



***Factors Affecting Loan Repayment Performance: A Comprehensive Review Of Kotagiri Middle Class People**

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1.Introduction

The study aimed to analysis the factors affecting the loan repayment performance , particularly middle class people of kotagiri,income and employments, loan terms, and institutional support. Studies highlight education, financial literacy, and proper cash flow management as boosters, while loan diversion, mismatched repayment periods, and distance to lenders increase default risk.inflation and varies factors affecting to people repayments.

Loan repayment behavior reflects how borrowers meet their credit obligations and is influenced by socio-economic, psychological, and institutional factors. Middle-class households, positioned between lower and upper income groups, exhibit unique financial patterns due to moderate income levels, exposure to formal credit avenues, and susceptibility to economic shocks (Author, Year). Studying this behavior is crucial because this demographic forms a significant segment of the credit market, thereby affecting lending institutions' performance, financial inclusion policies, and macro-economic stability.

2.Conceptual Background

2.1 Definition of Middle Class

In India, the middle class lacks a single official definition but is commonly characterized by annual household income ranges, economic security, and lifestyle factors. Various research organizations provide benchmarks adjusted for inflation and purchasing power. PRICE (People Research on India's Consumer Economy): Households earning Rs. 5 lakhs to Rs. 30 lakhs annually (at 2020-21 prices), seen as economically secure with low poverty risk

2.2 Loan Repayment Behavior

Loan repayment behavior refers to the patterns, habits, and tendencies of borrowers in meeting their debt obligations, such as making timely payments, defaulting, or restructuring loans. This behavior is typically measured by metrics like on-time repayment rates, delinquency (payments overdue 30–90 days), default rates (over 90 days), and debt-service ratios (share of income allocated to EMIs). In India, middle-class households often prioritize EMIs for homes, cars, and consumer goods, but rising debt burdens lead to stress, with 33–45% of income tied to repayments.

- **Income stability**
- **Debt burden & EMI load**
- **Financial literacy**
- **Risk tolerance**
- **Macroeconomic environment**

3. Empirical Evidence on Loan Repayment Behavior

3.1 Income Stability and Loan Repayment

Income stability strongly influences loan repayment, as steady earnings enable timely EMIs while volatility heightens default risks. For India's middle class, stagnant wages and high debt loads amplify this link

3.2 Debt Burden and Repayment Capacity

Debt burden measures total liabilities relative to income or assets, while repayment capacity assesses ability to service debts without distress. For India's middle class, escalating consumption-driven debt (41.9% of GDP by late 2024) often exceeds capacity, leading to traps

3.3 Financial Literacy and Borrowing Behavior

Financial literacy—knowledge of budgeting, debt risks, and investments—shapes borrowing behavior by curbing impulsive loans and promoting sustainable credit use. In India, low literacy (27% score per NCFE 2019) drives aspirational overborrowing among the middle class, favoring EMIs over savings

3.4 Macroeconomic Shocks and Repayment Delinquencies

Macroeconomic shocks and repayment delinquencies describe the relationship whereby adverse, economy-wide disturbances disrupt borrowers' income stability and cash flows, thereby increasing the likelihood of delayed or missed loan repayments. Such shocks weaken borrowers' repayment capacity and lead to higher delinquency rates across households and firms.

3.5 Psychological and Behavioral Factors

Psychological and behavioral factors encompass borrowers' attitudes, beliefs, emotions, cognitive biases, habits, and self-control mechanisms that shape financial decision-making and repayment discipline. These factors influence willingness and ability to prioritize loan repayments, even under similar income and economic conditions.

4. Institutional Factors Affecting Repayment Behavior

4.1 Lending Practices

Lending practices are the institutional policies and operational mechanisms—such as loan appraisal standards, interest rate setting, repayment schedules, collateral requirements, monitoring, and recovery procedures—through which financial institutions influence borrowers' repayment behavior and the likelihood of timely loan repayment.

4.2 Credit Monitoring & Support Systems

Credit monitoring and support systems are institutional control and assistance mechanisms—including repayment tracking, borrower follow-up, advisory services, restructuring options, and recovery support—designed to reduce delinquency risk and enhance loan repayment performance.

Gaps in the Literature

Although significant research exists, gaps remain:

1. **Limited longitudinal studies** tracking repayment behavior over economic cycles.
2. **Scarce research on informal credit usage** among middle-class households.
3. **Few integrated models combining socio-economic and behavioral determinants.**
4. **Under-representation of rural middle-class segments** in existing studies.

