



Financial inclusion status analysis of suddhodhan rural municipality Rupandehi

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Abstract

Financial inclusion is an innovative concept and has become the important national objective of every country. It is considered as an important factor to unlock the growth potential of the country. Poverty and socio-economic inequalities cannot be reduced without including unbanked population in formal financial system. Different surveys such as demand-side survey and supply-side survey are available to measure the financial inclusion. This study used demand side survey to measure the financial inclusion and follow descriptive, analytical, survey and interview research design. This study aims to examine the current status of financial inclusion in Suddhodhan Rural municipality in Rupandehi district. The study is basically based on primary data. Quantitative data are collected through questionnaire and qualitative data are collected through semi-structured interview with the participants. In this study financial inclusion is used as dependent variable. There are four independent variables such as financial literacy, financial accessibility, financial attitude and quality of financial services. The study follows descriptive, analytical and survey research design. Descriptive design is used to know the characteristics of variables and analytical design is used to examining how demographic variables bring changes in dependent and independent variables. Likewise, binary logistic regression analysis is used to estimate the impact of independent variable on dependent variable. The study found significant impact of financial literacy, financial accessibility, financial attitude, and quality of financial services on financial inclusion.

Formal education is not sufficient for financial literacy and hence even if a bank is available in nearby area due to lack of awareness about usage of the financial products and processes it may not lead to effective conversion into ownership of bank account. The study concludes that quality and accessibility to financial services and awareness about financial products are key factors that influence demand of financial services.

Keywords: Financial inclusion, financial literacy, financial attitude

Introduction

The importance of financial inclusion in fostering a nation's progress and prosperity has been generally acknowledged (Divya, 2013) ^[9]. Financial inclusion expands the pool of resources in the financial system by fostering a savings culture among a significant portion of the rural population and contributes to the overall economic growth. Financial inclusion refers to the provision of banking goods and services to the economically disadvantaged segments of society, at affordable rates, via banks and other financial organizations.

In order to effectively address poverty and socio-economic inequities, it is imperative to include the unbanked people into the official financial system. Financial inclusion safeguards the financial assets and resources of low-income groups by integrating them into the formal banking system, particularly during urgent situations (Singh *et al.*, 2015) ^[37]. Financial inclusion helps prevent the exploitation of disadvantaged groups by predatory lenders by making it easier for them to receive formal credit. Furthermore, having access to efficient financial services enables individuals to enhance their quality of life.

Developing inclusive financial sectors enhances the quality of life for both individuals and particularly those who are economically disadvantaged. A little loan, savings account, or insurance policy may have a significant impact on a low-income family. Access to finance is closely linked to the elimination of poverty on a global scale (World Bank, 2008). Access to financial services facilitates social integration and fosters self-assurance and empowerment (Chaulagain, 2015) ^[6]. Nepal is primarily an agrarian nation,

with a significant portion of its people residing in rural areas and without access to banking and financial services.

This study utilizes demand-side data survey to assess the level of financial inclusion and identify the obstacles faced by individuals when accessing formal financial services and products. Additionally, it examines the socio-economic and demographic characteristics of users, such as the extent of financial inclusion based on gender, age groups, education, and income level.

According to Akudugu (2013) ^[1], financial inclusion indicators may be used to establish national inclusion goals and track the progress towards achieving them. When evaluating financial inclusion, it is important to evaluate the major categories of indicators, which include financial literacy indicators, access indicators, use indicators, and quality indicators.

Previous research indicates that several studies have been conducted to assess the level of financial inclusion in various nations. Nevertheless, a comprehensive investigation to assess the level of financial inclusion in Nepal has not yet been conducted. In Nepal, many studies (Ferrari *et al.*, 2006; Dhakal, 2011; Thapa, 2016) ^[8, 11, 39] have made contributions to evaluating financial inclusion. However, many of these studies did not extensively use the supply-side survey, which includes all the variables as recommended by Akudugu (2013) ^[1]. Thus, this research provides a more lucid and up-to-date depiction of financial inclusion based on the most recent data.

Furthermore, this study has made an effort to investigate the correlation between financial inclusion, financial literacy, financial accessibility, financial attitude, and the quality of

financial services in Nepal, an aspect that previous studies have neglected to explore. This research used all the parameters specified by Akudugu (2013) ^[1] and utilized procedures such as percentage analysis, pie-chart, descriptive analysis, chi-square test, and binary logistic regression analysis to assess financial inclusion.

