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Section: 01

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IE6600 COMPUTATION AND VISUALISATION

MIDTERM 1

Problem 1:

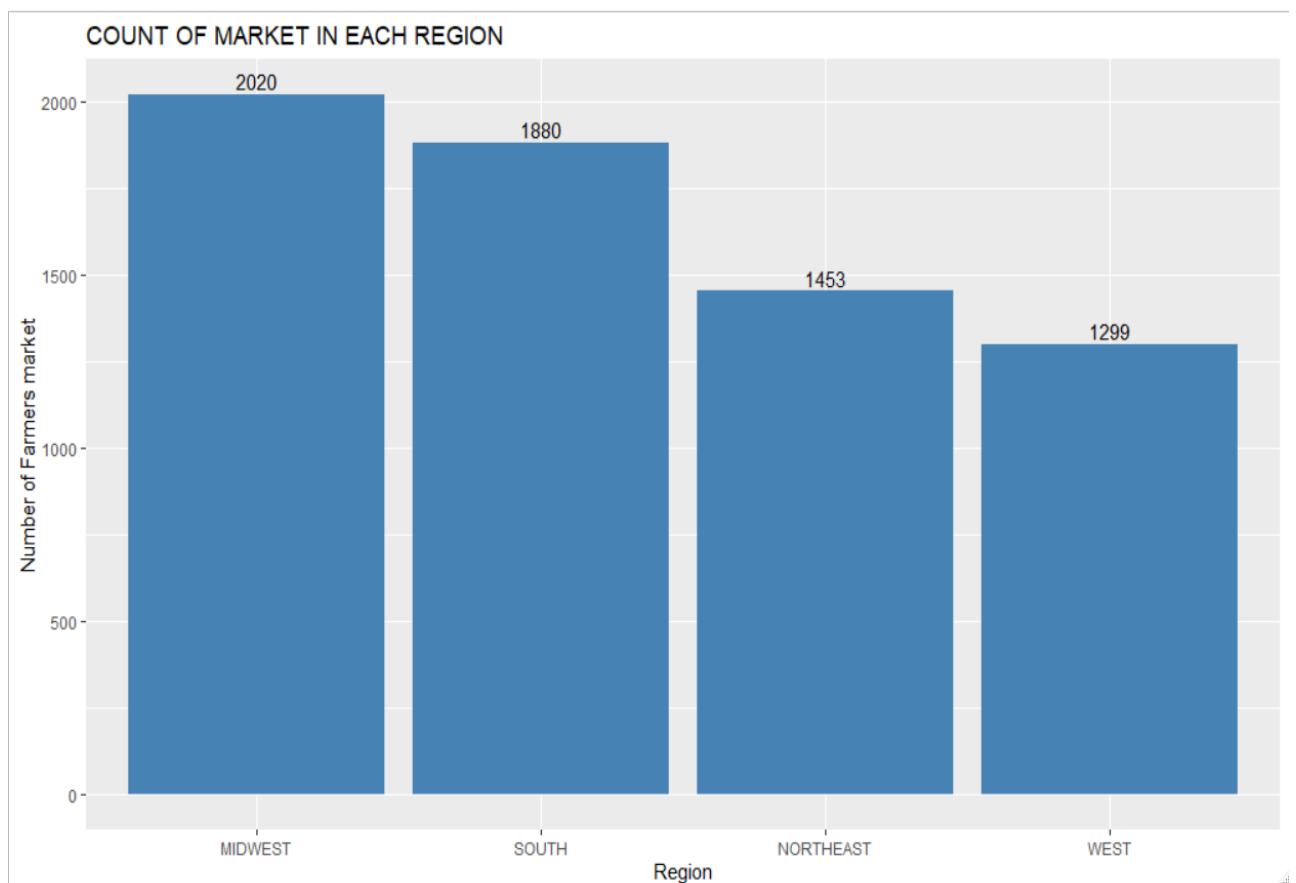


Figure 1.1

The number of farmers market the US has had from 2010 to 2019 is showed with respect to their regions. From figure 1.1, it can be observed that

- The Midwest region of the United states has had the greatest number of farmers market from 2010 to 2019
- The west region has had the least number of farmers market from 2010 to 2019

