HYPOTHESIS TESTING

Hypothesis 1.

Non Agricultural districts have seen huge increase in asset ownership and agricultural district have seen moderate increase in asset ownership.

Remarks: We did the asset ownership clustering again by removing the transistor and cycle ownership. We will explain the reason for this in our next meeting.

Finding.

(a) Change in Asset Ownership (low/moderate to High migration) It has been observed that 111 districts out of total 593 districts have migrated from low/moderate asset ownership (Label 1/2) to high asset ownership (Label 3) . The distribution of these 111 districts are as under

Non Agricultural District	61 (50 % of total Non Agricultural district)
Agricultural District	27 (10 % of Agricultural district)
Unemployed District	23 (11 % of Unemployed district)

Table -1

The above data shows that majority of districts which migrated to high asset ownership are Non Agricultural district. There are 8 districts which have migrated from agricultural/ unemployed to Non agricultural and all these 8 districts have moved from low/moderate asset ownership to high asset ownership. There are 47 districts out of 121 Non agricultural district which remained in the same label of asset ownership, 34 out of these 47 district are already in high asset ownership.

(b) Change in Asset Ownership (low to moderate migration): It has been observed that 208 districts have moved from low asset ownership to moderate asset ownership .The distribution of these 208 districts are as under

Non agricultural district	21 (17 % of total Non Agricultural District)
Agricultural District	109 (40 % of total Agricultural districts)
Unemployed District	78 (38 % of total unemployed district)

Table -2

(c) If we see the change in the asset ownership specifically in each type of employment then we observe that agricultural and unemployed districts are having similar trends

Agricultural District – Total 267 District	**Unemployed District – Total 205 Districts**
No Change in asset ownership – 131 (127 Districts are at label 1)	No Change in asset ownership – 96 (94 Districts are at label 1)
Positive change in asset ownership - 136 Low asset to Moderate asset migration – 109	Positive change in asset ownership - 109 Low asset to Moderate asset migration – 78

Table -3

If we plot table 1 and table 2 we get fig 1

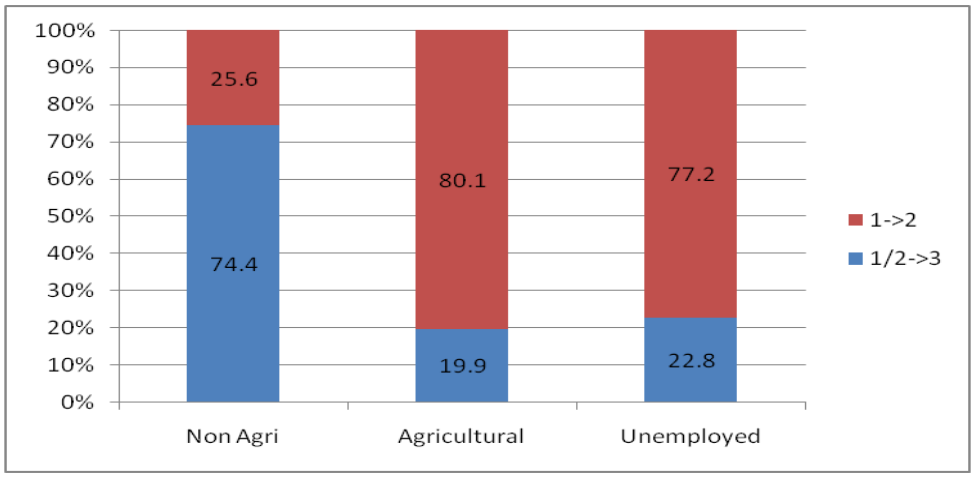

Fig -1: Change in asset ownership, Value represent the percentage of districts

(d) The first column represents the asset label migration of Non Agricultural districts. The first columns indicates that among the Non Agricultural districts which have seen migration in asset ownership approx 75% districts have migrated to high asset ownership (label 3). Similarly 20 % and 23% districts have migrated into high asset ownership in Agricultural and Unemployed districts respectively.

Result From fig 1 we conclude that in Non Agricultural districts majority of migration is from low/moderate asset ownership to high asset ownership , whereas in Agricultural and unemployed districts the majority of migration is from low asset ownership to moderate asset ownership.

