



A STUDY OF LOAN REPAYMENT BEHAVIOUR UNDER DIFFERENT INCOME GROUPS

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Abstract: This research paper presents a comprehensive analysis of loan repayment behavior across different income groups, emphasizing how income level, income stability, financial literacy, and socioeconomic conditions influence borrowers' repayment performance. This paper focuses the determinants of loan delinquency among customers that tend to create repayment differences between the low, medium and high-income customers. Primary and Secondary Data were analyzed using descriptive statistics and logistic regression analysis. The study draws empirical evidence from borrowers in the Jalgaon region of Maharashtra, India, offering insights relevant to similar semi-urban banking environments. The study examines the role of Income groups, documents, CIBIL score, debt to income ratio, moral behavior, advisory impact, financial literacy in loan delinquency behavior. The study determines that the households having low incomes, high obligations and greater loan diversion and experiencing high costs of borrowing are prone to greater risk of default. Contrarily, customers having higher financial literacy with a social awareness, multiple income sources and joint responsibility are likely to be less delinquent. Credit and collection team supervision is a critical factor for loan accounts stress management & delinquency. With proper supervision and organized credit underwriting measures for sanctioning loan proposals and tracking any stress factor is crucial for maintaining portfolio of bank and having smooth repayment behaviour among customers. The findings provide practical implications for banks and financial institutions in strengthening credit appraisal mechanisms, early stress detection, and improving repayment sustainability across income segments.

Keywords: *Loan Repayment Behaviour, Loan Delinquency, Income Groups, Financial Literacy and Credit Risk Management, etc.*

I. INTRODUCTION

Loan repayment behaviour plays an important role in determining the stability and efficiency of banking and financial institutions. It broadly reflects the manner in which borrowers meet their financial obligations, including timely repayment of instalments, delays in payment, defaults, prepayments, or restructuring of loan accounts. An understanding of repayment behaviour becomes particularly relevant when analysed across different income groups, as income level directly affects both the borrower's capacity to repay and the financial priorities that influence repayment decisions. For banks, non-banking financial companies (NBFCs), and policymakers, such analysis provides meaningful insights into credit risk and lending sustainability. Within the context of retail banking, regular repayment is essential for maintaining portfolio quality and ensuring the long-term viability of lending operations. Financial institutions offer a variety of credit products that can broadly be categorized into secured and unsecured loans. Unsecured loans, including personal loans and unsecured business loans, are typically characterized by simplified documentation, faster processing, and quicker disbursement, making them accessible to a wider segment of borrowers. Secured loans, on the other hand, involve collateral and additional verification requirements, thereby providing lenders with an alternative safeguard against repayment risk. Repayment behaviour is influenced by several interconnected factors such as financial discipline, stability of income sources, and overall creditworthiness of borrowers. Among these factors, income level emerges as a significant determinant influencing repayment patterns. Borrowers across low-, middle-, and high-income categories often display varying repayment behaviour due to differences in income stability, business or employment conditions, cash flow management, and access to financial support systems. Borrowers with lower and irregular income streams may experience greater difficulty in meeting repayment obligations during periods of financial uncertainty, whereas borrowers with relatively stable income sources tend to demonstrate more consistent repayment performance. Understanding these income-based variations in repayment behaviour is important for financial institutions seeking to strengthen credit appraisal practices and improve risk monitoring mechanisms. Such insights support the development of more balanced lending strategies, enabling institutions to manage portfolio risk effectively while promoting sustainable credit growth.

II. LITERATURE REVIEW

Existing literature on loan repayment behaviour emphasizes that income level plays a crucial role in shaping borrowers' repayment capacity, discipline, and default risk. Studies on MSME and retail borrowers indicate that low-income borrowers often face higher repayment stress due to irregular income flows, limited savings, and lack of collateral, which increase vulnerability to default. Researchers such as Roslan and Karim (2009) and Luasha (2009) highlight that low-income borrowers are more susceptible to delayed repayments due to unstable business performance and higher sensitivity to economic shocks. Middle-income borrowers, on the other hand, generally exhibit better repayment capacity but may experience repayment challenges arising from elevated debt-to-income ratios and multiple loan obligations. High-income borrowers are typically associated with stronger repayment behaviour due to stable earnings, better financial literacy, and access to formal credit histories. Overall, prior studies suggest that repayment behaviour varies significantly across income groups, driven by differences in income stability, debt burden, and financial management capabilities.

