

Assessing Farmers' Awareness Towards Banking Services in Haryana: A Financial Inclusion Perspectives

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ABSTRACT

Purpose: The present study explores the relationship between the key attributes of farmers of Haryana such as age, education, size of land holdings, and income and their familiarity with banking services. **Design/methodology/approach:** The researchers utilized a multistage sampling approach using 600 questionnaires to gather data from six revenue divisions in Haryana: Ambala, Rohtak, Gurgaon, Hisar, Karnal, and Faridabad. Four villages were chosen as primary data collection sites across the six revenues divisions to ensure a representative sample of the state's population. The study was conducted for the period 2023-2024. Descriptive statistics and one-way ANOVA is used to draw inferences about the population under study. **Findings:** The major banking services about which the respondents exhibit high level of awareness are passbooks, followed by cheque books, Kisan Credit Cards (KCC), ATMs and debit cards, bank accounts, Loans, and insurance. A poor level of awareness is observed for investments, credit cards, fixed deposit. The study also reveals a significant discrepancy in farmers' awareness of banking services based on education level, with higher-educated farmers demonstrating greater knowledge. However, no notable difference was observed in banking service awareness among farmers based on their land ownership. The respondents are incognizance about this banking service with 302 (49.8%) of the total respondents are totally unaware of credit cards, whereas, 93 (15.3%) respondents are poorly aware. Additionally, younger farmers exhibited more familiarity with banking services compared to their older counterparts. Substantial variations were noted across all banking services, including Bank Accounts, Pass Book, Cheques Book, ATM/ Debit Cards, Credit Cards, Fixed deposit (FD), Kisan Credit Cards (KCC), Mobile/Internet Banking, Loans, Insurance, and Investment. **Originality/value:** While previous research has examined farmers' awareness of banking services, no comprehensive empirical study has simultaneously investigated farmers' characteristics and awareness, particularly in Haryana. This study addresses this gap by exploring the relationship between key farmer attributes (age, education, landholding size, and income) and their knowledge of banking services.

Keywords: Awareness, Farmers, Haryana, One-way ANOVA, Revenue Division.



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INTRODUCTION

All sectors of the economy, including agriculture and small and marginal farmers (SMFs) has affected by the rapid process of globalization (Mishra, 2013; Siddiqui, 2015; Kumar, 2017; Azad and Ancey, 2020). The

agriculture sector accounts for the largest proportion of employment in the developing economies, where, 60 percent of the workforce and 81 percent of the total population, are engaged (Chen and Ravallion, 2007; Mishra, 2013; Kaparde, 2020). In many low-to-middle-

income countries, the majority of people work in farming and rely on it as their primary source of income . Agriculture is also very crucial for economic growth and accounts for 4 percent of global gross domestic product (GDP), however, in some least developing countries, it can account for more than 25 percent of GDP . Over the past 20 years, the introduction of the technology revolution, the availability of inexpensive labour in large quantities, and the prevalence of unregulated work practices have all contributed to the growth of the Indian economy. By guaranteeing food security, this development obscures the agrarian economy that is the foundation of India and promotes political and economic stability (Sandhu, 2021). However, 51.4 percent of farmer families are financially excluded from formal or informal sources. Of the total farmer families, only 27 percent reach for formal sources of credit and one-third borrow from informal sources. A farmer is involved in agriculture, raising living creatures for food or raw materials. The term generally applies to people who do some combination of raising field crops, vineyards, orchards, poultry, or other livestock. A farmer might own the farmed land or work as a laborer on land owned by others, but in most developed economies, a farmer is usually a farm owner, while farm employees are known as farm workers or farmhands. However, in other older definitions, a farmer is a person who improves or promotes the growth of plants, crops, or land or raises animals (as livestock or fish) by labour and attention.

Table 1: Categories of Farmers

Category	Land holding (in hectares)
Marginal farmer	(Less than <1 ha)
Small farmer	(1-2 ha)
Semi-Medium	(2-4 ha)
Medium	(4-10 ha)
Large	(More than >10 ha)

Source: Report of the Committee on Doubling Farmers' Income Volume I, August – 2017

According to the 2011 census, only 58.7 percent of families are using banking services in the country. Additionally, 86.2 percent of the Indian farmers are marginal farmers and own just 47.3 percent of the crop area. The semi-medium farmers are 13.2 percent with 43.6 percent of crop area (Ibrahim and Jyothi, 2018). Banks promote the economic development of a country. By offering a wide range of goods and services to clients, the banking sector has become extremely competitive in the current period of globalization and liberalization. Both the investor and the client must consider one another (sounds irrelevant/not in sync.plz check). Rising awareness levels correspond with rising consumer preferences (Janefer, and Siddiq, 2017). Okun (1981) described the bank as offering its customers "an umbrella in bad weather". Due to the financialization of social relationships, financial services have become a critical factor in the lives of citizens. It is crucial to be capable of using them in a proper way to lead an everyday social life. Financial inclusion and social inclusion are two development programmes to improve

peoples' socioeconomic well-being. Financial inclusion means easy access and usage of financial services by underserved population. Financial inclusion of farmers is very important for increasing their living standards as well as for their empowerment (Nithyashree, and Vallabhaneni, 2023). Understanding and acknowledging the existence of tradable products, the substance of products and services, as well as their functions, is referred to as awareness of banking products and services. These are learned either by personally interacting with the goods and services or knowing about them from other sources (Buchari et al., 2015). A consumer who is informed can maximize the value of his purchases. A market function that affects how people choose between comparable goods and services is customer awareness. As a result, consumer awareness enables the consumer to select from a given range of options that will help him/her to answer his demands (Kaur, and Singh, 2012). The awareness of consumer significantly affects the attitudes, association and beliefs regarding a product (Foroudi et al., 2014). The digital financial services improve the financial inclusion among farmers however; the farmers are unaware about most of the financial services (Nithyashree and Vallabhaneni, 2023).

Financial inclusion programs available for farmers Kisan Credit Card Scheme

- Initiated in 1998, under this scheme various government and non- government banks provide loans on land cultivation and crop sowing inputs with kisan credit card.
- Pradhan Mantri Kisan Samman Nidhi Scheme (PM-KISAN)
- PM-KISAN scheme launched by government of India on 1 December, 2018 to provide annual financial assistance to small and marginal farmers of Rs. 6000 in three installments.
- Pradhan Mantri Fasal Bima Yojana (PMFBY)
- PMFBY was launched in 2016, has become the world's largest crop insurance scheme with more than 5.5 crore farmers registered annually against uncertain natural risks from pre sowing to post harvest of crop.
- Namo Drone Didi
- On 11 March, 2024, PM launched the Namo Drone Didi scheme empowers women self-help groups (SHGs) with drone technology to modernize agriculture.

Digital agriculture mission

Digital agriculture mission launched in India to ameliorate farm activities management and provide farmers with financial access to information. This scheme includes the national e-governance plan in agriculture (NeGP-A), AgriStack, digital crop survey and digital agriculture mission.

Haryana is one of India's emerging states, contributing nearly 3.63 percent to India's GDP. Haryana is a rural economy, with 6841 villages, and 65.12 percent of the population lives in villages. Agriculture and other allied

activities, such as animal husbandry, dairy, etc., are the main occupations of rural people. Many researchers have discussed about the farmers and their awareness levels towards banking services, however, there is no comprehensive empirical study that examines the characteristics and awareness of farmers simultaneously. To overcome this gap, the present study explores the relationship between the key characteristics of farmers such as age, education, size of land holdings, and income and awareness of banking services.

