Group id -3

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PRIMARY CENSUS ABSTRACT
RAJASTHAN - 2011

A. THE SOURCE

https://data.gov.in/ -is the site that has been the source of this project. **Open Government Data Portal of India** is a platform for single-point access to datasets and applications published by Ministries/Departments/Organisations of the Government of India. Open Government Initiative was launched during October 2012, in compliance with the National Data Sharing and Accessibility Policy (NDSAP) of India. This site helps the citizens of India have transparent knowledge, be aware of the present scenario and accordingly plan their future Budgets,etc..

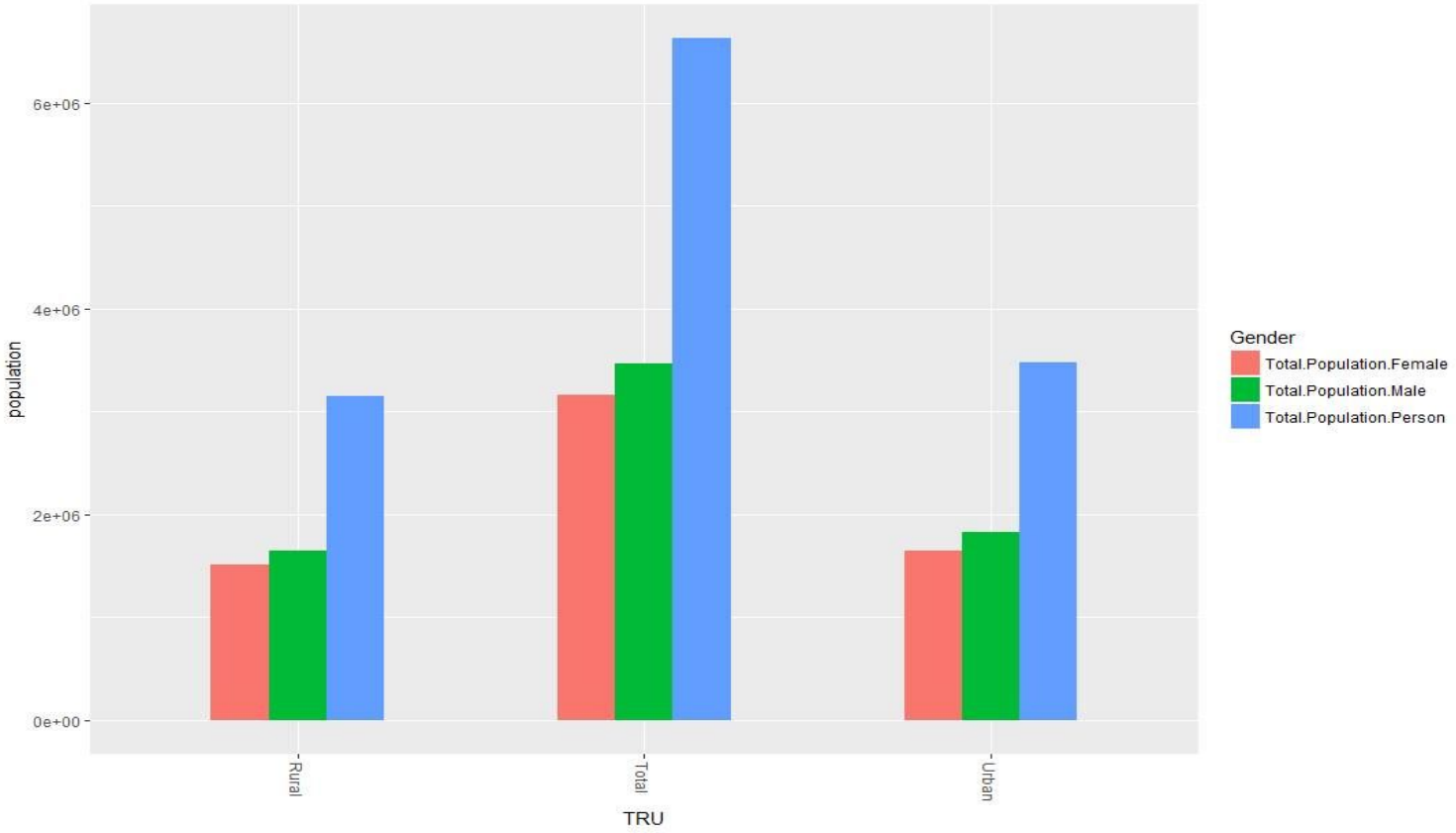
B. THE DATA SET

Primary Census Abstract 2011 is a detailed data set. Data contains the details of No. of Households, Population , Literate/Illiterate population, Total Working and Non-working Population categories with Male, Female and Total at Rural and Urban Level of State Rajasthan.

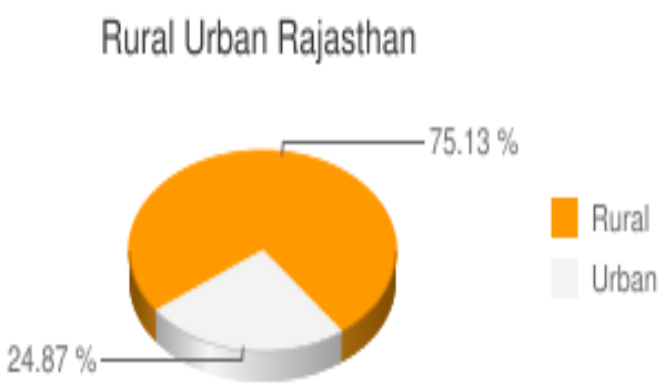
There are many irrelevant variables (like state code, ward code, EB code, etc) present in the csv file, to be precise there are total of 98 variables out of which we have selected only relevant variables which are as follows :

1. Level(State or District)
2. Name(District)
3. TRU(Total, Rural, Urban)
4. Total Population Person
5. Total Population Male
6. Total Population Female
7. Literates Population Person
8. Literates Population Male
9. Literates Population Female
10. Illiterate Persons
11. Illiterate Male
12. Illiterate Female
13. Total Worker Population Person
14. Total Worker Population Male
15. Total Worker Population Female
16. Non Working Population Person
17. Non Working Population Male
18. Non Working Population Female