Beyond borrower characteristics, the reviewed literature categorizes repayment determinants into firm, loan, and institutional factors. Nawai and Shariff (2010) note that firm characteristics such as profitability, business stability, and operating environment significantly influence repayment performance. Loan characteristics, including loan size, repayment period, and repayment method, also play a crucial role, as poorly designed loan products can increase default risk regardless of borrower intent. Importantly, the literature strongly emphasizes the role of institutional and lender-related factors in shaping repayment behavior. Regular monitoring, close borrower-lender relationships, and appropriate incentive mechanisms are found to improve repayment performance across microcredit programs. Several studies reviewed argue that loan defaults often result from poor program design and weak institutional management rather than borrower negligence alone. The provision of non-financial services such as training, financial literacy, and advisory support is also shown to positively influence repayment outcomes. These findings support the argument that microcredit repayment performance is multidimensional, shaped by interactions between borrower behavior, loan design, and institutional practices.

The literature on loan repayment performance within small finance bank institutions emphasizes its critical role in ensuring financial sustainability and poverty alleviation, particularly in developing economies such as India. Small Finance Banks (SFBs) were established to provide financial services to low-income and financially excluded populations who lack access to conventional banking systems. However, the effectiveness of these institutions largely depends on borrowers' ability and willingness to repay loans on time. Previous studies reviewed in the paper identify socio-economic factors such as age, education, income level, gender, and household structure as key determinants of repayment performance. Empirical evidence suggests that borrowers with higher educational attainment and stable income sources tend to demonstrate better repayment behaviour due to improved financial literacy and income predictability. Conversely, low-income borrowers are often more vulnerable to default due to unstable earnings and higher exposure to economic shocks. The paper also notes that while gender and household type have been widely examined, findings remain inconclusive regarding their significance. The literature establishes that repayment behaviour is not solely a function of access to credit but is strongly influenced by borrowers' socio-economic characteristics, making repayment analysis a multidimensional issue within microfinance research. Beyond borrower-related factors, the reviewed literature places strong emphasis on institutional and loan-specific characteristics in shaping repayment performance in small finance banks. Loan size, interest rate, repayment mode, and repayment period as critical determinants influencing borrowers' repayment outcomes. Studies indicate that excessively high interest rates and large loan sizes often increase default risk by placing excessive financial pressure on borrowers, particularly those operating small or informal businesses. Short repayment periods further compound this challenge by limiting the borrower's ability to generate sufficient returns before repayment obligations commence. Conversely, flexible repayment modes and longer repayment periods have been found to significantly enhance repayment performance by aligning repayment schedules with borrowers' income cycles. The literature also highlights the importance of effective loan monitoring, supervision, and borrower-lender relationships in reducing defaults. Weak institutional oversight and poor loan product design are frequently cited as major contributors to repayment failure. Collectively, the reviewed studies suggest that loan repayment performance in small finance banks is shaped by the interaction between borrower characteristics and institutional practices. This underscores the need for SFBs to adopt balanced credit policies that combine appropriate loan terms with borrower education and monitoring to improve repayment outcomes and institutional sustainability. Studies further emphasize the role of financial literacy and advisory interventions in moderating repayment behaviour across income groups. Literature indicates that financial counselling, budgeting guidance, and debt management education significantly improve repayment discipline, especially among low- and middle-income borrowers. Low-income borrowers, when provided with structured advisory support, demonstrate improved awareness of repayment responsibilities and long-term credit implications. Middle-income borrowers benefit from advisory interventions through enhanced budgeting skills and improved consistency in EMI payments. For high-income borrowers, financial advisory services contribute more towards optimizing debt portfolios and maintaining strong credit profiles rather than correcting repayment issues. Several empirical studies conclude that advisory mechanisms function as effective non-financial risk mitigation tools, reducing default probabilities without increasing lending costs.

Research Gap: Existing studies on loan repayment behavior primarily focus on overall credit risk, non-performing assets, and institutional factors influencing loan defaults. Many researchers have examined repayment behavior in isolation, without adequately segmenting borrowers based on income levels. This study addresses these gaps by conducting a comparative analysis of loan repayment behavior under different income groups, integrating both economic and behavioral dimensions. The research contributes by offering income-specific insights that can assist banks and financial institutions in improving credit risk management, repayment structuring, and sustainable lending practices.

III. OBJECTIVES OF STUDY

1. To analyse loan repayment behaviour of borrowers with different income group (low, middle and high income groups).
2. To understand the relationship between income level and repayment performance including timely payments, defaults and prepayments.
3. To identify the factors influencing loan repayment performance in different income group borrowers.
4. To understand the effect of financial literacy on repayment behaviour in different income groups.

IV. LIMITATIONS OF THE STUDY

1. The findings may be based on restricted number of borrowers, which may limit the generality of results across the entire population.
2. Income data may be self reported or estimated, especially in informal sectors, leading to misclassification of income Groups.
3. Limited access to long-term repayment data restricts the ability to track behavioural changes over time.
4. Macro-economic variable such as inflation, interest rate changes or economic downturns(eg.pandemic, recessions) may not be fully captured.