As stated in NRB's annual monetary policy, it has been prioritizing the improvement of financial inclusion via its credit policy and financial access strategy. Financial inclusion is essential for ensuring inclusive and sustainable economic growth performance. This necessitates focused consideration of certain segments of the population who have traditionally been marginalized from the formal financial sector due to factors such as their income level and instability, gender, geographical location, kind of occupation, or lack of financial knowledge.

Efficient implementation of inclusive financial sectors has the potential to disrupt the cycle of poverty. This has the potential to enhance the agency of those living in poverty and guarantee them access to a broader spectrum of financial services. Therefore, this research is significant and intriguing in evaluating the level of financial inclusion in Suddhodhan Rural municipality.

In Nepalese previous studies, key factors that affect the relationship of financial attitude, financial accessibility, financial literacy and quality of financial services with financial inclusion have not been identified. In this study, the impact of financial literacy, financial accessibility, financial attitude and quality of financial services on financial inclusion among people of Suddhodhan Rural municipality has been analyzed. Thus, this study addresses investigating following issues

1. What is the status of financial knowledge, financial attitude, quality of financial services, financial

accessibility and financial inclusion of people living in Suddhodhan Rural Municipality?

2. What is the relationship of financial attitude, financial accessibility, financial literacy, and quality of financial services with financial inclusion?
3. What is the impact of financial knowledge, financial attitude, quality of financial services, financial accessibility on financial inclusion of people living in Suddhodhan Rural Municipality?

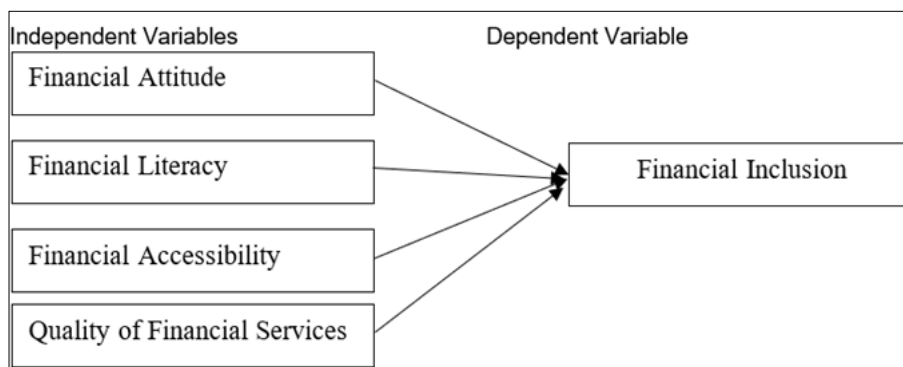
Objectives of the Study

The general objective of the study will examine the status of financial inclusion in Suddhodhan Rural municipality, Rupandehi. The specific objectives are as follows:

1. To examine the financial knowledge, financial attitude, quality of financial services, financial accessibility and financial inclusion with respect to gender, age, education level and income level of respondents.
2. To assess the relationship between financial attitude, financial accessibility, financial literacy and quality of financial services on financial inclusion.
3. To examine the effect of financial attitude, financial accessibility, financial literacy, quality of financial services on financial inclusion.

Conceptual Framework

Review of literature act as the base for the identification of variables which can be analyzed and critically examined for this study. Based on the literature surveyed, following theoretical framework and the relationship among the dependent variable and independent variable used in this study is depicted in the figure.



(Source: Vaid *et al.*, 2020) ^[45]

Fig 1: Conceptual framework of the study

Hypothesis of the Study

Based on the theoretical framework set above the hypothesis set for the study are as follows.

H₁: There is significance difference in financial attitude, financial accessibility, financial literacy quality of financial services and financial inclusion due to the gender, age, education qualification, and income level.

H₂: There is significance relationship between financial attitude, financial accessibility, financial literacy quality of financial services and financial inclusion.

H₃: There is significance impact of financial attitude, financial accessibility, financial literacy quality of financial services on financial inclusion.

Review of Literature

Financial Inclusion

Vasantha and Paveethiraa (2015) ^[46] defined financial inclusion or inclusive financing as the delivery of financial services at affordable costs to sections of disadvantaged and low-income segments of society, in contrast to financial exclusion where those services are not available or affordable.

Karlan and Morduch (2009) ^[17] stated financial inclusion as a process of ensuring access to appropriate financial vulnerable groups such as worker sections and low income groups at an affordable cost in a fair and transparent manner by mainstream institutional players.

Financial Literacy

The organization for economic cooperation and development defined financial literacy as ability to grow, monitor and effectively use financial resources to enhance wellbeing and economic security of one self, one's family and one's business. The economic crises has brought into sharp focus that financial literacy is an important element for promoting financial inclusion and ultimately financial stability. Lack of basic financial skills contributes to personal hardship and broader economic risk.

