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An Empirical Study of Regional Differences in Farmers' Attitude Towards Debt and Debt Repayment Behaviour of Jammu and Kashmir

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ABSTRACT: Access to agricultural finance is critical for boosting farmers' economic stability and productivity; however, attitudes on debt and repayment vary greatly between regions. The current study uses primary data obtained from 520 farmers in three districts of Jammu and Kashmir—Anantnag, Baramulla, and Budgam—to investigate differences in Attitude Towards Debt (ATD) and Debt Repayment Behaviour (DRB). Descriptive statistics and one-way ANOVA were used to investigate geographical variations in the variables. Farmers' attitudes about debt differ significantly between districts ($F = 80.26, p < 0.001$), with Anantnag having the highest mean ATD score ($M = 4.000$), followed by Budgam ($M = 3.329$), and Baramulla having the lowest ($M = 2.511$). Similarly, substantial differences were seen in debt repayment behavior ($F = 39.43, p < 0.001$). Anantnag farmers showed relatively superior repayment behavior ($M = 3.797$), followed by Budgam ($M = 3.013$) and Baramulla ($M = 2.661$). These findings show that regional socioeconomic variables and levels of financial understanding influence farmers' perceptions of debt and repayment habits. The study suggests that region-specific financial literacy initiatives and policy interventions are required to promote responsible borrowing and strengthen debt repayment behaviour among farmers, thereby improving the effectiveness of agricultural credit systems and supporting long-term rural financial development.

KEYWORDS: Debt Repayment Behaviour, Agricultural Finance, Agricultural Schemes, Debt Management, Financial Literacy.

I. INTRODUCTION

Agricultural finance plays a crucial role in sustaining farming activities, particularly in developing economies where farmers rely heavily on external financial support to meet production and household needs. Access to credit enables farmers to purchase inputs, adopt modern technologies, and manage risks associated with agricultural production. However, the effectiveness of agricultural credit systems largely depends on farmers' attitudes toward debt and their ability and willingness to repay borrowed funds. Understanding farmers' perceptions of debt and their repayment behaviour is therefore essential for ensuring the sustainability of rural financial institutions and the success of government agricultural schemes. In many areas, farmers rely on both conventional and informal financial sources to fund agricultural activities. Government measures, including agricultural schemes and institutional lending, attempt to enhance farmers' access to inexpensive finance and lessen their reliance on informal lenders. Despite these efforts, inequalities in debt attitudes and repayment behaviour occur among regions due to socioeconomic variances, government program awareness, and farmer financial literacy.

The current study investigates farmers' attitudes toward debt (ATD) and debt repayment behavior (DRB) in three districts of Jammu and Kashmir: Anantnag, Baramulla, and Budgam. Descriptive statistics show significant disparities between districts in terms of mean scores for both attitude toward debt and repayment behaviour. Further statistical analysis using ANOVA shows that these differences are statistically significant, implying that regional and contextual factors may influence farmers' financial views and behaviours. The study's goal is to provide insights into how farmers perceive debt commitments and how these perceptions affect repayment patterns by analyzing district-specific variances in ATD and DRB data. This understanding is critical for policymakers, financial institutions, and agricultural development agencies for developing effective lending policies, increasing financial inclusion, and strengthening the implementation of government agricultural initiatives. Finally, strengthening farmers' financial attitudes and repayment behaviour can help to ensure the viability of rural lending systems and long-term agricultural development.



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II. RESEARCH OBJECTIVES

To investigate the differences in farmers' views toward debt (ATD).
To examine the differences in farmers' debt repayment practices (DRB)

III. REVIEW OF LITERATURE

Moorman, D. C., et al. (2008). Years of debate over escalating bankruptcy filings and potential system abuse led to the passage of the Bankruptcy Abuse Prevention and Consumer Protection Act (BAPCPA) in 2005. This study investigates whether households apply for bankruptcy despite pursuing debt restructuring or being in financial crisis. Using a multivariate regression analysis of Panel Study of Income Dynamics (PSID) data, the researchers discovered that earlier financial troubles greatly increase bankruptcy filings, emphasizing the necessity of early financial intervention.