REVIEW OF LITERATURE

This section presents empirical studies on consumer awareness and banking services across the globe. One of the main obstacles to agricultural commercialization in the developing nations has been smallholder farmers' access to agricultural finance. The smallholder farmers have a high level of awareness regarding m-banking services and the use of m-banking services is influenced by factors such as education, proximity, participation in farmer organizations, accessibility towards m-banking agents, and endowment with material and monetary assets (Kirui, *et al.*, 2010). Mobile banking indicates an excellence digital innovation in banking sector with 88% of respondents have mobile banking access and 60% have formal bank account (khatun *et.al.*, 2024). In Blitar Regency, there is a strong and positive correlation between local farmers' attitudes towards using agricultural banking services and their financial well-being, financial literacy, and money attitude. Conversely, the financial capability variable shows a negligible correlation with the attitude of local farmers towards the use of agricultural banking services (Amalina, and Damayanti, 2021). Consumer awareness considered as a marketing tool adopted by organizations to influence consumers' attitudes and beliefs towards their brands (Foroudi *et al.*, 2014). Moreover, through consumer awareness, customers would always favour and patronize a product or service they are familiar with (Macdonald & Sharp, 2000). Anithamary and Harini (2017) investigated consumer awareness and usage of E-Banking services and found no significant difference between annual income and knowledge of banking services. Saha and Kuruppuge (2016) highlighted that there exists a positive correlation between social values of consumers and consumer awareness regarding green products. Tandon *et al.*, (2016) observed that the level of consumer awareness is higher in case of private and foreign sector banks as compared to public sector banks. Public sector banks need to focus on their working in order to remain competitive with the private and foreign sector banks. It was found that the counter banking is more reliable to the respondents as compared to digital banking. However, digital banking is becoming popular among the younger generation who are frequently using smart phones and internet facilities (Sharma *et al.*, 2019). Customers have moderate level of awareness and neutral level of satisfaction with regard to e-banking services (Poornima & Sridharan, 2022). 74.55% of customers are aware of E-Banking services however, only 60 % customers are using E-Banking Services. Age, education and income affect usage of e-banking services

(Uppal, and Bala, 2017) Amutha (2016) concluded that the majority of bank clients in Tuticorin District (Tamilnadu) are aware of all available banking services. The banks must also take the required actions to educate the public about the new technology and other services they provide. According to Renugadevi (2013), majority of the bank customers are not aware about all the banking services in the Madurai. Banks may adopt some new strategies to move to high-tech banking as a necessity of e-commerce, e-banking, etc. In the present scenario of severe competition and escalating expectations of the customers for newer products and improved as well as alternative delivery channels, the nerve centre (please check, as meaning is not clear) of banking activities has to be redefined. The consumers know about mobile banking services and are familiar about various banking transactions that can be done with the help of mobile banking. Consumers believe that mobile banking is easier to use and is very useful for them as it offers flexibility in making transactions anytime and from anywhere. Consumers think that major advantage of mobile banking is 'Anywhere anytime banking' (Wadhe and Ghodke, 2013). Yamunadevi and Selvan (2019) found that majority of the customers have moderate level of awareness and the variables like marital status, area of residence, age, educational qualification, occupation, type of family, number of earning members in the family, income, family savings per month, period of account holding in the bank, frequency of visit to the bank, amount of transaction done per month and loan availed from the bank are associated with the customers' level of awareness about various services offered by private sector banks. Janefer, and Siddiq, (2017) observed that customers have adequate knowledge with regard to service of bank deposits and loans and Ahmad and Bashir (2014) found a positive relationship between customers' level of awareness and customers' service utilization decision. Education improves the knowledge of farmers regarding the availability of different forms of financial assistance available for agricultural purposes (Reddy, and Ravishankar, 2020). The respondents have sound knowledge about various types of bank accounts, process of filling out the bank slips and consequences of delayed repayments, however, they have very poor knowledge about online transactions, cheque transactions, and have low competency about maintaining bookkeeping. Further the study found that education and income of the farmers have a significant impact on financial literacy. But age does not have any significant impact on the financial literacy level of the farmers (Gunawardhana, and Silva, 2021). The 59.6% farmers know about crop insurance however, only 15.3% know about the implementing crop insurance schemes in Haryana. The sources of income, education and maturity level of respondents are the main reasons of awareness (Duhan, and Dhingra, 2018). It has been discovered that farmers have a poor level of financial inclusion when it comes to agricultural lending activities, such as the KCC, crop insurance, and agriculture gold loan scheme. Bank-sponsored Financial Literacy Programmes can significantly raise farmers'

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knowledge of and use of KCC (Sreelakshmi, 2016). Farmers are unaware of many aspects of electronic banking products and services and their usage is also minimal. It was derived that age is not related to the awareness level of farmers but average monthly income and education is definitely related to their awareness level. In all of the examined e-banking products, with the exception of mobile banking, a clear association between education levels and farmer awareness was discovered (Raghi, 2022). Sarfo et al. (2023) found that not even half of the farmers (about 41%) are aware of digital credit and those who are financially literate are more aware of digital credit as compared to their counterparts who are not financially literate. Additionally, farmers' awareness of digital credit is influenced by their age, monthly income and access to remittance during the past 12 months. Agarwal et al. (2014) found that only 37% of the farmers in Punjab were financially literate and had sound financial knowledge and 47 % of the farmers had fair (please check for %) level of financial awareness. Furthermore, the farmers who are financial literate had fair knowledge about the interest rate, compounding principles and inflation but were weak in opting formal financial system and also found weaker in basic financial principles. Onovo and Enwelu, (2011) concluded that majority of farmers were aware of bank account, withdrawal booklet, ATM and ATM card but exhibited low awareness regarding ATM cash dispenser and ATM function key.

Objective of the study

The main objective of the study is to know the awareness of farmers towards banking services in Haryana. To achieve this objective, the proposed following hypothesis is:

- H1: There is a significant awareness of farmers towards banking services in Haryana. To achieve this main hypothesis, following sub hypotheses are framed:
- H1a: There is a significant difference in farmers' awareness towards banking services based on the age of the respondents in Haryana.
- H1b: There is a significant difference in farmers' awareness towards banking services based on the education of the respondents in Haryana.
- H1c: There is a significant difference in farmers' awareness towards banking services based on the annual income of the respondents in Haryana.
- H1d: There is a significant difference in farmers' awareness of banking services based on their land holdings in Haryana.

RESEARCH METHODOLOGY

Data Collection and Sample Size

The primary unit of data is a farmer. A farmer is a person who is directly or indirectly involved in agricultural activity. It is not possible to collect data from each farmer in Haryana. The best alternative is to use a sample

representative of the population for the study. The study was conducted for period 2023-2024.

To conduct the study, a multistage sampling method was employed for data collection. The research focused on six revenue divisions in Haryana: Ambala, Rohtak, Gurgaon, Hisar, Karnal, and Faridabad. These districts were chosen to ensure a representative sample of the state's population. From each of these revenue divisions, four villages were selected as the primary sites for data collection. This approach was designed to include diverse areas and encompass different age groups, ensuring comprehensive coverage of the population.

In total, 700 questionnaires were distributed among farmers across the Haryana. However, 32 questionnaires were not returned, and an additional 62 were excluded from the analysis due to issues such as incomplete, vague, or repetitive responses. After refining the data, a total of 606 valid responses were retained for analysis.

Reliability Analysis

The reliability of the measurement model depends upon the coefficient Alpha and composite reliability. The reliability coefficient refers to the consistency, stability, and repeatability of results, i.e., the results of a researcher are considered reliable if consistent results are obtained in similar but totally different circumstances (Twycross and Shields, 2004). Cronbach's alpha has assessed the internal consistency of the items. Cronbach's alpha is used to check the reliability and validity of the questionnaire. The Alpha coefficient values should be greater than 0.70 (Cronbach, 1951; Nunnally, 1978) for better internal consistency. The reliability statistics for the 11-item questionnaire, as indicated by Cronbach's Alpha, suggest a high level of internal consistency. With a Cronbach's Alpha of .929, this measure significantly exceeds the commonly accepted threshold of .70 for adequate reliability. This result implies that the items within the questionnaire are well correlated and measure the same underlying construct effectively.