TREEMAP OF REGION-BASED DISTRIBUTION

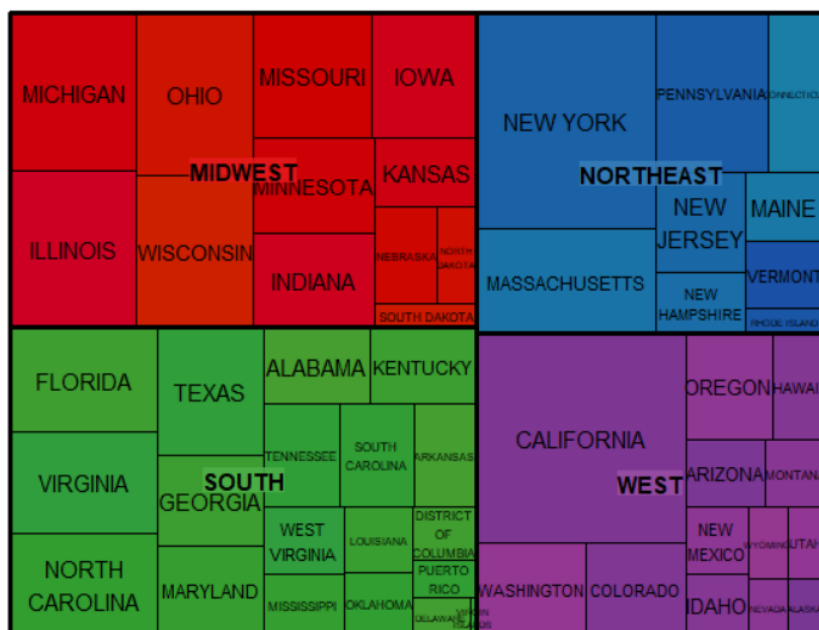


Figure 1.2

A treemap of the distribution of the farmers market from 2010 across all four regions of the US along with the states are displayed. From figure 1.2,

- New York has had significantly a greater number of farmers market when compared to Rhode Island in the Northeast region
- Similarly, California has been doing good in the West
- Most of the Midwest states have approx. equal distribution and so does the South region states

Problem 2:

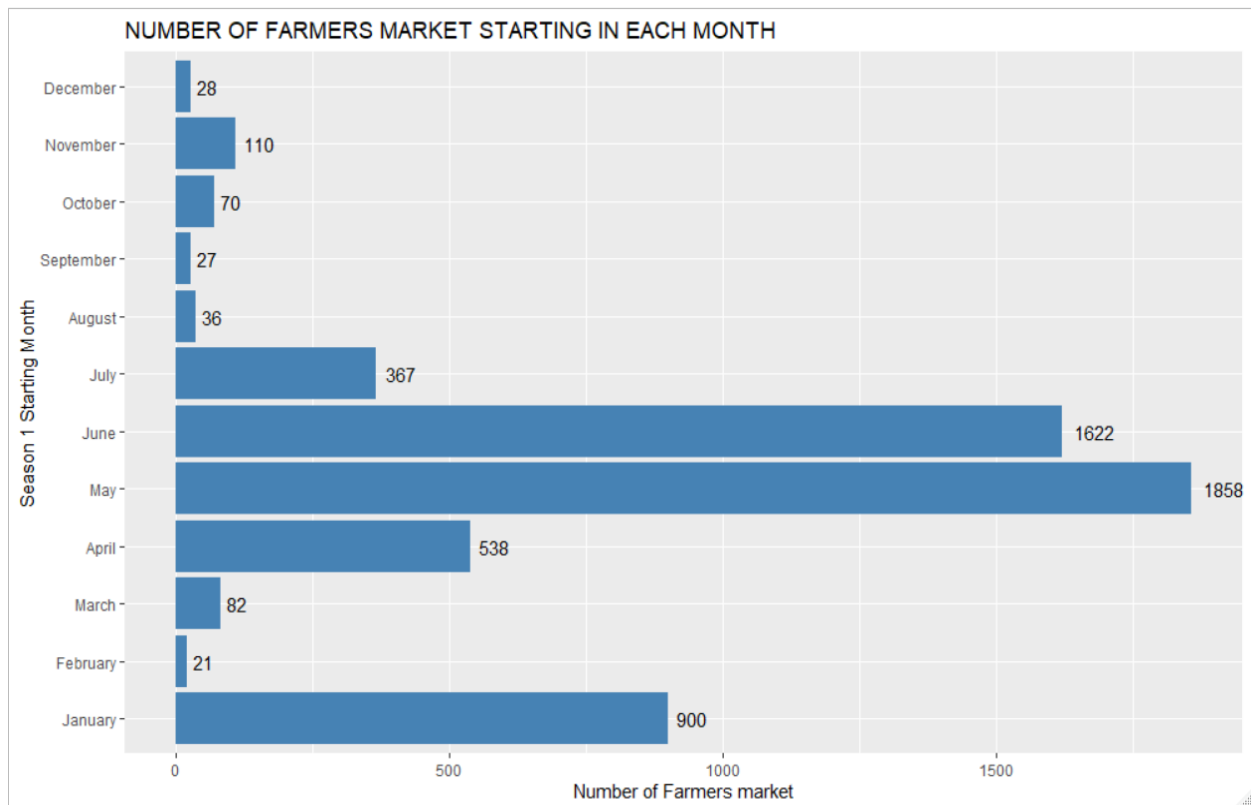


Figure 2.1

The count of the farmers market in each month from 2010 is shown. From the figure 2.1,

- May month seems to be having more farmers market, followed by June
- It should be noted that the summer months have greater number of markets
- The winter months has a decline in the markets count

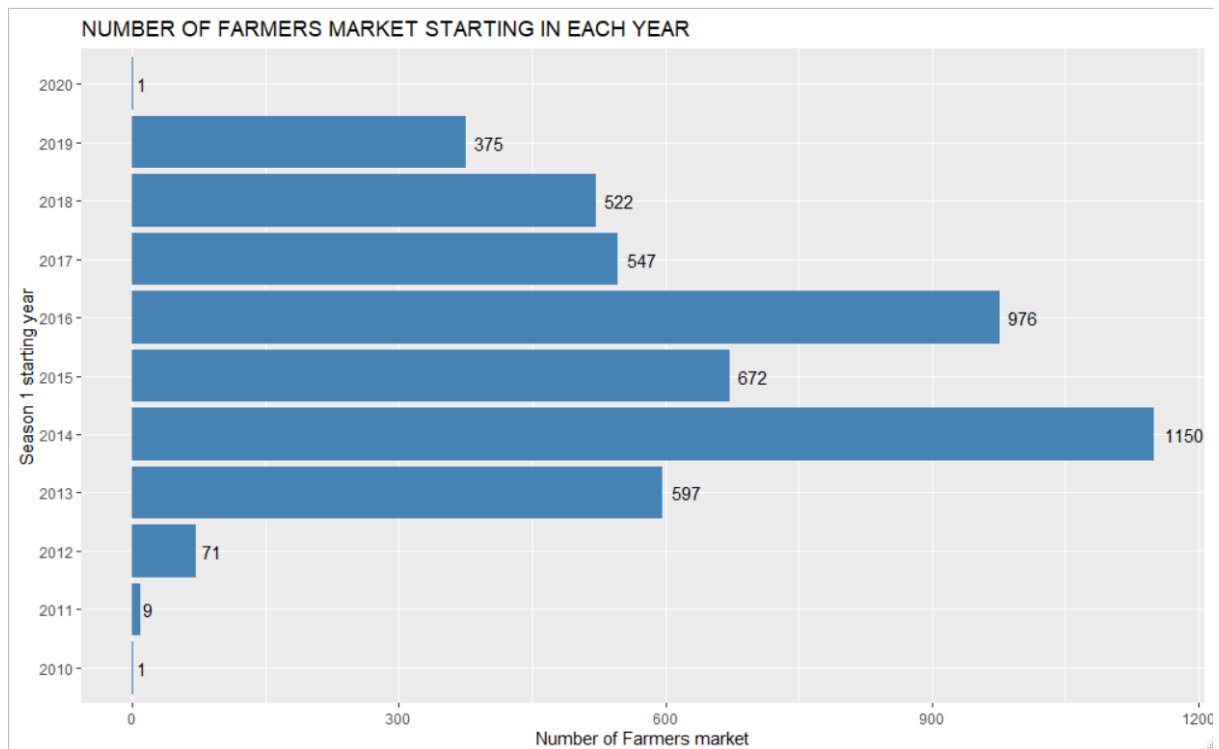


Figure 2.2

The total number of farmers markets in each year is shown in the bar graph. From the figure 2.2

