CHAPTER: 5

COST, REVENUE AND PROFIT OF THE WOMEN MICRO-ENTREPRENEURS OF DHUBRI DISTRICT AND KOKRAJHAR DISTRICT

5.1 INTRODUCTION:

The objective of this chapter is to perform data analysis and hypothesis testing part of the research. In our chapter three, i.e., methodology chapter, we came to some decision after testing normality, linearity and multi-collinearity of the distribution of the whole data relating to WMEs of Dhubri district and Kokrajhar district. A linear relationship is found between the dependent variable and independent variables for the data of WMEs of both Dhubri district and Kokrajhar district. So in this chapter, we shall consider linear regression model while fitting regression lines. Normality testing reflected that the overall distribution of data of various variables relating to WMEs (except age distribution of data) for both Dhubri district and Kokrajhar district are not normal. Statistical and econometrical Knowledge suggests going for non-parametric test, if the data is non-normal otherwise parametric test. Thus, we come to the decision that to compare average income of WMEs between two districts, we shall undergo Mann Whitney Wilcoxon test for two independent sample test under non-parametric test and t-test for two independent samples under parametric test. Similarly, to compare average income of different types of WMEs within a district we shall go for Kruskal-Wallis H test for (several) k-independent samples under non-parametric test or z-test under parametric test. SPSS software is utilized for all these tests.[1]

[1] Mann Whitney Wilcoxon test is a type of non-parametric test for two independent samples and t-test is a type of parametric test for two independent samples. Similarly, Kruskal-Wallis H test is a type of non-parametric test for k-independent samples (three or more independent samples) and z-test is parametric test for k-independent samples (three or more independent samples).

In the following part of this chapter, the **first three objectives and hypotheses** of the study, as considered in the first chapter, will be fulfilled. Firstly, the first objective is fulfilled i.e., **the cost, revenue & profit/income of various types of WMEs between the two districts namely, Dhubri and kokrajhar would be compared.** For that purpose, at the very outset, it is necessary to find out the cost, revenue & profit/income of WMEs in the study area. In other words, cost-benefit analysis will be utilized for this purpose.

5.2 (OBJECTIVE I) COMPARATIVE COST-BENEFIT ANALYSIS OF WOMEN MICRO-ENTREPRENEURS (WMES) OF DHUBRI DISTRICT AND KOKRAJHAR DISTRICT:

Before going to cost-benefit analysis of various micro-businesses undertaken by WMEs of Dhubri district and Kokrajhar district, first of all, let us know the following averages. (See table 5.1)

Table: 5.1 Various Averages relating to WMEs of Dhubri district and Kokrajhar district

Averages	**Dhubri**	**Kokrajhar**
Age	41	45
Education	6	3
No. of Family members	4	5
Monthly Investment	Rs.17750.69	Rs. 22266.87
Monthly Return	Rs. 25888.28	Rs. 31244.94
Working Hour	10	7.5

Source: On the basis of primary data collected by the investigator

1) The average age of WMEs of Kokrajhar district (forty five years) is higher than that of WMEs of Dhubri district (forty-one years).
2) The WMEs of Dhubri district are more educated, on average six years as compared to the WMEs of Kokrajhar district, on average three years.

3) Average number of family members of WMEs of Dhubri district is four, which is less than that of WMEs of Kokrajhar district (five).
4) Mean monthly investment of WMEs is lower at Dhubri district, i.e., Rs.17750.69, as compared to that of WMEs at Kokrajhar district, which is Rs. 22266.87.
5) Mean monthly return of WMEs is also lower at Dhubri district, i.e., Rs. 25888.28, as compared to that of WMEs at Kokrajhar district Rs. 31244.94.
6) Even though the average cost and average return of WMEs at Kokrajhar district is higher than that at dhubri district, but the WMEs of Kokrajhar district is found to work less hour (on average 7.5 hours) than that of Dhubri district (average 10 hours). This is because greater percentage of women in Kokrajhar district are engaged in vegetable vendoring at footpaths and they work for part time, but greater percentage of WMEs in Dhubri district do business in the form of permanent shop so they spend (full time) long time in their businesses.

Dhubri district: In Dhubri district women of varying age-groups starting from 18 to 70 are found to undertake micro-entrepreneurship. The WMEs are variedly educated from 0 to 16 years. Number of family members of WMEs, including herself, varied from 1 to 10. Monthly investment of WMEs ranges from Rs.100 to Rs. 155000 with a huge gap. Monthly return of different WMEs ranges from Rs. 600 to Rs. 210000. Monthly income of WMEs ranges from Rs. 600 to Rs. 75000. WMEs of Dhubri district are observed to spend minimum 2 hours to maximum 14 hours per day in their business places.

Age-wise Net Average Monthly Income (NAMI) shows minimum Rs.600 for the age 22, maximum Rs.24666 for the age thirty-nine. Education-wise NAMI is lowest Rs. 2250 among the WMEs with education level third standard and highest Rs. 15420 with education level seventh standard. NAMI of WMEs with various numbers of family members including the WMEs is found minimum Rs. 6000 with single family member and maximum Rs. 25300 with ten numbers of family members.

It is observed that a WME earns a minimum NAMI of Rs. 1400 by working 2 hours and maximum of Rs. 11450 by working 10 hours per day.

Kokrajhar district: In kokrajhar district women of varying age-groups starting from 20 to 70 are found to undertake micro-entrepreneurship. The WMEs are variedly educated from 0 to 12 standards. Number of family members of WMEs, including herself, varied from 1 to 13. Monthly investment of WMEs ranges from Rs.800 to Rs.150000 with a gap less than that of kokrajhar district. Monthly return of different WMEs ranges from Rs. 1000 to Rs. 200000. Monthly income of WMEs ranges from Rs. 400 to Rs. 40000. The WMEs of kokrajhar district are observed to spend minimum 2 hours to 15 hours time per day for their business purpose.

Age-wise NAMI shows minimum income Rs.1000 for the age sixty-two maximum average income Rs.23000 for the age fifty-eight. Education-wise NAMI is lowest Rs. 6300 among the WMEs with education level eleventh standard and highest Rs. 17400 with education level sixth standard. NAMI of WMEs with various numbers of family members including the WMEs is found minimum Rs. 2866 with ten family member and maximum Rs. 35000 with twelve numbers of family members. It is observed that a WME earns a minimum average net monthly income Rs. 3466 by working 2 hours and maximum of Rs. 17500 by working 10.5 hours per day.

5.2.1 Cost-Benefit Analysis of WMEs: To compare the profits/income of various WMEs of Dhubri district and Kokrajhar district, let us obtain the Net Present Value (NPV) of various WMEs of the two districts, which is the difference between average annual returns/benefits and average annual investment (cost). Here average monthly return and average monthly investment is multiplied by twelve (12) to obtain average annual return and average annual investment. Now, let us at first, identify the costs and benefits of various types of WMEs of our study area. It is presented in table 5.2.

Returns/Benefits of the WMEs: Revenue/benefits of the WMEs is the product of quantity of commodity sold by WMEs and their respective prices.

Costs of WMEs: Costs of WMEs means all those expenditures which the WMEs have to incur to run their business. Cost is of two types, fixed cost and variable cost.

Here, fixed costs for different WMEs are in the form of place or room for shop, furniture and machine etc. We know, Total Cost= Total Variable Cost+ Total Fixed Cost. While calculating total cost, total fixed cost is taken into account in the form of monthly rent or permanent investment on place or room for shop, and furniture and machines (if needed) etc. For some micro-entrepreneurs fixed cost is equal to zero, as they pay municipality tax (which is very small in amount), only when they open up shop, and don't need to invest on any permanent assets like furniture and machines etc. And municipality tax is included within variable cost.

Table: 5.2 Cost of different types of Women Micro-entrepreneurs in the two Study Areas

Cost of Women Micro-Entrepreneurs (WMEs)				
Fixed Cost	Rent*/expenditure on plot of land, Room/building, *plus*	Furniture, *plus*		Machine, Instruments
Variable cost	Cost of buying goods or raw materials, intermediate commodities, *plus*	Carrying charge/Transportation cost, *plus*	Municipality tax[2], *plus*	Wage/salary of employees
Cost of Women Vegetable Vendors (WVVs)[a]				
Variable	Purchasing cost of	Carrying charge/Transportation		Municipality

[2] Municipality tax is a type of pure variable cost, as the WMEs have to pay it only if they open up their shop, otherwise not.

cost	vegetables if the WVV is not a farmer/ cost of producing vegetables if the WVV is a farmer, *plus*	cost of vegetables, *plus*	tax[b],
Cost of Women run Beautiparlours (WBs)			
Fixed Cost	Rent*/cost of place for shop and room for shop, *plus*	Cost of purchasing furniture for parlour, necessary instruments like comb, scissors etc.,	
Variable Cost	Cost of purchasing cosmetics like facial cream, powder, shampoo, etc. *plus*	Cost of salary / cost of wage of employees	
Cost of Women food stall Owners (WFOs)			
Fixed Cost	Cost/rent* of place and room for shop, *plus*		Furniture
Variable Cost	Cost of purchasing intermediate goods and inputs like rice, pulse, vegetables, fish, meat, edible oil etc., *plus* Cost of fuel, *plus*	Cost of salary / cost of wage of employees	Municipality tax[c]
Cost of Women Grocery Shopkeepers (WGSs)			
Fixed Cost	Cost/rent* of place or room for shop, *plus*		Furniture
Variable Cost	Cost of Purchasing grocery items for sale, *plus*	Transportation cost of grocery items, *plus*	Municipality tax

Cost of Women Tailors (WTs)			
Fixed cost	Cost/rent* of place for shop or room for shop, *plus*	Furniture, *plus*	Cost of sewing machine
Variable cost	Cost of clothes	Cost of thread	
Cost of Women *Paan* Vendors (WPVs)			
Fixed Cost	Expenditure/rent* for place or room for shop, *plus*	Furniture	
Variable cost	Cost of *Paan*, betel nuts, other goods needed for *paan*, *plus.*	Cost of Purchasing other goods in the shop for sale[d]	

Source: Author's own construction

a. In the study area, for vegetable vendors fixed cost like land and various agricultural instruments are only present for WVVs who produce vegetables in their own farm.
b. Permanent shop of WVVs are not found in the two study areas both Dhubri and Kokrajhar district, so, shop rent is not present, only municipality tax is prevalent for WVVs.
c. In both Dhubri district and Kokrajhar district, two types of food stalls are present. One with permanent and personal place and room for shop, giving a rent, and, other without personal place, instead using place of municipality, giving municipality tax.
d. Some WPVs are found to sale some other commodities along with *paan*.