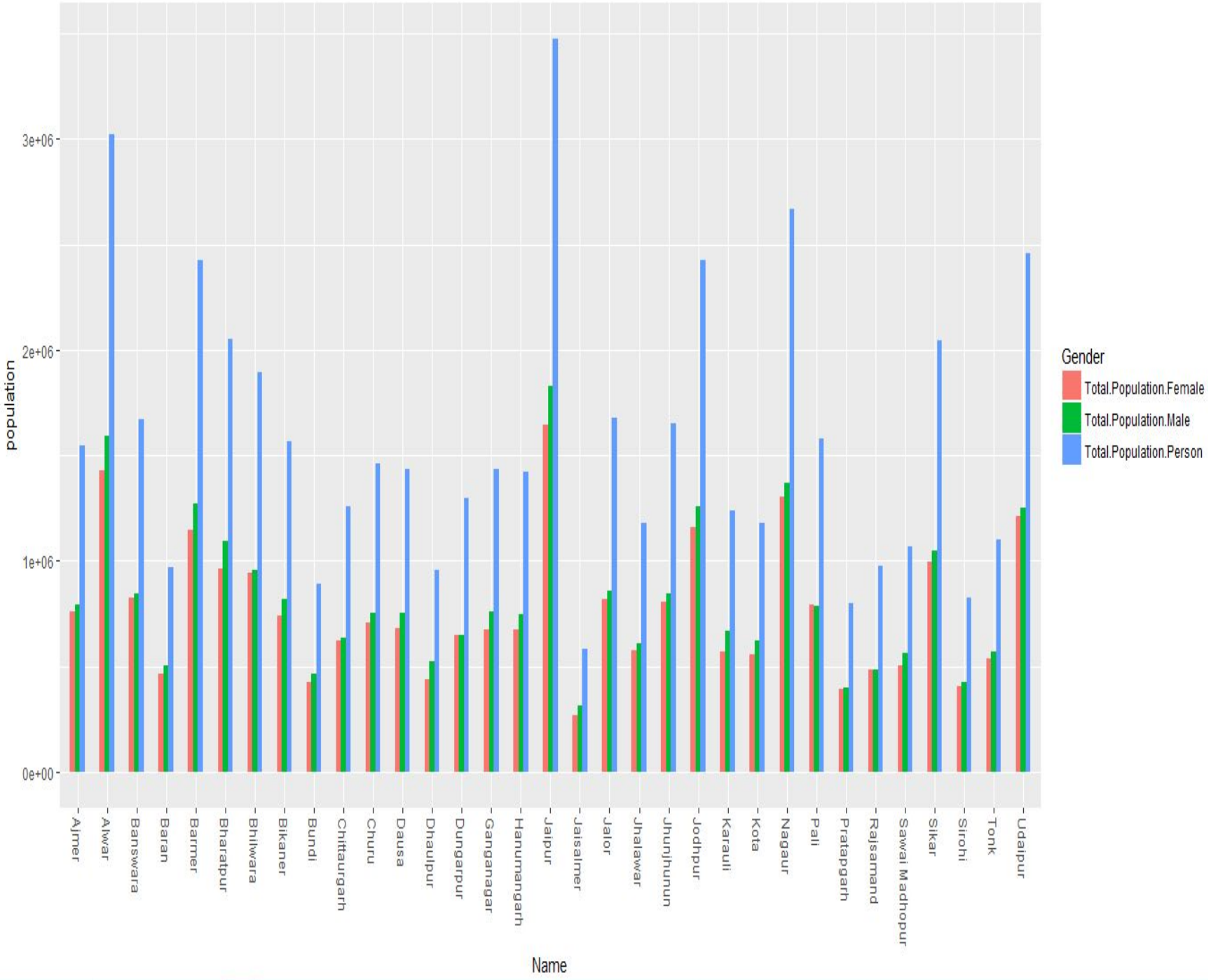
C. FIRST LEVEL ANALYSIS



To begin with our analysis,we intended to visualize how the population is distributed in Rajasthan. We realize that be it the Rural area of rajasthan or the Urban part, male to female ratio is greater than 1. The total population of men in Rajasthan is more than that of the women.



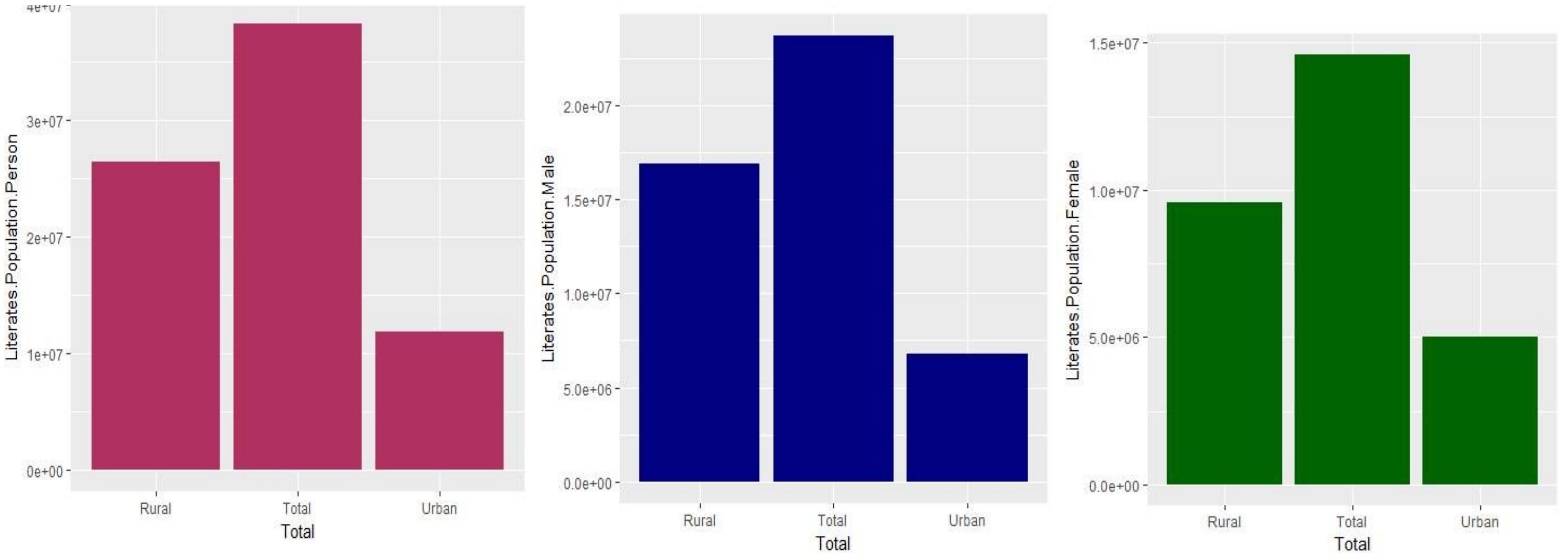
Also, this can be brought to notice that both the male and the female population residing in the Urban stretch is more when compared to the rural area. This is despite the fact that majority of Rajasthan is Rural -which is approximately 75.13%.


population
3e+06
2e+06
1e+06
0e+00
Ajmer
Alwar
Banswara
Baran
Barmer
Bharatpur
Bhilwara
Bikaner
Bundi
Chittaurgarh
Churu
Dausa
Dhaulpur
Dungarpur
Ganganagar
Hanumangarh
Jaipur
Jaisalmer
Jalor
Jhalawar
Jhunjhunun
Jodhpur
Karauli
Kota
Nagaur
Pali
Pratapgarh
Rajsamand
Sawai Madhopur
Sikar
Sirohi
Tonk
Udaipur
Name
Gender
Total.Population.Female
Total.Population.Male
Total.Population.Person

The graph above depicts the distribution of the population into different districts in Rajasthan. Jaipur, Udaipur, Alwar and Nagaur are pretty heavily populated. Whereas, Jaisalmer, Bundi, Sirohi, Baran , Pratapgarh and a few other cities are lightly populated.