V Hypothesis of the study:

H₀₁: There is no significant difference in loan repayment behaviour among borrowers belonging to low, middle, and high income groups.

H₁₁: There is a significant difference in loan repayment behaviour among borrowers belonging to low, middle, and high income groups.

H₀₂: There is no significant relationship between income level and loan repayment performance (timely payments, defaults, and prepayments).

H₁₂: There is a significant relationship between income level and loan repayment performance (timely payments, defaults, and prepayments).

H₀₃: The identified factors do not have a significant influence on loan repayment performance among borrowers across different income groups.

H₁₃: The identified factors have a significant influence on loan repayment performance among borrowers across different income groups.

H₀₄: Financial literacy has no significant effect on loan repayment behaviour across different income groups.

H₁₄: Financial literacy has a significant effect on loan repayment behaviour across different income groups.

VI RESEARCH METHODOLOGY

Research Methodology adopts a descriptive research design to examine loan repayment behaviour across different income groups. The objective of the methodology is to systematically collect, analyse, and interpret data in order to understand how income level influences borrowers repayment patterns and related factors. The study is based on both primary and secondary data. Primary data are collected directly from loan borrowers using a structured questionnaire and Secondary data are gathered from published sources such as research journals, books, SFB databases and credible online databases. The study emphasizes practical observations, borrower interactions, and secondary data to analyze patterns, trends, and factors influencing repayment behaviour. It also incorporates income-group-specific perspectives to understand repayment tendencies among low, middle and high-income borrowers.

1. **Research Design:** a research paper follows a descriptive research design to examine loan repayment behaviour among borrowers belonging to different income groups. Research paper aims at understanding loan repayment in Small Finance Banks at Jalgaon District in Maharashtra.
2. **Population and Sample:** The population for the present study consists of loan borrowers from small finance bank in Jalgaon who have availed loans and fall under different income groups (low, middle, and high income) includes 100 borrowers served by Small Finance Bank in Jalgaon : Loan Against Property (LAP), Micro LAP, Home loans, Unsecured Business loans.
3. **Sample Size:** 100 borrowers representing low, middle and high-income groups.

Sampling Technique: Stratified random sampling, where borrowers were categorized into income groups:

Low-income: < ₹ Up to ₹25,000 monthly income

Middle-income: ₹ 25,001 – ₹75,000 monthly income

High-income: > ₹ Above ₹75,000 monthly income

4. Data Collection Techniques :

Structured Questionnaire: A structured questionnaire was designed for getting customers repayment insights. The questionnaire covered aspects such as Income level, Type of loan, Loan amount, EMI amount, Repayment regularity, Reasons for delayed payments (if any).

Observation: Borrower interactions observed while assisting small finance bank services. Delayed EMI Payments, missed EMIs, and reasons provided by borrowers for bounced EMI, discussion with collection executive about borrowers with delayed EMI payments.

Interviews with Borrowers: Interviews with borrowers from each income Group to understand challenges in repayment. Personal or telephonic interviews with sfb borrowers as to gain qualitative insights into repayment challenges and habits.

Focus Groups: Discussions with small groups of borrowers to understand behavioural and socio-economic factors affecting repayment.

5. Data Analysis Techniques:

Data Editing: The collected data was checked for completeness and accuracy.

Qualitative Analysis: Thematic analysis of interview responses to identify key reasons for delayed repayment and behavioural factors influencing repayment discipline.

Correlation Analysis: To identify relationship between income stability, loan type, and repayment behaviour.

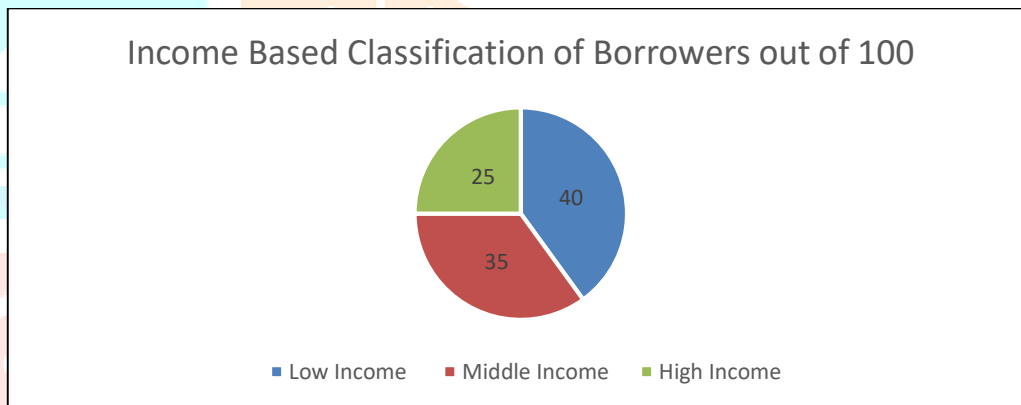
Graphical Representation: Bar charts, pie charts, and histograms to visualize delinquency rates, timely repayments, and default patterns by income Group.

