A Statistical Analysis of Household Expenditure and Income in Kerala

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Abstract - The researcher attempts to determine each family's income and expenditure, how they differ from one another, how many families struggle to meet basic needs such as groceries, transportation, medicine, education, and so on, and most importantly, whether expenditure exceeds income in families in this analysis. It is critical to examine the spending and income patterns of Kerala households, with an emphasis on income, expenditure, borrowing and saving. The biggest determinant of an individual's consumption spending is his or her income level. However, income isn't the only element that affects expenditure, loans and savings also have an impact. Spending of course satisfies basic requirements. This inquiry included hypothesis testing to determine a relationship between income and quality of life measures based on secondary data. A multivariate regression model was used to analyze the factors that influence household expenditure. Based on data from a random sample of 100 families, the dependent variable was monthly household expenditure, and a number of socioeconomic factors were used as explanatory variables.

Index Terms - expenditure, household, income, savings.

INTRODUCTION

The study focusses on a family's income and expenditure in Kerala. The researcher attempts to determine each respondent's family economic situation through this study.   One of the variables influencing the above occurrence is society's income level, which is the key factor that drives individual consumption spending. However, income is not the only factor that affects spending; other factors such as borrowing and saving also play a part. The need to meet the basic demands of one's own household and family drives one's spending behavior. People who work for the state or the federal government are the only ones who are not at such a drastic level as compared to other enterprises. In this study, which looked at household expenditure patterns in a comprehensive systems framework. The study's major goal was to discover and quantify the relationship between household spending and socioeconomic level. The researcher is attempting to determine each family's income and expenditure, how they differ from one another, how many families struggle to meet basic needs like groceries, transportation, medicine, education, and electricity, and, most importantly, whether expenditure exceeds income in families.

STATEMENT OF THE PROBLEM

Eventually, inequalities in lifestyle will be influenced by differences in expenditure and spending among households.
The economic consequences of this alternative way of life will intensify and increase the income gap between rich and poor families. The study's purpose is to look at how household spending and consumption priorities have changed over time. During the economic downturn, the terms income and earnings were used interchangeably. The purpose of this study is to assess Kerala inhabitant's income and spending patterns, as well as to identify critical issues.

OBJECTIVE OF THE STUDY

The overall goal of this study is to look at how much money households earn and how they spend it. The influences of the global economic crisis on household income and spending patterns is one of the specific goals. Identifying significant household expenses as a percentage of total income in terms of food, education, health, utility, savings, and borrowing. Identifying the factors that influence a household's regular inclination to consume on major components of expenditure in relation to income.

RESEARCH METHODOLOGY AND ANALYSIS

The information for this study was acquired in a number of places across Kerala. For face-to-face interviews, a total of 100 people in the area were chosen at random. Demographics, income and consumption patterns, and respondents' overall impressions of their socio-economic conditions were all included in the study. The survey's reliability was calculated using Cronbach's Alpha (0.756). For this study the latest version of SPSS was used for analysing the data. Graphs, statistical constants such as average standard deviation, correlation, regression, and multiple regression were used to determine various characteristics.

Table 1: Demographic variables

		Frequency	Percentage%
Head of family	Male	83	83%
	Female	17	17%
	Total	100	100%
Age group	18-30	18	18%
	31-40	6	6%
	41-50	29	29%
	Above 50	47	47%
	Total	100	100%
Occupation	farmers	8	8%
	business	16	16%
	Self-employers	15	15%
	Public sector	18	18%
	Private sector	28	28%
	Retired	15	15%
Education of the respondent	Below SSLC	5	5%
	SSC	29	29%
	Graduate	50	50%
	PG	15	15%
	Doctorate and above	1	1%
	Total	100	100%

In this study, 83% male and 17% female are responded. Male manages 83% of the families. 18% of those surveyed were between the ages of 18-30, 6% were between the ages of 31-40, 29% were between the ages of 41-50 and 47% were in the age group of above 50. 8% of the respondents were farmers, 16% were doing business, 15% were self-employers, 18% were working in public sector and 28% were working in private sector and 15% were retired. 50% of the respondents were graduates, 29% were SSC, 5% were below SSC, 15% were post graduates and 1% were PhD students and above.