- Male and female population is maximum in Jaipur.
- Both are the least in Jaisalmer.
- The difference in the male and female population number seems to be the least in Rajsamand, Pali and pratapgarh. And this difference seems to be the maximum for the districts like Alwar and Jaipur.

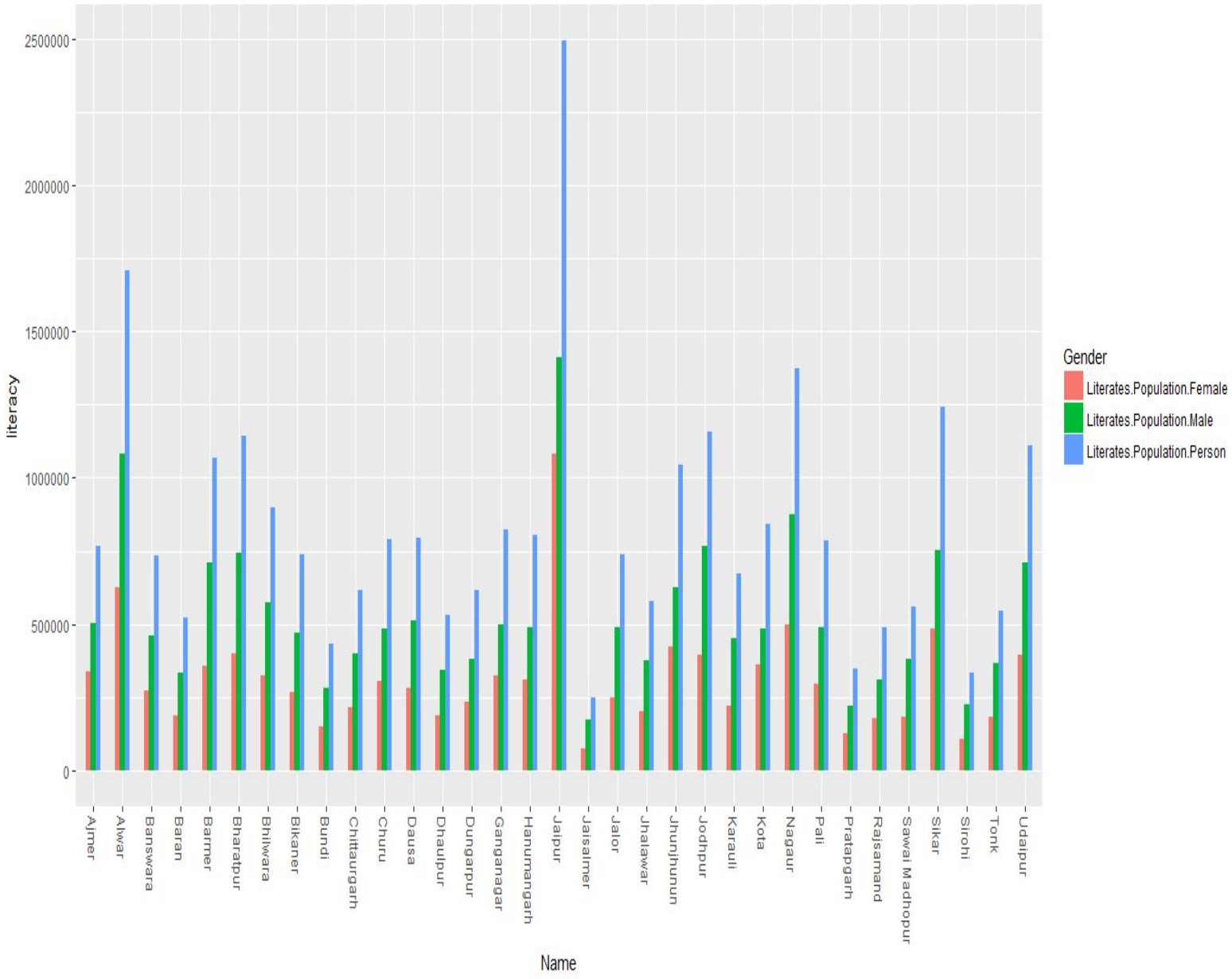
Moving further , the next step we take is to analyse how the literate and the illiterate population is distributed in Rajasthan.



The above graphs depict the trace of the Total Literate Population, Literate Male Population and the Literate Female Population respectively.The first graph depicts that the **Rural Rajasthan has more literates than the Urban Rajasthan**. This is what is observed, despite that the population residing in the Urban section is more (which was the inference made earlier).

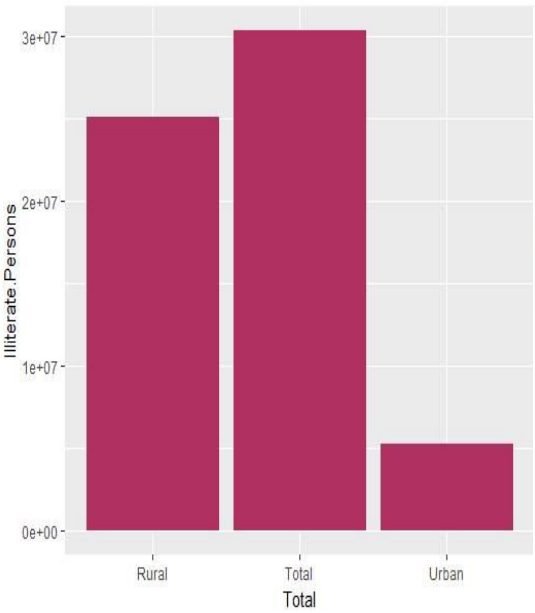
The same trend is followed in the other two graphs. The Rural Rajasthan has more number of both literate male and female. The population of literate men is more than women in both the Rural and the Urban areas.

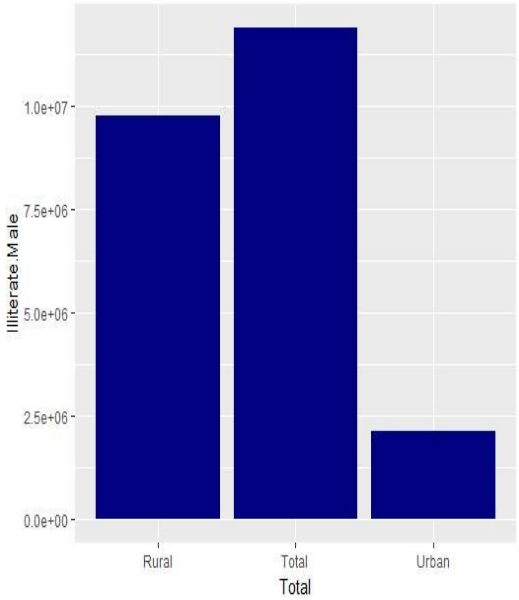
The graph below depicts how the literate population is distributed among the different districts and
cities of Rajasthan. The literate population shoots up in Jaipur whereas, the minimum in Jaisalmer.
The male literate population is the most in the state capital and is minimum in jaisalmer. The female literate population is the most in Jaipur again and is minimum in Jaisalmer, then Sirohi and Pratapgarh.