Hypothesis 2

Districts migrating to Non Agricultural have seen the maximum development in other social parameters.

Findings : We observed the districts which have changed their type of employment between 2001 and 2011 ,the findings are as under.

(a) Migration to Non Agricultural Districts : Total 16 districts migrated to Non Agricultural (5 from Agricultural and 11 from Unemployment). When we analysed the change in social parameter of these 16 migrated districts we observed some key points which are as under.

(i) There is not a single negative movement among any label of any of the social parameter.

(ii) 90 % of migration in social indicator is from label 1 to label 3 , which indicate a huge improvement in parameters.

(iii) All the migrations in social parameter reached to label 3. Not a single migration with destination label 3 has been observed.

(b) Fig 2 shows the change in social indicators for each type of migration in type of employment where first 3 columns represents the change in social parameter of those district which have migrated to Non Agricultural. The first column represents the positive change for each social parameter in stacked up manner. The second column represents the negative change and the third column represents the no change. Columns 4-6 and 7-9 represent the same thing for the districts which have migrated to Agricultural and Unemployment respectively.

(c) Migration to Agricultural Districts: Total 13 districts have migrated to Agricultural (one from Non Agricultural and 12 from Unemployment). While analysing the change in social parameter of these 13 districts we observed that generally there is improvement in social parameter but there are some negative movement also. Fig 2 indicates that there is negative movement in FC, BF and CHH . Another point is that there is migration from label 1 to label 2 also in many parameters unlike the migration to Non Agricultural where all the migration is towards label 3.

(d) Migration to Unemployment Districts : Total 46 districts have migrated from Agricultural to Unemployment(No Migration from Non Agricultural to Unemployment). While analysing the change in social parameter of these 46 districts we observed that generally the pattern is same as of migration to Agricultural Districts with lot of migration from label 1 to label 2 in each social parameter.

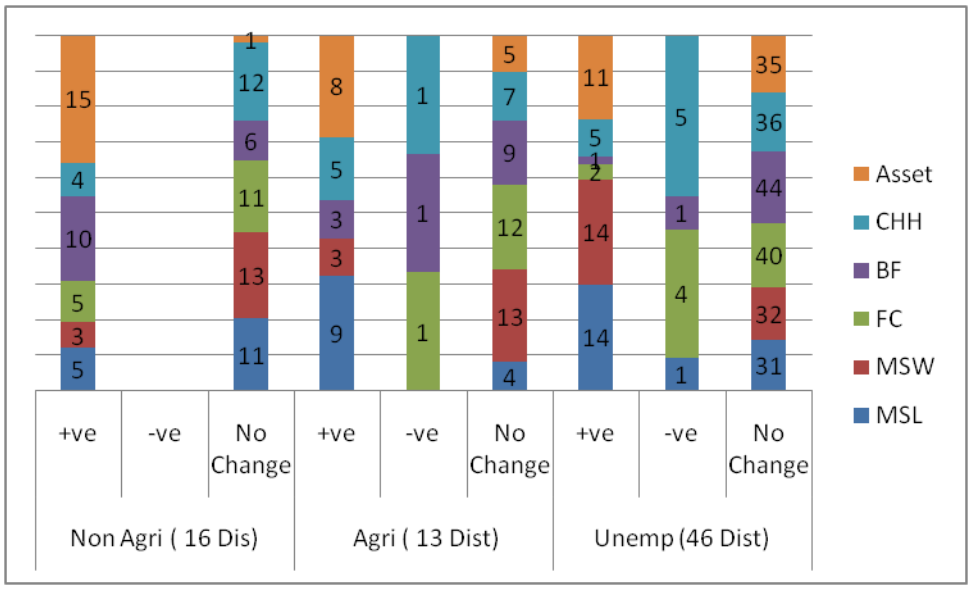

Fig 2 : The X axis shows the migration in type of employment , the values represent the count of the districts.

Result : Districts which have migrated to Non Agricultural have seen huge improvement in social indicators.

