

Report - Edge Homogeneity Cases – 23rd June

- From last report (dated on 18th June), we have seen how we have divided the different cases and 3 different scenarios in the each case
- As we now, Case1 with 3 different scenarios as different number of edges in each scenario.
- For Case1 – Scenario1 where Source Node Stance is Neutral and Target Node Stance is combined with all other Stances, we can see Pie chart with all the number of edges in the Target Node in Figure1 which consists of total 130240 edges with mean as 43406 and standard deviation as 12496

Pie Chart of TargetNode when SourceNode is Neutral
(with sample sizes)

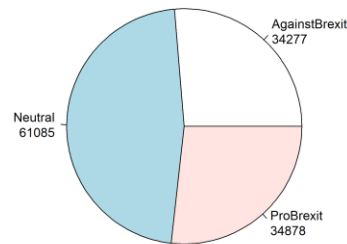


Figure1 – Pie Chart of TargetNode when SourceNode is Neutral

- For Case1 – Scenario2 where Source Node Stance is Against and Target Node Stance is combined with all other Stances, we can see Pie chart with all the number of edges in the Target Node in Figure2 which consists of total 106302 edges with mean 35434 and standard deviation 7336

Pie Chart of TargetNode when SourceNode is Against
(with sample sizes)

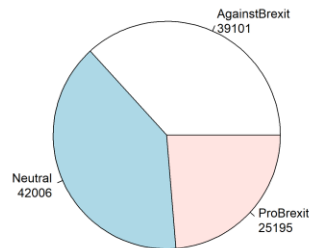


Figure2 – Pie Chart of TargetNode when SourceNode is Against

- For Case1 – Scenario3 where Source Node Stance is ProBrexit and Target Node Stance is combined with all other Stances, we can see Pie chart with all the number of edges in the Target Node in Figure3 which consists of total 97945 edges with mean 32648 and standard deviation 10607

**Pie Chart of TargetNode when SourceNode is ProBrexit
(with sample sizes)**

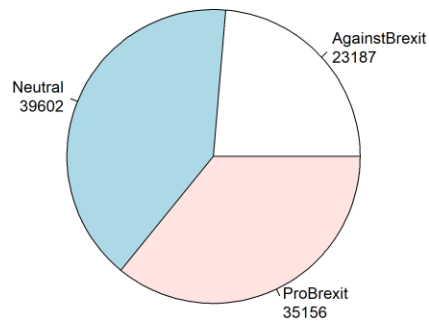


Figure3 – Pie Chart of TargetNode when SourceNode is ProBrexit

- For Case2 – Scenario1 where Target Node Stance is Neutral and Source Node Stance is combined with all the other Stances, we can see the Pie chart with all the number of edges in the Source Node in Figure 4 which consists of total 142693 edges with mean as 47564 and standard deviation as 9610

**Pie Chart of SourceNode when TargetNode is Neutral
(with sample sizes)**

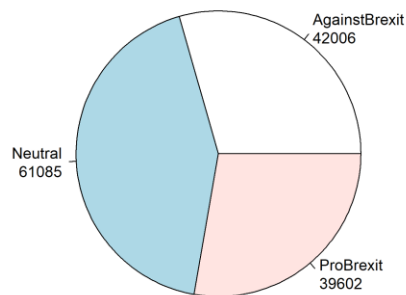


Figure4 – Pie Chart of SourceNode when TargeNode is Neutral

- For Case2 – Scenario2 where Target Node Stance is Against and Source Node Stance is combined with all the other Stances, we can see the Pie chart with all the number of edges in the Source Node in Figure 5 which consists of total 96565 edges with mean 32188 and standard deviation 6662

