Market Share Analysis

Pallak Goyal

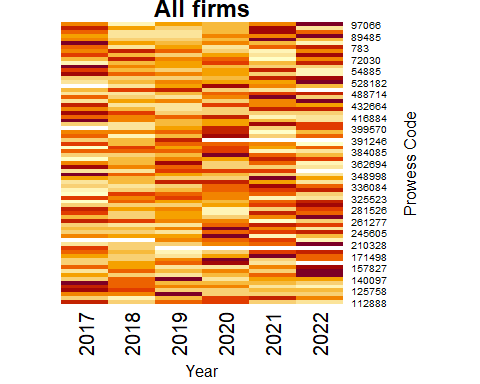
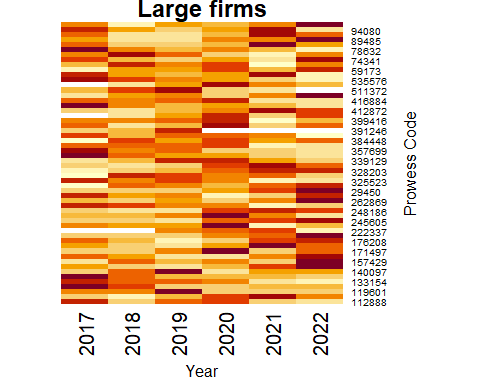
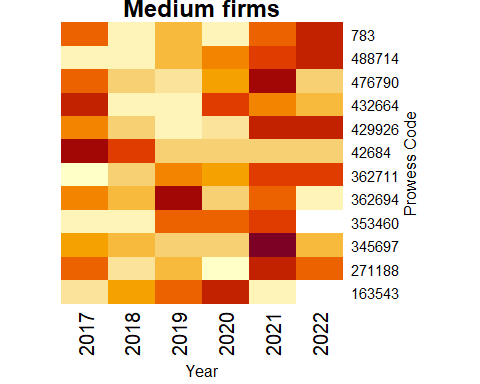
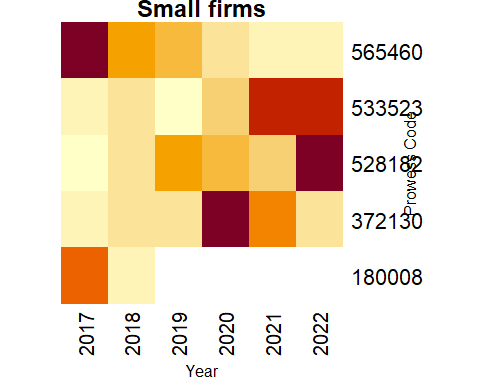
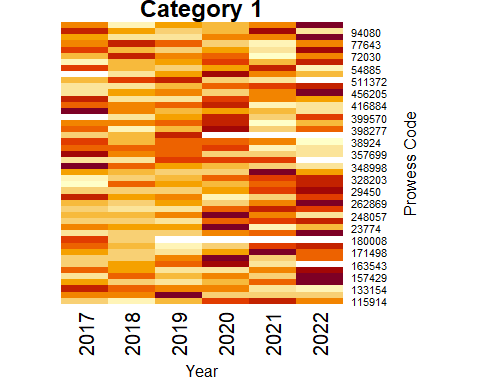
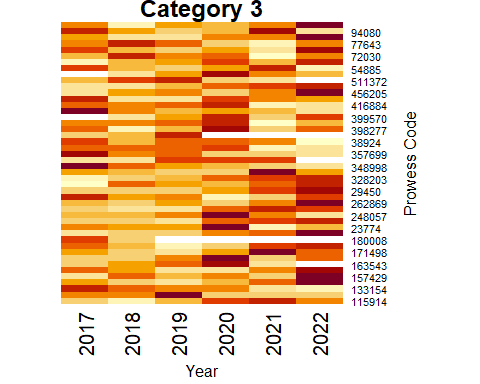
2024-01-03

## Methodology

* Only Category 1 and Category 3 beneficiaries were considered.
* The consolidated statements contain the total sales of all goods sold by the company. These goods differ even at the two digit level. Therefore sales data was taken from the Standalone annual financial statements.
* For each year the respective two digit nic classification was considered for determination of market share.
* The market share was calculated by dividing the total sales of goods of that company by the total sales of goods of all companies that were at the same two-digit classification.
* For the years when sales were not available the data point was dropped and calculations were done.
* The beneficiaries were classified as micro, small, medium and large following the revised turnover definition by the Ministry of Micro, Small and Medium Enterprises. Under this method, turnover less than or equal to 5 crore is classified as micro, above 5 crore but less than or equal to 50 crore is classified as small and above 50 crore but less than or equal to 250 crore is classified as medium.
* 2023 data is not considered as it is not comparable since the base is smaller due to unavailability of data at present. Also, within beneficiaries, the data is available for less than 50% for this year.
* In order to establish causality of market share with a time series data one would need the data on prices charged by the firm and its competitors[[1]](#footnote-20). This data is not available so the results are only illustrative for further research and do not establish causality[[2]](#footnote-21).