- 2014 has had the greatest number of farmers market followed by 2016
- The count has only been declining from 2017
- There is a significant number of decrease in the count of markets from 2016 to 2017
- Similarly, there is a huge increase in the number of markets from 2012 to 2013

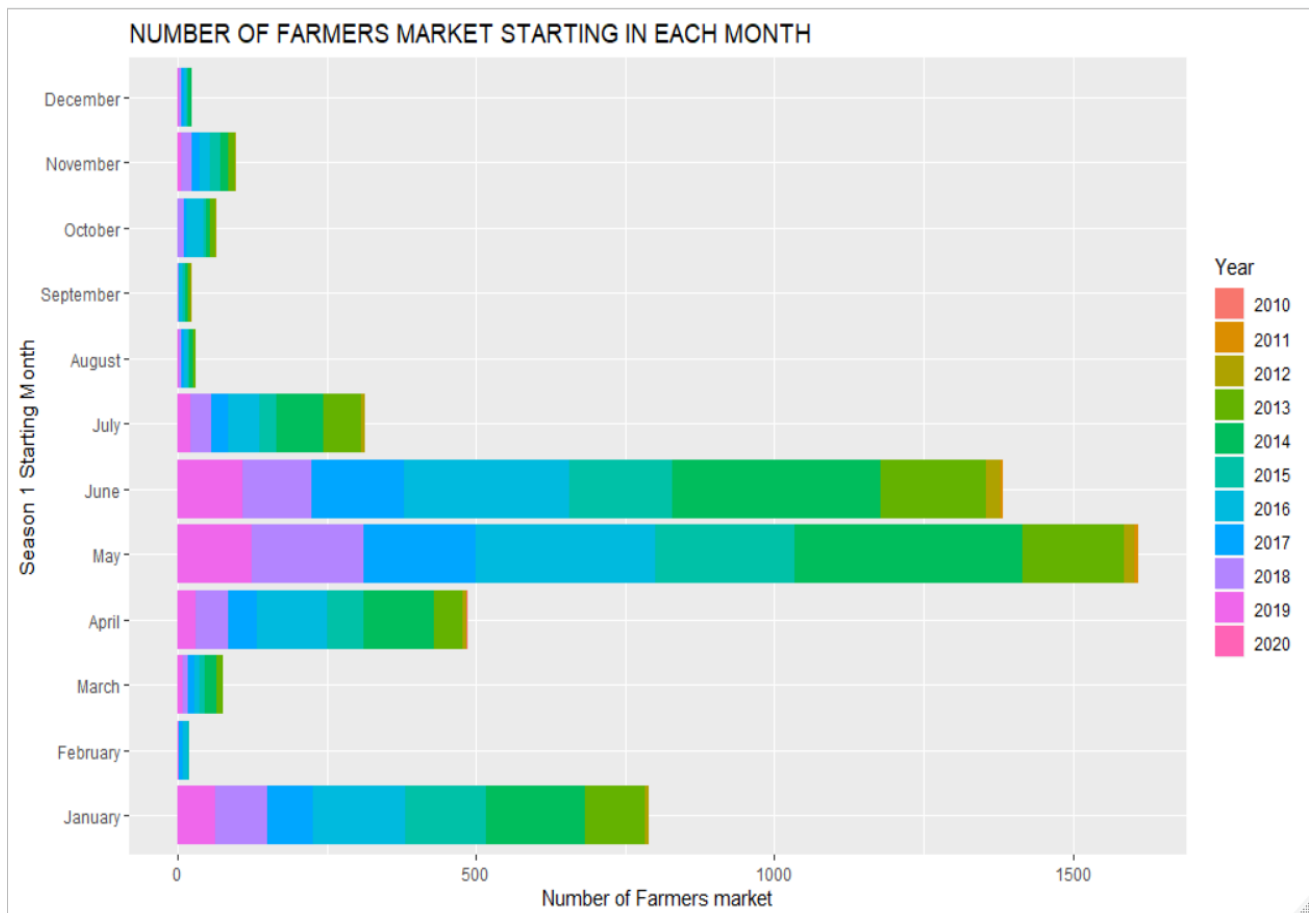


Figure 2.3

The count of the farmers market in each month along with the year is given. The bars represent the counts of the markets in each month while the colour represents the count of the markets in each year.