Financial literacy encompasses a number of concepts, including financial awareness and knowledge, financial skills and financial capability (Xu & Zia, 2014) ^[50]. The ability to evaluate the new and complex financial instruments and make informed judgments in both choice of instruments and extent of use that would be in their own best long-run interest (Ibrahim & Alqaydi, 2013) ^[16].

Financial literacy is rapidly being recognized as a core skill, essential for consumers operating in an increasingly complex financial landscape. It is therefore no surprise that governments around the world are interested in finding effective approaches to improve the level of financial literacy amongst their populations (OECD/INFE, 2013) ^[32].

Financial Accessibility

Accessibility of financial services is the basic dimension of financial services. It means the easy accessibility of financial services, location of BFIs, types of products and services accessible to the customers (Alliance for financial inclusion, 2015) ^[2]. Access to finance is the ability of individuals of enterprises to obtain financial services, including credit, deposit, payment, insurance, and other risk management services. Those who involuntarily have no or only limited access to financial services are referred to as the unbanked or under banked, respectively (Beck, Demircuc-Kunt, & Levine, 2005) ^[5].

Financial Attitude

Financial attitude is related to the psychological aspects of the individuals in making financial decision. Financial attitude refers to one's belief and values related to various personal concepts, such as it is important to save money (Kendall, Mylenko, & Ponce, 2010) ^[18]. Peoples' attitudes are an important element of financial inclusion. If people have a negative attitude towards saving for their future for example, it is argued that they will be less inclined to undertake such behavior. Similarly, if they prefer to prioritize short term wants then they are unlike to provide themselves with emergency savings or to make longer term financial plans (OECD/INFE, 2013) ^[32].

Chowa, Despard and Akoto (2015) ^[7] considered financial attitude as the psychological tendency expressed when evaluating recommended financial management practice with some degree of agreement or disagreement.

Quality of Financial Services

Quality of financial services refers to the product attributes that match the needs of the customers (Beck, Demircuc-Kunt, & Levine, 2005) ^[5]. Quality of financial services helps to better understand the different aspects of financial products, and so conduct a more accurate assessment of the products' potential benefit for customers. The article demonstrated the consumers' buying behavior is greatly

influenced by the type of financial product being purchased (Khan, Antara, & Masum, 2013) ^[19].

The measure of quality would be used to gauge the nature and depth of relationship between financial service provider and the consumer as well as their level of understanding of those choices and their implications. It states that lower banking costs, greater proximity to bank branch offices and reduces documentation requirements are possible only with better state of financial inclusion. Trust for banks and financial institutions and flexibility were kept under the quality of financial services.

Review of Related Studies

Parasuraman, Zeithaml, and Berry (1985) ^[34] conducted a study on four service industries, namely retail banking, Credit Card Company, security brokerage, and product repair. They emphasized that consumers are the exclusive evaluators of service quality. Customers assessed the quality of service based on the difference between their expectations and their actual experience. Service quality is defined as the disparity between clients' anticipated service and their actual service experience. The 10 primary elements that impact service quality were first established as; Reliability encompasses the quality of being consistent in performance and dependable. Responsiveness refers to the workers' eagerness and preparedness to deliver service. Competence refers to the acquisition of the necessary skills and information to effectively carry out a service. Access refers to the capacity to easily reach and make touch with something or someone; 5. Courtesy encompasses the qualities of civility, respect, consideration, and friendliness shown by contact persons. Communication is the act of providing consumers with information in a manner that is comprehensible to them, as well as actively listening to their needs and concerns. Credibility encompasses the qualities of being trustworthy, believable, and honest. Security refers to the state of being free from danger, risk, or uncertainty; 9. Understanding the consumer entails actively seeking to comprehend their requirements. Tangibles included the tangible manifestations of the service.

Hen and Volpe (1998) conducted a survey of 924 college students to investigate their level of personal financial literacy. The study aimed to explore the connection between financial literacy and students' characteristics, as well as the influence of financial literacy on students' perspectives and decision-making. The researchers conducted an analysis of the financial literacy level among college students and investigated the factors contributing to variations in knowledge among students. A detailed questionnaire consisting of 44 questions was used. The findings indicate that participants accurately respond to around 53% of the questions. Individuals who are not pursuing a business-related major, women, students in lower socioeconomic classes, those under the age of 30, and individuals with less job experience have lower levels of knowledge. Less informed pupils are prone to holding erroneous beliefs and making inaccurate judgments. College students lack proficiency in personal finance. The limited degree of knowledge will constrain their capacity to make well-informed judgments.

