

# LOAN BORROWER'S PERCEPTION AND AWARENESS ON CIBIL CREDIT SCORING MODEL

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**Abstract.** This study examines the effectiveness of various credit scoring models employed by financial institutions particularly in predicting loan default rates. The growing reliance on these models to decide on lending loans, understanding the factors that influence credit score such as payment history, the length of credit history, the diversity of credit portfolios and the total amount owed has become crucial. This research seeks to assess the awareness levels among borrowers regarding these factors and how their understanding impacts their financial decisions. By employing structured questionnaires and surveys the study gathers data from loan borrowers to understand borrower behaviour and knowledge on credit scores. ANOVA and correlation analysis is used to examine the differences in awareness across demographics variables and CIBIL factors. The findings indicate that demographic factors like gender, age and education levels impact their understanding of the CIBIL credit score factors.

## 1 INTRODUCTION

The CIBIL credit scoring model is an important tool in the Indian financial system, influencing key decisions for both borrowers and lenders. It evaluates an individual's creditworthiness based on the borrower's credit utilization, payment history, and the diversity of credit accounts. For loan borrowers having a good CIBIL score is crucial as it affects loan eligibility, interest rates and also terms offered by financial institutions. Despite the model significance many borrowers still lack in knowledge of how their financial behaviours influence their credit score leading to challenges in managing credit effectively. Studies show that awareness of credit scores varies among borrowers based on factors like the education, age and income of borrowers. For instance, **Dr. D. Immanuel (2024)** found that higher-income individuals tend to have a better grasp of their credit scores [1], while **Dhamodhar (2019)** highlighted the critical role of CIBIL scores in determining loan approval [2]. Furthermore, **Soni (2018)** pointed out the need to improve borrower education regarding CIR which are instrumental in assessing creditworthiness. Borrowers lesser education and financial experience may not have an understanding on how their credit history is being evaluated.

In today's digital age where financial services are increasingly online borrowers must be proactive in monitoring their credit and maintaining good financial habits. This paper is a study on the perception and awareness of CIBIL credit scoring model by the loan borrowers. Earlier studies seem to give conflicting findings on their perception, however it emphasised financial literacy to educate the

loan borrowers to overcome some of the myths regarding the credit scores.

## 2 LITERATURE REVIEW

Financial decision is quite a complex decision process for the loan borrowers and of course an important one. The credit score of the individuals seem to be the important measure in deciding on sanction loans by the financial institutions. However, the loan borrower's understanding and assessment of the credit score may not be the same as that of the lender. Research has tried to give insights on the influence of demographic variables on the knowledge related to credit score.

In one study, **Dr. D. Immanuel (2024)** focused on credit score awareness in India, he found that people's awareness is higher, when their incomes too is higher. The reason for this pattern could be, that people with more financial resources often deal with credit more regularly, whether through loans, credit cards, or other financial products. However still many people don't fully understand the basis on which the credit scores are assessed by banks and lenders. This lack of knowledge shows a clear need for better financial education and awareness. If more people understood their credit scores better. It may help them in making wise financial decisions and improve their creditworthiness [1].

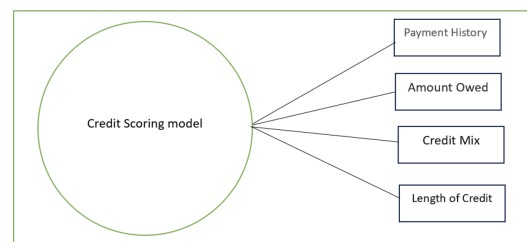
**Dhamodhar (2019)** highlighted the growing role of **CIBIL scores** which is widely used credit scoring model in India. He pointed out that a high CIBIL score can significantly improve the chances of getting any kind of loans approved. He also stresses the need for keeping a clean repayment record which is equally important. Even if some-