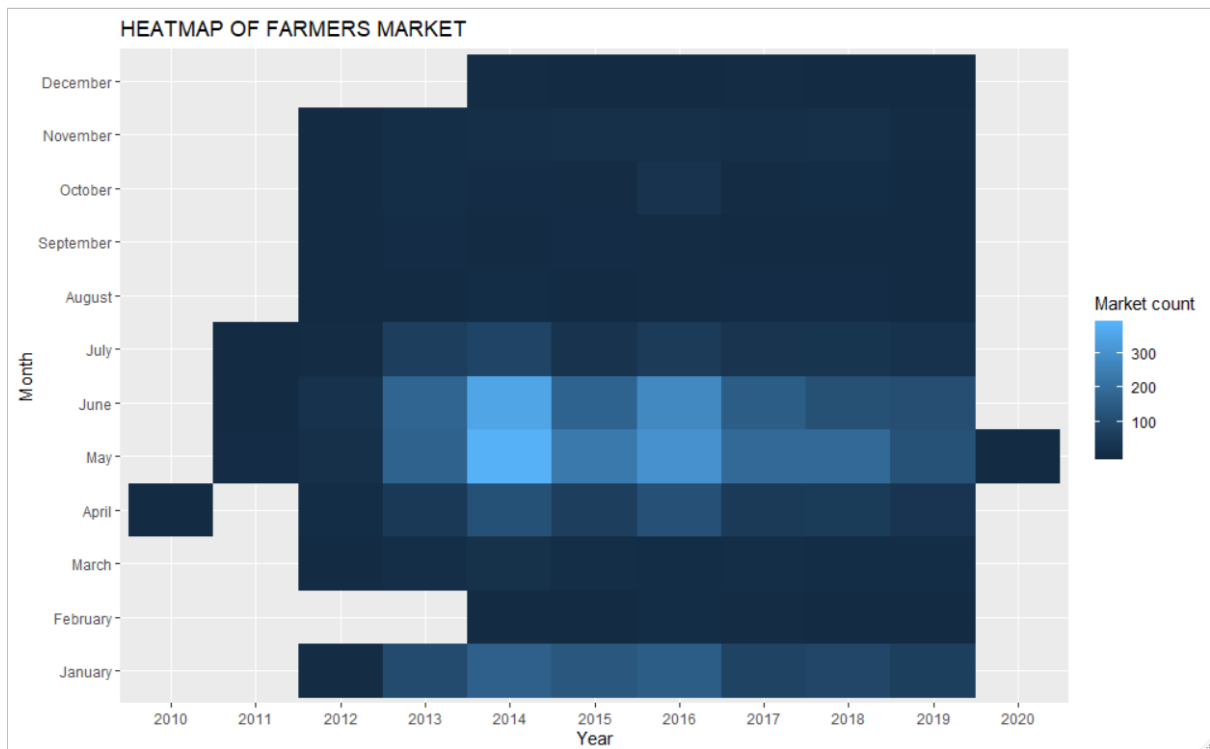


Figure 2.4

The heatmap helps to compare the count of markets with the combination of both month and year. From the figure 2.4

- May 2014, June 2014, May 2016, June 2016 are some of the months where the number of markets were greater

Problem 3 :

