

A Comparative Study of Rural Urban Difference in Household Electricity Consumption in Kottayam District

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ABSTRACT

Now a day's electricity had become an inevitable part of our life. Electricity consumption determines the standard of living. Electricity acts as a catalyst in our day today life. The main aim of this study is to analyze the differences in energy consumption pattern in rural and urban areas and find out the rural urban difference in consumption pattern of selected electronic items. The factors which influence the cost of electricity consumption of a rural household have been examined by using a questionnaire survey of 50 households using convenience sampling method.

KEY WORDS: Electricity, Consumption pattern

INTRODUCTION

Electricity was introduced in Greek. William Gibert, an English physician, physicist and natural philosopher was the first to coin the term “electricity” derived from the Greek word for amber. The combinations of qualities and quantities act of community or human group's use of resources for survival, needs, comfort and enjoyment is called consumption pattern. Consumption pattern is divided into three terms, broader terms include social process, narrow terms include energy demand, energy demand, energy utilization pattern, water conservation, water demand, water saving, related terms include consumer behavior. When income raises agriculture sector and industrial sector get mechanized which lead to increase in population and consumption of electrification increases in both rural and urban areas. The main reason behind consumption of electricity increases is Indian economy is growing very fast it is due to globalization, modernization and liberalization.

In present modern days electricity is highly essential for growing economy. Without electricity no single industry can run or exist. Discovery of electricity is a blessing to this world. Not only electricity helps to run industry but it also helps to common human beings because it provides comforts and luxury and satisfies their needs. Kerosene oil lanterns and gas lamps are used in past but now in the present days electricity is been used. By merely switching on the button and there is the day-like light even in the darkest night! Moreover,

during summer electric fans, air conditioning plants are used to provide us with cool atmosphere. And in winter, heating appliances are used to keep the room warm. Electric bells, press and stove are things of every-day use. People keep refrigerators in their homes to keep their food in a fresh condition. Indeed electricity serves as a faithful domestic Electricity can broadly be divided into two types, namely social and economic aspects. In general, electricity is mainly used in household level in order to light bulbs, fans, TV, computers, phone, washing machine air conditioner and other electrical assets. For over 30 years the World Bank and other organizations have studied the social benefits of electricity access and have noted that these benefits usually derive from the longer days that powered light bulbs offer to the household. Mainly children and women are highly benefited from this electricity, previously children used to study during day time and during night time they used to light candle or lamp in order to study. Which create eye problem and they face lot of problem but now children's are able to study properly because electricity is been provided and it reduce their stress . in past women used to use their physical power to do work but after electricity it reduce their physical work, in this way women and children are highly benefited, this is social benefit of electricity. Economic benefits related to production sector. The growth of businesses or farms using electricity will then increase demand for electricity, leading to a virtuous growth cycle profitable to both electricity providers and rural communities. Such economic growth is obviously an important achievement of any rural electrification programmer.

There are many small and large scale industries are found in rural areas which are running with the help of electricity. In urban areas large numbers of industries are there without electricity it cannot run. Electricity helps to run these industries and which lead to increase the production level of our country which lead to increase the income and per capita income also increases, thus we can say electricity is also and vital tool which is responsible to lead economic growth of our economy. Electricity is highly essential in this modern day which provides both social and economic benefits to humans and nation.

OBJECTIVE

The study focuses on the following objectives.

1. To analyze the differences in energy consumption pattern in rural and urban areas.
2. To find out the rural urban difference in consumption pattern of selected electronic items .

METHODOLOGY

The study uses mainly the primary data for analysis. The primary data was collected through questionnaire interview of both rural and urban households.

DATA ANALYSIS**SIZE OF THE FAMILY**

No: of family members	No: of rural households	Percentage (rural)	No: of urban households	Percentage (urban)
1	0	0%	1	5%
2	1	3%	2	12%
3	3	5%	5	17%
4	11	49%	10	35%
5	7	38%	6	26%
6+	3	5%	1	5%
Total	25	100%	25	100%

