CHAPTER II

2. Impact of Electrification on Living Standard of Farmers

2.1. Introduction

One of the main objectives of Indian planning is to bring economic development speedily along with reduction in rural unemployment and poverty. During 50 years of planning, planners have not succeeded up to the fullest possible extent in achieving the above mentioned objectives. However, there is a change in the living standards of people and country has achieved some development also but it is still below expectations. Lack of adequate facilities of production and non-availability of proper guidance regarding modern technology have affected agricultural production adversely. The stable growth of agricultural output, the unemployment and other related problems have led to an increase in the disguised unemployment in the rural area. To mitigate the problems of disguised unemployment, development of agriculture along with agro-based industries must take place rapidly. With the adoption of new agricultural strategy in 1965-66, the traditional method of agricultural production was replaced by modern package of inputs in India. This new package consisting of HYV seeds, fertilizers, pesticides, insecticides and the use of machinery requiring perennial water sources, for this use of electricity is essential. Since 1965-66 after the adoption of new technology, there was an increase in per hectare productivity of crops and the overall production. This has helped in increasing the level of income of farmers.

Electricity is not only the means to boost-up agricultural production but also instrumental in increasing household consumption. It can also help in increasing the standard of living of the farmers. Various modern equipments such as electric bulbs, machinery, television, radio, refrigerator and iron are used for domestic purposes. The communication gap has been reduced to a great extent by the use of telephone, fax etc. These modern methods of communication have also contributed indirectly in improving the level of development of rural areas. Attitude and outlook of farmers have also changed and they have accepted these changes easily.

In this chapter certain factors are identified to study the rural electrification on the standard of living of sample farmers. These factors are literacy level, level of income, expenditure, consumption pattern of household goods etc. It is generally assumed that rural electrification and improvement in the standard of living of farmers are closely associated with each other.

2.2. Literacy Level of Households of Sample Farmers

According to Census of India, a person who has ability to read and write and understanding of any language is literate. A person, who can merely read but cannot write, is not literate. It is not necessary that a literate person should have received any formal education or should have passed any minimum educational standard. In Erode district 58.92% of the population was reported literate in 2001 Census and the State of Tamil Nadu in which the rate of literacy was 80.34%.

In Erode district, 6 villages are selected from the 3 Taluks for this study. From these 6 villages, 120 households of sample farmers have been selected for the purpose of the study. The level of literacy of the households of selected farmers, persons above 6 years of age have been considered. The definition followed by 2001 census has been used for this study. The village wise literacy level of the households of selected sample farmers is presented in the following Table 2.1.

Table 2.1: Village Wise Literacy Level of Households of Sample Farmers

Village	Illiterate Level	Literate Level					Total
		Primary Level	Secondary Level	UG Level	PG Level	Total Literate	
Mylambadi	25 (37.31)	32 (47.76)	07 (10.45)	02 (02.99)	01 (01.49)	42 (62.69)	67 (100)
Thottipalayam	21 (40.38)	19 (36.54)	11 (21.15)	01 (01.92)	00 (00)	31 (59.62)	52 (100)
Gettisamudram	32 (24.43)	76 (58.02)	15 (11.45)	05 (03.82)	03 (02.29)	99 (75.57)	131 (100)
Sankarapalayam	34 (47.89)	21 (29.58)	12 (16.90)	04 (05.63)	00 (00)	37 (52.11)	71 (100)
Savandappur	31 (34.44)	27 (30.00)	18 (20.00)	11 (12.22)	03 (03.33)	59 (65.56)	90 (100)
Vellalapalayam	17 (20.99)	41 (50.62)	19 (23.46)	02 (02.47)	02 (02.47)	64 (79.01)	81 (100)
Total	160 (32.52)	216 (43.90)	82 (16.67)	25 (05.08)	09 (01.83)	332 (67.48)	492 (100)

Note: 1. Figures in brackets show the percentage of literacy level.