## Heat Maps of Market Shares

The heat maps are drawn using a scaling at the enterprise level.

There does not appear to be a pattern in these heat maps. This is further verified using a hypothesis test for difference in means for the samples with large enough sizes to allow meaningful statistical inference.

## Hypothesis testing for mean market shares

The market share averages for year 2021 will be compared to 2022.

Testing for pooled sample of all category 1 and 3 beneficiaries.

##   
## Welch Two Sample t-test  
##   
## data: market\_share[, 7] and market\_share[, 8]  
## t = -0.10651, df = 133.61, p-value = 0.9153  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -2.961653 2.658974  
## sample estimates:  
## mean of x mean of y   
## 1.584177 1.735517

The results show that there is no statistically significant difference in the average market share.

Testing for pooled sample of large beneficiaries.

##   
## Welch Two Sample t-test  
##   
## data: market\_share\_large[, 7] and market\_share\_large[, 8]  
## t = -0.085093, df = 105.41, p-value = 0.9323  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -3.729182 3.422262  
## sample estimates:  
## mean of x mean of y   
## 2.014218 2.167678

The results show that there is no statistically significant difference in the average market share for the large firms.

Testing for the pooled sample of category 1 beneficiaries

##   
## Welch Two Sample t-test  
##   
## data: market\_share\_cat1[, 7] and market\_share\_cat1[, 8]  
## t = -0.14382, df = 79.777, p-value = 0.886  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -4.946864 4.280076  
## sample estimates:  
## mean of x mean of y   
## 2.247233 2.580627

The results show that there is no statistically significant difference in the average market share for the category 1 beneficiaries.

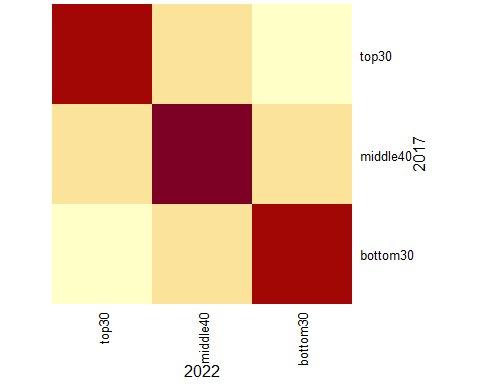
Testing for the pooled sample of category 3 beneficiaries

##   
## Welch Two Sample t-test  
##   
## data: market\_share\_cat3[, 7] and market\_share\_cat3[, 8]  
## t = -0.14382, df = 79.777, p-value = 0.886  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -4.946864 4.280076  
## sample estimates:  
## mean of x mean of y   
## 2.247233 2.580627

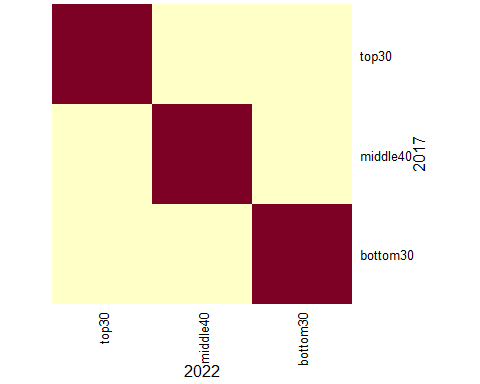
The results show that there is no statistically significant difference in the average market share for the category 3 beneficiaries.

## Mobility Matrix

The following mobility matrix was drawn for beneficiary firms that had NIC classification 10 in both 2017 and 2022. Between these firms the market share quantiles were taken to draw the mobility matrix. The colours are based on the value in the cell, therefore they can be interpreted as a heat map.



It shows that within the beneficiary firms in the 10 classification there has been very little mobility.

Similar exercise was performed for NIC 11 classifed beneficiaries. 

The matrix shows that there is zero mobility among these firms.

# References

Mixon, Franklin G, and Yu Hsing. 1997. “The Determinants of Market Share for the ‘Dominant Firm’ in Telecommunications.” *Information Economics and Policy* 9 (4): 309–18. <https://doi.org/10.1016/S0167-6245(97)00013-9>.

Weiss, Doyle L. 1968. “Determinants of Market Share.” *Journal of Marketing Research* 5 (3): 290–95. <https://doi.org/10.1177/002224376800500307>.

1. For example see Mixon and Hsing (1997),Weiss (1968) [↑](#footnote-ref-20)
2. For small and medium size firms a control group could have been formed to establish causality of changes in market share. However, the sample size is so small that statistical inference will not be possible. Therefore, this exercise is omitted. [↑](#footnote-ref-21)