Özşahin, M., et al. (2018). looks at psychological factors other than socioeconomic status that influence debt repayment behavior. It employs qualitative in-depth interviews to explore personality and attitudes in the Turkish environment. According to the findings, regular payers exhibit responsibility, long-term orientation, collectivism, sanction fear, rational decision making, and risk aversion, whereas irregular payers exhibit irresponsibility, short-term orientation, emotional imbalance, irrational decisions, and an external locus of control.

Barboni, G., et al. (2022). conducts a randomized experiment with 7,029 late-paying clients of a Colombian bank to investigate behavioral SMS messages urging loan payback. The results reveal that communications, particularly those based on social standards, reduce late payments by 4%. The effects are more pronounced among borrowers with good credit histories and unsecured loans. A second experiment with 8,019 on-time borrowers yields no meaningful results.

Duygan-Bump, B., et al. (2009). Using data from the European Community Household Panel, this study investigates the factors that influence household debt repayment behavior. It discovers that arrears frequently result in negative outcomes such as unemployment or ill health, and are commonly driven by income or health shocks. Cross-national differences exist, impacted by financial and judicial institutions. The findings imply that repayment issues stem from both actual financial difficulties and strategic behavior.

Bhattacharjee, M., et al. (2013). This study looks at the relationship between loan repayment in the formal credit market and borrowing from informal sources in India. According to National Sample Survey statistics, higher informal interest rates encourage prompt repayment of legal loans. However, expectations of loan waivers and moral hazard have a negative impact on repayment behavior, underscoring the problems of managing non-performing assets in the banking sector.

Abraham, K. G., et al. (2018). This study looks at how student loan repayment options affect borrowers' employment choices. Income-driven repayment (IDR) programs lower default risk, making higher-paying but riskier jobs more appealing. According to experimental research, borrowers use available plans and other people's selections as references. Emotions like remorse and relief can influence decisions. Offering just IDR plans promotes the appeal of riskier jobs and raises predicted earnings.

Almenberg, J., et al. (2021). This study introduces a survey measure of debt attitudes and relates it to Swedish household panel data. The study found that debt attitude strongly explains differences in household indebtedness, debt accumulation, and spending behavior between 2004 and 2007. It performs similarly to variables such as education, risk-taking, and financial literacy, and it appears to be influenced by family background and cultural influences.

Davies, E., et al. (1995). This study investigates debt levels and attitudes among undergraduate students, revealing that they are a low-income but high-debt group with a tolerant attitude toward debt. Age, religion, credit card use, and external locus of control are all factors that influence debt and attitudes. Debt levels grow before tolerance does, lending credence to life-cycle and behavioral theories that explain students' debt acceptance.

Beale, E. M., et al. (2023). This study examines the psychological factors that influence college students' views regarding debt using survey data from 283 undergraduates. The findings indicate that lower financial self-confidence is connected with more positive attitudes regarding debt. The ability to wait gratification and social comparison are not



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important considerations. Gender is the sole significant control variable, with women having more unfavorable attitudes towards debt than males.

Haultain, S., et al. (2010). This study uses factor analysis to investigate attitudes regarding debt among New Zealand tertiary students. The findings show that debt attitudes are not one-dimensional, but rather consist of two factors: fear of debt and debt utility. Longitudinal data reveal that students become less scared of debt after entering tertiary education, but their assessment of debt's utility remains relatively unaltered over time.

Bialowolski, P., et al. (2020). Using latent class analysis, this study investigates the link between debt literacy and debt attitudes in 1,004 Polish people. Five unique attitude profiles were established, demonstrating that debt views are more complex than just pro- or anti-debt. The findings show strong correlations between debt attitudes and financial knowledge and abilities, with debt skills appearing as an especially important predictor.

Brown, S., et al. (2013). This study uses data from the United States Panel Study of Income Dynamics (1984-2007) to investigate the connection between risk attitudes and household debt. The findings show that risk-taking attitudes have a considerable impact on debt accumulation. Households with higher risk aversion tend to have lower amounts of unsecured, secured, and total debt than those with higher risk tolerance.