2. Figures outside brackets show the total members of sample farmers households.

Village wise literacy level of households of selected sample farmers in Erode district has been explained in the above Table 2.1. These villages represent the situation of literacy level of the whole district. In the total of 120 households, total family members are 492. Out of these total family members (492), 160 members are illiterate and 332 members are literate i.e., 32.52% and 67.48% respectively. Vellalapalayam was found to be the most literate of the all villages under survey i.e., 79.01%. The reason for this is more awareness amongst the people of Vellalapalayam of education than those of other villages. The teachers of the schools have played a vital role in bringing this awareness among them. Various programmes are arranged

in bringing out importance of education for common people. Children are inspired to take the path of education. On the other hand the level of literacy is the lowest in the village of Sankarapalayam i.e., 52.11% as compared with the households of sample farmers of other villages. The people here being less aware of the importance of education do not persuade their children to study. They consider that the cost on education is not profitable.

The above Table 2.1 also presents that the number of people taking primary education is more than those taking post graduate education, i.e., 43.90% and 01.83% respectively. Higher education is not only expensive but it is also not available at nearby places. These two are the major reasons, which deprive the villages of taking higher education. Easily, timely and cheaply available primary education can help to increase overall literacy level.

2.3. Electrification of Households of Sample Farmers

In the above section, literacy level of households of sample farmers has been discussed. In this section, village wise position of electrification of households of selected sample farmers has been explained. Village wise electrified and non-electrified households of the sample farmers are presented in the following Table 2.2.

Table 2.2: Village Wise Electrified and Non-electrified Households of Sample Farmers

Village	**Electrified Households**	**Non-electrified Households**	**Total Sample Farmers**
Mylambadi	15(93.75)	01(06.25)	16(100)
Thottipalayam	11(91.67)	01(08.33)	12(100)
Gettisamudram	29(90.63)	03(09.38)	32(100)
Sankarapalayam	15(83.33)	03(16.67)	18(100)
Savandappur	20(90.91)	02(09.09)	22(100)
Vellalapalayam	19(95.00)	01(05.00)	20(100)
Total	109(90.83)	11(09.17)	120(100)

Note: 1. Figures in brackets show the percentage of total households of farmers.

2. Figures outside brackets show the total number of households of farmers.

From the above Table 2.2 it can be seen that the percentage of electrified households is more in comparison with non-electrified households of sample farmers. The total households of sample farmers are 120, out of which 109 households are enjoying electricity facilities and 11 households are non-electrified i.e., 90.83% and 09.17% respectively. In the village of Vellalapalayam, the number of households with electric connection is higher in comparison with other households of sample farmers of other villages. The total sample households of sample farmers of the village of Vellalapalayam are 20, out of which 19 households are

electrified (95.00%) and only one households is non-electrified (05.00%). Vellalapalayam village is quite near to Gobichettipalayam, which is a Taluk place. So means of transport is easily available and administrative formalities can be easily completed. Therefore, electric connection can be obtained without much hurdle.

The total households of sample farmers of the village of Sankarapalayam are 18, out of which the number of households with electric connection are 15 i.e., 83.33% which is quite low and number of households without electric connection are 03 i.e., 16.67%. The number of households with electricity facility is less in the village of Sankarapalayam when compared with the households of sample farmers with electric facilities in other villages. The electricity is not only expensive but there are many hurdles to get connection.

Village wise literacy level and village wise electrified and non-electrified households of sample farmers of Erode district have been explained in the previous section along with the information relating to electrification of farmers households. In this section an attempt has been made to find out whether there is any relationship between electrification and literacy level. The literacy level of electrified and non-electrified households is presented in the following Table 2.3.