* Here, rent is included in the fixed cost. But, rent may be variable cost, subject to the condition that, they leave the business place/room as soon as they stop their business work; that means they stop bearing rent as they stop their businesses.

We know from our previous knowledge that

NPV[3] = Present Value of Benefits-Present Value of Costs (investment)

Table: 5.3 NPV of WMEs of two districts

District	Present Value of Benefits/Returns of WMEs	Present Value of Costs (investment) of WMEs	NPV of WMEs
Dhubri	Rs. 310659.36	Rs.213008.28	Rs. 97651.08
Kokrajhar	Rs. 374939.28	Rs. 267202.44	Rs. 107736.84

Source: Figures estimated on the basis of the data collected from primary investigation

It is observed from above table 5.3 that the business volume i.e., both costs and returns; therefore NPV of WMEs is higher at Kokrajhar district (Rs. Rs. 107736.84) as compared to Dhubri district (Rs. 97651.08). This is due to higher business volume resulting out of higher demand, higher investment, and higher prices and therefore leading to comparatively higher income of WMEs at Kokrajhar district as compared to that at Dhubri district. Moreover, due to higher effective demand at Kokrajhar district, travelling costs, taxes and some other charges are also observed to be higher at Kokrajhar district as compared to Dhubri district.

5.3 COMPARING NPV OF VARIOUS TYPES OF WMES IN DHUBRI DISTRICT AND KOKRAJHAR DISTRICT:

In our methodology chapter we have already mentioned several types of WMEs, we found in the two districts, a few of which are common for both the districts. They are *Women Food-stall Owners (WFOs), Women Paan Vendors* (WPVs), *Women Grocery Shopkeepers (WGSs*), *Women Tailors (WTs) and Women*

[3] Here NPV is equivalent to net average annual profit or net average annual income of WMEs. Since, the WMEs invest in their business in a very small amount, sometimes on a daily basis and get returns from their business almost on the same period of their investment, so, here, the discount rate formula is not necessary to calculate the present value of returns. The data on WMEs was collected in the year 2016. Therefore, the NPV of WMEs for the financial year 2016 is used as a benchmark to assess the average annual profit of the WMEs of the two study areas.

Beauticians (WBs) etc. Thus there is a scope to compare the cost-benefit and profit of these WMEs of the two districts, Dhubri and Kokrajhar.

5.3.1 Comparing Cost-Benefit of Women Food-stall Owners (WFOs) in Dhubri District and Kokrajhar District: Here we compare some averages relating to WFOs of Dhubri and Kokrajhar district in the following table 5.4.

Table: 5.4 Various Averages relating to Women Food-stall Owners (WFOs) of Dhubri district and Kokrajhar district

Averages	**Dhubri**	**Kokrajhar**
Age	43	43
Education	4.5	3
No. of Family members	4.5	5
Monthly Investment	Rs.24750	Rs. 22847.62
Monthly Return	Rs. 34982.5	Rs. 33059.52
Working Hour	10.5	10

Source: Estimated on the basis of the data collected from primary investigation

Above table may be explained as under the following headlines:

1) Average age of the WFO of both Dhubri and Kokrajhar district is found to be same as forty-three (43) years.
2) Average education of WFOs at Dhubri district is higher than the average education of WFOs at Kokrajhar district.
3) Mean number of family members including the particular WFO is higher in Kokrajhar district than Dhubri district.
4) Mean monthly investment of WFOs at Dhubri and Kokrajhar district is Rs.24750 and Rs. 22847.62 respectively.
5) Mean monthly return of WFOs of Dhubri district is higher (Rs. 34982.5) than that of Kokrajhar district (Rs. 33059.52).
6) In Dhubri district a WFO works on an average 10.5 hours per day, which is higher than that in Kokrajhar district (10 hours per day).

Cost-Benefit Analysis of WFOs (Paul & Devi, 2018): In order to compare the profits of WFOs of Dhubri and Kokrajhar district, let us obtain the NPV of WFOs of the two districts. It is evident from table 5.5 that the business volume (i.e., both costs and returns) of WFOs is higher at Dhubri district as compared to Kokrajhar district. This is because the women headed food stalls at Dhubri district are observed comparatively bigger and organized than those at Kokrajhar district.

Table: 5.5 NPV of WFOs of the two districts

District	**Present Value of Benefits/Return of WFOs**	**Present Value of Costs (investment) of WFOs**	**NPV of WFOs**
Dhubri	Rs. 419790	Rs.297000	Rs.122790
Kokrajhar	Rs. 396714.24	Rs. 274171,44	Rs.122542.8

Source: Estimated on the basis of the data collected from primary investigation

The WFOs of Dhubri district are found to undertake business in organised and permanent basis, but, most of the WFOs of Kokrajhar district are found to run their business only at the time of *haats*. But, the NPV of WFO of both Dhubri district and Kokrajhar district is found to be almost equal.

5.*3.2 Comparing Costs-Benefits of Women Paan Vendors* (WPVs) *of Dhubri District and Kokrajhar District:* First of all let us compare some averages of WPVs of Dhubri and Kokrajhar district. It is presented in table 5.6.

Table: 5.6 Various Averages relating to Women *Paan* Vendors (WPVs) of Dhubri district and Kokrajhar district

Averages	**Dhubri**	**Kokrajhar**
Age	40	46
Education	5	5
No. of Family members	4	4

Monthly Investment	Rs.12822	Rs. 20637.5
Monthly Return	Rs. 20135.5	Rs.30210
Working Hour	10.5	9

Source: Estimated on the basis of the data collected from primary investigation

Above table is explained below:

1) The mean age of WPVs at Kokrajhar district is higher (46) than the mean age of WPVs (40) at Dhubri district.
2) Average education of the WPVs of both Dhubri and Kokrajhar district is found to be same as 5 years.
3) Average number of family members of WPVs of Dhubri district and Kokrajhar district is also same.
4) Mean monthly investment of WPVs is lower at Dhubri district, i.e., Rs.12822, as compared to Kokrajhar district Rs. 20637.5.
5) Mean monthly return of WPVs is also lower at Dhubri district, i.e., Rs. 20135.5, as compared to Kokrajhar district Rs. Rs.30210.
6) But, the average working hour WPVs of Dhubri district is higher than that of Kokrajhar district.

Cost-Benefit Analysis of WPVs: In order to compare the profits of WPVs of Dhubri district and Kokrajhar district, let us obtain the NPV of WPVs of the two districts.

Table: 5.7 NPV of WPVs of the two districts

District	**Present Value of Benefits/Return**	**Present Value of Costs (investment)**	**NPV of WPVs**
Dhubri	Rs. 241626	Rs.153864	Rs.87762
Kokrajhar	Rs. 362520	Rs. 247650	Rs.114870

Source: Estimated on the basis of the data collected from primary investigation

The business volume i.e., both investment and return of WPVs is greater in Kokrajhar district as compared to Dhubri district. This is presented in table 5.7.

5.3.3 Comparing Cost-Benefit of Women Grocery Shopkeepers (WGSs) of Dhubri District and Kokrajhar District: Before going to cost-benefit analysis, let us compare various averages relating to WGSs. It is presented in table 5.8.

Table: 5.8 Various Averages relating to Women Grocery Shopkeepers (WGSs) of Dhubri district and Kokrajhar district

Averages	**Dhubri**	**Kokrajhar**
Age	46	46
Education	5	2
No. of Family members	4	5
Monthly Investment	Rs.17183.33	Rs. 26161.11
Monthly Return	Rs. 22995	Rs. 34482.78
Working Hour	11	6

Source: Estimated on the basis of the data collected from primary investigation

Above table is explained below:

1) The mean age of WGSs is same for both Dhubri and Kokrajhar district i.e., forty six (46).
2) Average education of the WGSs of Dhubri district is higher (5) than that of Kokrajhar district (2).
3) Average number of family members of WGSs of Dhubri district (4) is lower than that of Kokrajhar district (5).
4) Mean monthly investment of WGSs is lower at Dhubri district, i.e., Rs.17183.33, as compared to Kokrajhar district Rs. 26161.11.
5) Mean monthly return of WGSs is also lower at Dhubri district, i.e., Rs. 22995, as compared to Kokrajhar district Rs. 34482.78.
6) But, the average working hour WGSs of Dhubri district (11 hours) is higher than that of Kokrajhar district (6 hours).

Cost-Benefit Analysis of WGSs: In order to compare the profits of various WGSs of Dhubri and Kokrajhar district, let us obtain the NPV of WGSs of the two districts. As presented in table 5.9, the business volume and so, NPV of WGSs of Dhubri district is found to be lower about Rs.69740.04 as compared to that of WGSs of Kokrajhar district about Rs.99860.08. This is due to higher effective demand, leading to higher sales of grocery products at Kokrajhar district as compared to that at Dhubri district.

Table: 5.9 NPV of WGSs of the two districts

District	**Present Value of Benefits/Return of WGSs**	**Present Value of Costs (investment) of WGSs**	**NPV of WGSs**
Dhubri	Rs. 275940	Rs.206199.96	Rs.69740.04
Kokrajhar	Rs. 413793.36	Rs. 313933.32	Rs.99860.04

Source: Estimated on the basis of the data collected from primary investigation

5.3.4 Comparing Cost-Benefit of Women Tailors (WTs) of Dhubri District and Kokrajhar District: Some important averages of WTs are compared, which is presented in the table 5.10.

Table: 5.10 various Averages relating to Women Tailors (WTs) of Dhubri district and Kokrajhar district

Averages	**Dhubri**	**Kokrajhar**
Age	32	38
Education	10	11
No. of Family members	5	4
Monthly Investment	Rs.1584.21	Rs. 2275
Monthly Return	Rs. 5889.47	Rs. 8400
Working Hour	5.5	7

1) Source: Estimated on the basis of the data collected from primary investigation

2) Average age of women tailors (WTs) of Dhubri district (32) is comparatively lower than the average age of WTs of Kokrajhar district (38).
3) Mean education of WTs of Dhubri district (10) is lower than that of WTs of Kokrajhar is district (11).
4) Average number of family members of this group is somewhat lower (4) in Kokrajhar district than Dhubri district (5).
5) Mean Monthly investment of WTs of Dhubri and Kokrajhar district is Rs.1584.21 and Rs. 2275 respectively.
6) Mean monthly return of WTs of Dhubri district (Rs. 5889.47) is lower than that of Kokrajhar district (Rs. 8400).
7) WTs of Dhubri district works less (5.5 hours) than WTs of Kokrajhar district (7 hours).