Hypothesis 3

Unemployed Districts have limited /No increase in living conditions

Finding : In hypothesis 2 we analysed the districts which have seen the change in type of employment and we observed that those districts migrated to Non Agricultural have seen most development, and moderate development in social parameters was seen in districts which have migrated to Agricultural/Unemployed**. Now we will see the change in social parameters among those districts which did not see change in the type of employment**. We will use the same type of graph as fig 2 but with different X axis , in fig 3 the X axis represents the districts which did not migrated in type of employment. Some of the key points observed are as under

(a) Among the districts which remained unemployed majority of districts are still in the same label (generally it is 1/2) for each social parameter. Except asset ownership approx 75% of districts remained at the same label.

(b) The pattern of Districts which remained in Agricultural is some what similar to Unemployed district with little improvement in MSL,CHH and asset ownership

(c) Among the districts which remained Non agricultural there is significant improvement in BF,CHH and asset ownership. The reason for low migration in MSL,FC and MSW is that a significant number of districts are already in label 3.

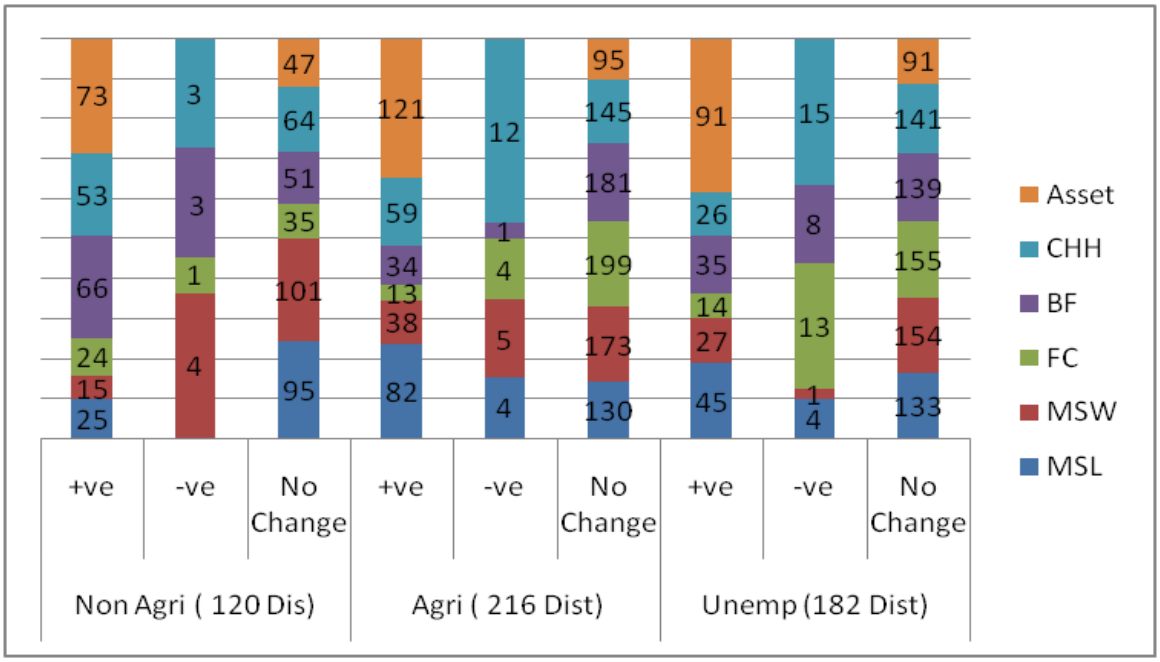

Fig 3 : The X axis shows the type of employment. The values represent the count of districts

Result: Least development is seen in the districts which remained unemployed , however the development in social parameters is some what similar to Agricultural districts.

Hypothesis 4:
The participation of female has increased in main workforce and reduced in marginal workforce. In other words we can say that the women are moving from casual labour to full time labour/work employment.

Finding – We did the labelling for female employment in two category main worker and marginal worker. If a woman has worked for more than 6 months in a year then she will be counted in main worker and if she had worked for less than six year then she will be counted in marginal worker. Fig 4 shows the change in labels of female employment between 2001 and 2011. The first column in the figure indicates that 83 districts have seen positive label change in the female employment in main workforce and only 45 districts have seen negative label change . The second column represents the change in label for female employment in marginal workforce and it is in stark contrast to the first column. In marginal workforce 271 (approx 46 % of total 593 districts) districts have seen negative change in label whereas only 17 districts have seen positive change.

Result: Fig 4 clearly indicates that female employment has reduced in marginal workforce and increased in main workforce.