Table 2.3: Village Wise Literacy Level of Electrified and Non-electrified Households of Sample Farmers

Literacy	**Mylambadi**			**Thottipalayam**		
	Electrified Households	**Non-electrified Households**	**Total Households**	**Electrified Households**	**Non-electrified Households**	**Total Households**
1. Primary Level	30(48.39)	02(40.00)	32(47.76)	18(37.05)	01(25.00)	19(36.54)
2.Secondary Level	06(09.68)	01(20.00)	07(10.45)	09(18.75)	02(50.00)	11(21.15)
3. UG Level	02(03.23)	00(00.00)	02(02.99)	01(02.08)	00(00.00)	01(01.92)
4. PG Level	01(01.61)	00(00.00)	01(01.49)	00(00.00)	00(00.00)	00(00.00)
5. Total Literate (1 to 4)	39(62.90)	03(60.00)	42(62.69)	28(58.33)	03(75.00)	31(59.62)
6. Illiterate	23(37.10)	02(40.00)	25(37.31)	20(41.67)	01(25.00)	21(40.38)
7. Total (5+6)	62(100)	05(100)	67(100)	48(100)	04(100)	52(100)

Literacy	Gettisamudram			Sankarapalayam		
	Electrified Households	Non-electrified Households	Total Households	Electrified Households	Non-electrified Households	Total Households
1. Primary Level	73(61.34)	03(25.00)	76(58.02)	19(31.15)	02(20.00)	21(29.58)
2.Secondary Level	13(10.92)	02(16.67)	15(11.45)	11(18.03)	01(10.00)	12(16.90)
3. UG Level	04(03.36)	01(08.33)	05(03.82)	03(04.92)	01(10.00)	04(05.63)
4. PG Level	02(01.68)	01(08.33)	03(02.29)	00(00.00)	00(00.00)	00(00.00)
5. Total Literate (1 to 4)	92(77.31)	07(58.33)	99(75.57)	33(54.10)	04(40.00)	37(52.11)
6. Illiterate	27(22.69)	05(41.67)	32(24.43)	28(45.90)	06(60.00)	34(47.89)
7. Total (5+6)	119(100)	12(100)	131(100)	61(100)	10(100)	71(100)

Literacy	Savandappur			Vellalapalayam		
	Electrified Households	Non-electrified Households	Total Households	Electrified Households	Non-electrified Households	Total Households
1. Primary Level	24(30.00)	03(30.00)	27(30.00)	39(51.32)	02(40.00)	41(50.62)
2.Secondary Level	17(21.25)	01(10.00)	18(20.00)	18(23.68)	01(20.00)	19(23.46)
3. UG Level	10(12.05)	01(10.00)	11(12.22)	02(02.63)	00(00.00)	02(02.47)
4. PG Level	03(03.75)	00(00.00)	03(03.33)	02(02.63)	00(00.00)	02(02.47)
5. Total Literate (1 to 4)	54(67.05)	05(50.00)	59(65.56)	61(80.26)	03(60.00)	64(79.01)
6. Illiterate	26(32.05)	05(50.00)	31(34.44)	15(19.74)	02(40.00)	17(20.99)
7. Total (5+6)	80(100)	10(100)	90(100)	76(100)	05(100)	81(100)

Literacy	Total		
	Electrified Households	Non-electrified Households	Total Households
1. Primary Level	203(45.52)	13(28.26)	216(43.90)
2.Secondary Level	74(16.59)	08(17.39)	82(16.67)
3. UG Level	22(04.93)	03(06.52)	25(05.08)
4. PG Level	08(01.79)	01(02.17)	09(01.83)
5. Total Literate (1 to 4)	307(68.83)	25(54.35)	332(67.48)
6. Illiterate	139(31.17)	21(45.65)	160(32.52)
7. Total (5+6)	446(100)	46(100)	492(100)

Note: 1. Figures in brackets show the percentage of total family members of households of sample farmers.

2. Figures outside brackets show the total family members of households of sample farmers.

Village wise literacy level of the electrified and non-electrified households of sample farmers has been explained in the above Table 2.3. In the electrified households of farmers the literacy level is 68.83% and the illiteracy level is 31.17%. In the non-electrified households of farmers the literacy level is 54.35% and the illiteracy level is 45.65%. The literacy level is the higher in electrified households in comparison with the non-electrified households of farmers. The higher education is quite low in the households of non-electrified as compared to the electrified households of farmers. About 06.52% of the total persons in the non-electrified households of sample farmers completed under graduate level of education and 02.17% of them have completed post graduate level of education.