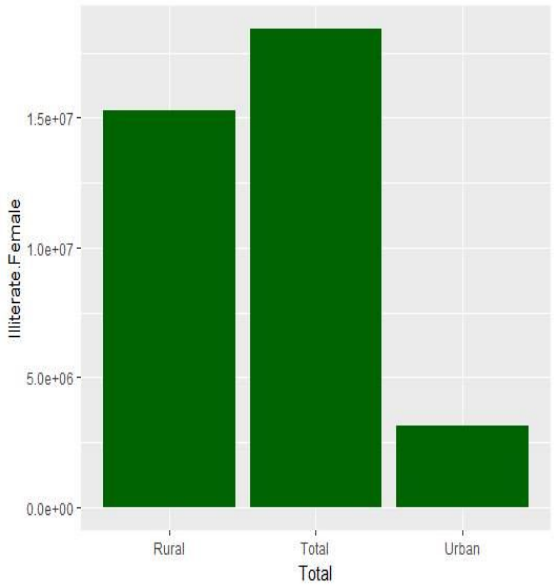


These depict the trace of the Total Illiterate Population, Illiterate Male Population and the Illiterate Female Population to Rural , Total and Urban stretch respectively.
The Rural Rajasthan also has more number of illiterate civilians as compared to the Urban Rajasthan.

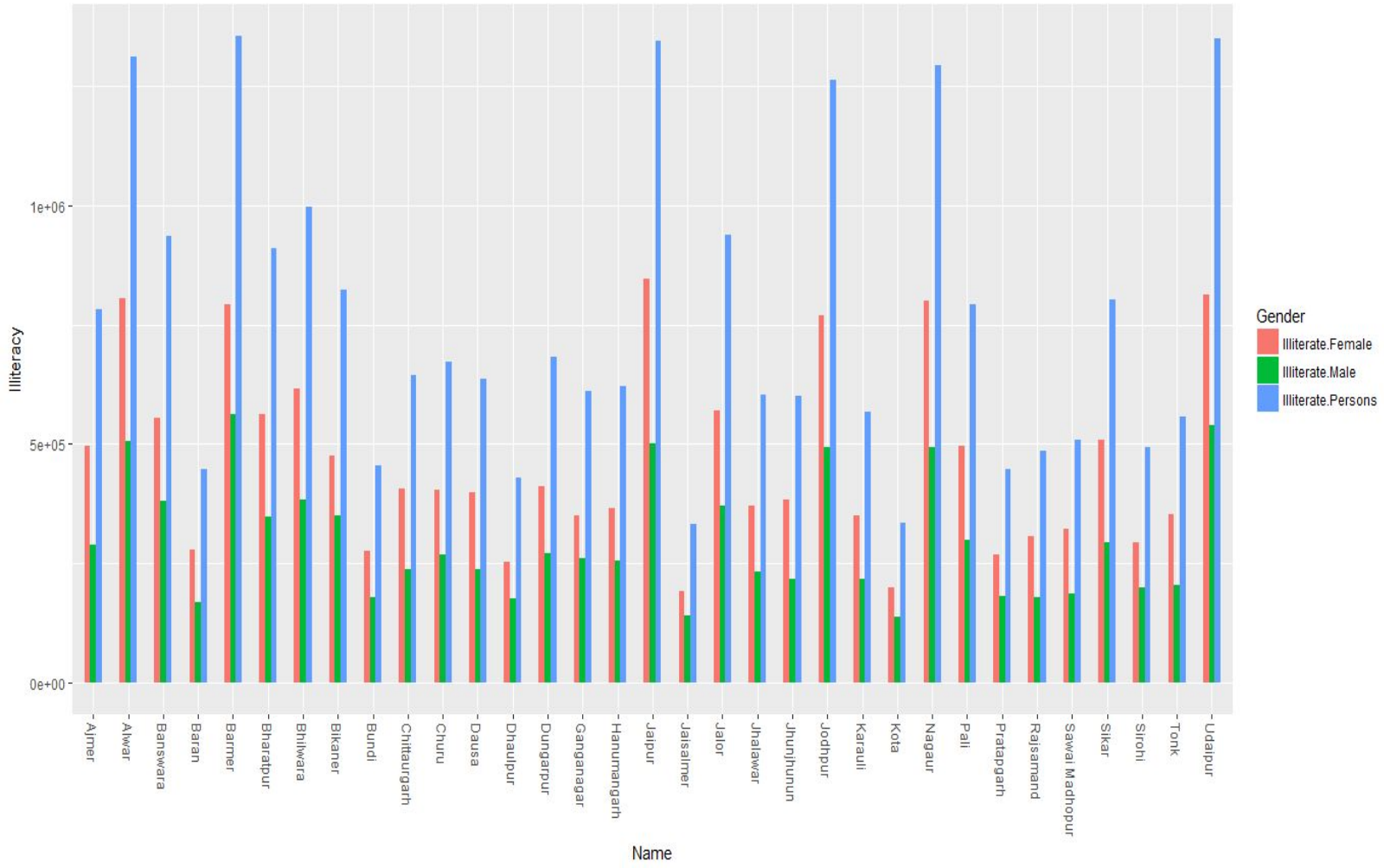
Another fact to note is that the number of Illiterate men is less than the illiterate women is both the rural and urban Rajasthan.







The graphs above depict that the Female to male illiterate ratio is greater than 1 in both the rural and the urban areas. Therefore, we can say that in Rural Rajasthan there is higher Female Illiteracy compared to Male Illiteracy.
Same is the case with Urban Rajasthan,of higher Female Illiteracy.