Cost-Benefit Analysis of WTs: In order to compare the profitability of various WTs of Dhubri and Kokrajhar district, let us obtain the NPV of WTs of the two districts.

Table: 5.11 NPV of WTs of the two districts

District	**Present Value of Benefits/Return of WTs**	**Present Value of Costs (investment) of WTs**	**NPV of WTs**
Dhubri	Rs. 70673.64	Rs.19010.52	Rs.51663.12
Kokrajhar	Rs. 100800.00	Rs. 27300.00	Rs.73500.00

Source: Estimated on the basis of the data collected from primary investigation

As shown in table 5.11, the average profit/income earned by WTs of Kokrajhar district of about Rs.73500.00, is higher than that of Dhubri district of about Rs. 51663.12. This is due to higher fashion and style sense of the people of Kokrajhar district as compared to the people of Dhubri district, leading to higher demand for dress designing in the former than the later. By visiting both the districts anybody can guess this fact.

5.3.5 Comparing Cost-Benefit of Women Beauticians (WBs) of Dhubri District and Kokrajhar District: Again, the averages relating to WBs of Dhubri district and Kokrajhar district are compared through the following table 5.12.

Table: 5.12 Various Averages relating to Women Beauticians (WBs) of Dhubri district and Kokrajhar district

Averages	**Dhubri**	**Kokrajhar**
Age	32.5	42
Education	11	8
No. of Family members	4.5	5.5
Monthly Investment	Rs.7130	Rs. 6288.89
Monthly Return	Rs. 22010	Rs. 22266.67
Working Hour	8.5	7

Source: Estimated on the basis of the data collected from primary investigation

1) Average age of women Beauticians (WBs) of Dhubri district (32.5 years) is comparatively lower than the average age of WBs of Kokrajhar district (42 years).
2) Mean education of WBs of Dhubri district (11) is lower higher than that of WTs of Kokrajhar is district (8).
3) Average number of family members of this group is lower (4.5) in Dhubri district and (5.5) Kokrajhar district.
4) Mean Monthly investment of WBs of Dhubri and Kokrajhar district is Rs.7130 and Rs. 6288.89 respectively.
5) Average monthly return of WBs of Dhubri district is Rs. 22010 and that of Kokrajhar district is Rs. 22266.67.
6) WBs of Dhubri district on an average work (8.5 hours) more than that of Kokrajhar district (7 hours).

Table: 5.13 NPV of WBs of the two districts

District	Present Value of Benefits/Return	Present Value of Costs (investment)	NPV of WBs
Dhubri	Rs. 264120	Rs.85560	Rs.178,560
Kokrajhar	Rs. 267200.04	Rs. 75466.68	Rs.191733.36

Source: Estimated on the basis of the data collected from primary investigation

It is observed from table 5.13 that regarding beautiparlour, WBs of Kokrajhar district are earning higher NPV (Rs.191733.36) as compared to that of Dhubri district (Rs.178,560) with even lower costs. This is because, people of Kokrajhar district, especially women are more beauty-conscious, stylish and fashionable than the women of Dhubri district.

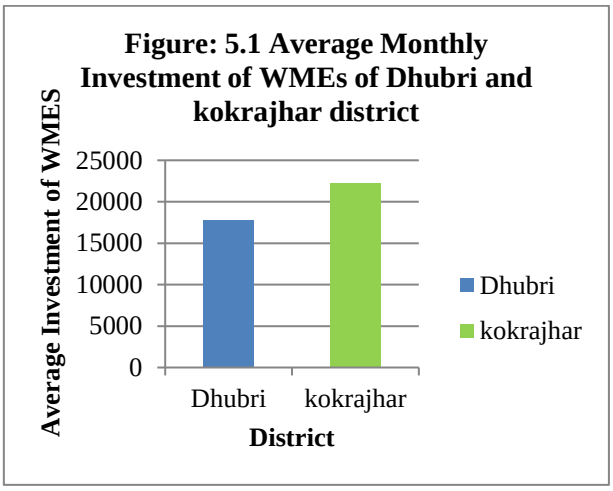
5.4 COMPARING AVERAGE MONTHLY INVESTMENT, AVERAGE MONTHLY REVENUE, AVERAGE MONTHLY INCOME AND AVERAGE DAILY WORKING HOUR OF WMEs BETWEEN DHUBRI AND KOKRAJHAR DISTRICT DIAGRAMMATICALLY:

5.4.1 Comparing Average Investment of WMEs of Dhubri and Kokrajhar district: It is obtained from primary investigation that average monthly investment Average Monthly Investment of WMEs of Kokrajhar district is higher (Rs. 22266.87) than the Average Monthly Investment of WMEs of Dhubri district (Rs. 17750.69). This is presented in table 5.14 and diagram 5.1.

Table: 5.14 Average Monthly Investment of WMEs of Dhubri and Kokrajhar district

District	Dhubri	Kokrajhar
Average Monthly Investment of WMEs	Rs. 17750.69	Rs. 22266.87

Source: Estimated on the basis of the data collected from primary investigation

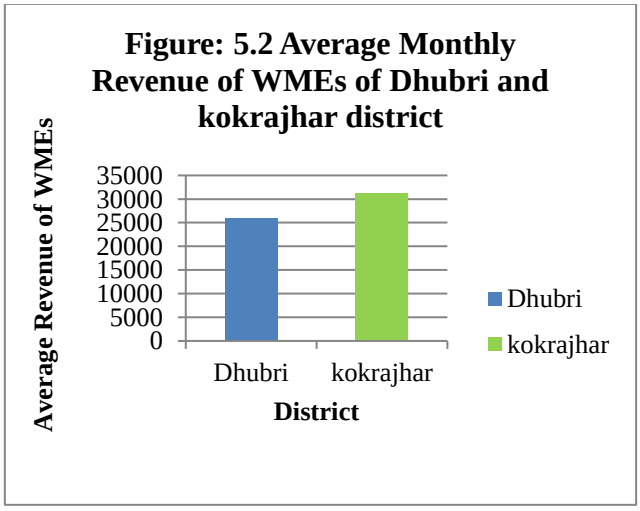


5.4.2 Comparing Average Revenue of WMEs of Dhubri and kokrajhar district: Average Monthly Revenue of WMEs of Kokrajhar district (31244.94) is found greater than that of Dhubri district (Rs. 25888.28). This is presented in table 5.15 and diagram 5.2.

Table: 5.15 Average Monthly Revenue of WMEs of Dhubri and kokrajhar district

District	**Dhubri**	**Kokrajhar**
Average Monthly Revenue of WMEs	Rs. 25888.28	Rs. 31244.94

Source: Estimated on the basis of the data collected from primary investigation

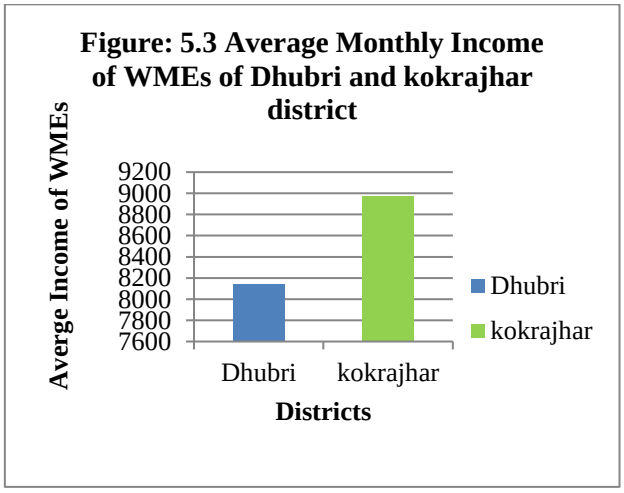


5.4.3 Comparing Average Monthly Income of WMEs of Dhubri and kokrajhar district: WMEs of Kokrajhar district is earning higher average monthly income of about Rs. 8978 as compared to WMEs of Dhubri district, which is Rs.8137.58. See table 5.16 and diagram 5.3.

Table 5.16 Average Monthly Income of WMEs of Dhubri and kokrajhar district

Districts	Dhubri	Kokrajhar
Average Income of WMEs	Rs. 8137.58	Rs. 8978

Source: Estimated on the basis of the data collected from primary investigation



5.4.4 Comparing Average Working Hour of WMEs of Dhubri and kokrajhar district: WMEs of Dhubri district work on an average 10 hours per day to earn a monthly income Rs. 8137, whereas this counterpart of Kokrajhar district spend less time of about 7.5 hour to earn somewhat more income of Rs. 8978. See table 5.17 and diagram 5.4.

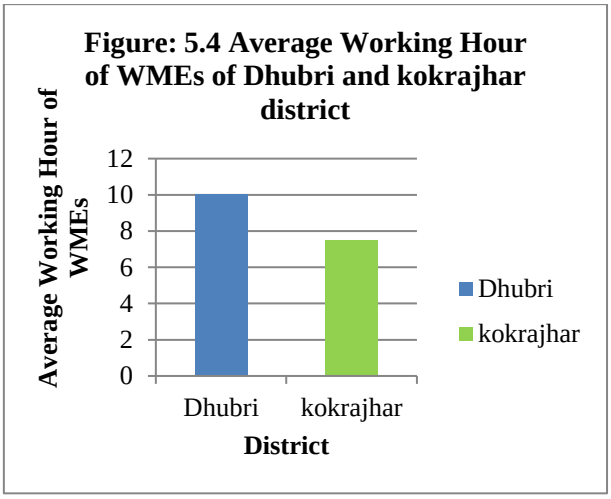
It is worth exploring, in this context, the survey found that in Kokrajhar district the business of the most of the women are part time or weekly (relating to

haat), whereas in Dhubri district maximum numbers of women are seen to be involved in their business for full time basis. The underlying reason behind this is that, the market demand for goods and services, and sales per hour is greater in Kokrajhar district as compared to that in Dhubri district. Hence, WMEs work comparatively less hour in Kokrajhar district than the WMEs in Dhubri district but the WMEs in Kokrajhar district earn higher income than their counterparts in Dhubri district.