Abdullah, N., et al. (2019). This study investigates the connection between young workers' financial well-being in Malaysia and their views toward money, financial literacy, and debt management. Data from 508 respondents under the age of 40 were examined using multi-stage random sampling. Positive correlations between financial well-being, money attitudes, debt management, and financial literacy were found by Pearson's correlation. According to regression analysis, these factors accounted for 27.4% of the variance in financial well-being, with the effort/ability dimension of money attitude making the largest contribution.

Harrison, N., et al. (2015). This study conducts qualitative interviews with 62 first-year students from various backgrounds to investigate attitudes toward money, borrowing, and debt among UK undergraduates. Thematic analysis revealed a wide variety of sentiments, from "debt-positive" to "debt-angry." The findings demonstrate that student attitudes are nuanced, with many lower-income students viewing debt positively as a means to better professions. Overall, most students appear to be debt-savvy or debt-resigned, accepting high student debt as the norm.

Bukhari IAS, Radhakrishna M., et al. (2026). looks at farmers' debt profiles and the socioeconomic determinants that influence borrowing behaviour, with an emphasis on outstanding agricultural loans. Using primary data from 520 farmers in Anantnag, Baramulla, and Budgam, the study used descriptive statistics, ranking, Chi-square, and ANOVA. The results suggest that the majority of respondents are small farmers with moderate debt, primarily for farm inputs and household requirements. The findings underscore the importance of financial awareness and supportive government policies, as well as continuous credit dependence.

IV. RESEARCH SIGNIFICANCE

The study found substantial geographical differences in both Attitude Towards Debt (ATD) and Debt Repayment Behaviour (DRB) among farmers in Anantnag, Baramulla, and Budgam. The ANOVA results show substantial differences ($p < .001$) among districts, indicating that farmers' views of debt and repayment behavior vary greatly based on geography and socio-economic situations. This finding is crucial for policymakers and financial institutions because it underscores the importance of region-specific financial policies, loan programs, and awareness activities rather than a standardized strategy across all districts.

The findings demonstrate that farmers in Anantnag have higher mean scores for both ATD and DRB than in Baramulla and Budgam, indicating greater financial discipline and a more positive attitude toward debt payback. This revelation is essential for rural financial institutions and government agencies because it provides actual evidence that one's attitude regarding debt has a major impact on repayment behavior. Understanding these behavioral differences can aid in the development of more effective agricultural lending schemes, risk assessment models, and financial literacy initiatives, ultimately leading to higher loan recovery rates and stronger rural financial institutions.



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V. RESEARCH METHODOLOGY

The current study used a quantitative research approach to investigate differences in farmers' attitudes toward debt (ATD) across three districts in Jammu and Kashmir: Anantnag, Baramulla, and Budgam. 520 farmers provided primary data through a standardized questionnaire. The data was summarized using descriptive statistics such as the mean, standard deviation, standard error, and coefficient of variation. To determine whether there were significant differences between the districts, one-way ANOVA was used. The findings revealed statistically significant disparities in farmers' views about debt across districts. Before interpreting the ANOVA data, we performed assumption testing using Levene's test for equality of variances and Q-Q plots to ensure normality and homogeneity.

VI. DATA ANALYSIS

Table 1- Descriptive Statistics of Farmers' Attitudes Toward Debt (ATD)

Address	N	Mean	SD	SE	Coefficient of variation
Anantnag	182	4.000	0.794	0.059	0.198
Baramulla	180	2.511	1.416	0.106	0.564
Budgam	158	3.329	1.055	0.084	0.317

The descriptive statistics show how farmers' attitudes toward debt (ATD) vary across three districts: Anantnag, Baramulla, and Budgam. The findings show that farmers in Anantnag (N = 182) have the highest mean score (Mean = 4.000, SD = 0.794), indicating a stronger or more positive attitude toward debt. Farmers in Budgam (N = 158) have a modest attitude toward debt, with a mean of 3.329 (SD = 1.055). In contrast, Baramulla (N = 180) had the lowest mean score (Mean = 2.511, SD = 1.416), showing a lesser attitude toward debt. The coefficient of variation also indicates that Baramulla has the most variability (0.564) compared to Budgam (0.317) and Anantnag (0.198), implying larger dispersion in responses among farmers in Baramulla.