VII ANALYSIS AND INTERPRETATION

1. Income Based Classification of Borrowers

For this study, borrowers were divided into three income Groups:

Income Group	Number of Borrowers out of 100	Monthly Income Range	Observations
Low-income	40	< ₹25,000	Higher volume of borrowers with small-ticket loans. Repayment behavior is often irregular, influenced by variable or unstable income sources.
Middle-income	35	₹25,000 – ₹75,000	Moderate loan volumes, with relatively consistent repayment patterns. Borrowers often repay on time, though occasional delays occur due to unforeseen expenses.
High-income	25	> ₹75,000	Lower volume of borrowers but larger loan amounts. Repayment behavior is generally timely and reliable, with minimal defaults.



Interpretation:

It has been observed there is a clear correlation between income level and repayment behavior: higher income borrowers tend to repay more reliably, whereas low-income borrowers show irregular repayment patterns.

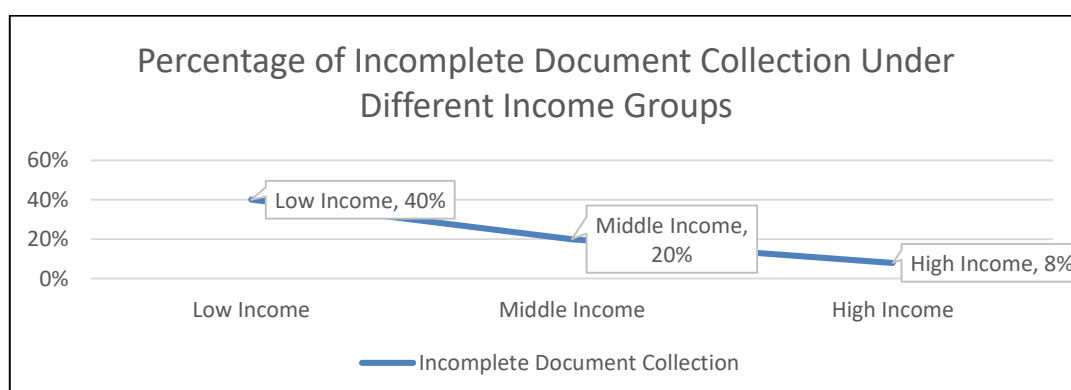
2. Client Onboarding and Document Collection

During the research, the onboarding stage revealed important behavioral patterns:

Low-income borrowers (40 Borrowers) : It was found that, they often submitted incomplete KYC and income documents. 16 Borrowers (40% of Borrowers) from low income groups showed incomplete document collection.

Middle-income borrowers (35 Borrowers) : It was found that, borrowers from middle income groups submitted complete documentation, though occasional clarifications were needed. It has been observed that 7 Borrowers (20% of Borrowers) from middle income groups showed incorrect/incomplete document collection.

High-income borrowers (25 Borrowers) : It was found that borrowers submitted all required documents accurately and promptly. It was observed that 2 Borrowers (8% of Borrowers) from high income groups showed incorrectness/incomplete documents collection.



Interpretation:

It was observed that low income borrowers needed assistance and guidance from bank staff to complete forms correctly. It has been found that promptness in documents collection and smooth client onboarding is associated with good repayment behaviour of borrowers.

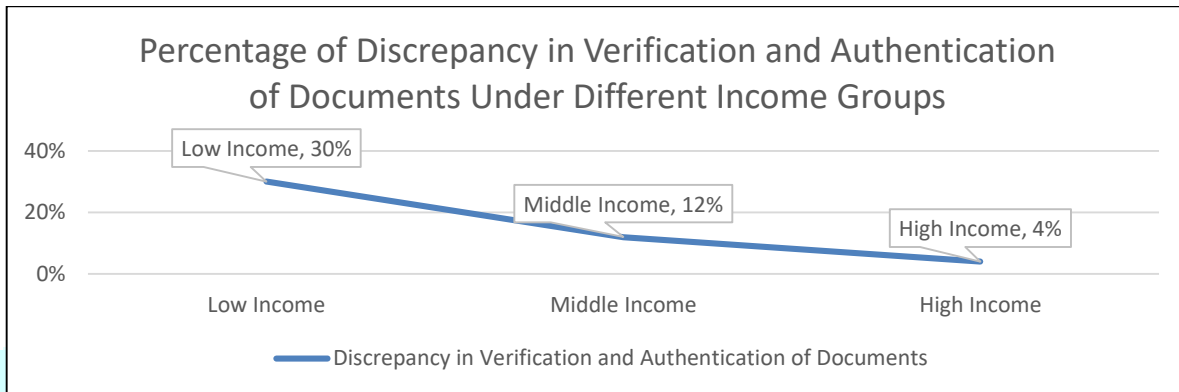
3. Verification and Authentication of Documents

Verification and authentication of documents is a critical step in the loan approval process, as it helps assess the authenticity of borrower information and reduces credit risk.