The number of person with higher education was found to be higher in case of electrified households than the non-electrified households of sample farmers. About 04.93% of the sample population completed under graduate level of education and 01.79% of them have completed post graduate level of education. The literacy of electrified households of sample farmers is slightly higher as compared to the non-electrified households of farmers.

In Vellalapalayam village, electrified households are higher and literacy level is also higher in comparison with households of sample farmers of other sample villages. In village of Sankarapalayam, electrified households are quite lower and the literacy level is also lower than households of sample farmers of other village. It has been observed that there is some relationship between electrification of households and level of literacy. The level of literacy can be improved by providing basic amenities like supply of electricity apart from educational facilities.

2.4. Size of Landholding

In the above part, village wise electrified and non-electrified households of sample farmers and their literacy level have been explained. In this section, the size of landholding and their electrification of households and level of literacy have been explained. The size of landholding and electrification of households is presented in the following Table 2.4.

Table 2.4: Size of Landholding and Electrification of Households of Farmers

Sample Farmers & Size of Landholding	**No. of Electrified Households**	**No. of Non-electrified Households**	**Total Sample Households**
Marginal (0-2.5 Acre)	13(61.90)	08(38.10)	21(100)
Small (2.5-5 Acre)	19(90.48)	02(09.52)	21(100)
Semi-medium (5-10 Acre)	28(96.55)	01(03.45)	29(100)
Medium (10-25 Acre)	34(100)	00(00.00)	34(100)
Large (25 Acre & Above)	15(100)	00(00.00)	15(100)
Total	109(90.83)	11(09.17)	120(100)

Note: 1. Figures in brackets show the percentage of electrified and non-electrified households of sample farmers.

2. Figures outside brackets show the total number of electrified and non-electrified households of sample farmers.

In the above Table 2.4 information relating to sample farmers and their size of landholding has been presented along with this data relating to electrified and non-electrified households of sample farmers have been also presented. The farmers having marginal size of landholding their households are 21 out of which 13 households are electrified and 08 households are non-electrified i.e., 61.90% and 38.10% respectively. Regarding the households of small sample farmers, 21 out of which 19 households are electrified and 02 households are non-electrified i.e., 90.48% and 09.52% respectively. The households of semi-medium sample farmers are 29 out of which 28 households are electrified i.e., 96.55% and 01 are non-electrified i.e., 03.45%. The households of medium sample farmers are 34 and all are electrified. The households of large sample farmers are 15 and all are electrified.

From the above discussion the following inferences can be drawn:

1. In the case of medium and large farmers all selected households are found to be electrified.
2. The percentage of electrified households in total sample was low in the case of marginal farmers. If the size of landholding increases, the proportion of electrified households also increase. This is quite obvious as medium and large farmers are in position to procure electricity.
3. In general, it has been observed that the size of landholding and electrification are interrelated with each other. With the increase in the size of landholding, facility of electrification also increases.

In this section, the size distribution of landholding and level of literacy has been studied. In the preceding section it has been shown that electrification of households and size of landholding are interrelated. To understand this relationship in a better manner the information regarding size of landholding and literacy has also been considered. The information relating to size of landholding and their literacy level is presented in the following Table 2.5.

Table 2.5: Size of Landholdings and Literacy Level

Literacy	**Marginal (0-2.5 Acre)**	**Small (2.5-5 Acre)**	**Semi-medium (5-10 Acre)**	**Medium (10-25 Acre)**	**Large (25 Acre & Above)**	**Total**
1. Primary Level	38(41.30)	40(37.38)	64(50.39)	69(51.11)	05(16.13)	216(43.90)
2. Secondary Level	11(11.96)	14(13.08)	20(15.75)	25(18.52)	12(38.71)	82(16.67)
3. UG Level	02(02.17)	03(02.80)	04(03.15)	07(05.19)	09(29.03)	25(05.08)
4. PG Level	01(01.09)	00(00.00)	02(01.57)	02(01.48)	04(12.90)	09(01.83)
5.Total Literate (1 to 4)	52(56.52)	57(53.27)	90(70.87)	103(76.30)	30(96.77)	332(67.48)
6. Illiterate	40(43.48)	50(46.73)	37(29.13)	32(23.70)	01(03.23)	160(32.52)
Total (5+6)	92(100)	107(100)	127(100)	135(100)	31(100)	492(100)

Note: 1. Figures in brackets show the percentage of literacy level.