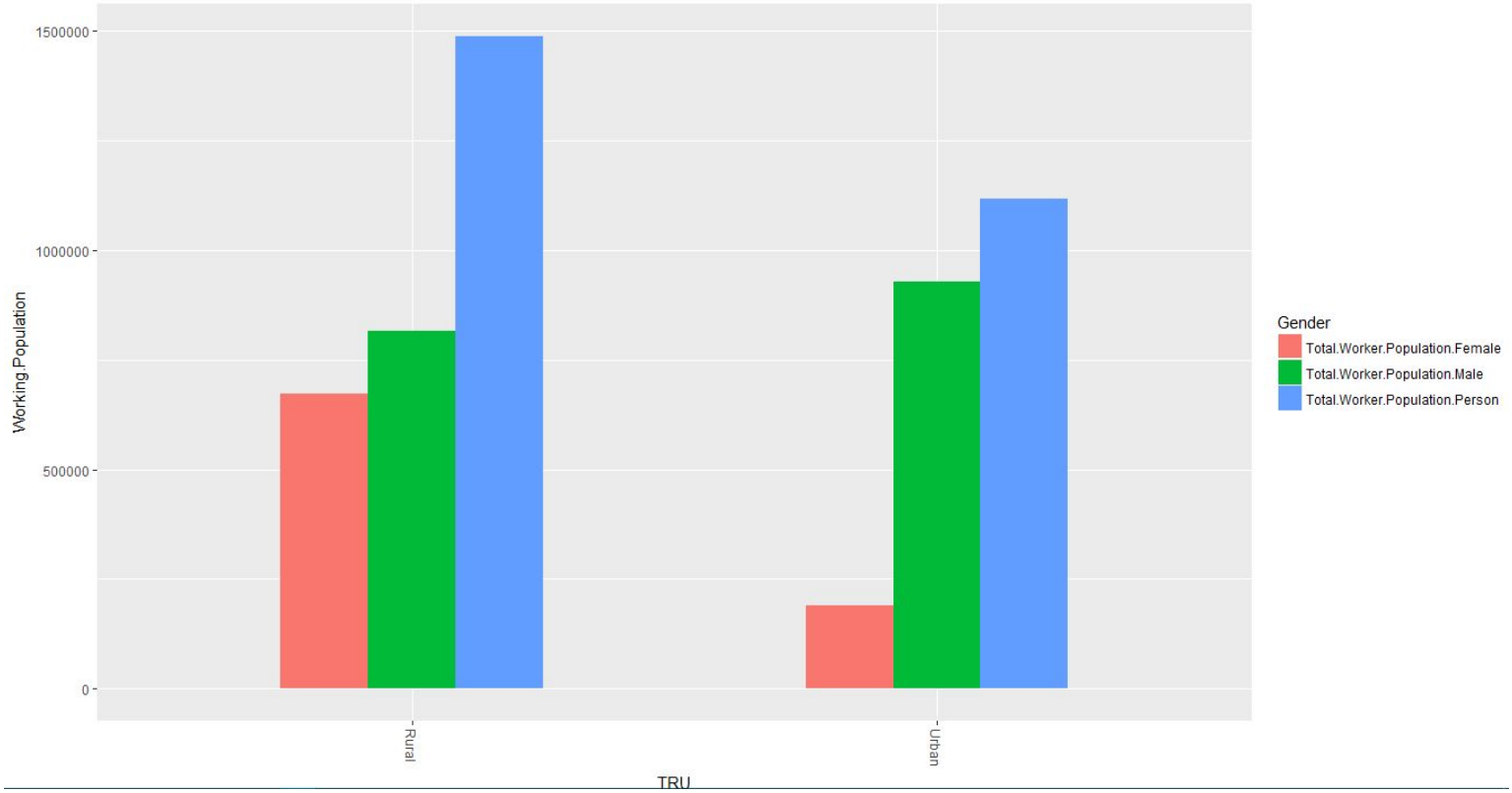


The graph below depicts how the Illiterate population is distributed among the different districts and cities of Rajasthan.
The Illiterate population shoots up in Jaipur,Barmer,Alwar,Nagaur,Jodhpur and Udaipur whereas, the minimum in districts of Jaisalmer and Kota.

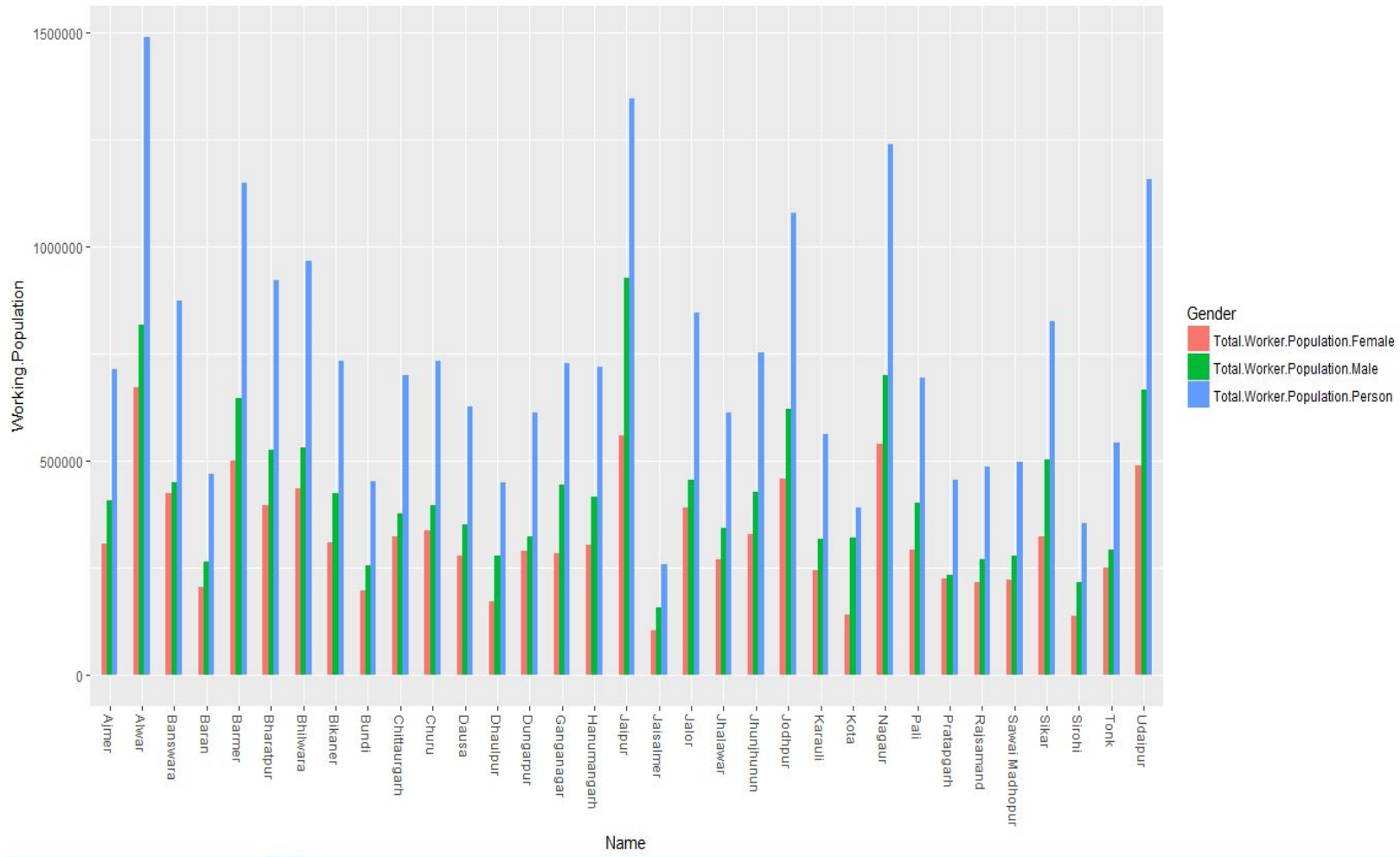
- The male illiterate population is the maximum in Barmer and Udaipur and is the least in the districts of Kota and Jaisalmer.
- The female illiterate population is the maximum in Alwar, Jaipur and Udaipur and is the lowest in Kota and Jaisalmer.

D. SECOND LEVEL ANALYSIS

Lets now take a step deeper into our analysis to know more about the state of Rajasthan. We would now emphasize on the distribution of the working and the non-working population of Rajasthan. Also, ponder on how this distribution is made among the states of Rajasthan. Point out the areas with a good mix of both and also know the cities where the gap is huge. We would also try to visualize the working and non-working ratio on the basis of the literate and illiterate ratio.