Table 2: Reliability Statistics

Cronbach's Alpha	No. of Items
.929	11

Source: Primary Data

Analysis of Variance (ANOVA)

One-way ANOVA, or Analysis of Variance, is a statistical method used to evaluate significant differences in mean scores among multiple sample groups. Examples of such groups include income categories (below 40K, 40K-80K, above 80K), residential areas (Rural, Urban, Semi-urban), and workplace types (Corporation board/Undertakings, State and central government employees, Autonomous institution). This technique also assesses variance within and between samples. The formula for degrees of freedom is $(k-1)*(n-1)$, where 'k' represents the number of samples and 'n' denotes the total observations. ANOVA requires meeting the homogeneity of variance

assumption, which is tested using the Levene test. A Levene test significance value exceeding .05 confirms homogeneity, while a value below .05 indicates a violation of this assumption. In cases where homogeneity is violated, the Welch test is employed instead of ANOVA. The Welch t-test, also known as the unequal variances t-test, is a non-parametric test, is a statistical test used to determine if the means of two populations are significantly different (Delacre et. al., 2017). It's a modification of the standard t-test, designed to handle situations where the two populations being compared. A p-value below 0.05 for either ANOVA or the Welch test suggests significant differences between group means (Savla, 2023). However, these tests cannot identify which specific groups differ from each other. ANOVA results and the Games-Howell test after significant Welch test outcomes (Field, 2018). The study employed various statistical tools, including frequency distribution, percentage, mean, standard deviation, and ANOVA, to analyze the collected data and draw meaningful conclusions.

Analysis of Variance (ANOVA) test is applied in this study to check variations in responses of different respondent groups formulated based on their demographic attributes. It helped understand the effect of respondents' demographics on their awareness of banking services. ANOVA aims to identify whether a significant difference exists between the means of two or more groups (Kao and Green, 2008).

In this test, one continuous dependent variable and one categorical independent variable are used, where categorical variable has at least three categories. The One-Way ANOVA procedure produces a one-way analysis of variance for a quantitative dependent variable by a single factor (independent) variable and estimates the effect size in one-way ANOVA. Analysis of variance is used to test the hypothesis that several means are equal. This technique is an extension of the two-sample t test . In ANOVA, the first gets a common P value. A significant P value of ANOVA test indicates for at least one pair, between which the mean difference was statistically significant (Kao and Green, 2008).

RESULTS

Characteristics of the Sample

Table 3: Demographic Profile of the Respondents

Variable	Subcategory	Frequency	Percentage
Age	20-30	70	11.6
	30-40	200	33.0
	40-50	227	37.5
	Above 50	109	18.0
	Total	606	100
Education	No formal education	103	17.0
	10th	228	37.6
	12th	149	24.6
	Graduate and above	126	21
	Total	606	100
Annual Income	Upto 80000	160	26.4
	80000 to 150000	182	30.0
	150000 to 300000	121	20.0
	More than 300000	143	23.6
	Total	606	100
Land Holding	Landless farmer	51	8.4
	Marginal farmer	261	43.1
	Small farmer	162	26.7
	Semi-Medium farmer	93	15.3
	Medium farmer	35	5.8
	Large farmer	4	0.7
	Total	606	100

Source: Compiled by the author through a primary survey (survey data)

Table 3 shows the overall demographic profile of the respondents. The table displays the age distribution of respondents, showing that 227 (37.5%) are between the ages of 40 to 50 years, followed by 200 (33.0%) who are between the ages of 30 and 40. Between the ages of 20 to 30 years, there are only 70 (11.6%) respondents, while there are 109 respondents (18.0%) who are over the age of 50 years. Regarding educational qualification, a majority of respondents, 228 (37.6%) are 10th qualified, followed by 12th qualified, 149 (24.6%). Moreover, 125 (20.6%) of the total respondents are graduates or higher, whereas, 103 (17.0%) have no formal education. Concerning the annual income, 182 (30.0%) respondents earn between Rs 80000 and Rs 150000, while 143 (23.6%) earn more than Rs. 300,000. Around, 121 (20.0%) of total respondents earn between Rs. 150000 and Rs. 300000, while 160 (26.4%) earn less than Rs 80000. With regard land holdings, 51 (8.4%), of total respondents do not own any land. The majority of respondents are marginal and small

farmers, accounting for 423 (69.8%) of the total. There are 93 (15.3%) semi-medium farmers and 35 (5.8%) medium farmers among the respondents. Only four responders (0.7%) are significant farmers.

Table 4: Awareness of Banking Services

	Variables (Banking services)	Not Aware	Poorly Aware	Aware	Fairly Aware	Highly Aware	Total	Mean	S.D.
1	Bank Account	17 (2.8)	304 (50.2)	138 (22.8)	102 (16.8)	45 (7.4)	606 (100)	2.76	1.011
2	Pass Book	2 (.3)	104 (17.2)	258 (42.6)	167 (27.6)	75 (12.4)	606	3.34	0.915
3	Cheque Book	51 (8.4)	113 (18.6)	206 (34.0)	160 (26.4)	76 (12.5)	606	3.16	1.125
4	ATM/ Debit Card	112 (18.5)	100 (16.5)	165 (27.2)	138 (22.8)	91 (15.0)	606	2.99	1.317
5	Credit Cards	302 (49.8)	93 (15.3)	96 (15.8)	80 (13.2)	35 (5.8)	606	2.10	1.303
6	Fixed deposit (F.D)	223 (36.8)	139 (22.9)	131 (21.6)	89 (14.7)	24 (4.0)	606	2.26	1.209
7	KCC	36 (5.9)	109 (18.0)	291 (48.0)	123 (20.3)	47 (7.8)	606	3.06	.964
8	Mobile/Internet Banking	253 (41.7)	59 (9.7)	139 (22.9)	97 (16.0)	58 (9.6)	606	2.42	1.406
9	Loans	36 (5.9)	151 (24.9)	264 (43.6)	115 (19.0)	40 (6.6)	606	2.95	0.970
10	Insurance	30 (5.0)	176 (29.0)	275 (45.4)	102 (16.8)	23 (3.8)	606	2.85	0.888
11	Investment	165 (27.2)	295 (48.7)	96 (15.8)	36 (5.9)	14 (2.3)	606	2.07	0.934

Source: Primary data

A bank account is a basic and essential condition for other banking and financial services. Table 4 shows a general overview of the respondents' awareness towards banking services. The values in the table show that most of the respondents are aware of a bank account. In recent years, the government has taken many steps to promote financial inclusion. On August 15, 2014, "Pradhan Mantri Jan-Dhan Yojana (PMJDY)", which is a National Mission for Financial Inclusion, was announced, and 43.85 Crore beneficiaries have so far banked a total of 148,068.69 crore rupees in beneficiary accounts (PMJDY). A passbook is given to a person when he opens a bank account with the bank, and he should have a passbook while dealing with the bank. Therefore, most of the respondents knew about the bank passbook. A cheque has become the main source of large transactions. All banks provide cheque book facilities to their customers. As per table 4.1, a majority of respondents 442 (73 percent) are aware of cheque book and only 164 respondents (27 percent) showed less awareness regarding cheque book. ATMs and debit cards provide several banking services, such as cash withdrawals, cashless transactions, balance checks, etc. ATMs and debit cards have become the replacement for physical banking. Therefore, all banks provide ATM and debit card facilities to their educated customers. Table 4.1 shows that 212 respondents (35 percent) hardly know about the ATM or debit card. The lower level of awareness is may be because banks do not provide ATMs or debit cards to uneducated customers. However, most respondents are aware of ATMs and debit cards. Our findings are consistent with those of Sharma et al., (2014), who showed that most respondents are aware of the debit card in the Indore district. A credit card provides a credit facility when there is no money. Table 4.1 shows that respondents have less knowledge about this banking service with 302 (49.8%) of the total respondents are totally unaware of credit cards, whereas, 93 (15.3%) respondents are poorly aware. Only 211 of them (34.8%) are aware of these services. Overall, respondents have insufficient knowledge or awareness regarding credit cards. However, Sharma et al., (2014) found a high awareness level of farmers towards bank credit card services in the Indore district. A fixed deposit (F.D.) is the main source of long-term savings. However, the respondents indicated a lower level of awareness about the fixed deposit. More than half of the respondents showed a lower level of awareness towards the fixed deposit. Concerning Demand raft facility, Table 2 shows that respondents possess very less knowledge with regard to the demand draft. Demand drafts were used for educational purposes, and technology has replaced this service in the education sector. As per the results in the table regarding the bank lockers, respondents have very low knowledge or awareness about lockers. More than half of the respondents, 420 (69.3%), showed a very low level of awareness for these services, whereas 86 (14.2 %) respondents are poorly aware. About 2/3 of respondents have very little knowledge regarding bank locker service. The reason for low awareness with regard to bank lockers is may be due to the fact that the people residing in rural areas feel more comfortable in keeping their assets with them at home only and use them on various occasions, rather than keeping it in banks as they find it difficult to get them back as and when they want to use it. Moreover, they are quite skeptical about the sustainability of the bank. Kisan Credit Card (KCC) is the main source of agriculture finance. The

