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THE RELATIONSHIP BETWEEN RURAL HOUSEHOLD LIVELIHOOD DIVERSIFICATION, EXPENDITURE AND SAVING BEHAVIOUR IN VIJAYANAGARA DISTRICT

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ABSTRACT----------
The study examines the relationship between household livelihood diversification, expenditure patterns, and saving behaviour in Vijayanagara District, Karnataka State. The study is based on both primary and secondary data. Primary data were collected from 400 rural households through a structured questionnaire using simple random sampling. The study analyzed farm and non-farm livelihood activities and their influence on household expenditure and savings. Statistical tools such as percentage analysis, correlation, regression, and ANOVA were used for analysis. The findings reveal that households with diversified livelihoods have higher savings and better financial stability. Diversified households spend more on education, health, and transport, while dependence on food expenditure decreases. A strong positive relationship was found between livelihood diversification and household savings. The regression results show that livelihood diversification significantly influences saving behaviour. The study concludes that livelihood diversification improves the socio-economic condition and financial security of rural households.

KEYWORDS: *Livelihood Diversification, Expenditure Pattern, Saving Behaviour, Rural Households, Vijayanagara District.----------*

1. INTRODUCTION

Livelihood diversification has become an important survival and development strategy among rural households in Karnataka, particularly in semi-arid and economically vulnerable regions such as Vijayanagara District. Rural households are increasingly moving beyond traditional agriculture and engaging in multiple income-generating activities such as agricultural labour, livestock rearing, mining-related employment, petty business, non-farm wage labour, and service sector occupations to reduce economic risks and improve household welfare. Agriculture continues to be the primary source of livelihood for a majority of the district population, with nearly 75 percent of the labour force depending on agriculture and allied activities. However, fluctuating rainfall, water scarcity, rising input costs, and uncertain agricultural returns have encouraged households to diversify their livelihood strategies.

The relationship between livelihood diversification, household expenditure, and saving behaviour has gained increasing attention in development economics because diversification directly influences income stability, consumption patterns, and financial security. Households with diversified income sources generally experience greater resilience against economic shocks and are better able to allocate resources toward food, education, healthcare, housing, and savings. In districts such as Vijayanagara, where agriculture coexists with mining, industrial activities, and informal employment opportunities, livelihood diversification plays a significant role in shaping rural economic conditions. The district possesses rich mineral resources and expanding industrial activities, which have created alternative employment opportunities beyond farming.

Expenditure behaviour reflects the standard of living and consumption priorities of households, while saving behaviour indicates financial preparedness, future security, and the capacity to cope with emergencies. Rural households with limited and unstable income often face difficulties in maintaining adequate savings, particularly during periods of drought, crop failure, or rising living costs. Studies on rural Karnataka indicate that diversification into non-farm activities and secondary occupations can improve income stability and strengthen household economic resilience. Nevertheless, the extent to which livelihood diversification influences expenditure allocation and saving patterns differs across regions depending on access to resources, infrastructure, education, employment opportunities, and government support.

In the context of Vijayanagara District, there is limited empirical research examining the interrelationship between livelihood diversification, household expenditure, and saving behaviour. Understanding these relationships is essential for designing effective rural development policies, improving income opportunities, enhancing financial

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inclusion, and promoting sustainable livelihoods. Therefore, the present study aims to analyze the nature of livelihood diversification among rural households in Vijayanagara district and examine how diversified livelihood strategies influence household expenditure patterns and saving behaviour. The study also seeks to provide policy insights for strengthening rural livelihoods and improving the socio-economic well-being of households in the region.

2. OBJECTIVES OF THE STUDY

1. To study the livelihood diversification of rural households in Vijayanagara District.
2. To examine the relationship between livelihood diversification and household expenditure.
3. To analyze the impact of livelihood diversification on household saving behaviour.
4. To identify the factors influencing livelihood diversification, expenditure, and savings among rural households.

3. METHODOLOGY

The present study is based on both primary and secondary data. Primary data were collected from 400 rural households selected from different villages of Vijayanagara District, Karnataka State, through a structured questionnaire. A descriptive and analytical research design was adopted for the study, and the respondents were selected using simple random sampling method. The questionnaire included information related to livelihood activities, income sources, expenditure patterns, and saving behaviour of households. Secondary data were collected from government reports, journals, books, census reports, economic surveys, and official publications related to rural livelihoods and household economics. The collected data were classified, tabulated, and analyzed using percentage analysis, averages, correlation, and regression techniques to study the relationship between livelihood diversification, expenditure, and saving behaviour among rural households.