Table: 5.17 Average Working Hours of WMEs of Dhubri and kokrajhar district

District	Dhubri	Kokrajhar
Average Working hour of WMEs	10	7.5

Source: Estimated on the basis of the data collected from primary investigation



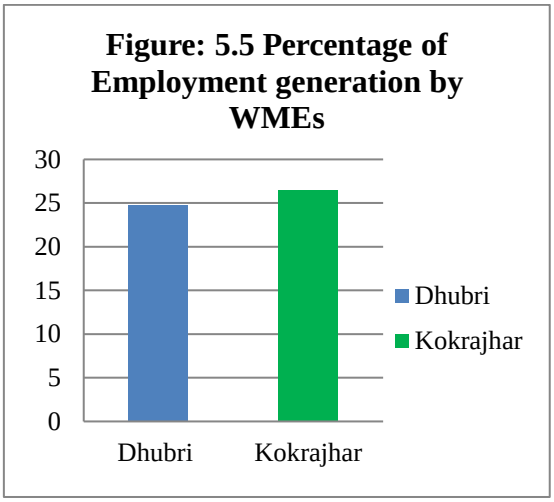
5.4.5 ***Employment Generation:*** Total numbers of employment generation by 145 numbers of WMEs in Dhubri district is 36 and 166 numbers of WMEs in Kokrajhar district is 44. Therefore, percentage of employment generation by WMEs in Dhubri district is 25% and in kokrajhar district is 27%. In other words, the WMEs to

employment generation ratio in Dhubri district is 100:25 and in Kokrajhar district is 100:27. It implies that 100 WMEs could be able to generate employment opportunities for 25 employees in Dhubri district and 27 employees in Kokrajhar district. This presented in table 5.18 & diagram 5.5.

Table: 5.18 Employment Generation by WMEs of Dhubri and Kokrajhar district

District	Total number of self-employed WMEs	Total Numbers of Employment Generation (%)	WMEs to Employment generation ratio
Dhubri District	145	36 (25%)	100:25
Kokrajhar District	166	44(27%)	100:27

Source: Estimated on the basis of the data collected from primary investigation



The employment is generated mainly by beauty-parlours and food-stalls in the two districts. Of the total employment generated, almost (21) 58% employment is generated by food-stalls in Dhubri district and almost (29) 66% employment is generated by food-stalls in Kokrajhar district (Paul & Devi, 2018). And the remaining

is generated by beauty-parlours. Thus, except food-stalls and beauty-parlours, all the other types of entrepreneurship undertaken by WMEs in the two study areas, could be rightly considered as survival or livelihood oriented entrepreneurship, where there is no tendency towards growth or employment generation.

5.5 **OBJECTIVE II: COMPARING NPVS, MONTHLY AVERAGE INVESTMENT, MONTHLY AVERAGE RETURN, MONTHLY AVERAGE INCOME AND AVERAGE DAILY WORKING HOURS OF DIFFERENT TYPES WMES WITHIN THE DISTRICT FOR BOTH DHUBRI AND KOKRAJHAR DISTRICT**: On the basis of the above cost-benefit analysis and NPVs, different types of WMEs belonging to a particular district are raked and this ranking is interestingly same for both the districts. They are (i) WBs are in the first rank with highest NPV (Rs.178,560 for Dhubri district & Rs. 1,91,733.36 for Kokrajhar district), (ii) WFOs are in the second position (with NPVs Rs. 1,22,790 for Dhubri district and Rs. 1,22,542.8 for Kokrajhar district) (iii) WPVs are in the third rank (with NPVs Rs. 87,762 for Dhubri district and Rs. 1,14,870 for Kokrajhar district), (iv) WGSs are in the fourth position (with NPVs Rs. 69,740.04 for Dhubri district and Rs. 99,860.04 for Kokrajhar district), and (v) WTs are in the fifth rank (with NPVs Rs. 51,663 for Dhubri district and Rs. 73,500 for Kokrajhar district). NPVs of WVVs are not compared for the two districts, as there is a huge gap between numbers of WVVs in Dhubri district and Kokrajhar district, and it is much higher for Kokrajhar district than Dhubri district. For details of the cost-benfit analysis, see tables 5.5, 5.7, 5.9, 5.11, 5.13.

On the basis of the data obtained from primary survey, various monthly averages like average investment, average income and average working hour of different types of WMEs are compared between Dhubri district and Kokrajhar district with the help of diagram.

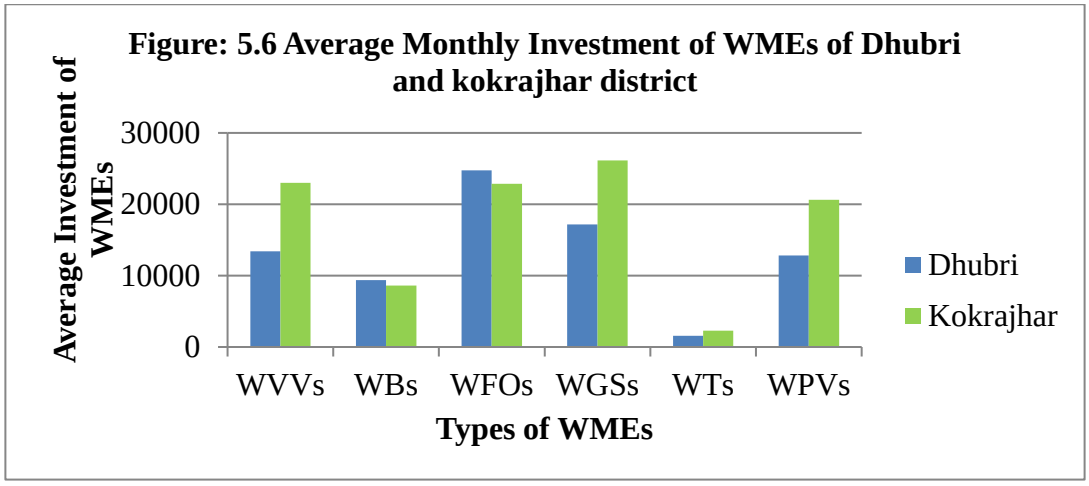
5.5.1 Comparing Average Investment of Different Types WMEs of the Two Districts:

In table 5.19 and diagram 5.6, we show average investment of various types of WMEs of Dhubri district and Kokrajhar district. In Dhubri district WFOs are the highest investors (Rs.24750) (Paul & Devi, 2018) and WTs are the lowest investors (Rs. 1584) on average. Contrary to this, in Kokrajhar district, WGSs are the highest investors (Rs. 26161) and WTs are the lowest investors (Rs. 2275) on average. But, both highest and lowest investment by WMEs of Kokrajhar district is higher than the highest and lowest investment by WMEs of Dhubri district.

Table: 5.19 Average Monthly Investment of Different WMEs of two districts

District	WVVs	WBs	WFOs	WGSs	WTs	WPVs
Dhubri	Rs. 13400	Rs. 7130	Rs. 24750	Rs. 17183	Rs. 1584	Rs. 12822.58
Kokrajhar	Rs.23002.67	Rs.6288.9	Rs.22847.6	Rs.26161	Rs. 2275	Rs. 20637.5

Source: Estimated on the basis of the data collected from primary investigation



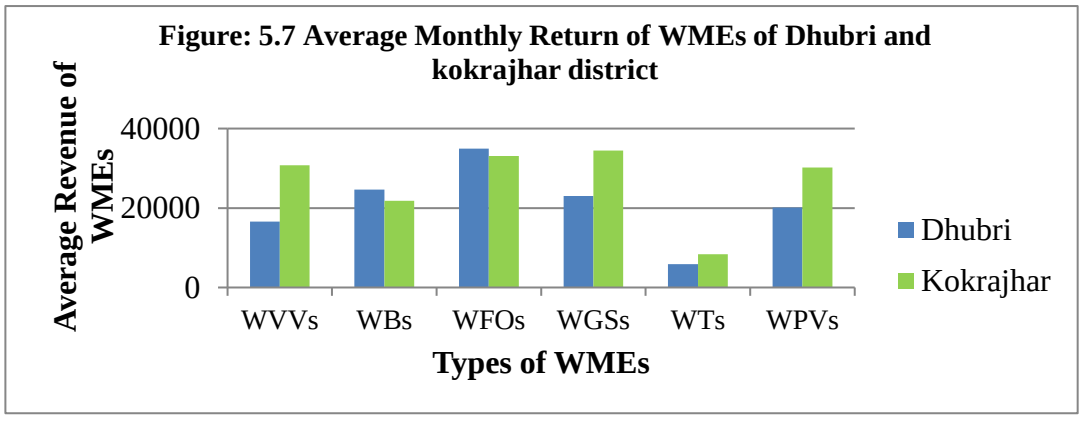
5.5.2 Comparing Average monthly Return of Different types WMEs of the two districts:

Table 5.20 as well as diagram 5.7 compares average monthly return of different types of WMEs of the two districts. Here, we see that the highest and lowest average monthly return earners of Dhubri district are WFOs (Rs. 34982.5) and WTs (Rs. 5889.5) respectively. And this highest and lowest of Kokrajhar district is WGSs (Rs. 34482.7) and WTs (Rs. 8400) respectively. Thus, it is observed that WTs are lowest average monthly return earners in both the districts, Dhubri and Kokrajhar.

Table: 5.20 Average Monthly Return of Different WMEs of two districts

District	WVVs	WBs	WFOs	WGSs	WTs	WPVs
Dhubri	Rs. 16560	Rs. 22010	Rs. 34982.5	Rs. 22995	Rs. 5889.5	Rs. 20135.5
Kokrajhar	Rs. 30720	Rs. 22266.67	Rs. 33059.5	Rs. 34482.7	Rs. 8400	Rs. 30210

Source: Estimated on the basis of the data collected from primary investigation



5.5.3 Comparing Average Monthly Income of Different types WMEs of the two districts:

Table 5.21 and diagram 5.8 presents average income of different types of WMEs of Dhubri and Kokrajhar district. Average income of WBs of Dhubri district

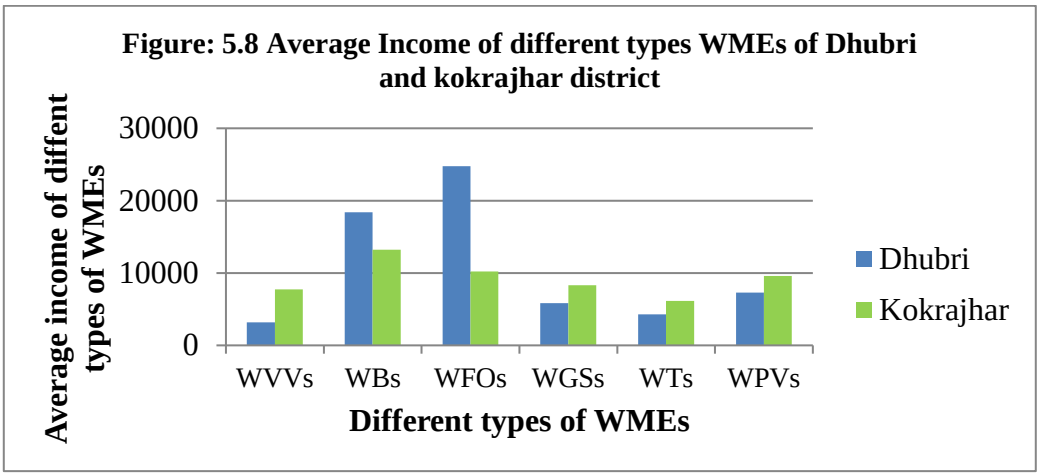
is the highest (Rs.14,880) and that of WVVs (Rs. 3160) is the lowest. In contrast to Dhubri district, in Kokrajhar district, even though, WGSs are both the highest investors and highest revenue earners on average, WBs are the highest (Rs. 15,977.78) average income earners. Anyway, WTs are the lowest (Rs. 6125) average income earners in Kokrajhar district. This result of Kokrajhar district reflects the fact that a higher level of investment and revenue is not always accompanied by a higher level of income.