1. Low-income Group (40 Borrowers) : It has been found that around 12 Borrowers (30% of low income borrowers) showed discrepancies in income or identity proofs. Informal Income Proof were harder to validate.

2. Middle-income Group (35 Borrowers) : It has been found that around 4 borrowers (12% of middle income borrowers) required clarification due to data mismatch across documents (name, dob, address), employment verification issues, income overstatement etc.

3. High-income Group (25 Borrowers) : It has been found that only 1 borrowers (4% of high income borrowers) had issues like complex income structure, verification was quick. Minimal verification issues resulted in faster loan approvals and lower operational risk.



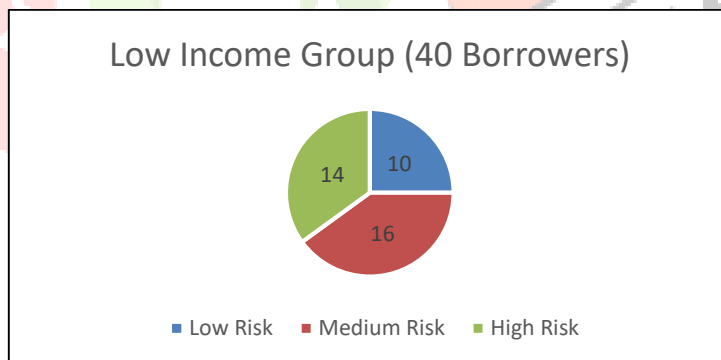
Interpretation:

It has been observed that higher discrepancy rates in the low-income group increase processing time and credit risk, while accurate documentation in middle- and high-income groups supports efficient loan approval and better repayment outcomes.

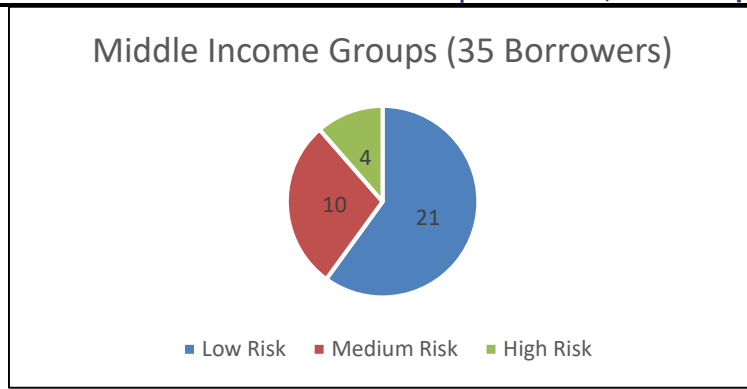
4. Credit Score Analysis

The CIBIL score analysis highlights a strong relationship between income level, creditworthiness, and repayment behavior.