In their study, Yahaya and Othman (2014) found that regression analysis revealed trust to be the most influential predictor of attitudes towards using Islamic credit cards, accounting for 24.9 percent of the variation. Trust,

knowledge, and financial cost, three out of the five independent factors, together accounted for 40 percent of the variation in attitude towards using Islamic credit cards. The factors of perceived ease of use and perceived utility did not have a significant impact on predicting the attitude towards using an Islamic credit card.

Gupta, Handa, and Singh (2014) have categorized the causes of financial exclusion into two main factors: demand-side exclusion and supply-side exclusion. The demand side viewpoints included factors such as physical accessibility, the intricacy of financial goods, price, Transparency of financial institutions, dependability, and the absence of financial services. The supply-side factors contributing to financial exclusion include financial illiteracy, limited awareness of financial products, difficulties in reaching the impoverished population, regulatory barriers faced by banks, irregular income patterns, lack of trust in banking institutions, and limited access to bank branches in rural areas. These were identical to the ones mentioned in Bhuvana and Vasantha's study from 2015 [46].

The Nepal Rastra Bank (2014/15) [29, 30, 31] has said that improving financial literacy among marginalized groups such as the poor, women, minorities, handicapped individuals, and dalits is an effective strategy to improve their access to financial services. Furthermore, Atkinson and Messy (2013) [4] explicitly state in their OECD working paper that the objective of financial literacy is to attain financial inclusion and improve individuals' access to financial services. Furthermore, they have contended that financial literacy poses a hindrance to both limited financial access and inclusion from the supply side.

Prior research has helped to identify deficiencies in the existing body of knowledge. Analysis of prior research indicates that various nations and groups have distinct encounters with the notion of financial inclusion, as well as differing levels of access and the variables that contribute to it. Hence, conducting pertinent research in a particular setting was necessary to close the disparity between the anticipated definition of financial inclusion and its present state. Despite being extensively investigated on the worldwide stage, the variables contributing to financial inclusion have received little attention in the context of Nepal. The theoretical framework for this study is based on the research conducted by Mohan, Rakesh, (2006) [28]; Ramji, (2009) [35]; Kendell, Mylenko & Ponce, (2009); Mbutor & Uba, (2013) [27].

Research Methodology

Research Design

This study follows descriptive, analytical and survey research design. This study employs descriptive design to describe the characteristics of population. It does not answer questions about how/when/why the characteristics occurred. Similarly, analytical design is intended to help examining how independent variables impacted on dependent variable and how demographic variables bring changes in the financial inclusion, financial literacy, financial accessibility, financial attitude and quality of financial services. Moreover, survey research design and interview research design were used to collect the data from the respondents and participants respectively.

Population

According to census of 2078, Suddhodhan Rural Municipality, Rupandehi consists total population of 41,472 which is our population for the study. There are total 7 wards in Suddhodhan Rural Municipality.

Sample Size

The following formula has been used for sample size calculation;

$$n = \frac{\chi^2 \times N \times P \times (1-p)}{(ME^2 \times (N-1)) + (\chi^2 \times P \times (1-p))} \dots\dots\dots (1)$$

Were,

n= Sample Size

χ^2 = Chi-Square for the specified confidence level at 1 degree of freedom

N= Population Size

P= Population Proportion (.50 has been used)

ME = Desired margin of error

This formula is the one used by Krejcie & Morgan in their 1970 article "Determining Sample Size for Research Activities" (Krejcie & Morgan, 1970). Using this formula 384 sample size is determined. Thus 400 questionnaires were distributed. Among them 307 respondents filled the questions and returned to the researcher. While cleaning the responses and verifying the answers, 47 respondents didn't provide complete answers which are excluded for the study. 260 responses were useable for data analysis process. Thus, the respond rate is 65%.

Only two wards 6 and 7 were selected and convenience sampling method was used for the individual sample selection. Primary data are major source for the study. So far as the data sources, quantitative data are collected from structured questionnaire with the respondents. The data obtained from the questionnaire are analyzed using SPSS software. The data were analyzed using statistical techniques like descriptive statistics, percentage analysis, pie chart, cross tabulation, Cronbach's Alpha test, chi-square test, and binary logistic regression analysis for various dependent and independent variables to achieve the research objectives. Under descriptive analysis, basically means are used to analyze the data and pie charts are used to present the data. It describes the level of influence on financial inclusion of the respondents.