table 4 shows that respondents are fairly aware of the KCC with 76.1% of the respondents know about this service. It means the respondents are very well aware of the KCC. Land holding is a major collateral security for a KCC, and formal sources of finance are cheaper than informal sources.

India is a big market for smart phones, and banking has changed rapidly. Most of the Indian banks provide mobile or internet banking to their customers. However, in the present study the respondents have very limited knowledge of mobile or internet banking. It may be due to the fact that respondents have not adapted to the new technology. Granting loans to the public is the primary function of banks. The respondents indicated a higher level of awareness about bank loans. Most of the respondents are aware of loans. Sharma et al., (2014) and Mujesh and Raman (2012) found a high level of awareness towards loans granted by banks. An overdraft facility is provided to those customers who maintain their accounts properly. However, most of the respondents have significantly less knowledge about this facility. Only 71 (11.7%) respondents are aware of this. Most of the respondents are required to learn its actual meaning. The results are consistent with those of Sharma et al., (2014).

The Indian insurance sector is growing very fast, and the government provides insurance facilities and bank accounts such as PMJDY. India is the 10th largest Life Insurance market globally and the 15th largest Non-Life Insurance market globally (reference). It is observed that most respondents know about insurance. Sharma et al., (2014) observed the same behaviour in their research. Pension payments are social welfare schemes, and most countries provide social security to their citizens. India is one of them. About 12% of the workforce (or approximately 58 million people) are covered under various pension systems, according to the 2011 census. As per Table 4, respondents are aware of the pension payments. Most of the respondents have poor knowledge about the investment options. This may be due to a lack of financial literacy. It is observed from Table 4 that the major banking services about which the respondents exhibit high level of awareness are passbooks, with a mean value of 3.34, followed by cheque books, Kisan Credit Cards (KCC), ATMs and debit cards, bank accounts, Loans, and insurance. A poor level of awareness is observed for investments, credit cards, fixed deposit.

Table 5: Awareness of farmers towards banking Services: One-Way ANOVA based on Age

Sr.No	Banking Services	Mean Score and Standard Deviation (Age Group)						Levene's test	ANOV A		WELCH		Ha
		Age	20-30	30-40	40-50	Above 50	Total						
		N	67	172	226	141	606		Sig.	F	Sig.	STS	
1	Bank Account	Mean (S.D.)	3.85 (1.104)	3.47 (0.927)	1.99 (0.094)	2.61 (0.791)	2.76 (1.011)	0.000**	NA		231.795	0.000*	Accepted
	Pass Book	Mean (S.D.)	3.97 (.904)	3.55 (.846)	3.14 (.850)	3.13 (.917)	3.34 (.915)	0.376	21.959	0.000*	NA		Accepted
	Cheque Book	Mean (S.D.)	4.01 (.844)	3.41 (1.014)	2.93 (1.052)	2.82 (1.211)	3.16 (1.125)	0.003**	NA		32.681	0.000*	Accepted
	ATM/ Debit Card	Mean (S.D.)	4.12 (.896)	3.46 (1.099)	2.61 (1.229)	2.51 (1.366)	2.99 (1.317)	0.000**	NA		55.383	0.000*	Accepted
	Credit Cards	Mean (S.D.)	3.30 (1.255)	2.52 (1.286)	1.66 (1.121)	1.72 (1.091)	2.10 (1.303)	0.000**	NA		42.912	0.000*	Accepted
	Fixed Deposit	Mean (S.D.)	3.01 (1.249)	2.41 (1.179)	2.02 (1.125)	2.11 (1.199)	2.26 (1.209)	0.209	14.081	0.000*	NA		Accepted
7	KisanCredit Card	Mean	3.61 (.953)	3.17 (.976)	2.93 (.902)	2.87 (.943)	3.06 (.964)	0.153	12.069	0.000*	NA		Accepted

		(S. D)											
8	Mobile/Internet Banking	Mean (S. D)	3.88 (.930)	2.94 (1.278)	1.93 (1.268)	1.87 (1.226)	2.42 (1.406)	0.006**	NA		83.19	0.000*	Accepted
9	Loans	Mean (S. D)	3.58 (.924)	3.13 (.878)	2.77 (.935)	2.74 (.990)	2.95 (.970)	0.106	17.919	0.000*	NA		Accepted
10	Insurance	Mean (S. D)	3.45 (.858)	3.05 (.818)	2.67 (.816)	2.62 (.922)	2.85 (.888)	0.004**	NA		20.585	0.000*	Accepted
11	Investment	Mean (S. D)	2.75 (.943)	2.24 (.936)	1.91 (.841)	1.82 (.883)	2.07 (.934)	0.051	21.458	0.000*	NA		Accepted

Source: Primary data, significant level at 0.05%*, No Homogeneity in group variance $p < 0.05^{**}$

Table 5 summarizes the one-way ANOVA analysis results pertaining to difference in awareness level of farmers about the banking services on the basis of four different age categories. The means of the different age groups of farmers have been compared in the one-way ANOVA, for which a total of 606 respondents' replies were reviewed. According to the alternate hypothesis (H1.1), there is significant difference in farmers' awareness of banking services based on age group. The 0.05 significant differences between the four age groups have been observed. Six banking services violated the premise of variance homogeneity, namely 1, 3, 4, 5, 8, and 9. As a result, the Welch test has been used to determine whether there is a significant difference in the aforesaid services.

A significant difference has been identified with regards to all banking services, i.e. Bank Accounts, Cheque Book, ATM/Debit Cards, Credit Cards, Mobile/Internet Banking, and Insurance, (Welch $F=231.79$, $p\text{-value}=0.000$), (Welch $F=32.68$, $p\text{-value}=0.000$), (Welch $F=55.38$, $p\text{-value}=0.000$), (Welch $F=42.91$, $p\text{-value}=0.000$), (Welch $F=83.11$, $p\text{-value}=0.000$), and (Welch $F=20.58$, $p\text{-value}=0.000$), respectively on the basis of age.

All banking services have come out with a significant difference. Farmer's awareness level has been observed high in passbooks, cheque books, and Kisan credit cards, as the average mean score across all age groups comes out to be more than 3. As a result, the alternate hypothesis (H1.1) is accepted for all banking services because their $p\text{-values}$ are less than 0.05. Farmers are more aware of Pass Book, Cheque Book, and Kisan Credit Card (KCC) banking services as the average mean score is more than 3. Farmers, on the other hand, have less awareness of bank accounts, ATM/debit cards, credit cards, fixed deposits (FD), mobile/internet banking, loans, insurance, and investment banking services, as the average mean value is less than 3. As a result, there is a large variation in farmers' awareness towards banking services based on age group. According to age, the age groups 20-30 years and 30-40 years are more aware of all banking services than the age group over 40 years. It can be interpreted that young farmers are more aware of banking services than older ones. The reason for this could be greater level of technology exposure for the young generation farmers as compared to the earlier generation who believe more on the traditional methods of borrowings and fund handling.