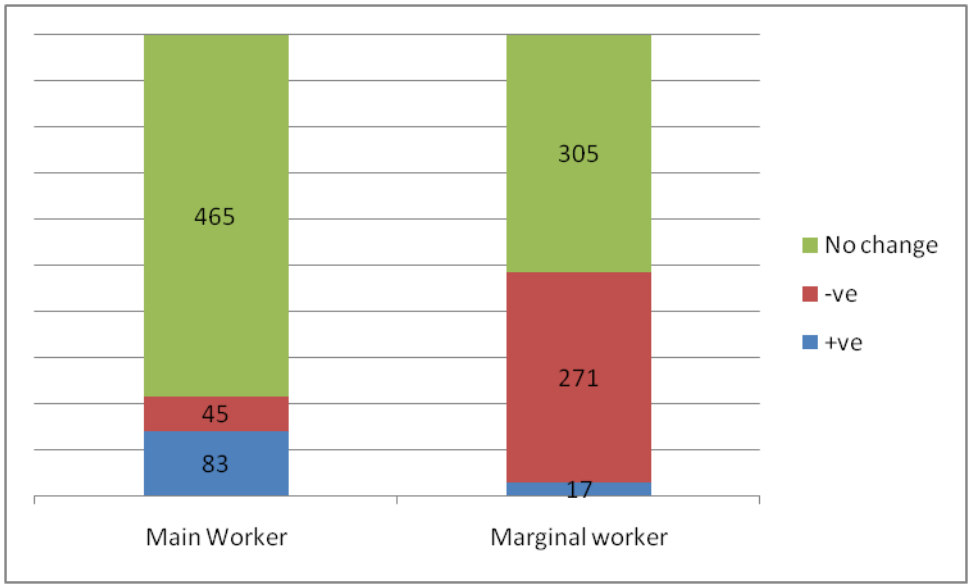

Fig 4: Change in the label of female employment, number represents the count of districts

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Hypothesis 5

Female participation is more in Non Agricultural districts.

Finding :

(a) To see the women participation in main and marginal workforce in district of different type of employment we plotted a 3 way graph as shown in fig 5 . The first 3 columns represents the distribution of female employment label in main worker category and last 3 columns represents distribution in marginal worker category. Let us explain the first column so that the graph could be easily understood. The first column shows that among the districts

labelled as Non Agricultural 49.6 % of districts are labelled as low female employment in Main worker category. Similarly the percentage for the moderate and high female employment among Non Agricultural district is 35.5 and 14.9 percent respectively.