Table 2: Monthly income of the respondent

		Frequency	Percent
Valid	Below 20,000	26	26.0
	20,001 - 50,000	42	42.0
	50,001 - 70,000	18	18.0
	70,001 - 1 lakh	9	9.0
	Above 1 lakh	5	5.0
	Total	100	100.0

Among the respondents 26% have monthly income below 20,000, 42% have monthly income 20,001–50,000, 18% have around 50,001 – 70,000, 9% have around 70,001 – 1 lakh and 5% have more than 1 lakh.

Table 3: Monthly expenditure of the respondent

		Frequency	Percent
Valid	Below 10,000	6	6.0
	10,000-15,000	10	10.0
	15,000-20,000	15	15.0
	20,000-25,000	33	33.0
	Above 25,000	36	36.0
	Total	100	100.0

Among the respondents 6% have monthly expenditure under 10,000, 10% have monthly expenditure in between 10,000-15,000, 15% have monthly expenditure in between 15,000-20,000, 33% have monthly expenditure in between 20,000-25,000 and 36% have monthly expenditure above 25,000. There exist a positive correlation(r=0.670) between income and expenditure.
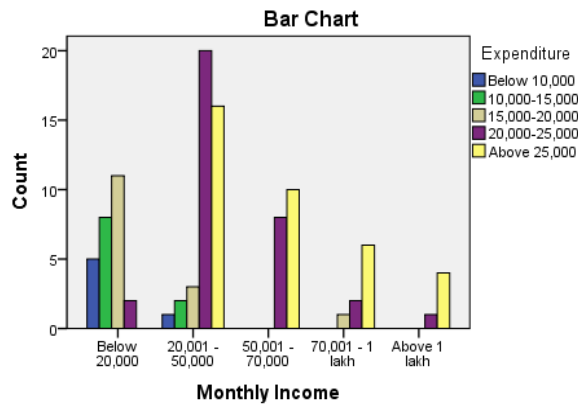
Fig. I

Table 4: Monthly savings of the respondent

		Frequency	Percent
Valid	Below 10,000	76	76.0
	10,000-15,000	16	16.0
	15,000-20,000	3	3.0
	20,000-25,000	3	3.0
	Above 25,000	2	2.0
	Total	100	100.0

Among the respondents 76% have savings less than 10,000, 16% have savings of 10,000–15,000, and only 8% have savings above 25,000. There exist a positive correlation (0.491) between monthly savings and monthly income.
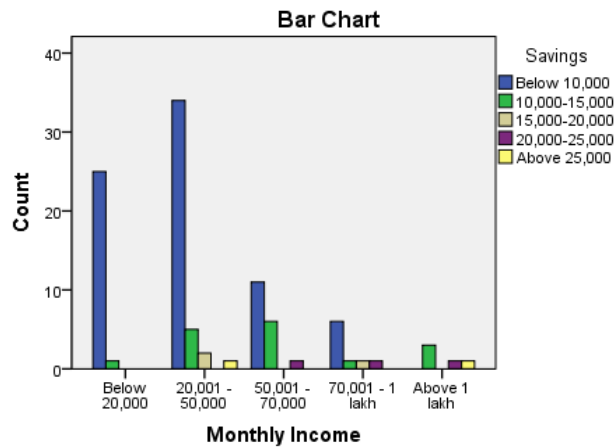

Fig. II

Table 5: Type of savings

		Frequency	Percent
Valid	No savings	16	16.0
	Regular savings	55	55.0
	Separate savings for women	11	11.0
	Having valuables like gold	18	18.0
	Total	100	100.0

From the above table 16% of the respondents have no savings, 55% have regular savings 11% have savings for women and 18% having savings as gold.
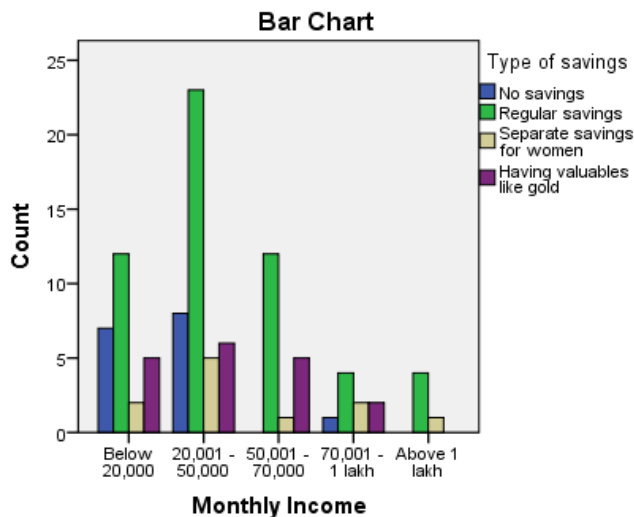