Table 6: Awareness of farmers towards banking Services: One-Way ANOVA analysis based on education

Sr.No	Banking Services	Mean Score and Standard Deviation (Education Category)						Levene's test	ANOVA		WELCH		Ha
		Education	No Formal Education	10th	12th	Graduate and above	Total		F	Sig	STS	Sig	
		N	103	227	149	127	606						
1	Bank Account	Mean (S.D)	2.17 (.544)	2.53 (.805)	3.01 (1.030)	3.36 (1.200)	2.76 (1.011)	.000	NA		46.191	.000	Accepted
2	Pass Book	Mean (S.D)	2.46 (.574)	3.18 (.790)	3.61 (.760)	4.06 (.819)	3.34 (.915)	.125	111.37	.000	NA		Accepted
3	Cheque Book	Mean (S.D)	1.93 (.808)	2.99 (.982)	3.56 (.817)	3.99 (.930)	3.16	.368	111.37	.000	NA		Accepted

							(1.125)						
4	ATM/ Debit Card	Mean (S.D)	1.50 (.791)	2.74 (1.175)	3.56 (.940)	3.99 (.996)	2.99 (1.317)	.000	NA		183.283	.000	Accepted
5	Credit Cards	Mean (S.D)	1.10 (.475)	1.65 (1.046)	2.46 (1.239)	3.28 (1.213)	2.10 (1.303)	.000	NA		142.901	.000	Accepted
6	Fixed deposit	Mean (S.D)	1.17 (.445)	2.07 (1.043)	2.50 (1.178)	3.20 (1.129)	2.26 (1.209)	.000	NA		156.178	.000	Accepted
7	Kisan Credit Card	Mean (S.D)	2.22 (.699)	2.98 (.844)	3.32 (.871)	3.58 (.979)	3.06 (.964)	.000	NA		63.248	.000	Accepted
8	Mobile/Internet Banking	Mean (S.D)	1.22 (.641)	1.98 (1.251)	2.98 (1.255)	3.51 (1.188)	2.42 (1.406)	.000	NA		148.170	.000	Accepted
9	Loans	Mean (S.D)	2.07 (.704)	2.86 (.829)	3.25 (.821)	3.50 (1.015)	2.95 (.970)	.000	NA		70.896	.000	Accepted
10	Insurance	Mean (S.D)	2.01 (.602)	2.70 (.728)	3.13 (.738)	3.50 (.881)	2.85 (.888)	.000	NA		95.166	.000	Accepted
11	Investment	Mean (S.D)	1.22 (.504)	1.92 (.724)	2.38 (.851)	2.68 (1.038)	2.07 (.934)	.000	NA		99.698	.000	Accepted

Source: Primary data, significant level at 0.05%*, No Homogeneity in group variance $p < 0.05^{**}$

Table 6 displays the one-way ANOVA analysis results of four education groups of farmers' awareness. The mean of different age groups of farmers is compared in the one-way analysis, for which 606 respondents' replies are reviewed. The null hypothesis states that there is no substantial difference in farmer awareness of banking services based on education level. The significant difference in farmer awareness among the four education categories has been shown at 0.05 significant levels. Levene's equality of variance test discovered a substantial difference in banking services, namely 1, 4, 5, 6, 7, 8, 9, 10 and 11. As a result, the Welch test has been used to determine whether there are any significant differences between groups.

A significant difference has been noticed with regards to all banking services, i.e. Bank Accounts, ATM/ Debit Cards, Credit Cards, Fixed deposit (FD), Kisan Credit Cards (KCC), Mobile/Internet Banking, Loans, Insurance, and Investment (Welch $F=46.19$, $p\text{-value}=0.000$), (Welch $F=183.28$, $p\text{-value}=0.000$), (Welch $F=142.90$, $p\text{-value}=0.000$), (Welch $F=156.17$, $p\text{-value}=0.000$), (Welch $F=63.24$, $p\text{-value}=0.000$), (Welch $F=148.17$, $p\text{-value}=0.000$), (Welch $F=70.89$, $p\text{-value}=0.000$) (Welch $F=95.16$, $p\text{-value}=0.000$), and (Welch $F=99.69$, $p\text{-value}=0.000$) respectively.

Once again, all banking services have made a huge difference. As a result, the null hypothesis has been rejected for all banking services because their $p\text{-values}$ are less than 0.05. Farmers are more aware of Pass Book, Cheque Book, and Kisan Credit Card (KCC) banking services as the average mean score is more than 3. Farmers, on the other hand, have lower understanding of bank accounts, ATM/Debit Cards, Credit Cards, Fixed Deposits (F.D), Mobile/Internet Banking, Loans, Insurance, and Investment in banking services, as the average mean value is less than 3. As a result, there is a large variance in farmer awareness of banking services based on education level. According to the mean value, higher-educated farmers are more aware of banking services than lower-educated farmers.

Table 7: Awareness of farmers towards banking Services: One-Way ANOVA analysis based on Income

Table 7.1: Awareness of Farmers towards Banking Services: One Way ANOVA Analysis based on Income														
Sr. No	Banking Services	Mean Score and Standard Deviation (Income Level)						Levene's test	ANOVA		WELCH		Ha	
		INC	to	to	to	More than	Total		Sig.	F	SIG	STS		SIG
			up	80000	80000									
		N	160	182	121	143	606							
1	Bank Account	Mean (S.D)	2.59 (.954)	2.77 (1.009)	2.87 (.991)	2.85 (1.077)	2.76 (1.011)	.151	2.376	.069	NA		Rejected	
2	Pass Book	Mean (S.D)	3.06 (.888)	3.30 (.922)	3.52 (.886)	3.57 (.876)	3.34 (.915)	.196	10.142	.000	NA		Accepted	

3	Cheque Book	Mean (S.D)	2.76 (1.153)	3.13 (1.139)	3.33 (1.052)	3.50 (.992)	3.16 (1.125)	.448	13.014	.000	NA	Accepted
4	ATM/ Debit Card	Mean (S.D)	2.65 (1.299)	2.95 (1.295)	3.13 (1.310)	3.32 (1.287)	2.99 (1.317)	.897	7.337	.000	NA	Accepted
5	Credit Cards	Mean (S.D)	1.82 (1.192)	1.99 (1.255)	2.30 (1.358)	2.37 (1.367)	2.10 (1.303)	.006	NA	6.003	.001	Accepted
6	Fixed Deposit	Mean (S.D)	1.87 (1.117)	2.23 (1.141)	2.42 (1.223)	2.61 (1.262)	2.26 (1.209)	.064	10.809	.000	NA	Accepted
7	Kisan Credit Card	Mean (S.D)	2.61 (.959)	3.03 (.913)	3.30 (.882)	3.41 (.898)	3.06 (.964)	.046	NA	21.850	.000	Accepted
8	Mobile/Internet Banking	Mean (S.D)	2.18 (1.301)	2.38 (1.392)	2.45 (1.483)	2.72 (1.426)	2.42 (1.406)	.075	3.916	.009	NA	Accepted
9	Loans	Mean 10(S.D)	2.61 (.978)	2.88 (.924)	3.12 (.918)	3.28 (.930)	2.95 (.970)	.339	14.450	.000	NA	Accepted
10	Insurance	Mean (S.D)	2.57 (.806)	2.81 (.874)	2.93 (.838)	3.17 (.929)	2.85 (.888)	.639	12.863	.000	NA	Accepted
11	Investment	Mean (S.D)	1.79	2.06	2.06	2.42	2.07	.036	NA	11.049	.000	Accepted

Source: Primary data, significant level at 0.05%*, No Homogeneity in group variance $p < 0.05^{**}$

Table 7 enlightens the one-way ANOVA analysis results of four income levels of farmers' awareness to conclude the sample data. In the one-way analysis, the mean of different income groups of farmers has been compared, for which 606 respondents' responses have been examined. The null hypothesis is that there is no significant difference in farmers' awareness of banking services based on their income levels. The significant difference among the four income levels has been established at 0.05 significant levels. Three banking services violated the assumptions of homogeneity of variance, i.e., 5, 7, and 11. Therefore, the Welch test has been applied to check for a significant difference between the above services.