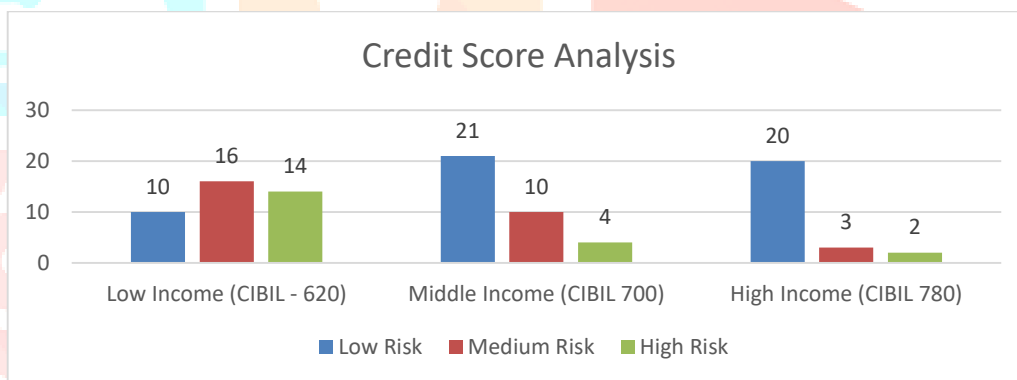
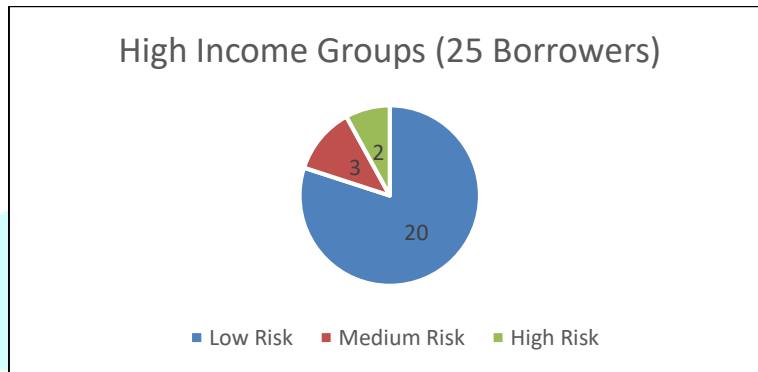
Low-Income Group : The average CIBIL score of 620 indicates higher credit risk. It has been found that out of 40 low income borrowers, Only 10 borrowers fall under the low-risk category, while 14 are classified as high-risk. This suggests a higher likelihood of repayment delays and defaults, often due to irregular income and limited credit history.



Middle-Income Group : With an average CIBIL score of 700, this group demonstrates moderate to good creditworthiness. It has been found that out of total 35 middle income borrowers, 21 borrowers are categorized as low-risk, while 10 borrowers fall under medium risk and 4 borrowers fall under high risk. This reflects relatively stable repayment behavior with occasional financial stress.



High-Income Group : The highest average CIBIL score of 780 indicates strong credit discipline and low default risk. It has been found that out of 25 low income borrowers, 20 borrowers fall under the low-risk category, 3 borrowers fall under medium risk and 2 borrowers are classified as high-risk. This Group shows consistent repayment patterns and strong financial stability.



5. Debt-to-Income Ratio Analysis

The Debt-to-Income (DTI) ratio was calculated for all borrowers to assess their repayment capacity and financial stress levels. DTI represents the percentage of a borrower’s monthly income that goes toward servicing debt obligations:

Income Group	Average DTI	Observation
Low Income (40)	52%	Risk of repayment stress
Middle Income (35)	38%	Moderate and manageable debt burden
High Income (25)	35%	Low repayment stress and strong capacity

Low-Income Group:

It has been observed that, an average DTI of 52% in low income borrowers indicates that more than half of monthly income is spent on debt repayment.

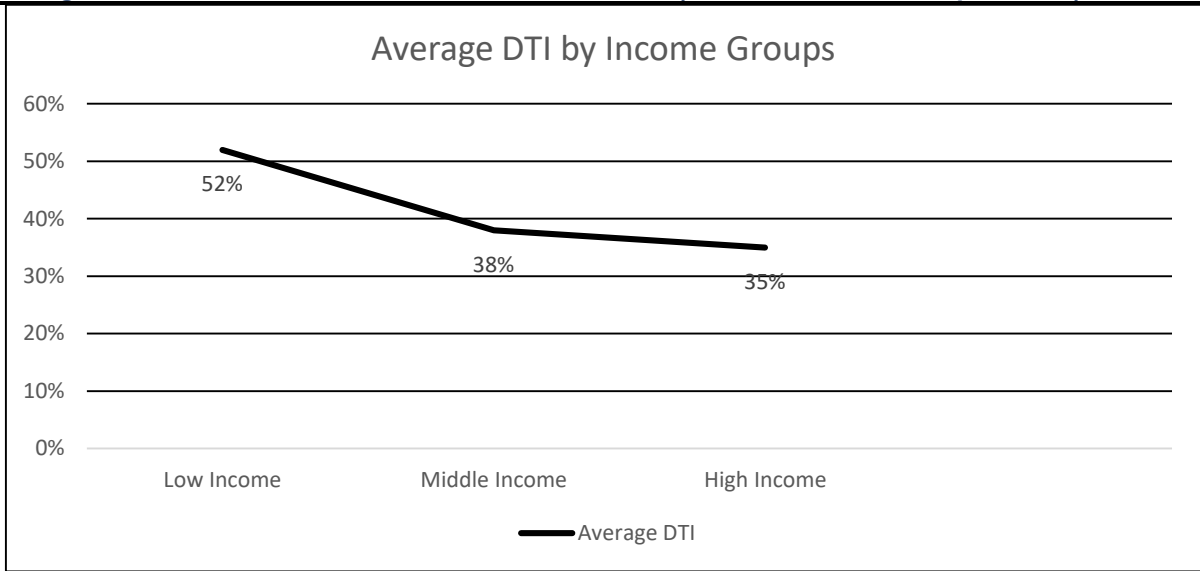
Middle-Income Group:

It is found that the average DTI of 38% in middle income borrowers suggests a balanced debt burden. It has been observed that borrowers in this group generally manage repayments effectively, though occasional stress may arise due to unforeseen financial needs.