Fig. III

Table 6: Basis of spending money

		Frequency	Percent
Valid	Necessity	43	43.0
	Luxury	18	18.0
	Social status	1	1.0
	Depending on income	38	38.0
	Total	100	100.0

From the above table represent the basis of spending money. 43% were used for necessity, 18% for luxury, 38% for depending on income and only 1% for social status.
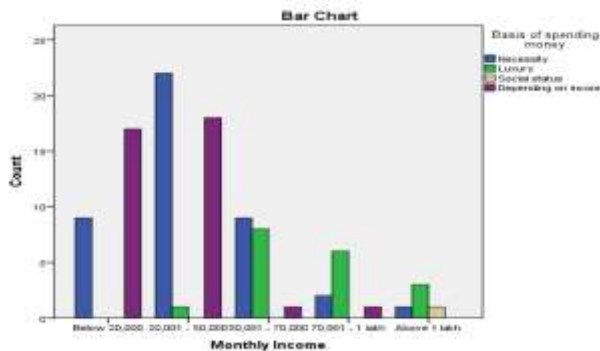

Fig. IV

Table 7: Respondents has taken loan

		Frequency	Percent
Valid	yes	59	59.0
	no	41	41.0
	Total	100	100.0

From the above table 59% of the respondents taken loan and 41% not taken loan, so majority of the respondents taken loan to adjust the family expenses.
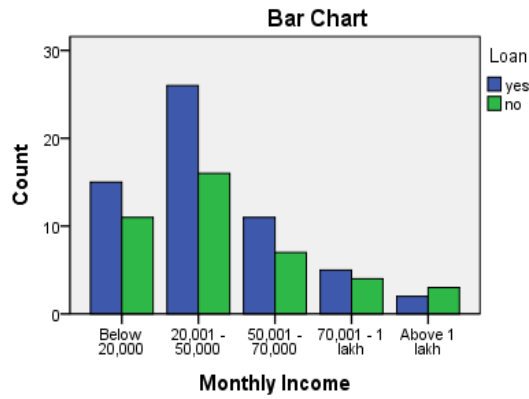
Bar Chart

Fig. V

Table 8: Correlation between monthly income and   expenditure

source	N	Correlation
Monthly Income & Monthly expenditure on groceries	100	.228
Monthly Income & Monthly expenditure on junk food	100	.358
Monthly Income & Monthly expenditure on transportation	100	.434
Monthly Income & Monthly expenditure on education	100	.212
Monthly Income & Monthly expenditure on electricity	100	.269
Monthly Income & Monthly expenditure on clothes	100	.271

Correlation between monthly income and monthly expenditure on groceries $(r = 0.228)$, on junk food $(r = 0.358)$, on transportation $(r = 0.434)$, on education $(r = 0.212)$, on electricity $(r = 0.269)$, on clothes $(r = 0.271)$.

Table 9: Model summary

					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.694ᵃ	.481	.459	.805	.481	22.016	4	95	.000

a. Predictors: (Constant), Basis of spending money, Expenditure, Type of savings, Savings

The above table shows that the multiple regression coefficients of savings, type of savings, expenses, expense base of monthly income is 0.694 and the adjusted R-squared is 0.481. Therefore the result finalized and suggested that the entire 45.9% of the variance in monthly income has been significantly explained by these three factors: savings, type of savings, expenses, and the expense basis. Since the p-value (P = .000) is less than 0.05, this study concluded that the four variables are statistically significant predictors of income.

Table 10: ANOVA table

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	57.125	4	14.281	22.016	.000ᵇ
	Residual	61.625	95	.649		
	Total	118.750	99			

The model's general importance was explained using analysis of variance. The F statistic is 22.016, the degrees of freedom are F (4, 95), and the p-value is.000 less than 0.05, indicating that the model is acceptable.

CONCLUSION

Based on the findings we may conclude that the variation in income is largely explained by these factors: savings, type of savings, expenses, and the expense basis. The amount of money that can be spent on certain necessities is determined by one's income. Families must budget carefully to meet their immediate necessities. The greatest strategy to monitor and limit costs is to create a budget. Budget categories can be modified to your specific tastes by setting the amounts for them. The importance of individual conscience in ensuring that families spend their money wisely must be emphasized. They should be encouraged to put money aside for their future need. The overall findings lead us to conclude that the amount and quality of household's purchasing power is closely related to family's income and spending.

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