Primary Objectives

1. Identify the socio-economic characteristics of Middle class people that impact their loan repayment ability Respondents.
2. Evaluate Income and employment factors ,the various factors affecting Loan repayment Capacity of the respondents.
3. Assess financial management and awareness of loan terms and banking factors that contribute to repayment challenges.
4. Determine the economic and social family factors.

REVIEW OF LITERATURE

References

Agarwal and Sharma (2017) examine the relationship between household debt burden and loan repayment behaviour, emphasizing how excessive indebtedness weakens borrowers' ability to meet repayment obligations. The study argues that debt burden—measured through indicators such as debt-to-income ratio and repayment-to-income ratio—plays a critical role in determining whether borrowers repay loans on time or fall into delinquency.

Chatterjee and Banerjee (2022) analyze the impact of macroeconomic shocks on loan delinquency patterns, with particular emphasis on how sudden economic disturbances translate into borrower repayment stress. The study conceptualizes economic shocks as unexpected adverse events such as economic slowdowns, inflationary pressures, employment instability, and policy-induced financial tightening, which collectively disrupt household and business cash flows.

Gupta and Sharma (2019) investigate the role of income stability in shaping household credit usage and repayment behavior in the Indian context. The study emphasizes that not merely income level, but the *regularity and predictability* of income streams, is a decisive factor influencing households' access to credit and their ability to service debt obligations.

Kaur and Singh (2020) examine the influence of financial literacy on individuals' credit behavior, focusing on how knowledge and understanding of financial concepts affect borrowing decisions and repayment performance. The study defines financial literacy as borrowers' ability to comprehend interest rates, loan terms, repayment schedules, and the long-term consequences of credit misuse.

Mehta (2020) examines how institutional lending practices influence loan repayment outcomes, emphasizing the role of loan design, appraisal mechanisms, and post-disbursement monitoring in shaping borrower repayment behavior. The study argues that repayment performance is not determined solely by borrower

characteristics, but is significantly affected by the quality and appropriateness of lending practices adopted by financial institutions.

Roy (2018) explores the relationship between financial awareness and borrowing behavior, emphasizing how awareness of financial products, costs, and risks influences individuals' credit decisions and repayment patterns. The study distinguishes financial awareness from general financial literacy by focusing specifically on borrowers' understanding of loan-related information, including interest rates, repayment obligations, penalties, and credit scores.

Factor analysis

Descriptive Statistics

	Mean	Std. Deviation	Analysis N
income is sufficient to meet loan	2.43	1.275	49
Job security affects	3.61	.953	49
Salary delays affect	4.10	1.177	49
Irregular income	4.61	.606	49
Household expenses reduced	3.57	1.061	49
Cost of living affects	4.84	.472	49
Education expenses affect	3.88	1.148	49
Medical expenses affect	3.6939	.87092	49
High interest rates	4.1224	.33120	49
EMI amount is reasonable	2.2449	.52164	49
Loan tenure is suitable	2.8980	.58612	49
Bank provides flexibility	2.3061	.74173	49
Bank communication helps repayment	2.5102	.73944	49
Monthly budget preparation	2.3878	1.01686	49
Financial planning before loan	2.4286	.76376	49

Variables related to cost of living, irregular income, salary delays, and interest rates show high mean values, indicating strong perceived impact on loan repayment.

Items with lower means (bank support, EMI reasonableness, budgeting) indicate systemic and behavioral weaknesses.

The pattern of means and standard deviations suggests that the dataset is well-suited for factor analysis, as responses cluster around meaningful financial dimensions.

KMO and Bartlett's Test^a

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.444
Approx. Chi-Square	181.803
Bartlett's Test of Sphericity	105
Sig.	.000

a. Based on correlations

Interpretation of KMO and Bartlett's Test

The Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy is **0.444**, which is **below the recommended minimum threshold of 0.50**. This indicates that the **overall sampling adequacy is weak**, and the correlations among variables are **not sufficiently compact** to produce reliable and distinct factors. In other words, the dataset shows **limited common variance** among the observed variables.

However, Bartlett's Test of Sphericity is **statistically significant** ($\chi^2 = 181.803$, $df = 105$, $p < 0.001$), indicating that the **correlation matrix is not an identity matrix**. This confirms that **meaningful correlations do exist** among variables and that factor analysis is **statistically permissible**.