High-Income Group:

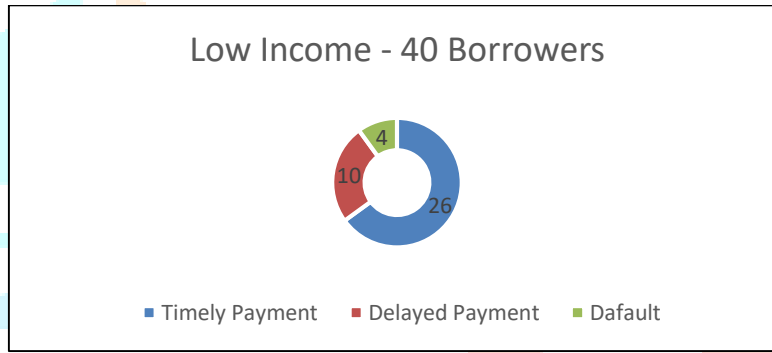
It was found that borrowers in high income group have average DTI of 25%, which shows strong repayment capacity. It has been observed that lower debt obligations relative to income provide greater financial flexibility, resulting in consistent and timely repayments.

The DTI analysis clearly indicates that repayment risk increases with higher debt-to-income ratios.

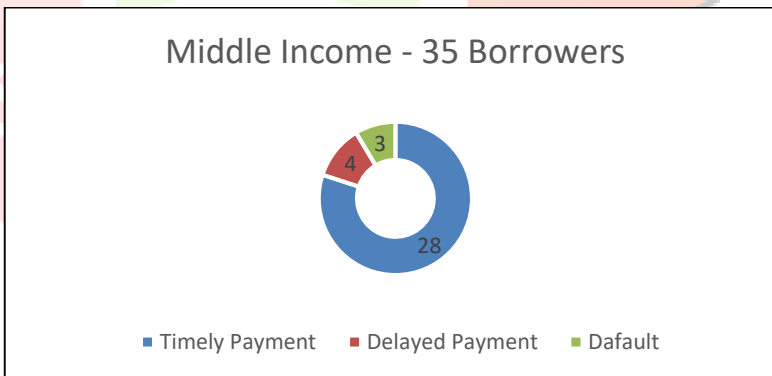


6. Loan Repayment Behavior Analysis

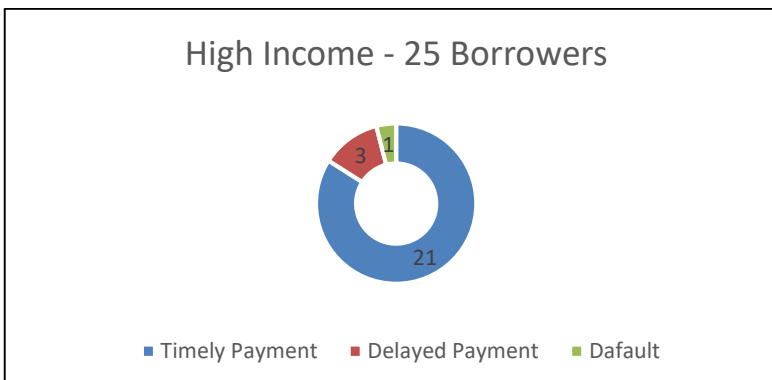
1) Low Income :



2) Middle Income :



3) High Income :



Analysis:

- It was found that repayment discipline increases with income.
- It was observed that middle-income Group occasionally faces delays due to unexpected expenses.
- Low-income borrowers are the most vulnerable to default.