Source: primary data

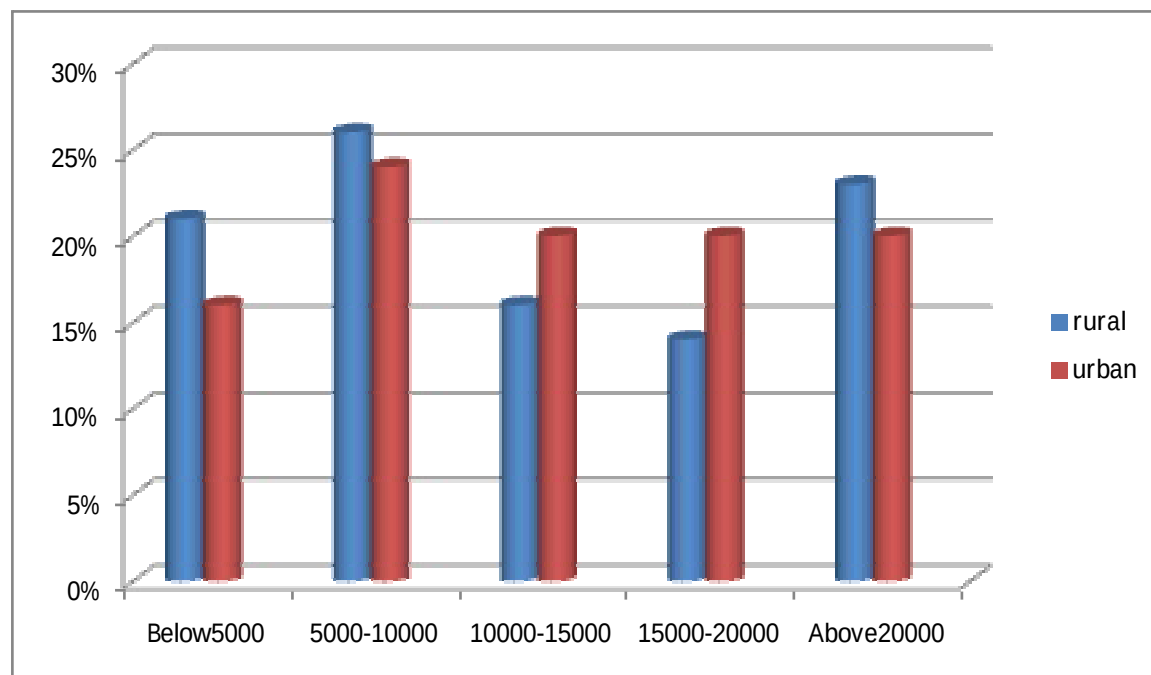
Household size perhaps has a great influence on electricity consumption. The table (Table-) represents the no: of family members in rural and urban areas. In urban areas 35 % of households include 4 members and 26% Of household includes 5 members in a family. 5% Of household include 6 members in a family.17% of household include 3members in a family and 12% of household include 2 members in a family and 5% of households include 1 member in a family. In rural areas 49% of households include 4 members in a family and 38% Of household include 5members in a family.5% of household include 3 and 6 members in a family and 3% Of household include 2 members in a family.

MONTHLY INCOME OF THE RESPONDENTS

Monthly income	No: of rural households	Percentage (%)	No :of urban households	Percentage (%)
Below 5000	5	21%	3	16%
5000-10000	7	26%	7	24%
10000-15000	4	16%	5	20%
15000-20000	3	14%	5	20%
Above 20000	6	23%	5	20%
Total	25	100%	25	100%

Source: primary data

Monthly income of respondents



Interpretation

The table (Table) shows the monthly income of urban and rural households.. In urban area 24% Of households have monthly income in-between 5000-10000. 20%, 20% households have monthly income below 10000-15000 and 15000-20000 respectively and again 20% of people have monthly income above 20000. . In rural area 26% Of households are 5000-10000 income. 21% are below 5000. 23% have monthly income above 20000. 16% and 14% have monthly income in-between 10000-15000 and 15000-20000 respectively.

MONTHLY AVERAGE ELECTRICITY CONSUMPTION OF RESPONDENTS

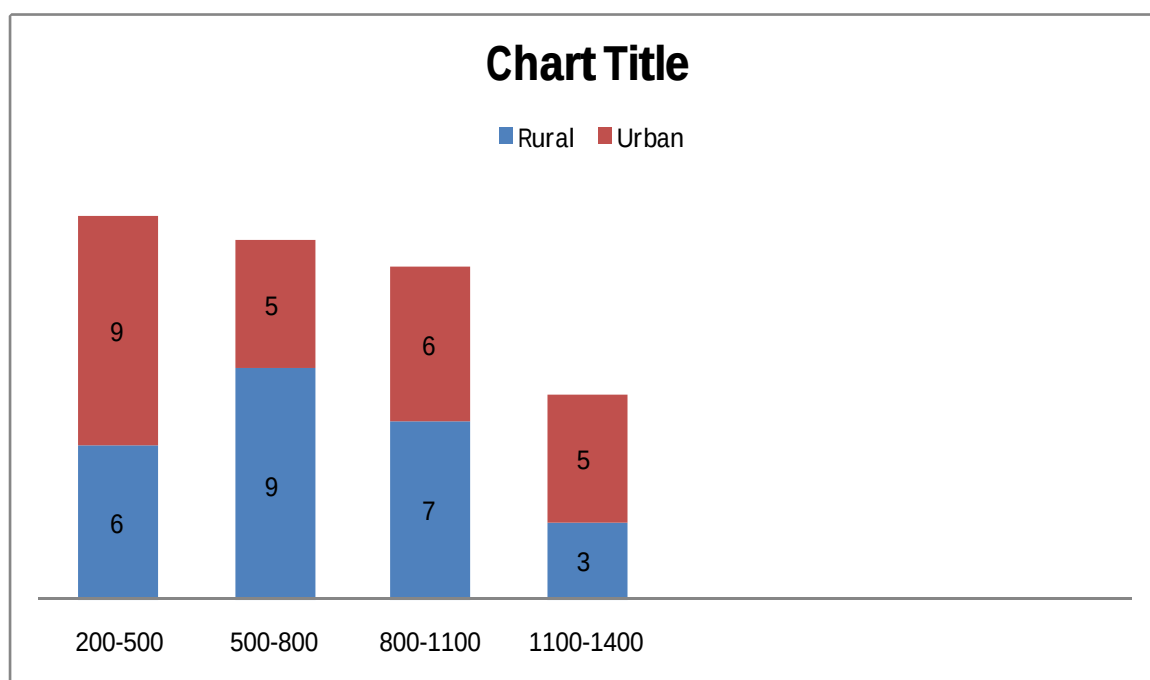
UNIT	RURAL	URBAN	TOTAL	PERCENTAGE
Below 150	10	2	12	24%
150-250	7	10	17	34%
250-350	3	7	10	20%
Above 350	5	6	11	22%
TOTAL	25	25	50	100%