In the case of banking services No. 2, 3, 4, 5, 6, 7, 8, 9, 10 and 11, i.e., Pass Book, Cheque Book, ATM/ Debit Card, Credit Cards, Fixed deposit (F.D), Kisan Credit Card(KCC), Mobile/Internet Banking, Loans, Insurance and Investment has been noticed a significant difference ($F=10.14$, $p\text{-value}=0.000$), ($F=13.01$, $p\text{-value}=0.000$), ($F=7.33$, $p\text{-value}=0.000$), (Welch $F=6.00$, $p\text{-value}=0.001$), ($F=10.80$, $p\text{-value}=0.000$), (Welch $F=21.85$, $p\text{-value}=0.000$) ($F=3.91$, $p\text{-value}=0.009$), ($F=14.45$, $p\text{-value}=0.000$), ($F=12.86$, $p\text{-value}=0.000$), and (Welch $F=11.04$, $p\text{-value}=0.000$) respectively.

Subsequently, a significant difference has not been found in the case of the remaining banking services. In this way, 10 out of 11 banking services have made a significant difference in farmers' awareness of banking services. As a result, it can be concluded that the null hypothesis has been rejected for banking services as their p -values are less than 0.05. It means that farmers have more awareness about Pass Book, Cheque Book, and Kisan Credit Card (KCC) banking services as the average mean score is above 3. On the other hand, farmers have less awareness about Bank Accounts, ATM/debit cards, Credit Cards, Fixed deposits (FD), Mobile/Internet Banking, Loans, Insurance, and investments in banking services as the average mean value is below 3. Therefore, it can be concluded that there is a significant difference in the awareness of farmers towards banking services based on income levels. On the basis of income, there is a significant difference in awareness of all banking services except bank accounts, demand draft and overdrafts. Farmers who have an income of more than Rs. 300,000 have more awareness regarding banking services. From the mean value, it can be concluded that farmers from higher income groups are more aware of banking services than those from lower income groups.

Table 8: Awareness of farmers towards banking Services: One-Way ANOVA analysis based on Land Holdings

Sr. No	Banking Services	Mean Score and Standard Deviation (Land Holdings)								Levene's test	ANOVA	WELCH			Ha
		Land Holdings	Landless farmer	Marginal farmer	Small farmer	Semi-Medium	Medium farmer	Large farmer	Total			SIG	STS	SIG	
		N	49	255	162	94	37	9	606	Sig.	F	SIG	STS	SIG	

1	Bank Account	Mean (S.D)	2.57 (1.000)	2.77 (1.056)	2.75 (.978)	2.83 (.969)	2.92 (1.010)	2.22 (.667)	2.76 (1.011)	.126	1.12	.344	NA	Rejected	
2	Pass Book	Mean (S.D)	3.10 (.848)	3.31 (.978)	3.40 (.887)	3.46 (.838)	3.43 (.899)	3.11 (.601)	3.34 (.915)	.030	NA		1.579	.178	Rejected
3	Cheque Book	Mean (S.D)	2.82 (1.093)	3.10 (1.205)	3.23 (1.089)	3.32 (.997)	3.38 (1.010)	2.89 (.928)	3.16 (1.125)	.324	1.98	.079	NA	Rejected	
4	ATM/ Debit Card	Mean (S.D)	2.71 (1.137)	2.98 (1.360)	3.00 (1.323)	3.15 (1.253)	3.19 (1.371)	2.44 (1.236)	2.99 (1.317)	.761	1.18	.313	NA	Rejected	
5	Credit Cards	Mean (S.D)	1.90 (1.141)	2.09 (1.331)	2.14 (1.316)	2.21 (1.343)	2.16 (1.236)	1.33 (.707)	2.10 (1.303)	.015	NA		2.425	.044	Accepted
6	Fixed deposit	Mean (S.D)	1.88 (1.053)	2.26 (1.219)	2.28 (1.197)	2.48 (1.276)	2.30 (1.175)	1.56 (.882)	2.26 (1.209)	.121	2.24	.049	NA	Accepted	
7	Kisan Credit Card	Mean (S.D)	2.57 (.842)	2.90 (1.018)	3.29 (.824)	3.30 (.926)	3.30 (.968)	2.67 (.866)	3.06 (.964)	.475	8.15	.000	NA	Accepted	
8	Mobile/ Internet Banking	Mean (S.D)	2.12 (1.148)	2.42 (1.398)	2.40 (1.463)	2.55 (1.434)	2.68 (1.473)	1.89 (1.167)	2.42 (1.406)	.012	NA		1.353	.253	Rejected
9	Loans	Mean (S.D)	2.65 (.751)	2.87 (1.017)	3.03 (.949)	3.11 (.967)	3.22 (.917)	2.89 (.782)	2.95 (.970)	.712	2.57	.026	NA	Accepted	
10	Insurance	Mean (S.D)	2.61 (.671)	2.79 (.918)	2.88 (.897)	3.03 (.897)	3.05 (.848)	2.89 (.601)	2.85 (.888)	.274	2.15	.058	NA	Rejected	
11	Investment	Mean (S.D)	1.82 (.601)	2.04 (.985)	2.06 (.967)	2.24 (.851)	2.27 (.932)	2.11 (.928)	2.07 (.934)	.296	1.78	.114	NA	Rejected	

Source: Primary data, significant level at 0.05%*, No Homogeneity in group variance $p < 0.05^{**}$

One-way ANOVA analysis in Table 8 explains the farmer's awareness with respect to six groups formed on the basis of own land. In the one-way analysis, the mean of different land groups of farmers has been compared with respect to the 606 respondents' sample size. The null hypothesis is that there is no significant difference in the awareness of farmers towards banking services based on their own land group. The significant difference among the six own land groups has been established at 0.05 significant levels. The assumptions of homogeneity of variance have been violated in the case of three banking services, i.e., 2, 5, and 8. Thus, the Welch test has been performed to check for a significant difference.

In the case of banking services, No. 5, i.e., Credit Cards, have come out significantly different (Welch $F = 2.42$, p -value $= 0.044$). The respondents in the large farmer-owned land group are less aware of credit cards than other land groups.

In the case of banking service No.5, 6, 7 and 9 i.e., Fixed deposit (F.D.), KCC and Loan the results came out significantly different (Welch $F = 2.42$, P -value 0.044), (Welch $F = 2.24$, p -value $= 0.049$), (Welch $F = 8.15$, p -value $= 0.000$), and (Welch $F = 2.57$, p -value $= 0.026$) respectively. The respondents of large farmer-owned land groups are less aware of the fixed deposits than other land groups. The respondents of the landless farmer's group are less aware of the loan as compared to other land groups.

Leftover banking services, i.e., 1,2, 3, 4, 8, 10 and 11 are not significantly different. As a result, it can be concluded that the null hypothesis has been accepted for banking services as their p -values are less than 0.05. It means that based on their own land groups, farmers have more awareness about Pass Book, Cheque Book, and Kisan Credit Card (KCC) banking services as the average mean score is above 3. On the other side, farmers have less awareness about Bank Accounts, ATM/ Debit Card, Credit Cards, Fixed deposits (F.D), Mobile/Internet Banking, Loans, Insurance, and Investment of banking services as average mean value is below 3.

Therefore, it can be concluded that there is no significant difference in the awareness of farmers towards banking services based on their own land group. From the mean value, it can be concluded that medium farmers are more aware of banking services than others.