2. Figures outside brackets show the total members of farmers households.

From the above Table 2.5 it can be seen that the size of landholdings and literacy level are positively related with each other. The literacy level of the households having marginal landholding (marginal farmers) is about 56.52%, households having small landholding (small farmers) are having literacy level of 53.27% and semi-medium holdings households (semi-medium farmers) percentage of literacy of about 70.87%. In case of households of medium holdings (medium farmers) and large holdings (large farmers) the literacy level is 76.30% and 96.77% respectively. Regarding the level of post graduate, large landholders (large farmers) literacy level is 12.90% (out of total members of large holdings households), which is quite high as compared to the other sample landholders.

The average literacy level of the all households of sample farmers has been calculated. The average literacy of marginal farmers households is 2.5 members pre households, for small farmers 2.7, for semi-medium farmers 3.1, for medium farmers 3 and for large farmers 2. In general, it has been observed that the size of landholding and literacy level are interrelated to each other with the increase in the size of landholding literacy level also increases. The average size of family of all households of all sample farmers has been also calculated. The average size of family for marginal farmers households is 4.4 persons per households, for small farmers 5.1,

for semi-medium farmers 4.4, for medium farmers 4 and for large farmers 2. It has been observed that the size of landholding and size of family are inversely associated with each other with the increase in the size of landholding size of family decreases.

As per expectation, it has been observed that, with the increase in the size of landholding level of literacy raises and size of family decreases. This could be due to the fact that general awareness and literacy may be at the higher level among these farmers rather than small or marginal farmers.

2.5. Income and Expenditure of Sample Farmers

The data regarding the income and expenditure of sample farmers before electrification and after electrification have been collected with the help of Interview Schedule. This data has immensely helped in establishing relationship between income and expenditure of all sample farmers. The data of income and expenditure of all categories of sample farmers after electrification have been considered for the year 2000. The time period for the use of electricity for the purpose of agriculture differ from farmer to farmer. The sample farmers have made the use of electricity for various agricultural activities at different points of time. Therefore, before electrification the data relating to income and expenditure of sample farmers are for different time periods. Hence, in order to standardize the date relating to income and expenditure the average time lag between before electrification and after electrification has been worked out.

The average, standard deviation, co-efficient of variation in level of income of all sample farmers has been presented in the following Table 2.6.

Table 2.6: Income of Sample Farmers

Sample Farmers	**Mean/Average**		**Standard Deviation**		**Co-efficient of Variation (%)**	
	BE	**AE**	**BE**	**AE**	**BE**	**AE**
Marginal Farmers	21821.43	44250.00	1262.79	2088.66	5.79	4.72
Small Farmers	30416.67	62785.71	1638.09	1220.36	5.39	1.94
Semi-medium Farmers	43008.62	134975.90	1289.52	1932.18	3.00	1.43
Medium Farmers	45305.88	185832.40	2075.24	2294.23	4.58	1.23
Large Farmers	65126.67	266280.00	2097.10	2415.19	3.22	0.91

Note: 1. BE means before electrification and AE means after electrification.

Prior to electrification the average annual income of the marginal farmers was worked out to Rs. 21,821.43 but after electrification the average income has increased up to Rs. 44,250. The value of standard deviation of income prior to electrification was calculated as Rs. 1,262.79 but the use of electricity it has gone up to Rs.2,088.66. The co-efficient of variation in the level of income of sample marginal farmers before electrification was 5.79% but after electrification it has decreased to 4.72%. In general, it has been observed that the use of electricity for the various activities of agriculture variation in income has decreased. The electrification on the level of income of these sample farmers has taken place in 7 years.