Source: primary data

The above table shows the monthly average electricity consumption of the respondents. Among 50 samples 34% consumes between 150-250 unit. 24% consumes below 150 units and 20% consumes between 250-350 units and 22% are consuming electricity above 350%. Thus majority of the people under the survey consumes above 150 units.

MONTHLY AVERAGE EXPENDITURE ON ELECTRICITY CONSUMPTION

EXPENDITURE	RURAL	URBAN	TOTAL	PERCENTAGE (%)
200-500	6	9	15	33%
500-800	9	5	14	30%
800-1100	7	6	13	27%
1100-1400	3	5	8	12%
1400-1700	0	0	0	0%



Above table and figure shows the monthly average expenditure of the respondents on electricity. 33% of respondents spent between 200-500 rupees. 30 % of households spent rupees 500-800. 27% and 12% of households spends rupees between 800-1100 and 1100-1400 respectively.

NUMBER OF FLORESCENT LAMPS

No: of florescent lamp	No: of rural households	Percentage (%)	No: of urban households	Percentage (%)
0	4	17%	0	0%
1-4	10	36%	10	37%
4-8	7	30%	9	34%
8-12	4	17%	6	29%

As per my study 17% of households in rural areas don't have florescent lamps and remaining 83% of rural households have florescent lamps. 36% of rural households have florescent lamps in between 1-4. 30 % of households have lamps in between 4-8. 17% Of households have lamps in between 8-12. In urban area 100% Of households have florescent lamps among that 37% Of urban households have florescent lamps in between 1-4. 34% Of households have lamp between 4-8 and 29% of households have florescent lamps in between 18-12.

HOURS OF WORKING OF TV

DURATION	RURAL	URBAN	TOTAL	PERCENTAGE (%)
2 Hours	5	7	12	25%
4 Hours	10	11	21	39%
6 Hours	8	6	14	29%
8 Hours	2	1	3	7%
TOTAL	25	25	50	100%

Source: primary data

Above table and figure explains the hours of working of TV among 50 samples taken. Out of 50 samples 39% is working on an average of 4 hours, 25% are working for 2 hours and 29% are working on an average of 8 hours.

NO: OF FANS

NUMBER	RURAL	URBAN	TOTAL	PERCENTAGE (%)
2	3	0	3	9%
3	3	4	7	14%
4	4	5	9	15%
Above 4	15	16	31	62%
TOTAL	25	25	50	100%

Source: primary data

The above table shows the average number of active fans used by the respondents. Out of 50 samples 64% of households have above 4 active fans. 15% of households have 4 active fans. 14% of households have 3 active fans and 9% of households have 3 active fans using.

FANS RUNNING ON AN AVERAGE (IN HOURS)

DURATION	RURAL	URBAN	TOTAL	PERCENTAGE (%)
4 Hours	2	3	5	9%
6 Hours	5	4	9	18%
8 Hours	8	6	14	29%
10 Hours	10	12	22	44%
TOTAL	25	25	50	100%

Source: primary data

The table represents the hours of working of fans on an average. Out of 50 samples 44 % of households uses fan for 10 hours. 29% uses in an average of 8 hours. 18% of household's uses fans on an average of 6 hours and remaining 9% of households use fans on an average of 4 hours.

Findings and Conclusion

- ✓ Among the respondents 34% are consuming electricity in between 150-250 units every month, 24% are consuming in below 150 units, 22% are consuming above 350 units and 20% are consuming un between 250-350 units
- ✓ The monthly average expenditure on electricity of respondents was between 200-500 rupees for 33% of respondents, 30% of respondents have expenditure in between 500-800 rupees, 27% of respondents have expenditure in between 800-1100 rupees and 12% have expenditure in between 1100-1400 rupees.
- ✓ 54% Of households own LED TV's, 32% of households own Normal TV and 14% of households own LCD TV's.
- ✓ 39% of people watches TV every day for 4 hours. 29% of households watch TV for 6 hours a day, 25% of households watch TV for 2 hours every day
- ✓ A majority of 62% of households own more than 4 fans in their house. 15% of households have 4 fans in their house, 14% of households have 3 fans in their house and 9% of households have only 2 fans in their house.
- ✓ 44% of households are keeping their fan running on an average of 10 hours, 29% uses fan for 8 hours, 18% uses fan for 6 hours and 9% uses fan for 4 hours.

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