DISCUSSION

The results of our study align with previous research, revealing that many participants lack adequate knowledge about investment opportunities. This deficiency may stem from participants' slow adaptation to new technologies. While banks primarily serve to provide loans to the public, respondents demonstrated a higher awareness of bank loans. Notably, younger farmers exhibited greater familiarity with banking services compared to their older counterparts. This disparity could be attributed to the increased technological exposure of the younger generation, contrasting with the older generation's preference for traditional borrowing and fund management methods. Although most respondents are aware of loans, their understanding of other banking services, excluding bank accounts and demand drafts, is limited. These findings corroborate the research of Sharma et al., (2014) and Mujesh and Raman (2012), who observed high awareness levels regarding bank-issued loans. Despite the availability of overdraft facilities for customers with well-maintained accounts, most respondents showed limited knowledge of this service. Our study's conclusions are consistent with those of Kaur and Singh (2012); Siddiq (2014); Tandon et al. (2016); Sharma et al. (2019); Mahajan et al. (2023). Kaur & Singh (2012) noted that customer awareness facilitates informed decision-making among available options that meet their needs. Siddiq (2014) and Tandon et al. (2016) argued that customer perception of internet banking service quality is primarily influenced by reliability, user-friendliness, responsiveness, accuracy, and speed of service. In private banks, compatibility, efficiency, customer support, security, approachability, and availability are key factors shaping customer perception. They also found that respondents from private and foreign sector banks demonstrated comparatively good awareness and knowledge regarding 'About your bank', 'About Internet Banking', 'Website of the Bank', 'Technology Adoption Level', 'Online Banking Services, information & enquiries', 'Managing ATM/ Debit card, Credit Card through IB', 'Fund Transfer through IB' and 'RTGS/NEFT facility as a mode of payment'. In contrast, public sector bank customers showed average awareness for some aspects, including 'Technology Adoption Level', 'Online Banking Services, information & enquiries', 'Mobile Banking', 'Various rules and regulations regarding IB', 'Online Complaint Procedures' and 'Online Grievance Handling'. Sharma et al. (2019) contended that digital banking poses greater challenges for rural populations due to several factors. These include poor internet connectivity, ATMs offering only Hindi or English language options, and the cash-centric nature of farming communities. Farmers often need to pay wages and relatives in cash, making digital transitions difficult. Additionally, the high cost of smartphones and lack of awareness about internet banking registration processes hinder adoption. A significant issue observed was that younger rural resident, who could easily learn digital banking, often lacked bank accounts. Mahajan et al. (2023) identified key obstacles faced by farmers in adopting Information

and Communication Technology (ICT) tools. These barriers included insufficient knowledge about ICT tool operation, inadequate farmer training, unreliable internet and power supply, difficulty comprehending ICT device language, and poor rural connectivity. To address these issues, farmers suggested providing uninterrupted rural power supply, offering agricultural marketing information in local languages, making ICT devices like smartphones and computers more affordable, and providing free internet access.

Ramalakshmi and Mari (2021) noted that most bank customers are familiar with e-banking services in both public and private sectors. They emphasized the need for public banks to raise awareness about their internet banking offerings. E-banking services are widely used for time management and real-time banking operations, potentially helping retain existing customers and attract new ones through innovative internet banking technologies. Okello and Nyikal (2010) reported high awareness of mobile banking services among smallholder farmers. They found that education, distance to commercial banks and mobile banking agents, membership in farmer organizations, and possession of physical and financial assets influenced mobile banking usage. They stressed the importance of expanding mobile banking coverage in rural areas to address farmers' limited access to financial services.

Conversely, Amalina and Damayanti (2021) found that financial well-being, financial literacy, and attitudes toward money significantly influenced local farmers' attitudes towards using agricultural banking services. Shanmugapriya and Lakshmirani (2021) and Jeyalakshmi And Lakshmi Rani (2021) emphasized that bankers should prioritize customer satisfaction, noting that private banks outperform public sector banks in this regard. They also highlighted customers' right to be informed about available services, their safety, and associated costs.

In the current banking landscape, intense competition exists among various types of banks, including new generation, private, and public sector institutions. It is crucial for bankers to provide timely information about their products and services to customers, as awareness significantly influences expectations and service utilization. To maintain customer loyalty, bankers must regularly assess and meet customer needs.

Poornima and Sridharan (2022) argued that banking staff needs to instill confidence in customers regarding the advantages and security of e-banking services. Comprehensive satisfaction with all aspects of e-banking services and their various modes is essential. Particular emphasis should be placed on security measures to encourage widespread use of e-banking services. This approach could contribute to overall economic growth while reducing paper usage and benefiting the environment.

Buchari et al. (2015) reported that most respondents held favorable views towards Islamic banking products and services. Their statistical analysis revealed significant differences in awareness and attitudes based on gender and education level. However, age and income were found to have no significant impact on these factors.

Limitations and future research directions

The study is primarily focused on farmers of six divisions of Haryana and the data was collected a multistage sampling method. As the study employed the sampling method for data collection, therefore, all the limitations associated with the sampling approach are the limitations inherent in the present study. Further, the research focused on six revenue divisions in Haryana: Ambala, Rohtak, Gurgaon, Hisar, Karnal, and Faridabad to ensure a representative sample of the state's population with four villages selected from every revenue division. Thus, the further studies can adopt more wider approach to draw inferences about the financial inclusion using more states and more representative population.

CONCLUSION AND SUGGESTIONS

This study explored farmers' awareness towards banking services. In order to investigate farmers' awareness towards banking services, i.e., bank account, pass book, cheque book, ATM/debit card, credit card, fixed deposit (F.D.), demand drafts, lockers, Kisan credit card (KCC), mobile/internet banking, loans, overdrafts, insurance, pension payments, and investment, the frequency, percentage, and mean scores are calculated. The results show that the respondents are aware of bank accounts, passbooks, cheque books, ATMs/debit cards, Kisan Credit Cards (KCC), loans, insurance, and pension payments. However, a poor level of awareness has been observed for credit cards, fixed deposits (F.D.), overdrafts, demand drafts, lockers, mobile/internet banking, and investments.

The analysis of variance (ANOVA) has been used to evaluate the association between socioeconomic characteristics, i.e., age, education, annual income and land holding, and the banking services.

There is a large variation in farmers' awareness of banking services based on different age groups. According to the study, the age groups 20–30 and 30–40 are more aware of all banking services than the age group over 40. It can be stated that younger respondents are more aware of banking services than older respondents. A significant difference has been noticed with regards to all banking services on the basis of education level. The higher-educated respondents are more aware of banking services than the lower-educated respondents. It shows that education significantly affects the awareness of respondents towards banking services. On the basis of income, there is a significant difference in awareness of all banking services except bank accounts, demand drafts, and overdrafts. It can be concluded that respondents from higher income groups are more aware of banking services than those from

lower income groups. It is observed that, based on their own land groups, farmers have more awareness about Pass Book, Cheque Book, and Kisan Credit Card (KCC) banking services. On the other side, farmers have less awareness about bank accounts, ATM/debit cards, credit cards, fixed deposits (F.D.), demand drafts, lockers, mobile/internet banking, loans, overdrafts, insurance, pension payments, and investment banking services. Therefore, it can be concluded that there is no significant difference in the awareness of farmers towards banking services based on their own land group. From the mean value, it can be concluded that medium farmers are more aware of banking services than others.