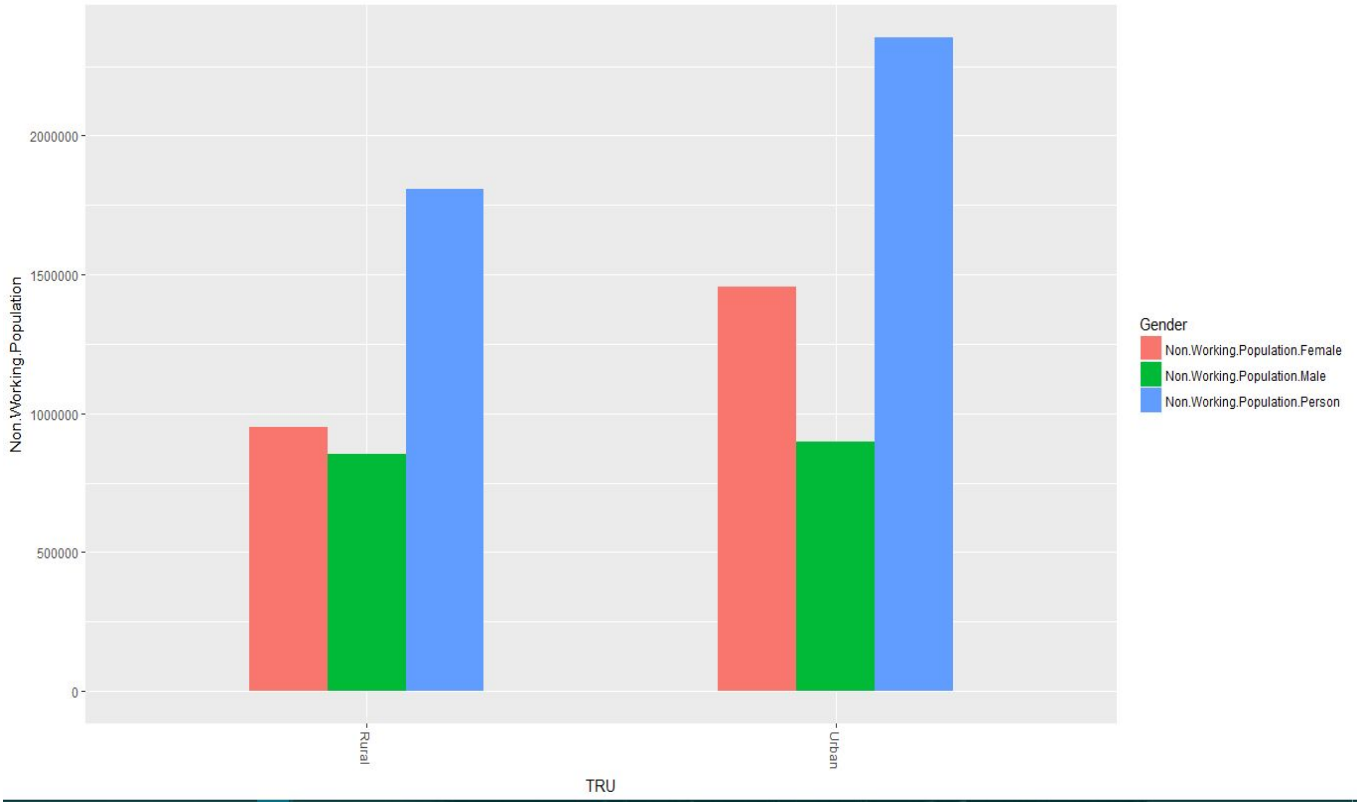
This plot depicts, how the working population is distributed in Rajasthan. Both the rural and urban have more of men working.
The probability of this is more since the population of men is anyways more than that of the female in Rajasthan. Also, the number of men working in the urban area is more than the rural. Whereas, the number of working females in much more the the rural area than in the urban.



We can now conclude a lots of things from the graph depicted above-

- The total working population is maximum in Alwar, then Jaipur and the minimum is in the district of Jaisalmer.
- The male working population is maximum in Jaipur and the least comes from the district of Jaisalmer.
- The female working population is maximum in Alwar, Jaipur and is minimum in Jaisalmer.
- The difference in between the male and female working ratio is the most the state capital Jaipur and is the minimum for Pratapgarh.
- Therefore, in Pratapgarh the number of male and female working strength is neck to neck. Whereas, in Jaipur the difference is the most.
- Also the number of literates in Jaipur are the most and minimum in Jaisalmer - this could be a contributing factor for the working population of Jaipur to be the maximum and Jaisalmer's to be the minimum.

- Another point to be noted is that the female illiterate number in the maximum in Alwar, even then the female working population of Alwar is the maximum - concluding that the women of Alwar put in efforts.



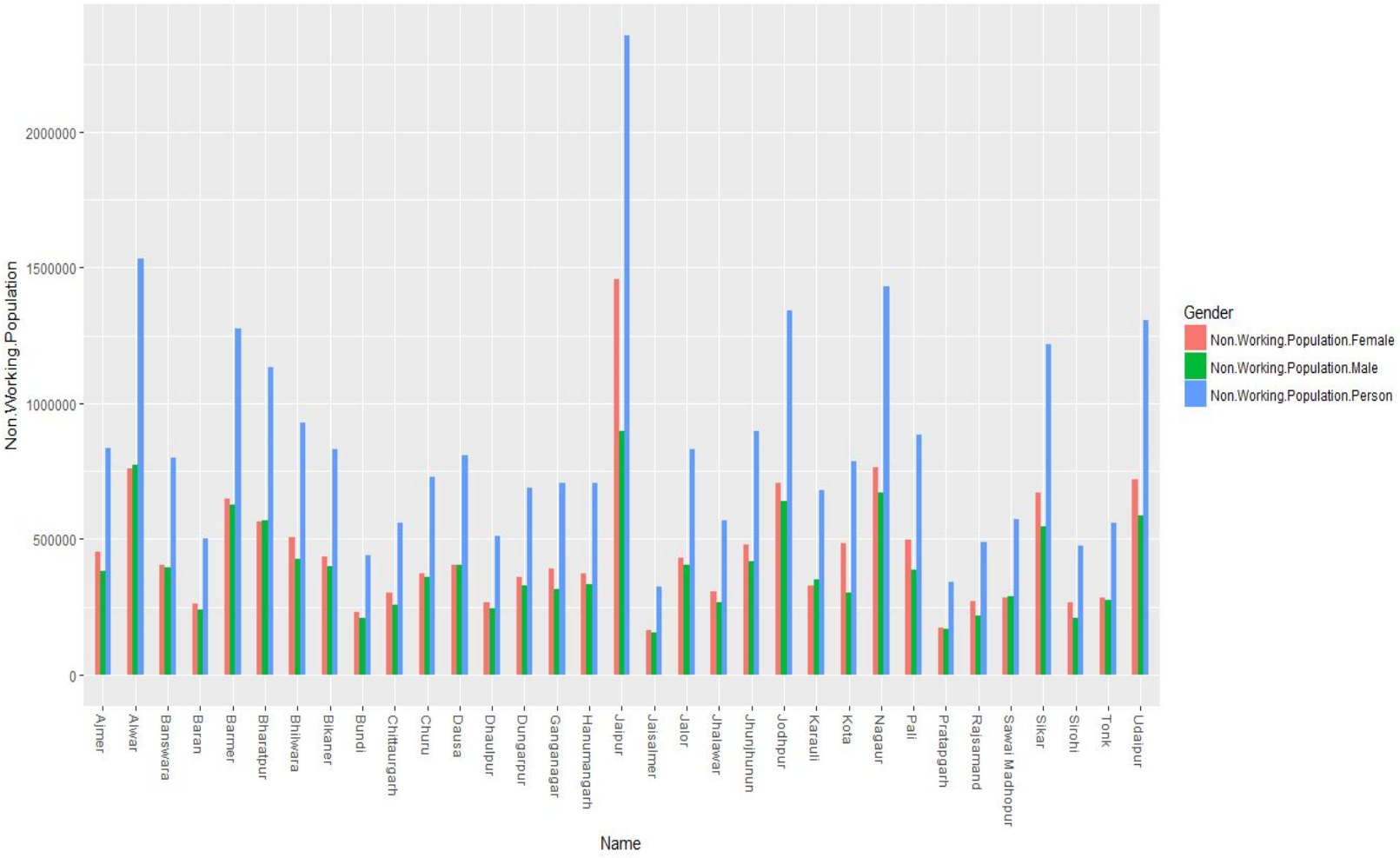
Now we come to analysing the non-working distribution. As seen - in both the rural and the urban area , the number of females not-working is more than the number of male. The difference between the two is much more in the urban part than in the rural area. Here the non-working female population in the urban area is way more than that in the rural area.