The average annual income of the small sample farmers before electrification worked out to Rs.30,416.67 but after electrification it has gone up to Rs.62,785.71. The value of standard deviation of income prior to electrification was calculated as Rs.1,638.09 but the making use of electricity it has decreased to Rs.1,220.36. The co-efficient of variation in the level of income of these sample farmers prior to electrification was 5.39% but after electrification it has decreased to 1.94%. In general, it has been observed that the variation in income has decreased marginally after electrification. This change has been observed during the last 11 years for small farmers.

The average annual income of the semi-medium farmers prior to electrification worked out to Rs.43,008.62 but after electrification it has gone up to Rs.1,34,975.90. The value of standard deviation of the level of income prior to electrification was calculated as Rs.1,289.52 but the use of electricity it has increased up to Rs.1,932.18. Co-efficient of variation in the level of income of sample semi-medium farmers prior to electrification was 3.00% but after electrification it has decreased to 1.43%. It has been observed that the use of electricity for the various agriculture activities variation in income has decreased after electrification. This effect was seen in 14 years for semi-medium sample farmers.

Before electrification the average annual income of the medium farmers worked out to Rs.45,305.88 but after electrification the average annual income has increased up to Rs.1,85,832.40. The value of standard deviation of the level of income of these sample farmers prior to electrification was calculated as Rs.2,075.24 but the use of electricity it has gone up to Rs.2,294.23. Co-efficient of variation in the level of income prior to electrification was 4.58% but after using electricity it has gone down to 1.23%. In general, it has been observed that due to the application of electric gadgets for the various agricultural activities, the variations in the income level of the farmers has reduced. This change has been noticed in the last 20 years.

Before electrification the average annual income of the large sample farmers worked out to Rs.65,126.67 but after using electricity it has increased up to Rs.2,66,280. The value of standard deviation of the level of income prior to electrification was calculated as Rs.2,097.10 but after making use of electricity the value of standard deviation worked out Rs.2,415.19. The co-efficient of variation in the level of income before electrification was 3.22% but after electrification it is worked out to 0.91%. In general, it has been observed that the use of electricity for the various activities of agriculture variation in income has decreased. The electrification on the level of income of large sample farmers has taken place in 23 years.

A comparison between the all types of sample farmers reveals that, the proportion of the income is the highest for the large and medium sample farmers. It is necessary to increase the agricultural production by improving the irrigation method and utilizing electricity. This will not only improve the economic condition of farmers but also reduce the dependence of farmers on moneylenders and other loan providing agencies. This change can be made possible through proper utilization of electrification. By and large electrification to some extent has also helped in reducing inequalities of income. For higher size of landholding electrification may help in reducing income inequalities. The level of income has significantly increased because of use of pump sets for irrigation purposes resulting in the increase in area under irrigation and also change in cropping pattern from low value to high value crops.

In the above paragraphs the position of the level of income of all sample farmers before electrification and after electrification has been explained. In this section, before and after electrification, farmers expenditure has been studied. The same method of considering the time lag of before and after use of electricity applied for income levels has been extended for the expenditure also. The average, standard deviation, co-efficient of variations in expenditure of all sample farmers has been presented in the following Table 2.7.

Table 2.7: Expenditure of Sample Farmers

Sample Farmers	**Mean/Average**		**Standard Deviation**		**Co-efficient of Variation (%)**	
	BE	**AE**	**BE**	**AE**	**BE**	**AE**
Marginal Farmers	17314.29	33190.48	1192.18	1334.41	6.89	4.02
Small Farmers	23130.95	56297.62	1570.47	913.85	6.79	1.62
Semi-medium Farmers	27482.76	97172.41	1496.92	1283.66	5.45	1.32
Medium Farmers	33382.35	126588.20	1576.62	2182.82	4.72	1.72
Large Farmers	33266.67	132983.30	1425.12	1826.07	4.28	1.37

Note: 1. BE means before electrification and AE means after electrification.