A questionnaire was developed to measure the financial inclusion, financial literacy, financial accessibility, financial attitude, and the quality of financial services of people in Suddhodhan Rural municipality. The questions were prepared on the basis of the studies by Thapa (2015) [40], Ibrahim & Alqaydi, (2013) [16], Karlan & Morduch, (2009) [17], Kendall, Mylenko, & Ponce, (2010) [18], Ellison, Whyley, & Forster, (2010) [10].

The questionnaire is divided into six sub-sections. The first section included information about the demographic and socio-economic characteristics of respondents like gender, age group, education level, monthly income level (family), and sources of income for which nominal and ordinal scale were used. This section contains five questions related to gender, age group, education level, monthly income (family) and sources of income. The questions were in the forms of force choice questions, in which the respondents have to put tick mark as per their demographic and socio-economic background. The second section enquires about

financial inclusion which contains four questions of yes/no types including borrowing credit, buying insurance policies, taken money transfer facilities and having saving accounts in BFIs. The third section of the questionnaire gives the picture of financial literacy of the respondents which has been presented in 5-point likert scale questions. There were seven statements to measure the financial literacy of the respondents. The respondents were asked to tick on the statement which they agree to on the scale from 1 (strongly disagree) to 5 (strongly agree) which indicated the financial literacy of the respondents. Similarly, fourth, fifth and sixth section presents 5 point likert type questionnaires related to the respondents financial accessibility, financial attitude and the quality of financial services respectively of the respondents, which contains six, seventeen and eight statements of section 4, 5 and 6 respectively.

Reliability and Validity

To test the validity of the questionnaire, first, the developed questionnaire was verified by the supervisor. Then, pilot test was carried out to test the trustworthiness of this instrument. The questionnaire was pretested by collecting the responses from twenty respondents. Then, minor changes were made in the questionnaire. Three questions were removed before going to the survey.

For reliability testing, Cronbach's alpha is the most widely used objective measure of reliability. In this study, Cronbach's alpha has been used to test reliability of the primary data for determining internal consistency among the opinion of respondents. It is used to test the consistency and reliability of measurements, which are in formats of continuous variables (for example, 5- point likert measurements). Cronbach's alpha was computed with the help of SPSS.

The value of Cronbach's alpha lies between 0 and 1 where the value of above 0.9 is ranked as excellent or highly consistent and the value below 0.5 is ranked unacceptable. Panayides (2013) [33] suggested that Cronbach's alpha should be at least 0.7 to make sure that measurements are reliable. However, many statisticians believed that it is acceptable if the coefficient is greater than or equal to 0.6 (Shelby, 2011) [36].

In this study, the reliability test has been carried out on 5-point likert scale questions. The likert scale questions

covered 37 statements. Seven of them represent financial literacy, six from financial accessibility, seventeen from financial attitude and remaining seven from quality of financial services. The reliability test for the study is presented as

Table 1: Value of Cronbach's alpha test

Variables	No. of statements	Cronbach's alpha
Financial literacy	7	0.706
Financial accessibility	6	0.708
Financial attitude	17	0.801
Quality of financial services	7	0.704

From the above table, the Cronbach's alpha for financial literacy, financial accessibility, financial attitude and quality of financial services are respectively. Since, the Cronbach's alpha of all the four variables are more than 0.7, the questionnaire is reliable.

Results and Findings

Association between Variables

When conducting survey analysis, cross tabulations (also referred to as cross-tabs) are a quantitative research method appropriate for analyzing the association between two or more variables. Cross tabulations provide a way of analyzing and comparing the results for one or more variables with the results of another (or others). The axis of the table may be specified as being just one variable or formed from a number of variables. The resulting table will have as many rows and columns as there are codes in the corresponding axis specification.

Cross tabulations are simply data tables that present the results of the entire group of respondents as well as results from sub-groups of survey respondents. Cross tabulations enable the researcher to examine relationships within the data that might not be readily apparent when analyzing total survey responses.

Association of financial inclusion with demographic variables

This section shows the association between financial inclusion and demographic variables.