**Pie Chart of SourceNode when TargetNode is Against
(with sample sizes)**

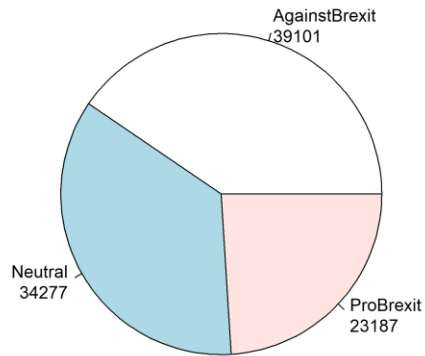


Figure5 – Pie Chart of SourceNode when TargeNode is Against

- For Case2 – Scenario3 where Target Node Stance is Against and Source Node Stance is combined with all the other Stances, we can see the Pie chart with all the number of edges in the Source Node in Figure 6 which consists of total 95229 edges with mean as 31743 and standard deviation as 4631

**Pie Chart of SourceNode when TargetNode is ProBrexit
(with sample sizes)**

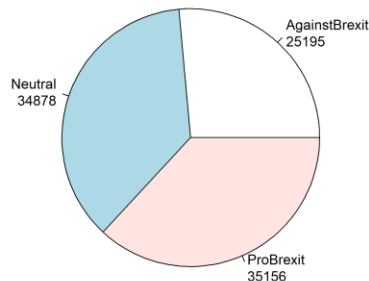


Figure6 – Pie Chart of SourceNode when TargeNode is ProBrexit

- Combining all the Scenarios together in Case1 and verify the PDF of Edge Homogeneity in this case1, Due to density of the Neutral Stance is more. We have scaled the density to show the comparison in the Figure 7

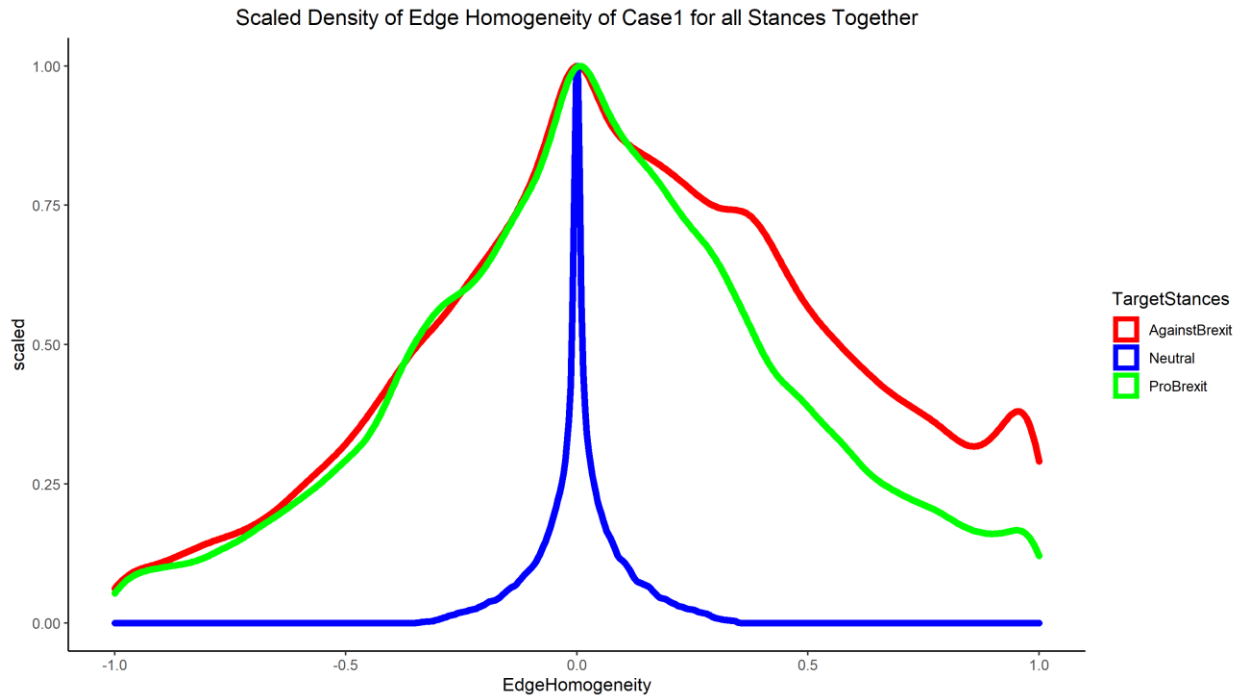


Figure7 – PDF of Edge Homogeneity of Case1 with all 3 different Scenarios

- From Figure 7 we can see that the Against Brexit users are more interacting to the alike Against User stance and it followed by the ProBrexit User.
- To get the better understanding of the different user interaction we can plot the differences between the Against Brexit and ProBrexit Users in this below Figure 8