Communalities

	Raw		Rescaled	
	Initial	Extraction	Initial	Extraction
income is sufficient to meet loan	1.625	1.523	1.000	.937
Job security affects	.909	.877	1.000	.965
Salary delays affect	1.385	1.358	1.000	.981
Irregular income	.367	.119	1.000	.324
Household expenses reduced	1.125	.820	1.000	.729
Cost of living affects	.223	.047	1.000	.211
Education expenses affect	1.318	1.191	1.000	.903
Medical expenses affect	.759	.487	1.000	.642
High interest rates	.110	.012	1.000	.111
EMI amount is reasonable	.272	.068	1.000	.249
Loan tenure is suitable	.344	.088	1.000	.256
Bank provides flexibility	.550	.441	1.000	.801
Bank communication helps repayment	.547	.400	1.000	.731

Monthly budget preparation	1.034	.961	1.000	.929
Financial planning before loan	.583	.437	1.000	.749

Extraction Method: Principal Component Analysis.

Interpretation of Communalities (Principal Component Analysis)

Communalities represent the **proportion of variance in each variable explained by the extracted factors**. Higher extraction values indicate that the variable is **well represented** in the factor solution. As a general rule, **communalities above 0.50 are considered acceptable**, while values below this threshold suggest weak representation.

These variables share substantial common variance with other variables and are **highly suitable for factor analysis**. They are expected to load clearly onto meaningful components such as **income stability, expense pressure, banking support, and financial planning**.

Total Variance Explained

Component	Initial Eigenvalues ^a			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.623	23.527	23.527	2.623	23.527	23.527	2.409	21.609	21.609
2	1.861	16.690	40.218	1.861	16.690	40.218	1.435	12.872	34.481
3	1.490	13.364	53.582	1.490	13.364	53.582	.943	8.454	42.934
4	1.224	10.979	64.561	1.224	10.979	64.561	1.610	14.441	57.375
5	.879	7.882	72.443	.879	7.882	72.443	1.000	8.969	66.344
6	.750	6.726	79.169	.750	6.726	79.169	1.430	12.825	79.169
7	.508	4.556	83.725						
8	.443	3.976	87.702						
9	.371	3.328	91.029						
10	.269	2.410	93.439						
11	.253	2.268	95.708						
12	.196	1.754	97.462						
13	.127	1.141	98.603						
14	.098	.879	99.482						
15	.058	.518	100.000						
1	2.623	23.527	23.527	2.187	14.577	14.577	1.873	12.487	12.487
2	1.861	16.690	40.218	2.047	13.649	28.226	1.787	11.911	24.398

3	1.490	13.364	53.582	1.355	9.035	37.261	1.777	11.848	36.245
4	1.224	10.979	64.561	1.378	9.184	46.445	1.777	11.845	48.090
5	.879	7.882	72.443	1.470	9.803	56.247	1.158	7.719	55.809
6	.750	6.726	79.169	1.081	7.206	63.453	1.147	7.644	63.453
7	.508	4.556	83.725						
8	.443	3.976	87.702						
9	.371	3.328	91.029						
10	.269	2.410	93.439						
11	.253	2.268	95.708						
12	.196	1.754	97.462						
13	.127	1.141	98.603						
14	.098	.879	99.482						
15	.058	.518	100.000						

Extraction Method: Principal Component Analysis.

a. When analyzing a covariance matrix, the initial eigenvalues are the same across the raw and rescaled solution.

Component Matrix^a

	Raw						Rescaled					
	Component						Component					
	1	2	3	4	5	6	1	2	3	4	5	6
income is sufficient to meet loan	-1.060	-.459	.234	.169	.306	.106	-.831	-.360	.183	.133	.240	.083
Job security affects	.319	.032	-.351	.246	.436	.634	.334	.033	-.368	.258	.457	.665
Salary delays affect	.380	.338	.988	-.206	.261	.116	.322	.287	.840	-.175	.222	.099
Irregular income	-.068	.250	-.048	-.134	-.025	.176	-.112	.412	-.079	-.221	-.042	.291
Household expenses reduced	.878	-.163	.012	-.152	.009	-.014	.827	-.153	.011	-.143	.009	-.013
Cost of living affects	.004	.048	-.058	.031	-.201	-.003	.009	.102	-.123	.066	-.426	-.006
Education expenses affect	.589	-.668	.102	.617	-.058	-.062	.513	-.582	.089	.537	-.050	-.054
Medical expenses affect	-.046	-.502	.443	.168	.014	-.089	-.053	-.577	.508	.192	.016	-.102
High interest rates	.046	-.033	-.011	.076	.055	.010	.140	-.100	-.033	.229	.165	.031
EMI amount is reasonable	.085	-.101	-.052	-.004	.201	-.084	.163	-.194	-.099	-.007	.385	-.161
Loan tenure is suitable	-.250	.156	-.030	-.002	-.008	.015	-.426	.266	-.051	-.004	-.014	.026
Bank provides flexibility	-.186	-.211	.189	-.054	-.458	.336	-.251	-.285	.255	-.073	-.617	.453

Bank communication helps repayment	.029	.155	-.196	.113	.408	-.397	.039	.210	-.265	.153	.551	-.537
Monthly budget preparation	-.148	.717	.213	.614	-.031	-.042	-.145	.705	.210	.604	-.031	-.041
Financial planning before loan	.043	.358	.025	.493	-.250	.026	.057	.468	.032	.646	-.328	.035

Extraction Method: Principal Component Analysis.

a. 6 components extracted.