Table 2: Cross-tabulation of financial inclusion with demographic variables

Demographic variables		Financial inclusion		Pearson chi-square	P-value
		Yes	No		
Gender	Male	155	33	4.695	0.030
	Female	67	5		
Age group	Less than 20	12	0	10.974	0.012
	20-30	54	3		
	30-40	46	15		
	40 and above	110	20		
Education level	Illiterate	28	1	23.361	0.000
	Literate (<SLC)	59	4		
	SLC	35	8		
	+2 level	34	2		
	Bachelor level	43	10		
Monthly income	Masters & above	23	13	43.673	0.000
	Less than 10,000	6	0		
	10,000-20,000	24	0		
	20,000-30,000	97	9		
	30,000-40,000	79	15		
	40,000-50,000	16	10		
	50,000 & above	0	4		

The table 2 shows the association between financial inclusion and demographic variables. The demographic variables such as gender, age group, education level and monthly income have statistically significant association with financial inclusion because the calculated p-value is less than standardized p-value 0.05. This shows there is difference between male and female inclusion in financial activity. Males' inclusion out of total male respondents is 82.45%. Whereas females' inclusion is 93.06% out of total female respondents. Male exclusion is 17.55% and female exclusion rate is 6.94%. Similarly, rate of financial inclusion is increasing with the lower age groups. It is also depicted

that the rate of financial inclusion of illiterate is 97.55% out of total illiterate respondents which is higher as compared to other literate respondents of attending different level of education. And respondents who earns 20,000 (and less) and 50,000 (and above) have 100% inclusion as compared to those respondents who earns 20,000-50,000.

Association of financial literacy with demographic variables

This section shows the association between financial literacy with demographic variables.

Table 3: Cross-tabulation of financial literacy with demographic variables

Demographic variables		Financial literacy		Chi-Square	P-value
		Yes	No		
Gender	Male	121	67	2.941	0.086
	Female	38	34		
Age group	Less than 20	7	5	1.594	0.661
	20-30	32	25		
	30-40	41	20		
	40 and above	79	51		
Education level	Illiterate	8	21	39.252	0.000
	Literate (<SLC)	27	36		
	SLC	32	11		
	+2 level	27	9		
	Bachelor level	41	12		
	Masters & above	30	6		
Monthly income	Less than 10,000	2	4	19.094	0.000
	10,000-20,000	11	13		
	20,000-30,000	53	53		
	30,000-40,000	65	29		
	40,000-50,000	22	4		
	50,000 & above	4	0		

The table 3 shows that demographic variables gender and age group have no significant association with financial literacy of the respondents because the calculated p-value is greater than standardized p-value. It means, both male and female and respondents of different age groups equally prefer financial literacy. But demographic variables such as education level and monthly income have statistically significant association with financial literacy of the respondents because the calculated p-value is less than 0.05. It shows that financial literacy varies among different age groups and monthly income of the respondents. The financial literacy percentage of illiterate, literate (<SLC),

SLC, +2 level, bachelor level and masters and above level is 27.59, 42.86, 74.42, 75.00, 77.36 and 83.33 respectively. It is depicted that financial literacy rate is increases with attaining higher level of education by the respondents. Likewise, financial literacy rate is increased with the increment of income level.

Association of qualities of financial services with demographic variables

This section shows the association between qualities of financial services with demographic variables.

Table 4: Cross-tabulation of quality of financial services with demographic variables

Demographic variables		Quality of financial services		Pearson chi-square	P-value
		Yes	No		
Gender	Male	120	68	2.046	.153
	Female	39	33		
Age group	Less than 20	7	5	4.168	.244
	20-30	34	23		
	30-40	44	17		
	40 and above	74	56		
Education level	Illiterate	7	22	25.538	.000
	Literate (<SLC)	36	27		
	SLC	25	18		
	+2 level	23	13		
	Bachelor level	38	15		
	Masters & above	30	6		
Monthly income	Less than 10,000	2	4	13.822	.017
	10,000-20,000	10	14		

	20,000-30,000	53	53		
	30,000-40,000	63	31		
	40,000-50,000	21	5		
	50,000 & above	4	0		

Table 4 shows the association between qualities of financial service with demographic variables. The demographic variables such as gender and age group have statistically no significant association with quality of financial service because the calculated p-value is greater than 0.05. But the demographic variables such as education level and monthly income have significant difference with quality of financial services because the calculated p-value is lesser than standardized p-value 0.05. It shows that quality on financial service is needed by different age groups and respondents with different monthly incomes.

It is depicted that as education level of Respondents increases, they have concern on quality of financial services. As seen in the analysis, 24.14%, 57.14%, 58.14%, 63.89%, 71.70% and 83.33% of the respondents have concerned on financial service quality of illiterate, literate (<SLC), SLC, +2 level, bachelor level and masters and above level respectively.

Likewise, financial services quality is needed by respondents with increment in income.

It can be said that those respondents whose earning level is 50,000 and above were 100% concern on financial service quality.