The average annual expenditure of marginal farmers before electrification was calculated as Rs.17,314.29 but the use of electricity the average expenditure of farmers has shifted to the tune of Rs.33,190.48. With the increase in the average expenditure, the inequalities in the expenditure have also gone up. This can be explained with the help of standard deviation and co-efficient of variation. Prior to electrification the value of standard deviation worked out to Rs.1,192.18, but after electrification the value of standard deviation has increased up to Rs.1,334.41. This change has also been supported by the values of co-efficient of variation, which has gone down from 6.89% to 4.02%. The variation in the expenditure has negligible decreased due to the electrification. The electrification on expenditure of marginal sample farmers has taken place in 7 years.

Prior to electrification the average annual expenditure of small farmers was calculated as Rs.23,130.95 with the use of electricity the average expenditure has increased up to Rs.56,297.62. The value of standard deviation of expenditure prior to electrification was calculated as Rs.1,570.47 but after electrification the value of standard deviation of expenditure has gone down to Rs.913.85. The co-efficient of variation of expenditure prior to electrification was 6.79% but after the use of electricity co-efficient of variation of expenditure worked out to 1.62%. The relative deviation indicates that in case of small farmers the variation in expenditure of farmers has negligible decreased due to the electrification. This may be due to the fact that the average expenditure after making use of electricity has gone down substantially. This change has taken place in 11 years for small sample farmers.

The average expenditure of semi-medium farmers prior to electrification was calculated as Rs.27,482.76; however, the use of electricity has helped in shifting the average expenditure on higher side. It has increased up to Rs.97,172.41. The value of standard deviation of farmers expenditure prior to electrification was calculated as Rs.1,496.92 it has gone down to Rs.1,283.66 after electrification. The co-efficient of variation of expenditure prior to electrification was 5.45% but after electrification it is worked out to 1.32%. The relative variation in expenditure of farmers has decreased due to the electrification. This effect has been taken place during 14 years for semi-medium sample farmers.

Prior to electrification the average annual expenditure of medium sample farmers was calculated as Rs.33,382.35 but after electrification it is increased up to Rs.1,26,588.20. The value of standard deviation of farmers expenditure prior to electrification was calculated as Rs.1,576.62, but after making use of electricity the standard deviation of farmers expenditure worked out to Rs.2,182.82. The co-efficient of variation of expenditure prior to electrification was 4.72% but after electrification it is worked out to 1.72%. The variation in expenditure of

farmers has gone down due to the use of electricity for the agricultural activities. This shows that the electrification can help to reduce the inequalities in a significant manner in case of medium farmers. This change has been noticed in the last 20 years.

The average annual expenditure of large farmers prior to electrification was calculated as Rs.33,266.67 after making use of electricity it has increased up to Rs.1,32,983.30. The value of standard deviation of farmers expenditure prior to electrification was calculated as Rs.1,425.12 but after the electrification the value of standard deviation of farmers expenditure worked out to Rs.1,826.07. The co-efficient of variation of expenditure prior to electrification was 4.28% but after electrification co-efficient of variation of farmers expenditure worked out to 1.37%. The variation of farmers expenditure has negligible decreased due to the use of electricity. By and large it can be seen that the use of electricity helps to reduce the degree of inequalities in terms of expenditure of farmers. This effect has been taken place during 23 years for large sample farmers.

This increase in the level of expenditure is because of the increase in the level of income. In the case of medium and large sample farmers, expenditure has significantly increased after electrification in comparison with the other sample farmers. The level of income has gone up because of increase in the area under irrigation resulted in the change in cropping pattern from food to non-food crops. Because of it the expenditure of sample farmers has increased.

2.6. Conclusion

In this chapter, an impact of rural electrification on living standard of sample farmers has been studied. Literacy level of the households of sample farmers, literacy level of electrified and non-electrified households, electrification of households of farmers and the size of landholding, income and expenditure of the households of sample farmers etc. have been explained. It has been observed that the electrification of households of sample farmers is closely related with the literacy level of households. The electrification of households has helped in increasing literacy level of households of sample farmers. It has also been observed that the size of landholding is related to the literacy level of households. In short it can be said that there is a positive impact of electrification on the standard of living of farmers in terms of literacy level, level of income and expenditure in selected area of this study.