It is worth exploring, in this context, that most of the WMEs of Dhubri district is earning higher average income by investing lower amount as compared to WMEs of Kokrajhar district, as, almost all costs, charges and taxes are higher in Kokrajhar district so investment is higher in Kokrajhar district as compared to Dhubri district. Again prices of all commodities are also higher in Kokrajhar district so revenue is higher in Kokrajhar district as compared to Dhubri district. Finally, since Kokrajhar district is developing speedily and rapidly (this is discussed in detail in chapter six) as compared to Dhubri district, leading to higher involvement of men and women in business in Kokrajhar district, resulting greater competition in the market, so, the difference between revenue and cost is lower in kokrajhar district. Dhubri district is slowly developing district, resulting lower charges, taxes as well as competition, leading the difference between revenue and cost higher. Thus, the profitability of WMEs of Kokrajhar district is lesser as compared to that of Dhubri district, even with a greater volume of business in Kokrajhar district.

Table: 5.21 Average Monthly Income of Different WMEs of two districts

District	WVVs	WBs	WFOs	WGSs	WTs	WPVs
Dhubri	Rs. 3160	Rs. 14,880	Rs. 10,232.5	Rs. 5812	Rs.4305	Rs.7313
Kokrajhar	Rs.7717.5	Rs. 15,977.78	Rs. 10212	Rs. 8321.6	Rs.6125	Rs.9572.5

Source: Estimated on the basis of the data collected from primary investigation



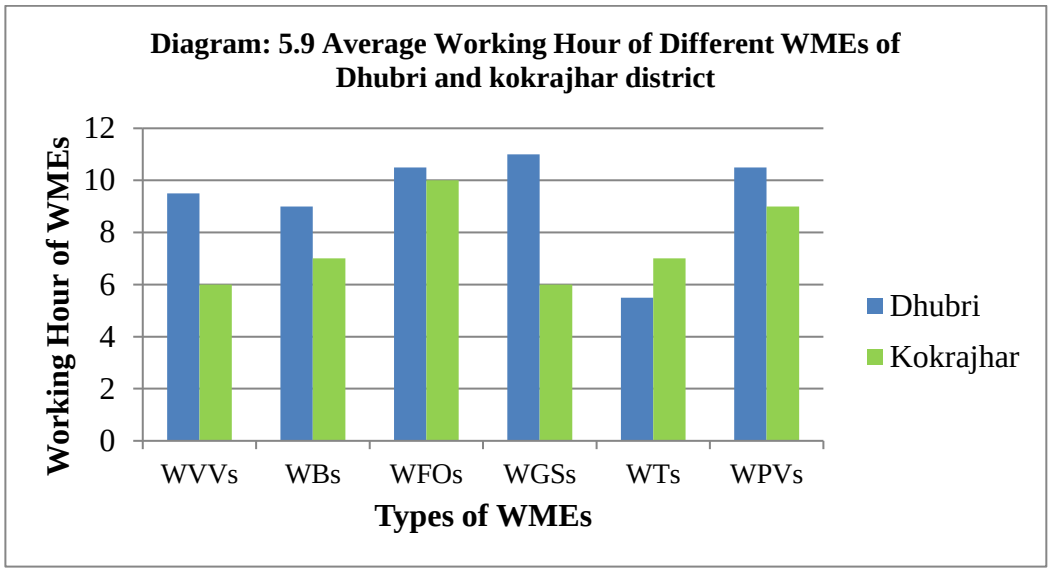
5.5.4 Comparing Average Working Hour of Different types WMEs of the two districts:

Table 5.22 and diagram 5.9 presents average working hour of various types of WMEs of Dhubri and Kokrajhar district. In Dhubri district WGSs spend longer time in their business about 11 hours, than any other WMEs; WFOs and WPVs are next highest, both spend 10.5 hours, then WVVs is the third highest (9.5 hours), beautiparlour in the fourth position, which spend 9 hours and last but not the least, WTs spend shortest time about 5.5 hours per day. Contrary to this, in Kokrajhar district WFOs are seen to spend longest time almost 10 hours, second, WPVs spend 9 hours, third both WTs and beautician spend 7 hours, lastly, WVVs and WGSs spend shortest time, 6 hours per day in their business.

Table: 5.22 Average Working hours per day of Different WMEs of two districts

District	WVVs	WBs	WFOs	WGSs	WTs	WPVs
Dhubri	9.5	9	10.5	11	5.5	10.5
Kokrajhar	6	7	10	6	7	9

Source: Estimated on the basis of the data collected from primary investigation



5.5.4.1 Cause and Effect of Long Hour Working/ Overwork by Women:

The present research investigation has already found that WMEs on average spend 10 and 7.5 hours in Dhubri and Kokrajhar district respectively for business purpose. But, if non-economic activities done by them towards their family are taken into consideration, then their working hours would stand even much longer. The WMEs have to engage themselves in their own businesses from 5.00AM-6.00 AM in the morning to 12.00 AM-1.00 PM per day. As they run the business with minimum investment, as far as possible, they avoid hiring employees for any kind of help relating to business, and they manage to do all the business related activities by themselves, like buying business materials to carrying to the market, sitting all the day for selling the commodities. In context of WFOs, they manage to do from buying & carrying raw material to cooking, from serving customers to cleaning tables & washing dishes etc. Again, amid of all these business activities, sometimes, they have to do their domestic works in the afternoon from 12.00 AM-1.00PM to 3.00PM-4.00PM. Then again they have to be busy with their business in the evening from 3.00-4.00 PM to 7.00-7.30 PM. Again, they have to take preparation for the next day, or sometimes they start taking preparation of their day very early in the morning. Due

to this water tight busy schedule, sometimes they have to miss some important tasks, like going to the bank, opening bank account, forming SHG, applying for micro-credit etc. which could have resulted much beneficial for them.

A woman plays an important role in a society. A working woman is observed to play a dual active role in a family. She has to maintain the family satisfying all the members as a daughter, wife, mother, daughter-in-law or/and sister-in-law, which is considered as non-economic activity as well as the work, which helps her to earn money, that is economic activity. According to Human Development Report, 2015, 72 percent of working-age (ages 15 and older) men were employed as compared to 47 percent of women. An analysis of time use surveys representing 69 percent of the world's adult population shows that out of total hours worked, women account for 52 percent and men 48 percent. Of the total global work, 59 percent is paid and 41 percent is unpaid. Of the 59 percent global paid work, mostly outside the home, men's share is nearly twice (38 percent) that of women (21 percent). But, the picture is reversed for unpaid work, which is mostly within the home and encompassing a range of care responsibilities. Of the 41 percent global unpaid work, which consists of mainly care services to children and elder family members, women perform three times more than men i.e. 31 percent versus 10 percent. According to time use surveys in developing countries like India, women are typically responsible for more than 75 percent unpaid household care services. In low-income households, which generally do not have better access to basic services and cannot afford to hire help or buy labour-saving technology, this percentage becomes higher, as compared to middle or high-income households, which have access to this basic services and can afford labour-saving technology. Even though unpaid work holds great worth for individuals and society but unpaid work is overlooked in economic valuations (Human Development Report, 2015). Perhaps, this is the reason why women are lagging behind man in the aspects like social esteem and power relations. Thus, whether a woman is involved in economic activity or not but long hour working is common phenomenon for a woman. But, the situation is even worsened for lower and middle-

class working women, who have to work outside for earning income as well as work at home to fulfill domestic needs. Therefore, overwork is more prevalent among working women as compared to housewives.

Effects of long hour working on Women:

Working long hours, specifically forty or more hours a week, has a very dangerous and fatal effect on women's health, according to a new study by the Ohio State University and Mayo Clinic. Researchers found that working long hours raise risks for some life threatening diseases like cancer, heart disease, arthritis, and diabetes to the women. According to the study, working 40 or more hours a week raises women's risk for developing arthritis and diabetes. And, working more than or equal to 51 hours a week develops heart disease or cancer (in all forms except for skin cancer) to women. Also the researchers found that, women who work 60 or more hours a week are in triple risk for developing all of these diseases.

After working outside for business or job by women, returning home means a 'second shift' of work where they are responsible for childcare, chores, housework, and more. Thus, all the work at home, at workplace, and all the mental and physical pressure and stress associated with it, distressingly affect women (https://www.womansday.com/health-fitness/news/a55529/working-women-health-risks/).[4]

However, the effects of overwork on women may be discussed under the following headlines:

(i) Sleeplessness/ insomnia

Several researches have shown that overwork can negatively impact sleep of women. Chronic insomnia raises the risk of obesity, heart disease, stroke, and

[4]Source: Cause and effects of long hour working by women is based on the writings collected from the following website. (https://www.womansday.com/health-fitness/news/a55529/working-women-health-risks/) retrieved on 5th February, 2019 at 10.00 PM.

diabetes etc. In the short-term, lack of sleep can have significant effects on the hippocampus, an area of the brain involved in memory creation and consolidation.

(ii) Causes bad habits and obesity

Working too much can affect the body and brain in two ways, firstly, by boosting stress and secondly, by working as a bottleneck in the way of exercise, healthy eating, and other good habits. It may increase consumption of caffeine and unhealthy food. Working over time, poor food choices can lead to weight gain and even obesity.

(iii) Long hour working is bad for heart

A long-running study of more than 10,000 civil servants in London found that white-collar workers who worked three or more hours longer than a normal seven-hour day had a 60% higher risk of heart-related problems than white-collar workers who didn't work overtime.

(iv) Overwork can cause harmful alcohol uses. However, this type of risk is less visible among women.

(v) Overwork can cause type-2 diabetes in low-income workers: In 2015, a group of researchers investigated and found that regardless of age, sex, obesity, and physical activity, longer hour working can cause type-2 diabetes in individuals in the low socio-economic status groups.