Impact of Financial Literacy, Financial Accessibility, Financial Attitude and Quality of Financial Services on Financial Inclusion

In instances where the independent variables are categorical, or a mix of continuous and categorical, and the dependent variable is categorical, logistic regression is necessary. Since the dependent variable is dichotomous a numerical

value can't be predicted value for it using logistic regression, so the usual regression least squares deviations criteria for best fit approach of minimizing error around the line of best fit is inappropriate. Instead, logistic regression employs binomial probability theory in which there are only two values to predict: that probability (p) is 1 rather than 0, i.e. the event/person belongs to one group rather than the other. Logistic regression forms a best fitting equation or function using the maximum likelihood method, which maximizes the probability of classifying the observed data into the appropriate category given the regression coefficients.

Like ordinary regression, logistic regression provides a coefficient 'b', which measures each independent variable's partial contribution to variations in the dependent variable. The goal is to correctly predict the category of outcome for individual cases using the most parsimonious model. To accomplish this goal, a model (i.e. an equation) is created that includes all predictor variables that are useful in predicting the response variable. Variables can, if necessary, be entered into the model in the order specified by the researcher in a stepwise fashion like regression.

Thus to determine the relationship between financial inclusion as the dependent variable and financial literacy, financial accessibility, financial attitude and quality of financial services as an independent variables than after the binary logistic regression is carried out. The financial inclusion is converted into the binary variable with two categories "yes" quoted as "1" and "no" quoted as "0". The results obtained are tabulated below.

Table 5: Logistic Regression Results

Predictors	B	S.E.	Wald Test	Df	Sig.	Exp(B)
Financial literacy	2.346	.759	9.542	1	.002	10.442
Financial accessibility	1.930	.455	8.287	1	.004	6.891
Financial attitude	-1.813	.606	8.961	1	.003	.163
Quality of financial services	1.471	.578	6.485	1	.011	4.353
Constant	1.049	.420	6.247	1	.012	2.856

$$\text{Log}[p/(1-p)] = B_0 + B_1(\text{Financial Literacy}) + B_2 (\text{Financial Accessibility}) + B_3 (\text{Financial Attitude}) + B_4 (\text{Quality of Financial Services}) + \epsilon_i$$

This is converted in the regression equation as;

$$\text{Log}[p/(1-p)] = 1.049 + 2.346 (\text{Financial Literacy}) + 1.930(\text{Financial Accessibility}) - 1.813 (\text{Financial Attitude}) + 1.471 (\text{Quality of Financial Services}) + \epsilon_i$$

Were,

B = Constant value for the equation

p = Probability

To know the financial inclusion of the respondents yes/no type question is asked to the respondents. If respondents put tick mark in "yes" it is coded by "1" and if put tick mark on "no" it is coded by "0".

Similarly, to know the respondents' financial literacy, financial accessibility, financial attitude, and quality of financial services 5-point likert scale question is asked. If the respondents choose to agree and strongly agree that is

coded by "1" and if respondents choose strongly disagree, disagree and neutral that is coded as "0".

The above table shows that the p-value is 0.002. This is less than 0.05. Hence, it shows that financial inclusion has significant relationship with financial knowledge. Similarly, the Exp (B) value for financial literacy with financial inclusion is 10.442 which states that the respondents who has financial literacy has 10.442 times financial inclusion than those respondents who don't have financial literacy.

The above table shows that the p-value is 0.004, which is less than standardize p-value. It means that the financial inclusion and financial accessibility have significant relationship. The Exp (B) value for financial accessibility and financial inclusion is 6.891 which states that those respondents who has financial accessibility has 6.891 times financial inclusion than those who don't have financial accessibility.

The above table shows that the p-value is 0.027, which is less than standardize p-value. It means that the financial inclusion and financial attitude has significant relationship. The Exp (B) value for financial attitude and financial inclusion is 0.163 which state those respondents who have positive financial attitude have 0.163 times financial inclusion than those who don't have positive financial attitude.

The above table shows that the p-value is 0.011, which is less than standardize p-value. It means that the financial inclusion and quality of financial services has significant relationship. The Exp (B) value for quality of financial services and financial inclusion is 4.353 which state that respondent who has concerned on quality of financial services has 4.353 times financial inclusion than those who don't have concerned on financial quality of services

Major Findings

The major findings of this study are presented below.