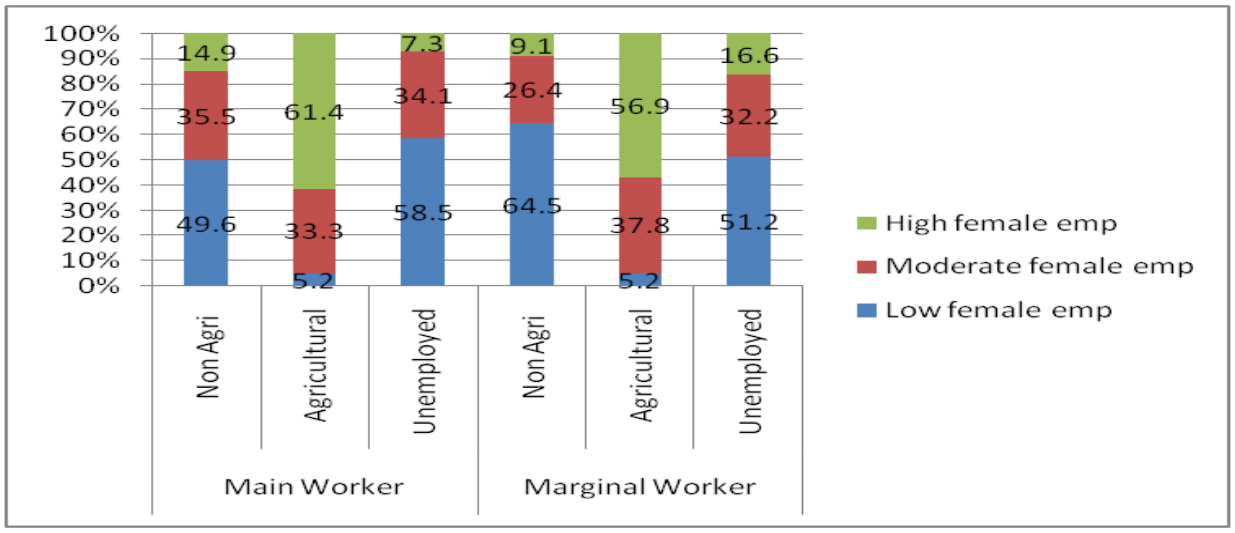

fig 5 : female employment in district of different type of employment (each value reprersent the percentage of the districts in that category)

(b) Some key points observed in the graph are as under

(i) Female participation is maximum in agricultural districts for both main and marginal worker category. If we observe column 2 and 5 of fig 5 ,we can see that more than approx 60 % of Agricultural districts have been labelled as high female employment.

(ii) Non Agricultural and Unemployed districts are showing almost similar pattern where approx 50% of districts are labelled as low female employment.

(c) Having seen the female label distribution at a cross section we examined the change in the female employment label for both the main and marginal category between 2001 and 2011. We plotted the 3 way graph similar to fig 5 with a little change that instead of employment labels the values now represent the change in the label.

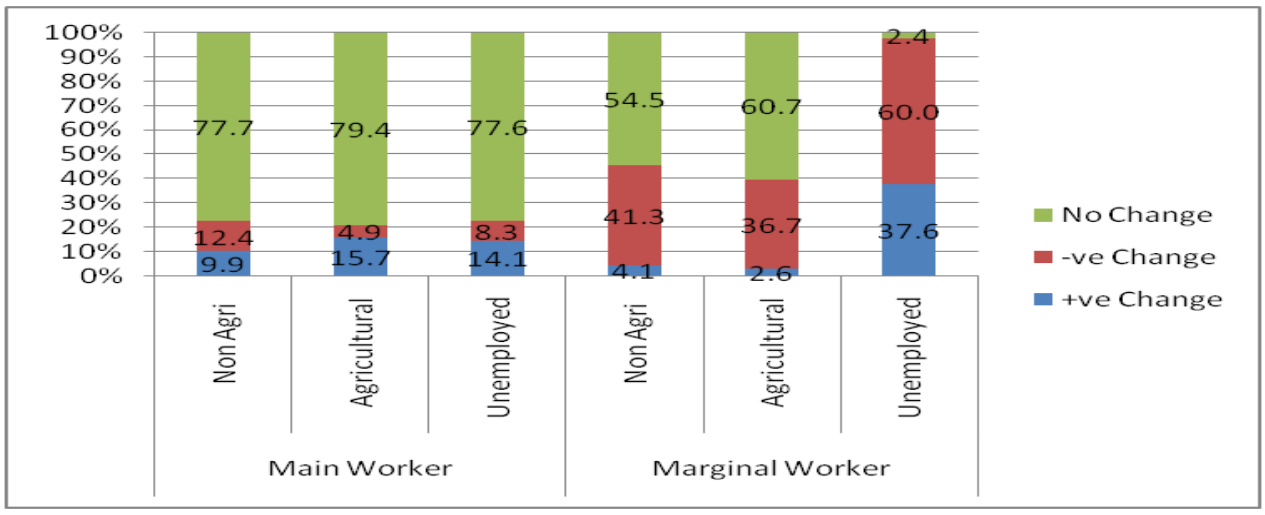

fig 6 : Change in female employment in district of different type of employment (each value reprersent the percentage of the districts in that category)

(d) Some of the key observations based on the figure 5 are as under

(i) In main worker category majority of districts did not change their label. Maximum positive change is seen in Agricultural district (Column 2) followed by unemployed district (column 3) and Non Agricultural district(column 1).

(ii) There is significant negative migration in marginal worker category (column 4-6).

(iii) If we see column 6 which represents the change in female employment in marginal worker category among unemployed district we observe that 98 % of district have seen migration with 60 % moving in positive direction and 37 & moving in negative direction.

Result : The maximum participation of female in workforce (both in main and marginal) is seen in Agricultural districts. Agricultural districts have also seen increase in women participation in main workforce between 2001 and 2011.