Table 2- ANOVA - Attitudes Toward Debt (ATD)

Cases	Sum of Squares	Df	Mean Square	F	p
Address	201.1	2	100.572	80.26	< .001
Residuals	647.9	517	1.253		

Note. Type III Sum of Squares

The one-way ANOVA findings were used to determine whether there are significant variations in attitudes toward debt (ATD) among farmers in the three districts. The results show a statistically significant difference between districts (F = 80.26, p < .001). The between-group sum of squares is 201.1 with two degrees of freedom, whereas the within-group (residual) sum of squares is 647.9 with 517 degrees of freedom. The district factor has a mean square value of 100.572, whereas the residual mean square is 1.253. Because the p-value is less than 0.001, the null hypothesis of no difference is rejected, suggesting that farmers' views regarding debt differ significantly between Anantnag, Baramulla, and Budgam districts.

Assumption Checks

Table 3- Test for Equality of Variances (Levene's)

F	df1	df2	P
59.45	2.000	517.0	< .001

Levene's test was used to investigate the assumption of variance homogeneity in attitude toward debt (ATD) across the three districts. The results are statistically significant (F = 59.45, df₁ = 2, df₂ = 517, p < .001). Because the p-value is less than 0.05, the assumption of equal variances between groups is violated. This suggests that farmers in Anantnag, Baramulla, and Budgam regions have dramatically different attitudes toward debt. The significant result indicates that

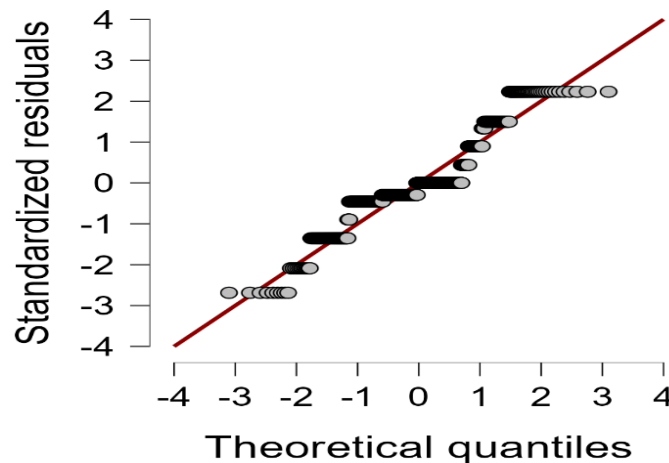


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the distribution of scores is not uniform across groups, which should be addressed when interpreting the ANOVA results and may necessitate the adoption of robust or alternative post-hoc techniques.

Graph 1 - Q-Q Plot



The Q-Q (Quantile-Quantile) plot was used to test the normality assumption for the distribution of attitude toward debt (ATD) scores among respondents. The graphical representation shows that the majority of the observed data points are near to the diagonal reference line, implying that the residuals follow a normal distribution. Although a few locations at the tails deviate slightly from the line, the general pattern is rather typical. As a result, the normalcy assumption necessary for the ANOVA analysis is reasonably met. This shows that the ATD data from the three districts—Anantnag, Baramulla, and Budgam—are sufficiently regularly distributed for further statistical analysis.

Table 4- Descriptive Statistics of Farmers’ Debt Repayment Behaviour (DRB)

Address	N	Mean	SD	SE	Coefficient of variation
Anantnag	182	3.797	0.950	0.070	0.250
Baramulla	180	2.661	1.565	0.117	0.588
Budgam	158	3.013	1.123	0.089	0.373

The descriptive statistics show the distribution of debt repayment behavior (DRB) among farmers in three districts: Anantnag, Baramulla, and Budgam. The findings show that farmers from Anantnag (N = 182) have the highest mean score (Mean = 3.797, SD = 0.950), indicating substantially greater debt payback behaviour. Farmers in Budgam (N = 158) had a moderate level of repayment behavior, with a mean of 3.013 (SD = 1.123). In contrast, Baramulla (N = 180) has the lowest mean score (Mean = 2.661, SD = 1.565), indicating relatively poor repayment behavior. The coefficient of variation also shows that Baramulla has the most variability (0.588), followed by Budgam (0.373) and Anantnag (0.250), showing a higher dispersion of responses among farmers in Baramulla.