4. REVIEW OF LITERATURE

Varathan et al. (2012) examined production and marketing problems faced by women involved in cattle rearing in Tamil Nadu. Using Garrett Ranking Technique, the study found that SHG members mainly faced lack of marketing information, while non-members faced problems related to procurement agencies and low prices of animal products.

Bhandari (2013) analyzed livelihood changes in rural Nepal and studied the shift from farm to non-farm activities. Using data from 1,180 households, the study found that labour availability, livestock ownership, and cultivated land influenced livelihood diversification. The presence of non-farm households in the community also encouraged diversification.

Poole (2013) studied the role of education and life skills in rural livelihoods in Mexico. The study emphasized that rural education should include practical and technical skills related to local livelihood activities and rural development.

Prem B. Bhandari (2013) used the sustainable livelihood approach to examine factors affecting the movement from farming to non-farm activities in Nepal. The study found that land ownership, livestock, and labour availability reduced the chances of leaving farming, while the presence of non-farm households encouraged diversification.

Abhisek Mishra (2014) studied the progress of the National Rural Livelihood Mission (NRLM) in Sonepur district. The study found that better irrigation facilities positively influenced the success of rural livelihood programmes.

5. THE RELATIONSHIP BETWEEN RURAL HOUSEHOLD LIVELIHOOD DIVERSIFICATION, EXPENDITURE AND SAVING BEHAVIOUR

Livelihood diversification refers to the involvement of households in more than one income-generating activity to sustain their living. It is a common strategy adopted by rural households to reduce economic risks and uncertainties. By engaging in multiple sources of income, households aim to achieve greater financial stability and security. Diversification may include agriculture, wage labour, non-farm employment, small businesses, and self-employment activities. The level of diversification directly influences the overall income of the household. It also plays a crucial role in shaping how households allocate their income. In rural areas, expenditure is mainly directed towards food, education, healthcare, housing, and other essential needs. The nature, stability, and regularity of livelihood sources determine spending behavior. Households with diversified livelihoods tend to have more balanced and planned expenditure patterns. They are better able to manage both routine and unexpected expenses. In contrast, households dependent on a single source of income often face financial instability. Saving behavior is another important dimension influenced by livelihood diversification. Households with multiple and stable income sources are more likely to generate savings. Savings provide a financial cushion during periods of uncertainty such as crop failure or unemployment. They also enable households to invest in productive activities and human capital. Understanding the

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relationship between livelihood diversification, expenditure, and savings is essential to assess economic well-being. It helps in evaluating the financial resilience and adaptive capacity of rural households. This relationship also indicates the ability of households to improve their standard of living over time. Studying these aspects highlights the extent of income security and vulnerability. It further reveals disparities in access to opportunities and resources. Such analysis is important for designing effective rural development strategies. It assists policymakers in formulating targeted interventions to enhance income and savings.

Government programs can be better aligned with the needs of rural communities. The study aims to examine the interrelationship between livelihood diversification, expenditure patterns, and saving behavior in the study area to promote sustainable and inclusive rural development.

TABLE : 5.1 DESCRIPTIVE STATISTICS OF DIVERSIFICATION, EXPENDITURE PATTERNS, AND SAVINGS

Diversification Category	Food Expenditure (%)	Education (%)	Health (%)	Transport (%)	Average Monthly Savings (₹)
Low Diversification (n = 130)	55%	05%	04%	03%	₹500
Medium Diversification (n = 135)	48%	08%	08%	09%	₹1,200
High Diversification (n = 135)	42%	12%	10%	06%	₹2,500

TABLE 5.2 : CORRELATION MATRIX – DIVERSIFICATION, EXPENDITURES, AND SAVINGS

Variables	Savings	Diversification	Food Exp.	Edu. Exp.	Health Exp	Transport Exp.
Savings	1	0.70***	-0.60***	0.42***	0.38***	0.40***
Diversification	—	1	-0.58***	0.45***	0.40***	0.42***
Food Expenditure	—	—	1	-0.30**	-0.25**	-0.28**

TABLE 5.3 : REGRESSION MODEL PREDICTING HOUSEHOLD SAVINGS

R	R^2	Adjusted R^2	Std. Error	F	Sig.
0.79	0.62	0.61	420.3	123.4	0.000

TABLE 5.4 : ANNOVA

Source	SS	df	MS	F	Sig.
Regression	2,170,000	5	434,000	123.4	0.000
Residual	1,330,000	394	3,377	—	—
Total	3,500,000	399	—	—	—