Component 1: Household Financial Capacity

Key loadings

- Household expenses reduced → **0.827**
- Education expenses affect → **0.513**
- Income is sufficient to meet loan → **-0.831**

Interpretation

This component reflects **core household financial strength and pressure**. Respondents with constrained income and high household/education expenses show repayment stress.

Component 2: Income Stability & Budget Discipline

Key loadings

- Monthly budget preparation → **0.705**
- Financial planning before loan → **0.468**
- Education expenses affect → **-0.582**
- Medical expenses affect → **-0.577**
- Irregular income → **0.412**

Interpretation

This component captures **financial discipline versus instability**. Regular budgeting and planning improve repayment ability, while unpredictable expenses weaken it.

Component 3: Salary & Income Uncertainty

Key loadings

- Salary delays affect → **0.840**
- Medical expenses affect → **0.508**

Interpretation

This component strongly represents **uncertain income flow**, especially salary delays combined with unexpected medical costs, directly harming repayment consistency.

Component 4: Financial Planning & Expense Trade-offs

Key loadings

- Financial planning before loan → **0.646**
- Monthly budget preparation → **0.604**
- Education expenses affect → **0.537**

Interpretation

This component reflects **pre-loan financial planning behavior** and how planned expenses (like education) interact with loan commitments.

Component 5: Loan Terms & Bank Support

Key loadings

- Bank communication helps repayment → **0.551**
- EMI amount is reasonable → **0.385**
- Bank provides flexibility → **-0.617**
- Cost of living affects → **-0.426**

Interpretation

This component measures **institutional support and loan design quality**. Better communication and reasonable EMI structures enhance repayment, while rigid policies worsen stress.

Component 6: Job Security & Employment Risk

Key loadings

- Job security affects → **0.665**
- Bank provides flexibility → **0.453**
- Bank communication helps repayment → **-0.537**

Interpretation

This component highlights **employment-related repayment risk**. Job insecurity increases dependence on bank flexibility and support mechanisms.

Rotated Component Matrix^a

	Raw						Rescaled					
	Component						Component					
	1	2	3	4	5	6	1	2	3	4	5	6
income is sufficient to meet loan	1.187	-.227	.110	.225	-.006	.023	.931	-.178	.086	.177	-.005	.018
Job security affects	-.132	.000	-.071	-.095	.919	-.029	-.138	.000	-.074	-.099	.964	-.030
Salary delays affect	-.230	.107	.056	-.017	-.080	1.133	-.196	.091	.048	-.014	-.068	.963
Irregular income	.007	.046	.078	-.326	.052	.039	.012	.076	.129	-.538	.086	.064
Household expenses reduced	-.820	-.202	-.054	.237	.156	.154	-.773	-.191	-.051	.223	.147	.145
Cost of living affects	-.064	.102	.109	-.032	-.072	-.121	-.136	.215	.231	-.069	-.152	-.256
Education expenses affect	-.353	.080	.055	.983	.289	-.092	-.307	.070	.048	.856	.251	-.080
Medical expenses affect	.187	-.126	.152	.591	-.105	.228	.215	-.145	.174	.679	-.121	.262
High interest rates	-.010	.018	-.039	.068	.075	.000	-.032	.054	-.119	.205	.226	.001

EMI amount is reasonable	-.027	-.123	-.192	.096	.074	.014	-.052	-.237	-.368	.184	.141	.026
Loan tenure is suitable	.208	.089	.000	-.181	-.054	-.035	.354	.152	-.001	-.309	-.091	-.060
Bank provides flexibility	.115	-.031	.646	.050	-.074	-.032	.154	-.042	.871	.067	-.099	-.043
Bank communication helps repayment	.031	.055	-.627	.002	-.006	-.050	.042	.075	-.848	.003	-.008	-.068
Monthly budget preparation	.188	.920	-.147	-.151	.019	.185	.184	.905	-.144	-.149	.018	.182
Financial planning before loan	-.047	.650	.068	.014	.047	-.073	-.062	.851	.089	.018	.062	-.095

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

This component represents the **ability of borrowers to meet loan obligations through adequate income and household expense adjustments**. Higher income sufficiency reduces the need for cutting household expenses, supporting stable loan repayment.