Table 5- ANOVA - Debt Repayment Behaviour (DRB)

Cases	Sum of Squares	Df	Mean Square	F	P
Address	122.0	2	60.998	39.43	< .001
Residuals	799.8	517	1.547		

Note. Type III Sum of Squares

A one-way ANOVA was conducted to determine whether significant differences exist in debt repayment behaviour (DRB) among farmers across the three districts. The results show a statistically significant difference between districts (F = 39.43, p <.001). The between-group sum of squares is 122.0 with 2 degrees of freedom, and the within-group



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(residual) sum of squares is 799.8 with 517 degrees of freedom. The mean square for the district factor is 60.998, whereas the residual mean square is 1.547. Because the p-value is less than 0.001, the null hypothesis is rejected, showing that farmers' loan repayment patterns differ considerably among Anantnag, Baramulla, and Budgam districts.

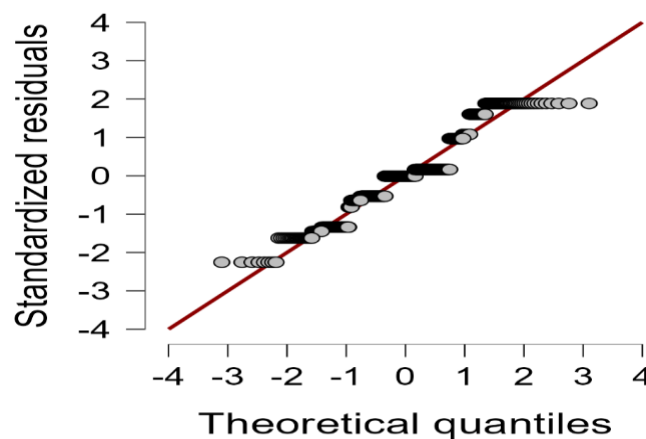
Assumption Checks

Table 6- Test for Equality of Variances (Levene's)

F	df1	df2	p
56.69	2.000	517.0	< .001

Levene's test was used to evaluate the assumption of variance homogeneity in debt repayment behaviour (DRB) across the three districts. The results are statistically significant ($F = 56.69$, $df_1 = 2$, $df_2 = 517$, $p < .001$). Because the p-value is less than the standard significance level of 0.05, the premise of equal variances between groups is violated. This suggests that debt payback behaviour varies dramatically among farmers in Anantnag, Baramulla, and Budgam districts. The significant result indicates that response distribution is not uniform among the three groups, which should be noted when interpreting the ANOVA results.

Graph – 2, Q-Q Plot



The Q-Q (Quantile-Quantile) plot was used to determine the normality of debt repayment behavior (DRB) data. The graphical representation reveals that the bulk of the observed data points are near to the diagonal reference line, implying that the residuals have a normal distribution. Although tiny deviations are seen at the extreme ends of the plot, they are minor and do not imply severe violations of the normalcy assumption. As a result, the DRB data across the three districts can be deemed reasonably regularly distributed, confirming the suitability of using ANOVA for analysis.

VII. CONCLUSION

The study found substantial regional differences in farmers' attitudes toward debt (ATD) and debt repayment behavior (DRB) among the three districts of Anantnag, Baramulla, and Budgam. The descriptive data show that farmers in Anantnag have the highest mean scores for both ATD (Mean = 4.000) and DRB (Mean = 3.797), indicating a particularly favorable attitude toward debt and higher payback behavior. In contrast, Baramulla has the lowest mean values for both variables, indicating poorer attitudes and payback habits, whereas Budgam is in the middle. The ANOVA findings show statistically significant differences ($p < 0.001$) between ATD and DRB. Overall, the findings show that geographical location has a significant impact on farmers' financial attitudes and repayment behaviour, underlining the necessity for region-specific financial awareness and policy measures.



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