Also a couple of other facts can now conclude a lots of things from the graph-

- The total non-working population is maximum in Jaipur and the minimum is in the district of Jaisalmer,compared to all the districts in Rajasthan.

- The Unemployed Male population is maximum in Jaipur and the least comes from the district of Jaisalmer and Pratapgarh.

- The Unemployed Female population is maximum in Jaipur and is minimum in Jaisalmer.



We can now conclude a lots of things from the graph depicted above:

- As seen in the Total Population and Total Illiterate Population,we can say that, **Jaipur** District having the Highest amount of Illiterate Population,has the highest amount of **Non-Working Population**.

- Even though Illiterate Population percent is high in **Barmer** and **Udaipur**,on having less population living in those districts we can say that these districts have **low non-working population compared to Jaipur**.

- The **Least Non-Working Population** is from the district of **Jaisalmer**,i.e,this district has been putting all the efforts in all kinds of ways to not stay unemployed.

E. APPENDIX - Codes

Codes for the Population Distribution Graphs

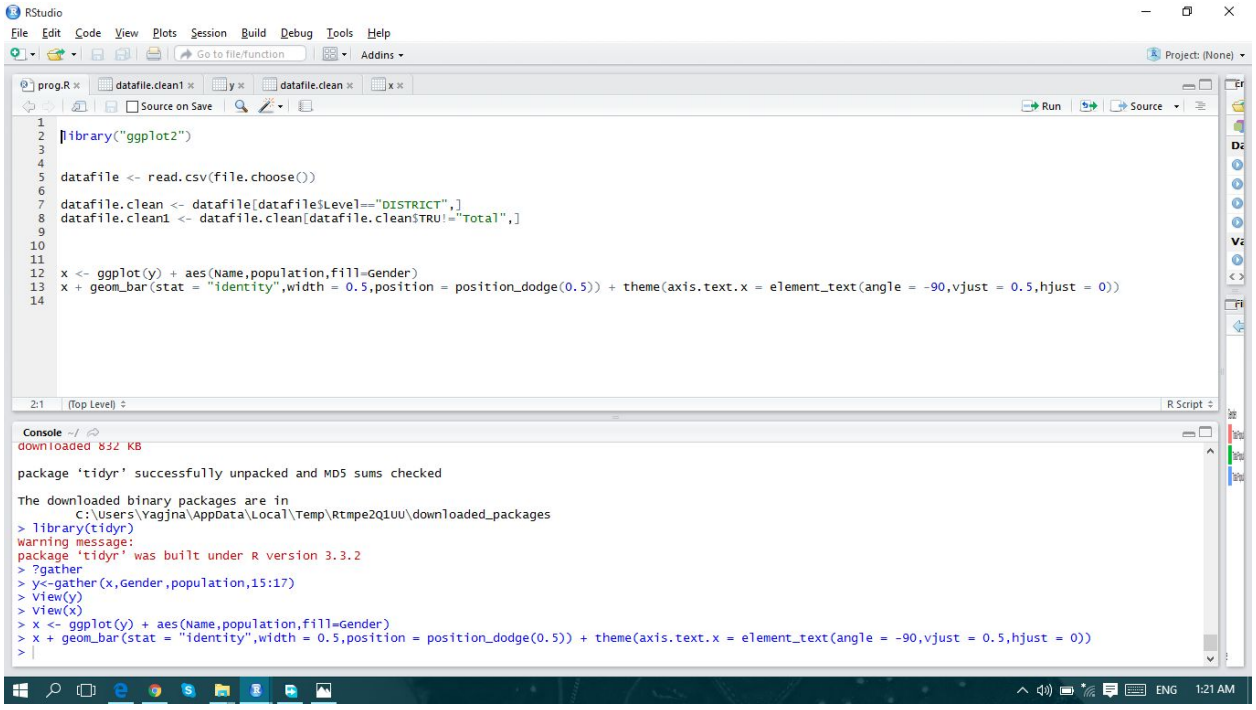
```
library("ggplot2")


datafile <- read.csv(file.choose())

datafile.clean <- datafile[datafile$Level=="DISTRICT",]
datafile.clean1 <- datafile.clean[datafile.clean$TRU!="Total",]

temp <- gather(datafile.clean,Gender,population,15:17)

x <- ggplot(temp) + aes(TRU,population,fill=Gender)
x + geom_bar(stat = "identity",width = 0.5,position = position_dodge(0.5)) + theme(axis.text.x = element_text(angle = -90,vjust = 0.5,hjust = 0))
```



```
library("ggplot2")


datafile <- read.csv(file.choose())

datafile.clean <- datafile[datafile$Level=="DISTRICT",]
datafile.clean1 <- datafile.clean[datafile.clean$TRU!="Total",]


x <- ggplot(y) + aes(Name,population,fill=Gender)
x + geom_bar(stat = "identity",width = 0.5,position = position_dodge(0.5)) + theme(axis.text.x = element_text(angle = -90,vjust = 0.5,hjust = 0))
```

```
downloaded 832 KB

package 'tidyr' successfully unpacked and MD5 sums checked

The downloaded binary packages are in
        C:\Users\Yagjna\AppData\Local\Temp\Rtmpe2Q1UU\downloaded_packages
> library(tidyr)
Warning message:
package 'tidyr' was built under R version 3.3.2
> ?gather
> y<-gather(x,Gender,population,15:17)
> View(y)
> View(x)
> x <- ggplot(y) + aes(Name,population,fill=Gender)
> x + geom_bar(stat = "identity",width = 0.5,position = position_dodge(0.5)) + theme(axis.text.x = element_text(angle = -90,vjust = 0.5,hjust = 0))
>
```

Codes for the Literate Distribution graphs.