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one has a good credit score, banks will still look closely at how they previously handled loans before approving any new ones. This means its crucial for borrowers to stay on top of their payments to maintain a good credit history [2]. **Dingari (2021)** took a different approach by looking at how financial institutions assess someone's creditworthiness. He explained character, capital, collateral, capacity and conditions as the key factors in credit scoring. These are the five main factors that the banks consider when deciding to approve a loan. One of the key issues he uncovered is the challenge faced by many people who don't already have a credit history. Without a track record of managing credit it's hard for them to get loans. But to build a credit history, they first need to take out loans—a tricky situation that many first-time borrowers put themselves into. This creates a cycle that can be tough to break and it highlights the need for more inclusive lending options for people who are just starting out with credit. In a more technology-driven solution **Gopi (2020)** introduced a web-based system designed to help people to remain at their higher credit scores. The system sends reminders to users about their loan repayment dates and also offers tools to guide borrowers in keeping their credit scores in good shape. By providing regular updates and encouraging them for timely payments, the system helps users maintain a strong credit profile. Gopi's research shows that these make a big difference in helping people manage their credit more effectively, especially when paired with financial education [3]. **Ahmed (2019)** focused on how the credit risk are handled by financial institutions in the digital age. There has also been an increase in fraudulent activities with rise of online financial services. Ahmed explained that credit scoring systems play a key role in helping lenders assess whether someone is a good risk. By looking at a borrowers credit history and background these systems help banks as well as lenders to make more informed decisions. This reduces the risk of lending and also helps financial institutions avoid potential losses from defaults or fraud [4]. In another study **Soni (2018)** explored how **Credit Information Reports (CIRs)** help banks assess a borrowers creditworthiness. He found that most people may not be fully aware of how these reports work and this shortcoming can lead to major ambiguity in decisions. Soni emphasized that better education about these reports should reach the consumers, so that both individuals and businesses, can make better financial decisions. Lastly **Anoop (2016)** discusses problem of non-performing assets (NPAs) especially in the area of educational loans. With the rising costs of education, more students are relying on loans to finance their studies. However, many of these loans turn into NPAs meaning the borrower fails to make the required payments. This creates challenges for banks, as it affects their financial stability. Anoop's study suggests that better management of credit and transparency in how loans are dispersed and tracked could help reduce these problems.

### 3 METHODOLOGY

The data for the study was collected through a survey questionnaire. The respondents were selected using a convenience sampling method, ensuring a diverse representation of age, gender, education, and profession. The collected data is analysed using basic statistical tools like chi-square, Anova correlation and regression to study the relationship between the demographic variables like gender, age, education, and profession with factors of CIBIL credit scoring model like Payment history, Amount Owed, Length of credit and Credit mix.



**Figure 1.** Factors of the credit scoring model

**Payment history:** Your history of making on-time payments for loans and credit accounts.

**Amount Owed:** It indicates the total outstanding balance on your credit accounts

**Length of credit history:** The length of time you've had credit accounts open, showing your experience with managing credit over time.

**Credit Mix:** Having different types of credit accounts (e.g., credit cards, loans) to demonstrate your ability to manage various types of credit responsibly.

#### **Data collection:**

The data from respondents was sourced through a structured questionnaire administrated online to loan borrowers of diverse background and the survey covered several aspects such as the frequency of borrowing, length of borrowing and types of borrowing.

### 4 RESEARCH OBJECTIVES:

- To analyze if educational level has any significant impact on an individual's Payment history.
- To examine the difference in the Amount Owed across different Genders groups.
- To evaluate whether the Length of credit varies among individuals of different age groups.
- To examine the relationship between age and Credit Score Knowledge among individuals.

To find the association between the amount owed by borrowers and length of credit history

### 5 RESEARCH HYPOTHESIS

**Hypothesis1:** There is significant difference in the Payment history among different levels of education

**Table 1.** Demographic Variable of Respondents

Demographic Variable	Option	Frequency	Percentage (%)	Cumulative Percentage (%)
<b>Age</b>	18-25	11	10%	10
	26-35	49	46%	56
	36-45	38	36%	92
	46-55	7	7%	99
	56 and above	1	1%	100
<b>Gender</b>	Male	68	64%	64
	Female	38	36%	100
	Other	0	0%	100
<b>Education</b>	10th Grade	3	3%	3
	12th Grade	17	16%	19
	Bachelor's Degree	46	43%	76
	Master's Degree	25	24%	100
	<b>Occupation</b>	Self-employed	48	45%
	Salaried profession	7	7%	52
	Corporate employee	41	39%	91
	govt.employee	0	9%	100