Effects of over working on business:

(i) Sarah Green Carmichael of **Harvard Business Review** calls the story of overwork "the story of diminishing returns" If we keep overworking, we will keep making avoidable mistakes and getting lost in the weeds -- all while not actually producing more.

(ii) Long working hours doesn't necessarily mean more output or return.

Research by the Business Round table found in the short run to meet a critical production deadline, working long hour can give positive result. But, normally longer hours working may not result more return.

(iii) Increasing number of hours worked may result making increasing number of mistakes.

According to some researchers due to stress and pressure arising out of overwork may lead some avoidable mistakes by an individual.

(iv) Long working hours lead to lose focus: According to a 2011 study from the University of Illinois, people can easily lose focus and get lost in the weeds of a task or project if they work on it continuously without stopping.

In a nutshell, a tired, sick and depressed person resulting from overwork can never be happy. Thus, overwork done by the people of a country can definitely pull down the happiness index of that country.

Why do women overwork?

If overwork is so damaging and dangerous for the physio-psychological health of a woman then, the question arises, why women do overwork? Actually there are some causes which attribute to overwork by women. These causes may be classified into natural, socio-cultural, economic, pressure from employer, family member and the tendency of women herself.

(i) Natural Cause: Nature has created with some physiological differences between men and women, for which reason the child birth and child rearing responsibility solely comes on women's shoulder, and a women can never deny this responsibility. Therefore, in whatever profession, a woman may belong to she has to take the responsibility of a mother.

(ii) **Socio-cultural Cause:** There are some strong socio-cultural beliefs that cooking for the family, keeping the house neat and clean, family care-taking service for both young and elder family member should be met by women of the family only, for which men are not responsible.

(iii) **Economic Cause:** Sometimes due to financial crisis to meet subsistence needs of their children and other family members, women are observed to do multiple types of work all the day long. For example, in some area, the house maids are observed to do domestic works walking around several houses in different shifts all the day long, due to multiple types of family problems, (sick or drunk father or husband, careless male members etc.).

(iv) **Pressure from Employer:** Sometimes, job holder women do overwork due to pressure from their employer or manager with the threatening of salary cut or termination.

(v) **Other Family Members:** Overwork by women is a result of attitude of other family members especially male; whether they are providing helping hand towards the works done by female counterpart or just sitting and ordering for work.

(vi) **Women's own outlook:** Sometimes, even after getting all types of support from male family members, women do not let their male counterpart to be involved in household works, as she has a presumption that it is solely her duty; and involving male members in domestic works means sin to female members of the family. In third world countries like India, where superstition is pre-dominating the family and social life of people, women perform overwork due to this reason.

5.6 TESTING OF HYPOTHESES:

Here, at this point null hypotheses will be tested for first, second and third hypothesis. Two-independent sample test is applied for testing the first null hypothesis and k-independent sample test is applied for testing the second null

hypothesis. The third objective and third hypothesis of the study is to examine the factors affecting monthly return of WMEs in Dhubri and Kokrajhar district, for which regression analysis will be applied. We will use SPSS software to obtain our test outcome. By looking into test outcome, if value of Sig. Asymp. Sig. is less than 0.05 then we reject our null hypothesis, otherwise, accept our null hypothesis.

5.6.1 Objective III & Hypothesis III): Testing of hypothesis utilizing regression analysis. At this point the third null hypothesis will be tested as considered in chapter one.

Null Hypothesis: Monthly return of WMEs is not significantly affected by the factors like age, education, number of family members, monthly investment and working hours of WMEs.

H_o: $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5=0$

Alternative Hypothesis: Monthly return of WMEs is significantly affected by the factors like age, education, number of family members, monthly investment and working hours of WMEs.

H_A: $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5\neq0$

For testing this hypothesis, a multiple linear regression model would be used, which is considered in chapter three, equation number one. By looking into SPSS outcome, if the level of significance (value of Sig.) is less than 0.05 then we reject our null hypothesis, and agree that $\beta_i\neq0$ (here, i=0, 1, 2, 3, 4, 5), thus conclude that there is a significance effect of explanatory variable on endogenous variable. Contrary to this if value of Sig. greater than 0.05, we accept our null hypothesis and state that $\beta_i=0$ and endogenous variable is not significantly affected by the particular explanatory variable.

5.6.1.1 Regression Analysis for Dhubri District:

Now, after application of OLS estimation the historical regression line for WMEs of Dhubri district is found to be

Y_t= -2651.39+50.19X_1+361.12X_2+330.33 X_3+ 1.13 X_4+ 282.41 X_5 R^2=0.975 ..(i)

Table 5.23: Test statistics for WMEs of Dhubri District

	Coefficient	**(S.E)**	**t**	**Sig.**	**Collinearity Statistics**		**R^2**
					Tolerance	VIF	
Constant (β_0)	-2651.39	4526.96	-0.586	0.559	--	--	0.975
Age of WMEs (β_1)	50.19	68.48	0.733	0.465	0.663	1.509	
Education of WMEs (β_2)	**361.12**	**172.92**	**2.088**	**0.039**	**0.670**	**1.493**	
Number of family members of WMEs (β_3)	330.33	409.51	0.807	0.421	0.943	1.060	
Monthly investment of WMEs (β_4)	**1.13**	**0.16**	**71.58**	**0.000**	**0.962**	**1.040**	
Working hours of WMEs (β_5)	282.41	233.37	1.21	0.228	0.894	1.118	

Source: Analysis of primary data by the author.

If the value of all the explanatory variables X_1, X_2, X_3, X_4 & X_5 are fixed at zero, the average monthly return of WMEs in Dhubri district is negative by the amount Rs.2651. It is due to the fixed cost especially shop rent incurred by the WMEs. The partial regression of 50.19 implies that holding all the variables constant, an increase in the age of WMEs by, say, one year leads to an increase in the average monthly returns of WMEs of about Rs.50.0. Holding all other variables constant, the average monthly return of WMEs increases by about Rs.361.12 with an increase in the level of education by one year. Keeping all other explanatory variables constant,

the increase in one family member leads to an increase in average monthly return of WMEs by Rs.330.33. Similarly, keeping all other variables constant, average monthly returns of WMEs in Dhubri district increases by Rs.1.13, as monthly investment increases a (Rupee) unit. In other words, marginal efficiency of investment (MEI)[5] is estimated to be 13% for WMEs in Dhubri district. Finally, holding all the other variables constant, average monthly return increases by Rs.282.41, with per unit increase in working hour. The R^2 value of 0.975 shows that, the five explanatory variables accounted for 97.50% of variations in average monthly return of WMEs.

The significant values as shown in the table 5.23 reveal that for Dhubri district

$\beta_1, \beta_3, \beta_5=0$ and $\beta_2, \beta_4 \neq 0$

i.e., the monthly return of WMEs in Dhubri district is only significantly affected by education and monthly investment and effect of age, number of family members and working hour of WMEs on monthly return is not significant. The estimated values of different test statistics are given in the table 5.23.

5.6.1.2 Regression Analysis for Kokrajhar District:

And after application of OLS estimation the historical regression line for WMEs of Kokrajhar district is found to be

$Y_t = -3134.70+9.24X_1+183.49X_2+236.58\ X_3+ 1.31X_4+ 388.85\ X_5 \quad R^2=0.981..(iii)$

Again, if the value of all the explanatory variables X_1, X_2, X_3, X_4 & X_5 are fixed at zero, the average monthly return of WMEs in Kokrajhar district is negative by the amount Rs.3134.7. The partial regression implies that, holding all the other variables constant, an increase in the age of WMEs by one year leads to an increase in the average monthly return of WMEs of about Rs. 9.24.

[5] MEI refers to expected rates of return on an addition to capital investment.

Table 5.24 Test table for WMEs of Kokrajhar District

	Coefficient	(S.E)	t	Sig.	Collinearity Statistics		R^2
					Tolerance	VIF	
Constant (β_0)	-3134.70	-1858.27	-1.687	0.094	--	--	0.981
Age of WMEs (β_1)	9.24	31.863	0.290	0.772	0.831	1.203	
Education of WMEs (β_2)	**183.49**	**79.06**	**2.321**	**0.022**	**0.809**	**1.237**	
number of family members of WMEs (β_3)	236.58	150.55	1.576	0.117	0.888	1.126	
Monthly investment of WMEs (β_4)	**1.31**	**150.55**	**87.566**	**0.00**	**0.940**	**1.064**	
working hours of WMEs (β_5)	**388.85**	**99.749**	**3.898**	**0.00**	**0.941**	**1.062**	

Source: Analysis of primary data by the author.

Holding all other variables constant, an increase in the level of education by one year, leads to an increase in the average monthly income by Rs. 183.49. Holding all the other variables constant, an increase in one family member leads to an increase in average monthly return of WMEs by Rs. 236.58. Similarly, keeping all the other variables constant, average monthly return rises by Rs. 1.31 with a unit (Rupee) increase in monthly investment i.e. MEI is estimated to be 31%. Finally, holding all the other variables constant, average monthly return increases by Rs. 388.85, with per unit increase in working hour. The R^2 value of 0.983 reflects that the five explanatory variables accounted for 98.1% of changes in average monthly return of WMEs. All the values are shown in table 5.24. It is evident from above significant values from table 5.24 that for WMEs of Kokrajhar district

$\beta_1, \beta_3 = 0$ and $\beta_2, \beta_4, \beta_5 \neq 0$

i.e., monthly return of WMEs in Kokrajhar district is significantly affected by the factors like level of education, monthly investment and working hours of WMEs. And the effect of age and number of family members of WMEs on monthly returns of WMEs is not significant.

5.6.2 Regression analysis For Several WMEs:

5.6.2.1 **Regression analysis For WFOs of Dhubri District**[6]

"The historical regression line for WFOs for Dhubri district will be

$Y_t = 2194.8-12.45X_1+105.62X_2+791X_3+1.159X_4+59.02X_5$ $R^2=0.982$

Table 5.25 Test table for WFOs of Dhubri District

	Coefficient	**(S.E)**	**t**	**Sig.**	**R^2**
Constant (β_0)	2194.8	9680.87	0.227	0.822	0.982
Age of WMEs (β_1)	-12.45	152.036	-0.082	0.935	
Education of WMEs (β_2)	105.62	379.161	0.279	0.782	
Number of family members of WMEs (β_3)	791	806.53	0.981	0.334	
Monthly investment of WMEs (β_4)	**1.159**	**0.029**	**39.914**	**0.000**	
Working hours of WMEs (β_5)	59.02	593.89	0.099	0.921	

Source: Analysis of primary data by the author.