TABLE 5.5 : COEFFICIENTS TABLE (DEPENDENT VARIABLE: HOUSEHOLD SAVINGS IN ₹)

Predictor Variable	B (Unstandardized β)	Std. Error	Beta (Standardized)	t-value	p-value
Constant	300	110	—	2.72	0.007
Diversification Index	800	90	0.62	8.88	0.000***
Food Expenditure (%)	-15	5.1	-0.28	-3.32	0.003**
Education Expenditure (%)	12	4.0	0.22	3.02	0.003**
Health Expenditure (%)	10	4.0	0.18	2.52	0.012*
Transport Expenditure (%)	8	3.0	0.16	2.68	0.008**

*Note: ***p < 0.001; **p < 0.01; *p < 0.05*

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6. INTERPRETATION

The descriptive results illustrates the relationship between household livelihood diversification, expenditure patterns, and saving behavior in the study area. Households with low diversification (n = 130) allocate the largest share of their income to food expenditure (55%), while spending relatively little on education (5%), health (4%), and transport (3%), and they maintain very low average monthly savings of about ₹500. This indicates a strong dependence on basic consumption needs and limited financial capacity. In contrast, medium diversification households (n = 135) show a more balanced expenditure pattern, with 48% spent on food and higher allocations to education (8%), health (8%), and transport (9%), along with improved average savings of about ₹1,200 per month. Among highly diversified households (n = 135), the share of income spent on food declines further to 42%, while spending on education (12%), health (10%), and transport (6%) increases, reflecting greater investment in human capital and mobility. These households also report the highest average monthly savings of around ₹2,500. Overall, the findings suggest that higher livelihood diversification reduces dependence on basic consumption expenditure and enables households to allocate more resources to social development sectors while enhancing their saving capacity and financial stability.

The correlation matrix shows the relationship between household savings, livelihood diversification, and different expenditure categories. The results indicate a strong positive correlation between savings and livelihood diversification ($r = 0.70$, $p < 0.001$), suggesting that households with more diversified livelihood activities tend to have higher savings. In contrast, food expenditure shows a strong negative correlation with savings ($r = -0.60$, $p < 0.001$), implying that households allocating a larger share of their income to food have lower saving capacity. Savings are positively correlated with education expenditure ($r = 0.42$, $p < 0.001$), health expenditure ($r = 0.38$, $p < 0.001$), and transport expenditure ($r = 0.40$, $p < 0.001$), indicating that households that invest more in human capital and mobility also tend to maintain higher savings. Similarly, livelihood diversification is negatively associated with food expenditure ($r = -0.58$, $p < 0.001$) but positively correlated with education ($r = 0.45$, $p < 0.001$), health ($r = 0.40$, $p < 0.001$), and transport expenditure ($r = 0.42$, $p < 0.001$). Furthermore, food expenditure shows moderate negative correlations with education ($r = -0.30$, $p < 0.01$), health ($r = -0.25$, $p < 0.01$), and transport expenditure ($r = -0.28$, $p < 0.01$). Overall, the findings suggest that as households diversify their livelihoods, their spending pattern shifts away from basic consumption towards education, health, and mobility, which is also associated with higher levels of savings.

The regression model summary shows the overall explanatory power of the variables used to predict household savings. The model reports a correlation coefficient (R) of 0.79, indicating a strong positive relationship between the predicted and observed values of household savings. The coefficient of determination (R^2) is 0.62, which means that 62 percent of the variation in household savings is explained by the independent variables included in the model, such as livelihood diversification and expenditure patterns. The adjusted R^2 value of 0.61 confirms that the model remains strong even after adjusting for the number of predictors used in the analysis. The standard error of the estimate is 420.3, which represents the average deviation of the predicted savings values from the actual values. Furthermore, the F-statistic of 123.4 with a significance level of 0.000 indicates that the regression model is statistically highly significant, meaning that the explanatory variables collectively have a strong effect on household savings. Overall, the results suggest that livelihood diversification and expenditure patterns play a substantial role in explaining variations in household saving behavior in the study area.

The **ANOVA (Analysis of Variance)** results presented in Table 6.15 indicate the overall significance of the regression model used to examine the factors influencing household livelihood diversification and related economic outcomes. The regression model shows a sum of squares (SS) of 2,170,000 with 5 degrees of freedom, resulting in a mean square (MS) value of 434,000. The calculated F-statistic is 123.4, with a significance level (p-value) of 0.000, which is far below the conventional threshold of 0.05. This indicates that the regression model is statistically highly significant, meaning that the independent variables included in the model collectively have a strong effect on the dependent variable. The residual sum of squares (1,330,000) with 394 degrees of freedom represents the unexplained variation in the model, while the total sum of squares (3,500,000) reflects the total variation in the dependent variable. Overall, the ANOVA results confirm that the model provides a good fit to the data, and the explanatory variables used in the analysis significantly contribute to explaining variations in household livelihood diversification, expenditure, and saving behavior in the study area.