- Demographics and Financial Literacy: Gender and age group are not significantly associated with financial literacy, while education level and monthly income are.
- Demographics and Quality of Financial Services: Gender and age group are not significantly associated with the quality of financial services, while education level and monthly income are.
- Financial Inclusion and Literacy: There is a significant association between financial inclusion and financial literacy.
- Financial Inclusion and Accessibility: Financial inclusion and financial accessibility are significantly associated.
- Financial Inclusion and Attitude: There is a significant association between financial inclusion and financial attitude.
- Financial Inclusion and Quality of Services: Financial inclusion and the quality of financial services are significantly associated.
- Irregular Income: The main reason for not having a formal financial institution account is irregular income.
- Trust in Financial Institutions: Participants believe banks are safer, more secure, and more trustworthy than cooperatives.
- Perception of Benefits: Twenty-one interviewees feel they lack benefits from not using financial services, while nine do not.
- Cost of Financial Products: The low presence of commercial banks leads to higher costs of financial products and services compared to other financial institutions.
- Financial Knowledge: Twenty-eight participants have basic financial knowledge and are keen to open accounts at financial institutions.
- Interest Rates on Loans: Some interviewees feel they pay more interest on loans from BFIs than from informal sources and prefer borrowing from friends, relatives, and lenders.
- Preference for Holding Cash: Some participants feel safer holding cash at home and prefer acting as informal money lenders to earn interest.

Discussion and conclusions

Discussion

This research was conducted to examine the current state of financial inclusion in Suddhodhan Rural municipality. Financial inclusion is the outcome that is influenced by four factors known as independent variables: financial literacy, financial accessibility, financial attitude, and quality of financial services. Additionally, there are demographic variables, including gender, age, education level, and income level. In order to achieve the research aim, both qualitative and quantitative data were gathered via the use of questionnaires and semi-structured interviews. The data was then analyzed using several statistical methods including percentage analysis, pie-charts, descriptive statistics, chi-square tests, and binary logistic regression analysis.

The study reveals a correlation between the financial views of the respondents and the demographic factors. There is no statistically significant relationship between demographic factors, such as age group, education level, and monthly income, and financial attitude. Gender, as a demographic element, is significantly associated with financial attitude. The results align with the findings of Thapa (2016) ^[39]. The research conducted by West and Worthington in 2013 ^[48] found that attitudes towards financial risk-taking are significantly associated with certain demographic and socioeconomic factors, as shown by the ordered logit analysis.

The research reveals that characteristics such as gender and age group do not exhibit a significant correlation with the quality of financial services. However, variables such as education level and monthly income demonstrate a strong link with the quality of financial services. The findings from both Karlan and Morduch (2009) ^[17] and Thapa (2016) ^[39] are comparable. In a study conducted by Cheserek, Kimwolo, and Cherop (2015), it was discovered that factors such as dependability, trustworthiness, responsiveness, flexibility, convenience, user-friendliness, assurance, and empathy had a beneficial impact on consumer attitudes, specifically in terms of satisfaction. However, the tangible aspects do not have a substantial impact on the degree of consumer satisfaction. The characteristics of service quality played a vital role in determining customer satisfaction in commercial banks in Kenya. Moreover, the findings indicate that customers who had a greater level of satisfaction were content with the quality of the financial services provided.

A study discovered a noteworthy correlation between financial literacy, financial accessibility, financial attitude, quality of financial services, and financial inclusion. The results were consistent with the studies conducted by Akudugu (2013) ^[1] and Thapa (2016) ^[39]. The study emphasizes that the key factors for enhancing financial inclusion in the field of financial services are a streamlined documentation procedure, effective client handling, and cost efficiency.

Conclusions

This study revealed that in Suddhodhan Rural municipality, majority but not all, of respondents were having at least a saving account in BFIs but 26.20 percent didn't possess a saving account. This means a significant proportion of respondents were out of the coverage of financial services. The study also concluded that the most common reason for not having formal bank account was lack of enough income and savings. Further study reveals that 43.50 percent respondents had taken credit from formal sources of finance. A significant portion 9 out of 30 participants had taken

credit from informal sources like local money lenders, relatives and friends. 56.50 percent respondents reported not taken any loan from formal financial services. Still there is need for improvement in hidden cost, loan process, equal availability of financial services to all and effectiveness of saving and credit cooperatives. This study also found significant impact of financial literacy, financial accessibility, financial attitude and quality of financial services on financial inclusion. The study concludes that quality and accessibility to financial services and awareness about financial products are key factors that influence demand of financial services. The findings of the study further substantiate the fact that villagers of Suddhodhan Rural municipality still do not have full access to formal financial institutions due to limited numbers of BFIs availability. The lack of financial services has not yet only made villagers' life difficult to manage the finances, but it might have even hurt the economy's potential to growth. This study also concludes formal education is not sufficient for financial literacy and hence even if a bank is available in nearby area due to lack of awareness about usage of financial products and processes it may not lead to effective conversion into ownership of bank account.

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