**Hypothesis2:** There is significant difference in the Amount Owed among different Genders.

**Hypothesis3:** There is significant difference in the among different Age groups and the factor 'length of credit '

**Hypothesis4:** There is an association between age and knowledge of credit scores.

## 6 DATA ANALYSIS AND RESULTS

The respondents of the survey are largely around the age group of 26-35, making up 46% of the total, followed by 36% in the 36-45 age range. The majority are male (64%), with females accounting for 36%. In terms of education, 43% have a Bachelor's degree, and 24% hold a Master's degree. Regarding their professions, 45% are self-employed, while 39% are corporate employees. Only 7% are in salaried professions, and 9% are government employees. The data shows respondents of different age groups, professions, and educational backgrounds, but the largest groups are middle-aged, male, educated to at least a Bachelor's degree level, and self-employed.

The above table 2 reveals that the reliability analysis performed with Cronbach's Alpha produced a score of 0.736 which shows that the items in the scale have a decent level of internal consistency. This means that the

**Table 2.** Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.736	0.740	6

**Table 3.** Reliability Test

Mean	Variance	Std. Deviation	N of Items
26.50	9.167	3.028	6

**Table 4.** Chi-square Analysis

Factors	Value	df	Asymptotic Significance (2-sided)
Age and credit score knowledge	Pearson Chi-square	28.434 <sup>a</sup>	9 0.001
	Likelihood Ratio	22.277	9 0.008
	Linear-by-Linear Association	9.874	1 0.002
	N of Valid Cases	106	

items used to assess the underlying concept are fairly well correlated which is a good sign for the scale's reliability.

The average score of 26.50 shows the typical performance across all items emphasizing the main trend in the data. The variance of 9.167 reveals how much the scores vary or spread out. With a standard deviation of 3.028 it means that on average the scores are about three points away from the average score of 26.50.

## 7 INFERENCE ANALYSIS

### 7.1 Chi-Square Test:

The association between Age and Credit Score Knowledge among individuals was analysed using a chi square test.

**Hypothesis1:** There is an association between age and knowledge of credit scores

The Chi-Square test shows an association between the variables, with a Pearson Chi-Square value of 28.434 and a p-value of 0.001 ( $p < 0.05$ ). This indicates that the relationship between the tested variables is statistically significant. Additionally, the significant linear-by-linear association ( $p = 0.002$ ) suggests a meaningful linear trend between the variables.

### 7.2 ANOVA

One-way Analysis of Variance (ANOVA) was conducted to find the impact of various demographic factors on

**Table 5.** ANOVA Analysis

Variable	Factor	df	F-value	Sig. value	
Payment History and Gender	Between groups	2	13.026	2.421	0.041
	within group	103	4.456		
	Total	105			
Amount owed & Gender	Between groups	2	49.88	3.411	0.037
	within group	103	14.625		
	Total	105			
Length of credit & Age	Between groups	3	116.37	9.137	0.000
	within group	102	12.373		
	Total	105			

key credit score variables like Payment History, Amount Owed, and Length of Credit. The objective was to find if there is any differences in these variables based on factors such as gender and age.

**Hypothesis1:** There is significant difference in the Payment history among different Gender

**Hypothesis2:** There is significant difference in the Amount Owed among different Genders.

**Hypothesis3:** There is significant difference in the Length of credit among different Age group

**Payment History & Gender:** The F-value is 2.421, with a significance value (p-value) of 0.041, which is lesser than 0.05 indicating a significant difference between gender (male, female) and the factor payment history.

**Amount Owed & Gender:** The sig., value is 0.037 with f -value equal to 3.411. this is an indication that there is a significant difference in the amount owed amongst genders.