It is clear from above significant values that for WFOs of Dhubri district

$\beta_1, \beta_3, \beta_2, \beta_5=0$ and $\beta_4 \neq 0$

[6] The study on WFOs of the present study has already been published by the researcher on the research paper (Paul, J., & Devi, Dr. M. (2018). Income Generation and Employment Generation by Self-employment through Micro-entrepreneurship: A Comparative Study of Women Food-Stall Owners (WFOs) of Dhubri district and and Kokrajhar district of Assam. *IOSR Journal of Business and Management (IOSR-JBM),* Volume 20, Issue 9, Ver. IV, September 2018, pp 53-60)

i.e., in case of Dhubri district, except the effect of monthly investment of WFOs, the effect of all other variables like age, education, number of family members and working hours of WFOs on monthly returns of WFOs is not significant. And the effect of investment on return is such that, all the other variables remaining constant, with a unit (Rupee) increase in average monthly investment, average monthly return rises by Rs. 1.16 i.e., MEI is approximated to be 0.16 for WFOs of Dhubri district (Paul, and Devi, 2018). See table 5.25.

The historical regression line for WFOs for Kokrajhar district will be

Y_t=-3163.239+78.634X_1+-76.879X_2+-104.797X_3+1.402X_4+152.231X_5

R^2=0.982

Table 5.26 Test table for WFOs of Kokrajhar District

	Coefficient	**(S.E)**	**t**	**Sig.**	**R^2**
Constant (β_0)	-3163.239	3672.01	-0.861	0.395	0.982
Age of WMEs (β_1)	78.634	57.491	1.368	0.180	
Education of WMEs (β_2)	-76.879	142.015	-0.541	0.592	
Number of family members of WMEs (β_3)	-104.797	357.694	-0.293	0.771	
Monthly investment of WMEs (β_4)	**1.402**	**0.033**	**42.186**	**0.000**	
Working hours of WMEs (β_5)	152.231	171.844	0.886	0.382	

Source: Analysis of primary data by the author.

Like Dhubri district, it is clear from above significant values in table 5.26 that for WFOs of Kokrajhar district

$\beta_1, \beta_3, \beta_2, \beta_5=0$ and $\beta_4 \neq 0$

i.e., in Kokrajhar district, only monthly investment of WFOs affects monthly return of WFOs significantly. And the effect of all other variables like age, education, number of family members and working hour of WFOs on monthly returns of WFOs is not significant. Holding all the other variables constant, average monthly return

increases by Rs. 1.40 with a unit (Rupee) increase in monthly investment i.e. MEI is estimated to be 40% for WFOs of Kokrajhar district" (Paul, and Devi, 2018).

5.6.2.2 **Regression analysis For WPVs**

The historical regression line for WPVs for Dhubri district will be

Y_t=-1623.77-148.24X_1-126.12X_2+1482.01X_3+1.37X_4+436.27X_5 R^2=0.825

Table 5.27: Test table for WPVs of Dhubri District

	Coefficient	**(S.E)**	**t**	**Sig.**	**R^2**
Constant (β_0)	-1623.77	6289.49	-0.258	0.798	0.825
Age of WMEs (β_1)	-148.24	85.75	-1.729	0.096	
Education of WMEs (β_2)	-126.12	242.24	-.0521	0.607	
Number of family members of WMEs (β_3)	**1482.01**	**526.27**	**2.816**	**0.009**	
Monthly investment of WMEs (β_4)	**1.37**	**0.142**	**9.691**	**0.000**	
Working hours of WMEs (β_5)	436.27	406.6	1.073	0.294	

Source: Analysis of primary data by the author.

For Dhubri district, it is clear from above significant values in table 5.27 that for WPVs

$\beta_1, \beta_2, \beta_5=0$ and $\beta_3, \beta_4 \neq 0$

i.e., in Dhubri district, monthly investment and number of family members of WPVs affects monthly return of WPVs significantly. And the effect of all other variables like age education and working hour of WPVs on monthly returns of WPVs is not significant. Keeping all the other variables constant, an increase in one family member leads to an increase in average monthly return of WPVs approximately by Rs. 1482. Holding all the other variables constant, average monthly return increases

by Rs. 1.37 with a unit (Rupee) increase in monthly investment i.e. MEI is estimated to be 37% for WPVs of Dhubri district.

The historical regression line for WPVs for Kokrajhar district will be

Y_t=-6496.929+135.248X_1+223.792X_2+16.011X_3+1.486X_4-155.484X_5

R^2=0.996

Table 5.28: Test table for WPVs of Kokrajhar District

	Coefficient	**(S.E)**	**t**	**Sig.**	**R^2**
Constant (β_0)	-6496.929	5423.912	-1.198	0.259	0.996
Age of WMEs (β_1)	135.248	78.695	1.719	0.116	
Education of WMEs (β_2)	223.792	207.097	1.081	0.305	
Number of family members of WMEs (β_3)	16.011	462.079	.035	0.973	
Monthly investment of WMEs (β_4)	**1.486**	**0.051**	**29.362**	**0.000**	
Working hours of WMEs (β_5)	-155.484	247.160	-.629	0.543	

Source: Analysis of primary data by the author.

Again, it is clear from the significant values that for WPVs of Kokrajhar district

$\beta_1, \beta_3, \beta_2, \beta_5=0$ and $\beta_4 \neq 0$

i.e., in Kokrajhar district, only monthly investment of WPVs affects monthly return of WPVs significantly. And the effect of all other variables like age, education, number of family members and working hour of WPVs on monthly returns of WPVs is not significant. Holding all the other variables constant, average monthly return increases by Rs. 1.486 with a unit (Rupee) increase in monthly investment i.e. MEI is estimated to be 48.6% for WPVs of Kokrajhar district. All these values are reflected in table 5.28.

5.6.2.3 **Regression analysis For WGSs**

The historical regression line for WGSs for Dhubri district will be

Y_t= 9442.762-52.66X_1-81.29X_2-432.065X_3+1.087X_4+41.43X_5 R^2=0.994

Table 5.29: Test table for WGSs of Dhubri District

	Coefficient	**(S.E)**	**t**	**Sig.**	**R^2**
Constant (β_0)	9442.762	3579.450	2.638	0.014	0.994
Age of WMEs (β_1)	-52.66	44.64	-1.18	0.250	
Education of WMEs (β_2)	-81.29	105.958	-0.767	0.450	
Number of family members of WMEs (β_3)	-432.065	337.713	-1.279	0.213	
Monthly investment of WMEs (β_4)	**1.087**	**0.022**	**49.676**	**0.000**	
Working hours of WMEs (β_5)	41.43	149.404	-0.277	0.784	

Source: Analysis of primary data by the author.

It is evident from the significant values that for WGSs of Dhubri district

$\beta_1, \beta_3, \beta_2, \beta_5=0$ and $\beta_4 \neq 0$

i.e., in Dhubri district, only monthly investment of WGSs affects monthly return of WGSs significantly. And the effect of all other variables like age, education, number of family members and working hour of WGSs on monthly returns of WGSs is not significant. Holding all the other variables constant, average monthly return increases by Rs. 1.087 with a unit (Rupee) increase in monthly investment i.e. MEI is estimated to be 8.7% for WGSs of Dhubri district. These are shown in table 5.29.

The historical regression line for WGSs for Kokrajhar district will be

Y_t=-6209.774+15.906X_1+332.957X_2+566.685X_3+1.360X_4+122.609X_5 R^2=0.996

Table 5.30 Test table for WGSs of Kokrajhar District

	Coefficient	(S.E)	t	Sig.	R^2
Constant (β_0)	-6209.77	5663.004	-1.097	0.294	0.996
Age of WMEs (β_1)	15.906	106.525	0.149	0.884	
Education of WMEs (β_2)	332.957	306.040	1.088	0.298	
Number of family members of WMEs (β_3)	566.685	463.833	1.222	0.245	
Monthly investment of WMEs (β_4)	**1.360**	**0.027**	**50.288**	**0.000**	
Working hours of WMEs (β_5)	122.609	233.131	0.526	0.609	

Source: Analysis of primary data by the author.

It is evident from the significant values of WGSs of Kokrajhar district

$\beta_1, \beta_3, \beta_2, \beta_5=0$ and $\beta_4 \neq 0$

i.e., in Kokrajhar district, only monthly investment of WGSs affects monthly return of WGSs significantly. And the effect of all other variables like age, education, number of family members and working hour of WGSs on monthly returns of WGSs is not significant. Holding all the other variables constant, average monthly return increases by Rs. 1.36 with a unit (Rupee) increase in monthly investment i.e. MEI is estimated to be 36% for WGSs of Kokrajhar district. All these are shown in table 5.30.

Lastly, the regression line for WTs and WBs is not considered, since, it will not be valid, due to inadequate number of observations.

5.6.3 Test of second null hypothesis (relating to second objective): Compare mean income/mean profit of various groups of WMEs within a district.

The second hypothesis is that there is no significant difference in profit of various groups of WMEs within a district.

Here, we have to test two hypothese for two districts Dhubri and Kokrajhar separately. They are presented below.

(a) Null Hypothesis: There is no significant difference in profit/income of various groups of WMEs within Dhubri district, or,

H_o: Income of WVVs= Income of WBs= Income of Income of WFOs= Income of WGSs= Income of WTs= Income of WPVs

Alternative Hypothesis H_A: There is significant difference in profit of various groups of WMEs within Dhubri district, or

H_A: Income of Women Vegetable Vendors≠ Income of WBs≠ Income of Income of WFOs≠ Income of WGSs≠ Income of WTs≠ Income of WPVs

To test this hypothesis we have to go for **k-independent sample test:** Here we compare average income of different types of WMEs of Dhubri district. In this case, we get distribution of some series as normal and some other not normal, so we shall undergo non-parametric test. We have applied Kruskal Wallis H test for several independent variables by using SPSS.

Table: 5.31 Kruskal Wallis Test Statistics for WMEs of Dhubri district

	Income
Chi-square	21.886
df	5
Asymp. sig	**0.001**

Source: Analysis of primary data by the author.

Here we compare median income of each type of WMEs. In the Test Statistic table, we will look at the Asymp. Sig., which is equivalent to p-value. If the Asymp. Sig. value is less than 0.05, then we will reject our null hypothesis and conclude that the difference in average income between different WMEs is statistically significant.

On the other hand, if the p-value (Asymp. Sig.) is higher than 0.05, we will accept our null hypothesis. See above table 5.31 and also table B.1 & B.2 of Appendix IV for details. Here, out of this entire outcome we would observe Asymp sig. value from Test Statistics table. Since, the Asymp. Sig. value is less than 0.05, so we reject our null hypothesis and conclude that the difference in average income between different types of WMEs in Dhubri district is statistically significant.