VIII: MAPPING OF OBJECTIVES, HYPOTHESIS, STATISTICAL TOOL USED, DECISION AND RESULT

Sr. No.	Objectives	Hypothesis	Variables	Test Used	p-value	Decision	Result
1	To analyse loan repayment behaviour of borrowers with different income group (low, middle and high income groups)	H01 vs H11 Income group & Repayment behaviour	Income group vs repayment behaviour	Chi-square	Chisquare = 18.62, p=0.001	Reject Null Hypothesis	This indicates that income level has a significant influence on loan repayment behaviour.
2	To understand the relationship between income level and repayment performance including timely payments, defaults and prepayments.	H02 vs H12 Income level & Repayment performance	Income group vs repayment performance	Chi-Square	Chi-square=16.84, p<0.001	Reject Null Hypothesis	This shows that income level has a significant relationship with loan repayment performance.
3	To identify the factors influencing loan repayment performance in different income group borrowers.	H03 vs H13 Factors influencing repayment	Documentation & verification factors vs repayment score	Multiple Regression	R ² =0.41, F=16.50, p<0.001	Reject Null Hypothesis	Verification and authentication factors significantly influence loan repayment performance.
4	To understand the effect of financial literacy on repayment behaviour in different income groups	H04 vs H14 Financial literacy effect	Financial literacy score vs repayment behaviour	Multiple Regression	R ² =0.33, F=15.70, p<0.001	Reject Null Hypothesis	Financial literacy significantly influences loan repayment behaviour across income groups.

IX. SUMMARY OF FINDINGS**1. Low-Income Groups (< ₹25,000 per month):**

- It was found that Borrowers in the low-income Group exhibited the highest frequency of delayed EMI payments and occasional defaults among all income groups.
- It is observed that repayment behaviour was largely influenced by irregular or seasonal income patterns, dependence on informal employment, and vulnerability to unexpected household expenses.

2. Middle-Income Groups (₹25,001 – ₹75,000 per month):

- It was found that borrowers belonging to the middle-income groups generally exhibited stable repayment behaviour, with a majority maintaining regular EMI payments.
- It was found that delays when observed, were primarily associated with multiple loan obligations, such as housing, vehicle, and personal loans, which increased overall repayment burden.

3. High-Income Group (> ₹75,000 per month):

- It was found that borrowers generally demonstrated high repayment reliability, timely EMIs, and strong credit scores (CIBIL > 750).
- It was found that their repayment consistency was supported by stable income sources, higher savings capacity, and stronger financial literacy.

4. It was found that while income level is a key factor influencing loan repayment behavior, risks associated with lower repayment capacity can be significantly reduced through financial education, borrower awareness, and effective advisory support.

5. It was understood that borrowers belonging to the middle-income group exhibit higher vulnerability to repayment stress due to over-borrowing and exposure to multiple loan obligations.

6. It was found that High-income borrowers generally demonstrate consistent repayment performance and a lower likelihood of default.

7. Credit scores and debt-to-income (DTI) ratios continue to serve as reliable and strong indicators for predicting borrower repayment behavior.

8. The study found that that income level has a significant influence on loan repayment behaviour.
9. The findings demonstrate a significant relationship between income level and loan repayment performance.
10. Verification and authentication factors are found to significantly influence loan repayment performance.
11. The study found that Financial literacy significantly affects loan repayment behaviour across different income groups.

X. SUGGESTIONS

1. **Promotion of Financial Inclusion:** Well-structured advisory services and focused support mechanisms for low-income borrowers can facilitate responsible access to credit.
2. **Strengthening Portfolio Quality:** Grouping borrowers based on income levels enables lending institutions to anticipate and manage credit risk more effectively. This proactive approach helps reduce non-performing assets and supports long-term portfolio stability and sustainable growth.
3. **Income-Based Credit Assessment:** Small Finance Banks should further strengthen its income-specific credit appraisal system. Customized credit scoring models based on income levels can help in identifying potential repayment risks at an early stage.
4. **Flexible Repayment Structures for Low-Income Borrowers:** Low-income borrowers are more vulnerable to income fluctuations due to seasonal employment or informal work. The bank should consider flexible repayment schedules, such as weekly or bi-weekly EMIs, grace periods, or income-linked repayment plans.
5. **Enhanced Monitoring of Middle-Income Borrowers:** Middle-income borrowers generally show moderate repayment behavior but may face temporary financial stress. The bank should implement early warning systems to identify delayed payments and initiate timely follow-ups.
6. **Use of Technology in Repayment Management:** Small Finance Bank should promote digital payment channels, SMS alerts, mobile app reminders, and auto-debit facilities to encourage timely EMI payments. Technology-enabled reminders can reduce unintentional delays, especially among salaried and middle-income borrowers.

XI. CONCLUSION

The research on loan repayment behavior across different income groups clearly establishes income as a significant determinant of borrowers repayment capacity and financial discipline. The research paper reveals that repayment behavior is shaped not only by the design of loan products but also by a combination of economic and behavioral factors. Borrowers with stable and adequate income levels generally demonstrated stronger repayment performance, while those with fluctuating or limited income were more vulnerable to delays and defaults. The study further highlights that employment stability, existing financial commitments, and debt-to-income ratios play a crucial role in determining borrowers' ability to service their loans on time. Overall, the findings suggest that integrating advisory services into the lending process, along with robust credit assessment tools, can enhance repayment performance, reduce credit risk, and contribute to the long-term sustainability of lending institutions.

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