REFERENCE

1. Aggarwal, N., Gupta, M., & Singh, S. (2014). Financial Literacy among farmers: Empirical evidence from Punjab. *Pacific business review international*, 6(7), 36-42.
2. Ahmad, A., & Bashir, R. (2014). An investigation of customer's awareness level and customer's service utilization decision in Islamic banking. *Pakistan economic and social review*, Vol. No.52 (1), pp.59-74.
3. Amalina, S., & Damayanti, S. M. (2021). The Influence of Financial Well-Being, Financial Literacy, Financial Capability, and Money Attitude on Local Farmers' Attitude in Using Agricultural Banking Service in Blitar Regency, Indonesia. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, 6(7), 343-349.
4. Amutha, D. (2016). A study of consumer awareness towards e-banking. *International journal of economics and management sciences*, 5(4), 350-353.
5. Anithamary, C., & Harini, M. (2017). A study on consumer awareness and usage of E-Banking services with reference to Coimbatore City. *International Journal of Commerce and Management Research*, 3, 109-110.
6. Buchari, I., Rafiki, A., & Al Qassab, M. A. H. (2015). Awareness and attitudes of employees towards Islamic banking products in Bahrain. *Procedia Economics and Finance*, 30, 68-78.
7. Chen, S., & Ravallion, M. (2007). Absolute poverty measures for the developing world, 1981–2004. *Proceedings of the National Academy of Sciences*, 104(43), 16757-16762.
8. Duhan, A., & Dhingra, M. (2018). Association between the factors affecting awareness level of farmers about agriculture insurance in Haryana. *Int. J. Bus. Gen. Manage*, 7(1), 17-24.
9. Foroudi, P., Melewar, T. C., & Gupta, S. (2014). Linking corporate logo, corporate image, and reputation: An examination of consumer perceptions in the financial setting. *Journal of Business Research*, 67(11), 2269-2281.
10. Gunawardhana, R. P. S. A., & Silva, K. N. N. (2021). An Analysis of the Impact of Financial Literacy on Credit Utilisation Behaviour of the Farmers in Kamburupitiya DS division. In

- Proceedings of International Conference on Business Management (Vol. 18).
11. Ibrahim, B. M., & JYOTHI, K. T. (2018). Assessing Medium and Small Farmers' perception and awareness over Banking services and Financial Products in Puducherry. *International Journal of Creative Research Thoughts*, Volume 6, Issue 1 January 2018, PP. 90-99.
12. Janefer, C., & Siddiq, A. (2017). A study on customer awareness towards banking service with reference to deposit and loan in Mangaluru city. *International Journal on Recent and Innovation Trends in Computing and Communication*, 5(7), 520-522.
13. Janefer, C., & Siddiq, A. (2017). A study on customer awareness towards banking service with reference to deposit and loan in Mangaluru city. *International Journal on Recent and Innovation Trends in Computing and Communication*, 5(7), 520-522.
14. Kao, L. S., & Green, C. E. (2008). Analysis of variance: is there a difference in means and what does it mean?. *Journal of Surgical Research*, 144(1), 158-170.
15. Kaur, D., & Singh, F. (2012). Location and Educational Background: A Comparison of Their Moderating Role in Customer Awareness Regarding Banking Services. *IUP Journal of Marketing Management*, 11(1), 42.
16. Khaparde, S. (2020), "Farmer suicide: causes, prevention and remedies", *Sustainable Humanosphere*, Vol. 16 No. 1, pp. 210-219.
17. Kirui, O. K., Okello, J. J., & Nyikal, R. A. (2010). Awareness and use of m-banking services in agriculture: The case of smallholder farmers in Kenya. <http://dx.doi.org/10.22004/ag.econ.96188>
18. Kumar, A. (2017). Dynamics of Access to Rural Credit in India: Patterns, Determinants and Implications. In: Bathla, S., Dubey, A. (eds) *Changing Contours of Indian Agriculture*. Springer, Singapore. https://doi.org/10.1007/978-981-10-6014-4_3
19. Macdonald, E. K., & Sharp, B. M. (2000). Brand awareness effects on consumer decision making for a common, repeat purchase product: A replication. *Journal of business research*, 48(1), 5-15.
20. Mishra, P. (2013), "Agriculture vs. non-agriculture", *Economic and Political Weekly*, Vol. XVIII No. 15,
21. Nithyashree, R., & Vallabhaneni, M. (2023). A Study on the Role of Financial Services in the Financial Inclusion of Farmers. *Saudi J Bus Manag Stud*, 8(6), 113-117.
22. Onovo, C. L., & Enwelu, I. A. (2011). Farmers' Awareness and Use of Automated Teller Machines (ATMs) in Selected Communities in Enugu North Senatorial Zone, Enugu State. *Journal of Agricultural Extension*, 15(1), 40-50.
23. Poornima, S., & Sridharan, R. (2022) A Study on Customer Awareness and Satisfaction Towards E-banking Services with Special Reference to Chennai City. *International Journal of Health Sciences*, (II), 10273-10279. <https://doi.org/10.53730/ijhs.v6nS2.7749>.
24. RAGHI, T. (2022). Financial Inclusion among Farmers through Electronic Banking, *International Journal of Research and Analytical Reviews*, Vol. No 9 (4), pp.28-34.
25. Reddy, K. S. S., & Ravishankar, K. (2020). A STUDY ON FARMERS AWARENESS ON AGRICULTURE LOANS IN RURAL AREAS WITH REFERENCE TO RAYALASEEMA REGION, ANDHRA PRADESH. *International Journal of Management (IJM)*, 11(11).
26. RENUGADEVI, S. (2013). A STUDY ON CONSUMER AWARENESS ABOUT BANKING SERVICES IN MADURAI CITY. *CLEAR International Journal of Research in Commerce & Management*, 4(5).
27. Saha, A., & Kuruppuge, R. H. (2016). Determinants of consumer awareness of green products: a study of customers of super markets. *Mediterranean Journal of Social Sciences*, 7(6), 349-355.
28. Sandhu, N. (2021). Dynamics of banks' lending practices to farmers in India. *Journal of Small Business and Enterprise Development*, 28(1), 102-120.
29. Sarfo, Y., Musshoff, O., & Weber, R. (2023). Farmers' awareness of digital credit: Does financial literacy matter? *Journal of International Development*, 35(8), 2299-2317.
30. Sharma, S., Bharad, R., & Korake, R. (2019). Farmers' behavior towards digital banking of Ambajogai Tehsil of Maharashtra. *Journal of Pharmacognosy and Phytochemistry*, 8(5), 178-181.
31. Siddiqui, K. (2015), "Agrarian crisis and transformation in India", *Journal of Economics and Political Economy*, Vol. 2 No. 1, pp. 3-22.
32. Sreelakshmi, C. C. (2016). Extent of Financial Inclusion among Farmers in Thanniyam Panchayath. *Asia Pacific Journal of Research ISSN (Print)*, 2320, 5504, Vol: I. Issue XLVI, pp. 1-15.
33. Tandon, A., Goel, M., & Bishnoi, S. (2016). Consumer awareness towards internet banking: a comparative study of public, private and foreign banks. *International Journal of Hybrid Information Technology*, 9(6), 77-90.
34. Uppal, R. K., & Bala, R. (2017). A Study of Awareness and Usage Level of Customers towards E-Banking Services in Semi-Urban Area of Mansa District. *AGU International Journal of Research in Social Sciences & Humanities*, (5), 523-532.
35. Wadhe, A. P., & Ghodke, S. (2013). To Study Consumer Awareness and Perception towards Usage of Mobile Banking. *IBMRD's Journal of Management & Research*, 110-123.
36. Savla, D. N. (2023). Comparing SEM and Its Robustness Adjustments to Student's and Welch's T-Test (Master's thesis, San Diego State University).
37. Delacre, M., Lakens, D., & Leys, C. (2017). Why psychologists should by default use Welch's t-test instead of Student's t-test. *International Review of Social Psychology*, 30(1), 92-101.

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38. Yamunadevi, M. M., & Selvan, D. M. C. (2019). Customers' awareness on various services offered by old and new generation private sector banks in coimbatore district. *Suraj Punj journal for multidisciplinary Research*, 9, 547-551.
39. Khatun, M. N., Sarker, M. N. I., & Mitra, S. (2024). Adoption of mobile banking to promote financial inclusion among rural farming community: Drivers and satisfaction level perspective. *Journal of Agriculture and Food Research*, 18, 101448. <https://doi.org/10.1016/j.jafr.2024.101448>