(b) Null Hypothesis: There is no significant difference in profit of various groups of WMEs within Kokrajhar district, or,

H_o: Income of WVVs= Income of WBs= Income of Income of WFOs= Income of WGSs= Income of WTs= Income of WPVs

Alternative Hypothesis H_A: There is significant difference in profit of various groups of WMEs within Kokrajhar district, or

H_A: Income of Women Vegetable Vendors≠ Income of WBs≠ Income of Income of WFOs≠ Income of WGSs≠ Income of WTs≠ Income of WPVs

Again we will undergo **k-independent sample test:** In this case also the distribution of some series is obtained as normal and some other not normal, so we shall undergo non-parametric test. Here also we have applied Kruskal Wallis H test for several independent variable by using SPSS and obtained the outcome represented in the tables 5.32. For details also see table B.3 & B.4 in Appendix IV.

Table: 5.32 Kruskal Wallis Test Statistics for WMEs of Kokrajhar district

	Income
Chi-square	12.104
df	5
Asymp. sig	**0.033**

Source: Analysis of primary data by the author.

Again, the Asymp. Sig. value is less than 0.05, so we reject our null hypothesis and conclude that there is significant difference in average income between different groups of WMEs in Kokrajhar district.

5.6.4 Testing first null hypothesis (relating to first objective): As mentioned in chapter one the first null hypothesis is given by

Null Hypothesis: There is no significant difference in profit Between the WMEs of Dhubri district and Kokrajhar district, or,

H_o: Income of WMEs in Dhubri district= Income of WMEs in Kokrajhar district

Alternative Hypothesis: There is significant difference in profit Between the WMEs of Dhubri district and Kokrajhar district, or,

H_A: Income WMEs in Dhubri district≠ Income WMEs in Kokrajhar district

Here, we have to compare income of several WMEs viz. WVVs, WBs, WFOs, WGSs, WTs, and WPVs between Dhubri district and Kokrajhar District one by one.

(a) H_o: Income WVVs in Dhubri district= Income WVVs in Kokrajhar district

H_A: Income WVVs in Dhubri district≠ Income WVVs in Kokrajhar district

Table: 5.33 Mann-Whitney U Test Statistics[a] for WVVs of Dhubri district and Kokrajhar district

	Income of WVVs
Mann Whiteney U	69.500
Wilcoxon W	84.500
Z	-2.346
Asymp. Sig two-tailed	**0.019**

a. Grouping Variable: Districts

Source: Analysis of primary data by the author.

Data relating to WVVs of the two districts show non-normality. So, we go for Mann-Whitney test for two independent samples, under non-parametric test. We observe in the test statistic that the Asymp. Sig. value is less than 0.05, so we reject our null hypothesis and conclude that the difference in average income between WVVs of Dhubri district and Kokrajhar district is statistically significant. See the above table 5.33 and also tables B.5 & B.6 in Appendix IV.

(b) H_o: Income WBs in Dhubri district= Income WBs in Kokrajhar district

H_A: Income WBs in Dhubri district≠ Income WBs in Kokrajhar district

Table 5.34: Independent sample test for WBs of Dhubri and Kokrajhar district

		t-test for Equality of Means	
		Net income of WBs	
		Equal variances assumed	**Equal variances not assumed**
t		0.615	0.665
df		18	13.548
Sig. (2-tailed)		**0.546**	**0.517**
Mean Difference		5186.868	5186.868
Std. Error Difference		8429.668	7804.903
95% Confidence Interval of the Difference	**Lower**	-12523.21	-11605.54027
	Upper	22896.945	21979.27764

Source: Analysis of primary data by the author.

The data for beautiparlour shows normal distribution for both the districts, so, we go for parametric test, i.e., t-test for two independent samples. We observe in the test table 5.34 that the. Sig. value is greater than 0.05, so we accept our null hypothesis and conclude that the difference in average income between WBs of Dhubri district

and Kokrajhar district is not statistically significant. For details see tables B.7 & B.8 in Appendix IV.

(c) H_o: Income WFOs in Dhubri district= Income WFOs in Kokrajhar district

H_A: Income WFOs in Dhubri district≠ Income WFOs in Kokrajhar district

Data for WFOs shows non-normality. Thus, we applied Mann-Whitney test under non-parametric test.

Table: 5.35 Mann-Whitney U Test Statistics[a] for WFOs of Dhubri district and Kokrajhar district

	Income of WFOs
Mann Whiteney U	814.000
Wilcoxon W	1634.000
Z	-0.241
Asymp. Sig two-tailed	**0.809**

a. Grouping Variable: Districts

Source: Analysis of primary data by the author.

We observe in the test statistic table 5.35 that the Asymp. Sig. value is greater than 0.05, so we accept our null hypothesis and conclude that the difference in average income between WFOs of Dhubri district and Kokrajhar district is not statistically significant. Also see tables B.9 & B. 10 in Appendix IV for details.

(d) H_o: Income WGSs in Dhubri district= Income WGSs in Kokrajhar district.

H_A: Income WGSs in Dhubri district≠ Income WGSs in Kokrajhar district.

Data for WGSs is found to be non-normal. The outcome after Mann-Whitney test is shown in the tables B.11 & B.12 in Appendix IV.

Table: 5.36 Mann-Whitney U Test Statistics[a] for WGSs of Dhubri district and Kokrajhar district

	Income of WGSs
Mann Whiteney U	237.000
Wilcoxon W	702.000
Z	-0.705
Asymp. Sig two-tailed	**0.481**

a. Grouping Variable: Districts

Source: Analysis of primary data by the author.

The test statistic table 5.36 reflects that the Asymp. Sig. value is greater than 0.05, so, we accept our null hypothesis and conclude that the difference in average income between WGSs of Dhubri district and that of Kokrajhar district is not statistically significant.

(e) H_o: Income WTs in Dhubri district= Income WTs in Kokrajhar district

H_A: Income WTs in Dhubri district≠ Income WTs in Kokrajhar district

Again, the data for WTs shows normal distribution for the two districts, so, we go for t- test.

The independent sample test table 5.37 shows that the Sig. value is greater than 0.05, so we accept our null hypothesis and conclude that the difference in

average income between WTs of Dhubri district and Kokrajhar district is not statistically significant. Also see tables B.13 & B.14 in Appendix IV for more details.

Table 5.37: Independent sample test for WTs of Dhubri and Kokrajhar district

		t-test for Equality of Means	
		Net income of WTs	
		Equal variances assumed	Equal variances not assumed
t		-0.931	-1.417
df		21	8.940
Sig. (2-tailed)		**0.362**	**0.190**
Mean Difference		-1819.73	-1819.73
Std. Error Difference		1954.19515	1284.014
95% Confidence Interval of the Difference	**Lower**	-5883.708	-4727.37
	Upper	2244.234	1087.898

Source: Analysis of primary data by the author.

(f) H_o: Income WPVs in Dhubri district= Income WPVs in Kokrajhar district

H_A: Income WPVs in Dhubri district≠ Income WPVs in Kokrajhar district

The data for *paan* vendor shows normal distribution for the two districts. Thus, we go for t- test. Here also Sig. value as revealed in the above table 5.38, is greater than 0.05, so we accept our null hypothesis and conclude that the difference in average income between WPVs of Dhubri district and Kokrajhar district is not statistically significant. See tables B.15 & B.16 in Appendix IV.

Table 5.38: Independent sample t-test for WPVs of Dhubri and Kokrajhar district

		t-test for Equality of Means	
		Net income of WPVs	
		Equal variances assumed	Equal variances not assumed
t		-1.171	-1.056
df		45	23.29
Sig. (2-tailed)		**0.248**	**0.302**
Mean Difference		-2259.596	-2259.596
Std. Error Difference		1928.913	2139.561
95% Confidence Interval of the Difference	**Lower**	-6144.628	-6682.547
	Upper	1625.434	2163.353

Source: Analysis of primary data by the author.

(g) H_o: Income of WMEs in Dhubri district= Income of WMEs in Kokrajhar district

H_A: Income of WMEs in Dhubri district≠ Income of WMEs in Kokrajhar district

Table: 5.39 Mann-Whitney U Test Statistics[a] for WMEs of Dhubri district and Kokrajhar district

	Income of WMEs
Mann Whiteney U	10499.000
Wilcoxon W	21084.000
Z	-1.943
Asymp. Sig two-tailed	**0.052**

a. Grouping Variable: Districts

Source: Analysis of primary data by the author.

The distribution of whole data of income of WMEs in both Dhubri and Kokrajhar district reflects non-normality as reflected in chapter three. Thus, hypothesis testing has been done by using Mann Whitney test under non-parametric test with the help of SPSS and obtained the outcome represented in the tables B.17 & B.18 in Appendix IV. Here Sig. value is greater than 0.05, as reflected in the table 5.39, so we accept our null hypothesis and conclude that the difference in average income between WMEs of Dhubri district and Kokrajhar district is not statistically significant.

5.7 CONCLUSION:

From the above analysis of data, it is found that the WMEs of Kokrajhar district earn a higher average income than that of Dhubri district by working comparatively less hours than WMEs of Dhubri district. But, the WMEs of both the districts are undergoing long working hour, due to their double shift work responsibility in household as well as in business place, which may develop some fatal and life threatening diseases to them. Therefore, apart form taking dual responsibility; they should be very much careful to their health and give importance to leisure time and adequate rest. Regarding returns on investment, Marginal efficiency of investment (MEI) of WMEs is found to be much higher in Kokrajhar district (31%) than that in Dhubri district (13%). Increase in return on increase in per unit working hour per day of the WMEs is also greater in Kokrajhar district (Rs. 388.85) than that of Dhubri district (Rs.282.41). The MEI for WFOs of Kokrajhar district is also much higher (40%) than that of Dhubri district (16%). In this way, the MEI of WPVs and WGSs is also higher in Kokrajhar district as compared to that of Dhubri district. Thus, it could be concluded in this sense that almost all types of businesses by WMEs in Kokrajhar district are found to be more profitable as compared to those in Dhubri district. Regarding intra-district comparison of average income earned by different types of WMEs, it could be concluded that the average

monthly income of various types of WMEs is significantly different from each other within the district, both for Dhubri and Kokrajhar district. Again in this context, it is worth exploring that the difference in average monthly income between WMEs of Dhubri district and Kokrajhar district, including WBs, WFOs, WTs, & WPVs, except WVVs is not statistically significant. In other words, to conclude it could be stated that except WVVs, almost all other types of WMEs earn almost equal income in both Dhubri district and Kokrajhar district.

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