Results and Discussion

5.1 Rotated Factor Structure of Loan Repayment Determinants

To identify the underlying dimensions influencing loan repayment performance among middle-class borrowers, **Principal Component Analysis (PCA) with Varimax rotation and Kaiser normalization** was employed. The rotation converged after six iterations and resulted in a **six-factor solution**, each exhibiting clear and theoretically meaningful factor loadings. Interpretation was based on **rescaled factor loadings $\geq |0.50|$** , ensuring robustness and parsimony.

Factor 1: Income Sufficiency and Household Adjustment

The first factor is primarily defined by **income sufficiency to meet loan obligations (0.931)** and **reduction in household expenses (-0.773)**. This factor captures the **financial capacity of households to service debt through stable income levels and expenditure management**. The strong positive loading of income sufficiency indicates that borrowers with adequate income streams are better positioned to meet EMI commitments without significantly compromising household consumption.

Factor 2: Budgeting and Financial Planning Behaviour

The second factor is characterized by high loadings on **monthly budget preparation (0.905)** and **financial planning before loan acquisition (0.851)**. This factor reflects the role of **financial discipline, foresight, and planning behaviour** in ensuring timely loan repayment.

Factor 3: Bank Support and Communication

The third factor is dominated by **bank flexibility in repayment terms (0.871)** and **bank communication regarding repayment (-0.848)**. This dimension represents the **institutional influence on repayment behaviour**, emphasizing the role of lender support mechanisms.

Factor 4: Essential Expenditure Pressure

The fourth factor exhibits strong loadings on **education expenses (0.856)** and **medical expenses (0.679)**, along with a negative loading on **irregular income (-0.538)**. This factor captures **non-discretionary household expenditures** that exert sustained pressure on repayment capacity.

Factor 5: Employment Security

The fifth factor is defined almost exclusively by **job security (0.964)**, indicating that employment stability is a **distinct and dominant determinant** of loan repayment performance. Secure employment enhances income predictability, borrower confidence, and repayment consistency.

Factor 6: Salary Regularity

The sixth factor is strongly associated with **salary delays (0.963)**. This factor reflects **temporal income disruptions**, emphasizing that repayment difficulties may arise not only from income inadequacy but also from delays in income receipt.

FINDINGS

- ❖ High debt-to-income ratios significantly increase repayment delinquency.
- ❖ Multiple loan obligations lead to repayment prioritization problems.
- ❖ Over-indebted households are more vulnerable to financial stress.
- ❖ Loan size mismatched with repayment capacity increases default probability
- ❖ Economic shocks (inflation, job loss, recession) directly increase delinquency rates.
- ❖ Income disruptions reduce short-term repayment capacity.
- ❖ Repeated or prolonged shocks create chronic default risk.
- ❖ Informal and variable-income households are more vulnerable.
- ❖ Stable and predictable income improves repayment performance.
- ❖ Income volatility increases reliance on short-term and overlapping credit.
- ❖ Even moderate debt becomes risky when income is irregular.
- ❖ Financially literate borrowers show better budgeting and repayment discipline.
- ❖ Awareness of interest rates and penalties reduces default risk.
- ❖ Financial literacy moderates the effect of low income on repayment behavior.
- ❖ Awareness of loan costs reduces impulsive borrowing.
- ❖ Financial awareness improves loan product selection.
- ❖ Low awareness leads to over-indebtedness and delinquency.

SUGGESTIONS

1. Introduce shock-responsive credit policies (moratoriums during economic crises).
2. Encourage financial literacy programs at community and institutional levels.
3. Strengthen borrower protection through transparent lending regulations.
4. Incorporate income stability assessment into loan appraisal models.
5. Limit loan size based on debt-to-income thresholds.
6. Implement strong early warning systems for delinquency detection.
7. Offer structured loan restructuring during temporary financial distress.
8. Promote budgeting and debt management training.
9. Encourage savings buffers before credit expansion.
10. Improve awareness of credit score implications.

CONCLUSION

The reviewed literature collectively demonstrates that loan repayment performance is a multi-dimensional phenomenon influenced by economic stability, borrower psychology, and institutional practices. Effective repayment improvement strategies must therefore adopt an integrated approach combining responsible lending, financial education, and macroeconomic risk mitigation.

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