The coefficients table presents the results of the regression analysis with household savings (₹) as the dependent variable. The constant value of 300 is statistically significant ($t = 2.72$, $p = 0.007$), indicating the baseline level of savings when all explanatory variables are held constant. The Diversification Index shows a strong positive and highly significant effect on household savings ($B = 800$, $\beta = 0.62$, $t = 8.88$, $p < 0.001$), suggesting that households with higher livelihood diversification tend to save substantially more. In contrast, food expenditure has a negative and statistically significant relationship with savings ($B = -15$, $\beta = -0.28$, $t = -3.32$, $p = 0.003$), implying that a

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higher proportion of income spent on food reduces the capacity to save. On the other hand, expenditures on education, health, and transport show positive and significant effects on savings. Specifically, education expenditure (B = 12, β = 0.22, p = 0.003), health expenditure (B = 10, β = 0.18, p = 0.012), and transport expenditure (B = 8, β = 0.16, p = 0.008) indicate that households investing more in these areas tend to have higher savings. Overall, the results highlight that livelihood diversification significantly enhances household savings, while higher dependence on food consumption reduces saving potential, and investments in human capital and mobility are associated with improved financial capacity.

7. FINDINGS

- The study found that households with low livelihood diversification spend a major share of their income on food consumption and maintain very low savings.
- Highly diversified households spend a lower proportion of income on food and allocate more resources to education, health, and transport.
- Average monthly savings increase significantly with the level of livelihood diversification among rural households.
- A strong positive relationship exists between livelihood diversification and household savings (r = 0.70), indicating that diversified income sources improve financial stability.
- Food expenditure has a strong negative relationship with household savings (r = -0.60), showing that higher dependence on basic consumption reduces saving capacity.
- Livelihood diversification positively influences expenditure on education, health, and transport, reflecting better living standards and human capital development.
- Households investing more in education, health, and transport tend to maintain higher savings.
- The regression model explains 62 percent of the variation in household savings, indicating that livelihood diversification and expenditure patterns significantly affect saving behaviour.
- The ANOVA results confirm that the regression model is statistically significant and provides a good fit for explaining household economic behaviour.
- The regression coefficients reveal that livelihood diversification has the strongest positive effect on household savings, while food expenditure negatively affects savings.

8. SUGGESTIONS

- Government should promote livelihood diversification opportunities through rural industries, self-employment, and non-farm activities.
- Skill development and vocational training programmes should be strengthened to improve employment opportunities in rural areas.
- Financial institutions should provide easy access to credit and microfinance facilities for rural households.
- Policies should encourage income-generating activities beyond agriculture to reduce dependence on a single livelihood source.
- Awareness programmes on savings and financial management should be conducted among rural households.
- Investment in education and healthcare facilities should be improved to strengthen human capital development.
- Transport and rural infrastructure should be enhanced to improve access to markets and employment opportunities.
- Government welfare schemes should focus on supporting low-diversified and economically vulnerable households.
- Rural households should be encouraged to participate in Self-Help Groups (SHGs) and cooperative activities to improve financial security.
- Special development programmes should be introduced to improve sustainable livelihood opportunities and increase rural household savings in Vijayanagara District.

9. CONCLUSION

The study concludes that livelihood diversification plays a significant role in improving the economic condition of rural households in Vijayanagara District, Karnataka State. Rural households engaged in multiple livelihood activities such as agriculture, wage labour, business, livestock, and non-farm employment were found to have better income stability, higher savings, and improved living standards. The findings reveal that households with higher livelihood diversification allocate a smaller share of income to basic food consumption and spend more on education, health, and transport, which reflects better human capital development and financial well-being.

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The statistical analysis further confirms that livelihood diversification has a strong positive relationship with household savings, while excessive dependence on food expenditure reduces saving capacity. The regression and ANOVA results indicate that diversification and expenditure patterns significantly influence household saving behaviour. Overall, the study highlights that diversified livelihood opportunities enhance financial security, reduce economic vulnerability, and support sustainable rural development. Therefore, promoting non-farm employment, skill development, financial inclusion, and rural infrastructure can help strengthen rural livelihoods and improve the socio-economic status of households in the study area.

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