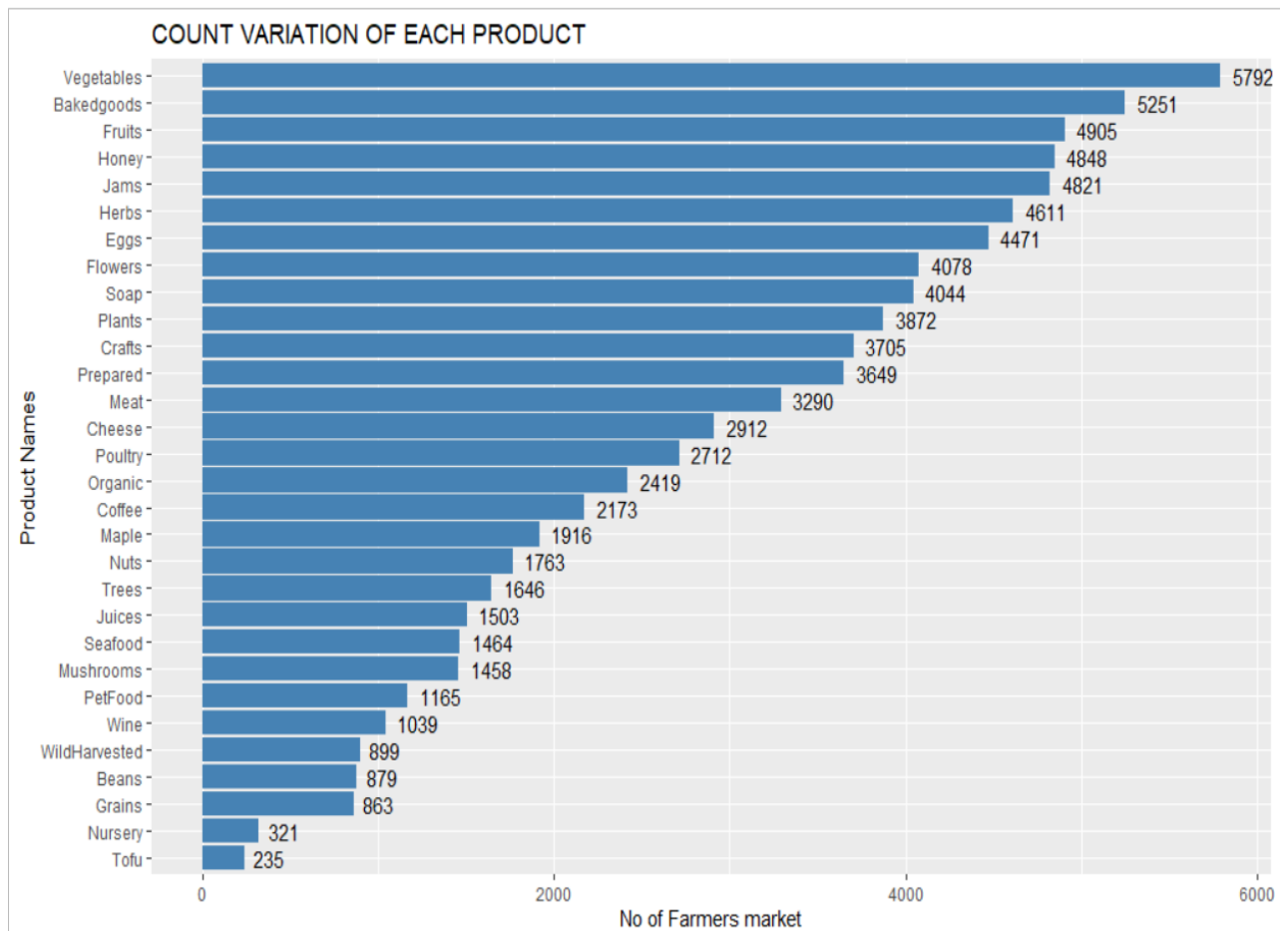


Figure 3.1

The total number of markets that has each product is demonstrated. From the figure 3.1

- Vegetables is the most available product throughout the markets while tofu is the least available one

Problem 4:

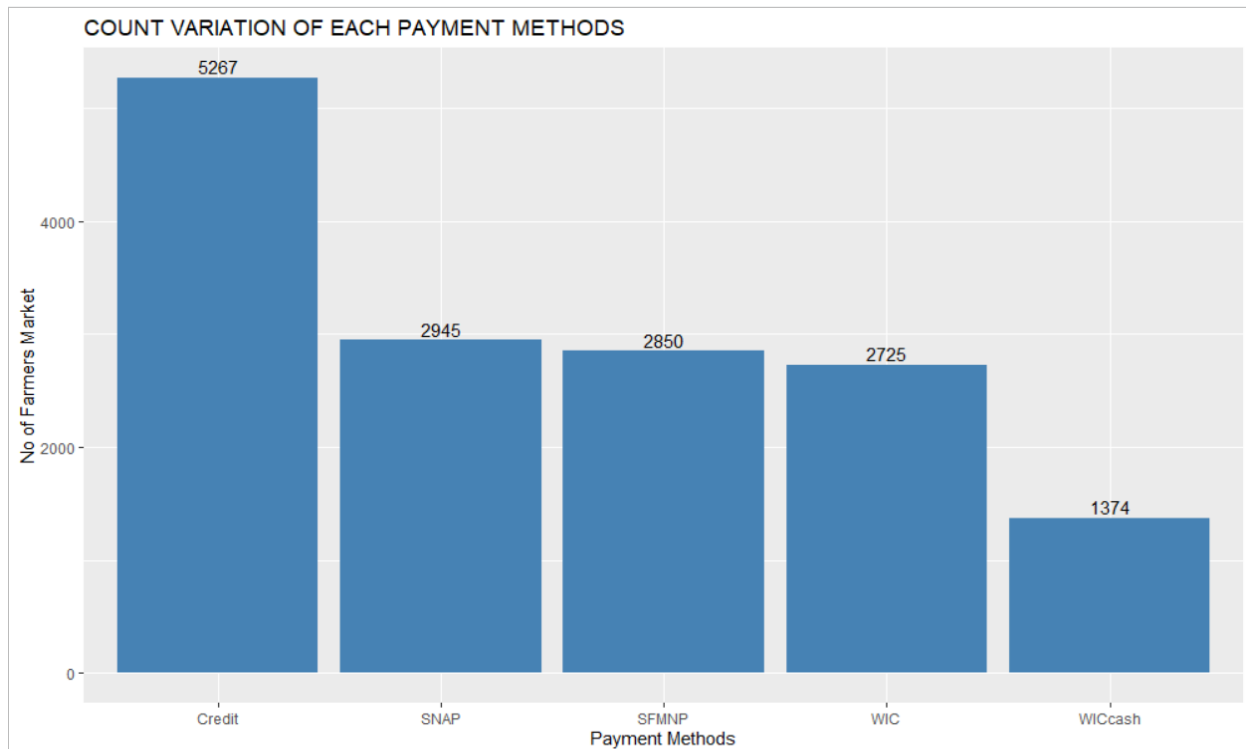


Figure 4.1

Count variation of each payment methods of all the markets are shown in the above graph. From figure 4.1 & figure 4.2

- Most of the markets have credit card payment method (34.74%) whereas only few of them have WICcash (9.06%)

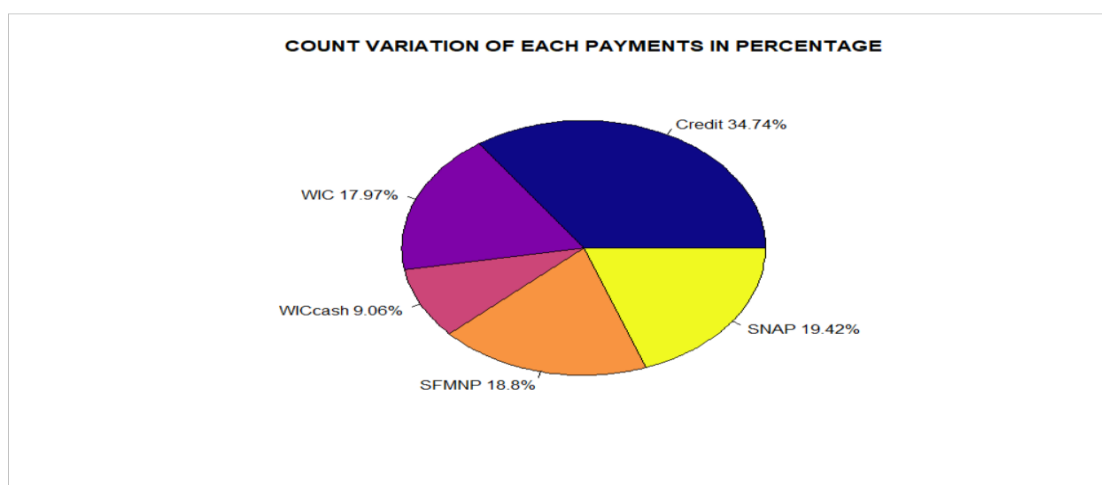


Figure 4.2

Problem 5:

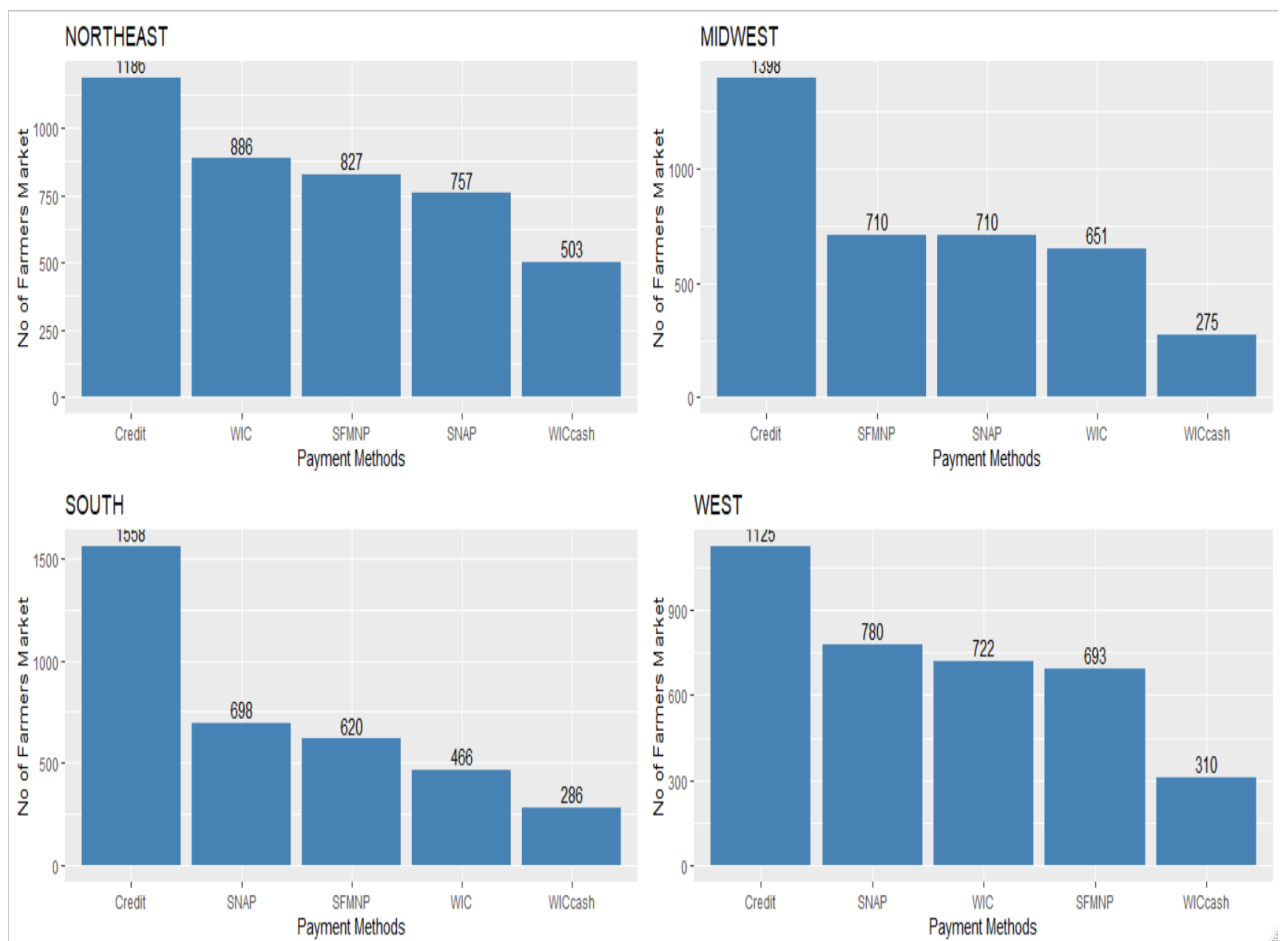


Figure 5.1

The above sets of graphs can be used to compare the payment methods in different regions for the farmers market. From the figure 5.1

- Though credit seems to be the highly available method and WICcash seems to be the highly unavailable method, WIC method seems to be shifting positions in different regions
- WIC is the second greatest method available in the northeast region whereas in the south region it is next to the least available method