a.R
datafile
Source on Save
Run
Source
1
2
3 library(ggplot2)
4 census <- read.csv("F:\\IBM\\census.csv",header=TRUE,sep=",")
5
6 datafile <- census[census$Level!="STATE",]
7
8
9 ggplot(datafile, aes(x = Total, y = Literates.Population.Person)) + geom_bar(stat = "identity", fill = "maroon")
10
11
12
13
13:1
(Top Level)
R Script

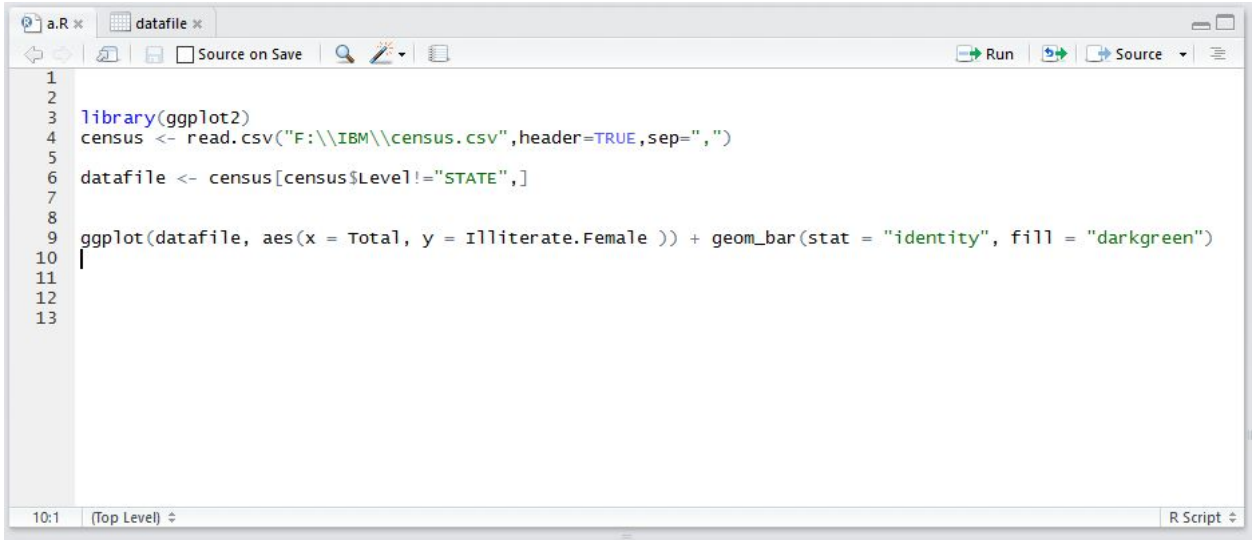

a.R
datafile
Source on Save
Run
Source
1
2
3 library(ggplot2)
4 census <- read.csv("F:\\IBM\\census.csv",header=TRUE,sep=",")
5
6 datafile <- census[census$Level!="STATE",]
7
8
9 ggplot(datafile, aes(x = Total, y = Literates.Population.Female)) + geom_bar(stat = "identity", fill = "darkgreen")
10
11
12
13
10:1
(Top Level)
R Script

Codes for the Illiterate Distribution graphs

```
library(ggplot2)
census <- read.csv("F:\\IBM\\census.csv",header=TRUE,sep=",")

datafile <- census[census$Level!="STATE",]


ggplot(datafile, aes(x = Total, y = Illiterate.Male )) + geom_bar(stat = "identity", fill = "navyblue")
```



```
library(ggplot2)
census <- read.csv("F:\\IBM\\census.csv",header=TRUE,sep=",")

datafile <- census[census$Level!="STATE",]


ggplot(datafile, aes(x = Total, y = Illiterate.Female )) + geom_bar(stat = "identity", fill = "darkgreen")
```

```
library("ggplot2")


datafile <- read.csv(file.choose())

datafile.clean <- datafile[datafile$Level=="DISTRICT",]
datafile.clean1 <- datafile.clean[datafile.clean$TRU!="Total",]

temp <- gather(datafile.clean1,Gender,Illiteracy,30:32)

x <- ggplot(temp) + aes(x = Name,y = Illiteracy,fill=Gender)
x + geom_bar(stat = "identity",width = 0.5,position = position_dodge(0.5)) + theme(axis.text.x = element_text(angle = -90,vjust = 0.5,hjust = 0))
```

Codes for the Working population Distribution graphs

```
library("ggplot2")


datafile <- read.csv(file.choose())

datafile.clean <- datafile[datafile$Level=="DISTRICT",]
datafile.clean1 <- datafile.clean[datafile.clean$TRU!="Total",]

temp <- gather(datafile.clean1,Gender,Working.Population,33:35)

x <- ggplot(temp) + aes(x = TRU,y = Working.Population,fill=Gender)
x + geom_bar(stat = "identity",width = 0.5,position = position_dodge(0.5)) + theme(axis.text.x = element_text(angle = -90,vjust = 0.5,hjust = 0))
```

```
library("ggplot2")


datafile <- read.csv(file.choose())

datafile.clean <- datafile[datafile$Level=="DISTRICT",]
datafile.clean1 <- datafile.clean[datafile.clean$TRU!="Total",]

temp <- gather(datafile.clean1,Gender,Working.Population,33:35)

x <- ggplot(temp) + aes(x = Name,y = Working.Population,fill=Gender)
x + geom_bar(stat = "identity",width = 0.5,position = position_dodge(0.5)) + theme(axis.text.x = element_text(angle = -90,vjust = 0.5,hjust = 0))
```

Codes for the Non-Working population Distribution graphs

prog.R | temp | datafile.clean1

Source on Save | Run | Source

```
1
2  library("ggplot2")
3
4
5  datafile <- read.csv(file.choose())
6
7  datafile.clean <- datafile[datafile$Level=="DISTRICT",]
8  datafile.clean1 <- datafile.clean[datafile.clean$TRU!="Total",]
9
10 temp <- gather(datafile.clean1,Gender,Non.Working.Population,96:98)
11
12 x <- ggplot(temp) + aes(x = TRU,y = Non.Working.Population,fill=Gender)
13 x + geom_bar(stat = "identity",width = 0.5,position = position_dodge(0.5)) + theme(axis.text.x = element_text(angle = -90,vjust = 0.5,hjust = 0))
14
```

14:1 (Top Level) R Script

prog.R | temp | datafile.clean1

Source on Save | Run | Source

```
1
2  library("ggplot2")
3
4
5  datafile <- read.csv(file.choose())
6
7  datafile.clean <- datafile[datafile$Level=="DISTRICT",]
8  datafile.clean1 <- datafile.clean[datafile.clean$TRU!="Total",]
9
10 temp <- gather(datafile.clean1,Gender,Non.Working.Population,96:98)
11
12 x <- ggplot(temp) + aes(x = Name,y = Non.Working.Population,fill=Gender)
13 x + geom_bar(stat = "identity",width = 0.5,position = position_dodge(0.5)) + theme(axis.text.x = element_text(angle = -90,vjust = 0.5,hjust = 0))
14
```

14:1 (Top Level) R Script