**Length of Credit & Age:** The analysis reveals that there is a statistical difference across age groups when it comes to length of credit . As the table shows, the sig., value is 0.000 and f value is 9.137

### 7.3 Relationship between Amount Owed and Length of Credit

To relationship between Amount Owed and Length of Credit is analysed by performing a Pearson’s correlation to determine both the strength of the relationship and the direction between the two key credit score variables.

**Hypothesis1:** There is a significant relationship between the length of credit history and the amount owed by borrowers.

The correlation analysis shows a significant positive correlation ( $r = 0.283$ ,  $p < 0.01$ ) between Amount Owed and Length of Credit. This is an indication that ,the length of a borrower’s credit history increases and the amount they owe tends to increase simultaneously. This relationship is significant, meaning the association is unlikely due to chance.

**Table 6.** Correlation Analysis

		amount owed	length of Credit Mean
Amount Owed	Pearson Correlation	1	.283**
	Sig. (2-tailed)		0.000
	N	106	106
length of credit	Pearson Correlation	.283**	1
	Sig. (2-tailed)	0.000	
	N	106	106

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

**Table 7.** Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.317 <sup>a</sup>	0.101	0.092	3.76267
a. Predictors:		(Constant),length_of_credit		
b. Dependent variable:		amount_owed		

**Table 8.** Coefficients

Model	Unstandardized Coefficients	standardized Coefficients		t	Sig.	
		B	Std. Error			Beta
1	(Constant)	16.913	1.732	3.764	0.000	
	lengthofcredit	.313	.092	.317	1.413	.001

### 7.4 Regression Analysis

The impact of Length of Credit (independent variable) on the Amount Owed (dependent variable) was analysed using regression. The goal was to find the variation in the amount owed that can be explained by the length of an individual’s credit history.

The results from the regression analysis give us a better understanding of how the factor ‘length of credit history’ relates to the ‘amount of money owed’. The correlation coefficient (R) is 0.317 which indicates a moderate positive relationship between the ‘length of credit history’ and the ‘amount owed’. This means that to some degree as the ‘length of credit history ‘gets longer the amount owed also increases.

The regression analysis indicates a significant relationship between Length of Credit and Amount Owed, as detailed by the regression equation  $Y=16.913+0.313 \times XY = 16.913 + 0.313 \times XY=16.913+0.313 \times X$ , where Y denotes Amount Owed and X represents Length of Credit. The model suggests that for each additional year of credit history, the amount owed increases by 31.3%. This finding is statistically significant with a t-value of 1.413 and a significance level of 0.001, highlighting that longer credit



histories are associated with higher debt levels, potentially reflecting increased credit availability over time.

## 8 DISCUSSIONS & CONCLUSION

The comparison between the findings from this research and the literature review reveals both similarities and unique insights. Like **Dr. D. Immanuel (2024)**, this study found that age and financial awareness significantly influence borrowers' understanding of credit scores, with older individuals generally having better credit knowledge. Additionally, as noted by **Dhamodhar (2019)**, this study confirms that gender plays a role in borrowing behaviors, as there is a significant difference in the amount owed between males and females. The positive correlation between length of credit history and amount owed aligns with **Ahmed's (2019)** findings, where individuals with longer credit histories tend to have access to larger loans, increasing their debt levels, this research provides additional insights by highlighting the importance of personalized financial education, especially for younger borrowers who may lack the credit knowledge necessary to manage their financial decisions effectively this aligns with **Soni's (2018)** recommendation for enhancing financial literacy Overall these results highlight how demographic factors influence financial behaviour and credit management. The findings of the study show the key demographic variables related to the understanding of the credit scores, thereby the researchers stress on the need for creating financially literate borrowers to manage credit better. Interestingly, people with higher education levels and older people have a better understanding on credit scores and ability to manage their debt. This could be because of their experience long term and also a better level of financial literacy. Gender is an important demographic variable when it comes to payment history and amount owed. It is also noted that people with longer credit histories were able to handle debt better and also owed less amount. The results indicate that the demographic variables have an influence on their perception and understanding of the credit scores. It becomes essential for professionals, lending banks and other financial institutions to create more awareness by way of educational programs and training leading to a financially literate loan borrowers.

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