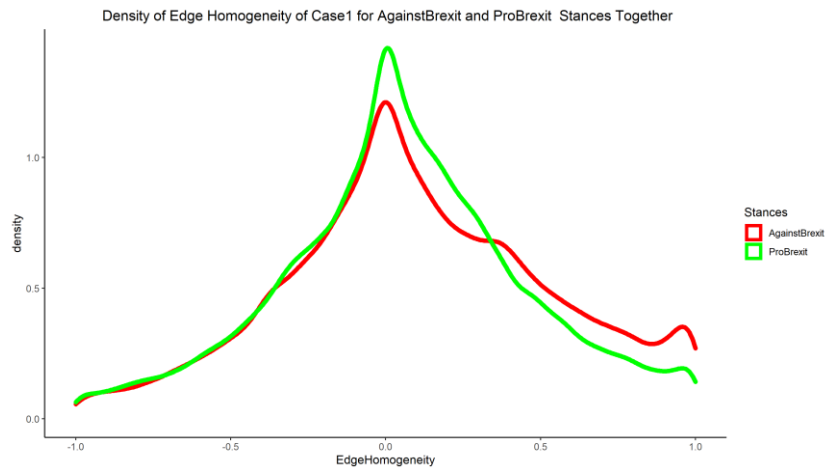


Figure 8 – PDF of Edge Homogeneity of Case1 for Against and ProBrexit Stances

- From Figure 8 we can see that, though the peak of the density is more in the ProBrexit Edges. We can see the Against Brexit user interaction is more in number of user compared to the ProBrexit User in this case1.
- Similarly we can do the comparison in the Case2 with all the three different scenario .As the density of the Neutral stance is more we have scaled the density and tried to combine the 3 Stances in the single plot with help of scale density.

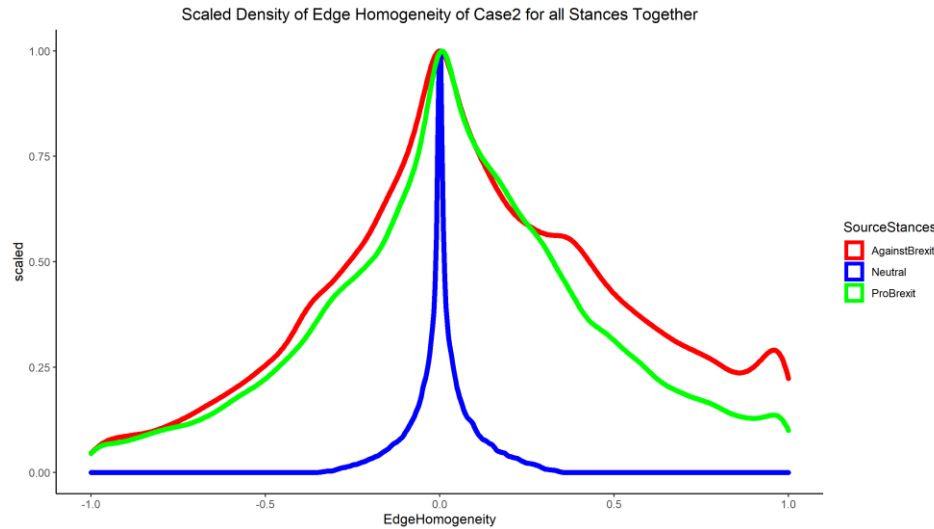


Figure9 – PDF of Edge Homogeneity of Case2 with all 3 different Scenarios

- Similarly as the Case1 result we can see the Case2 results are alike to each other as the density of the AgainstBrexit user where interaction takes to same user stances is more in the Against Brexit user. To get the better understanding between the AgainstBrexit and ProBrexit user comparison we see the PDF of edge homogeneity of the Case2 with AgainstBrexit and ProBrexit user in Figure10

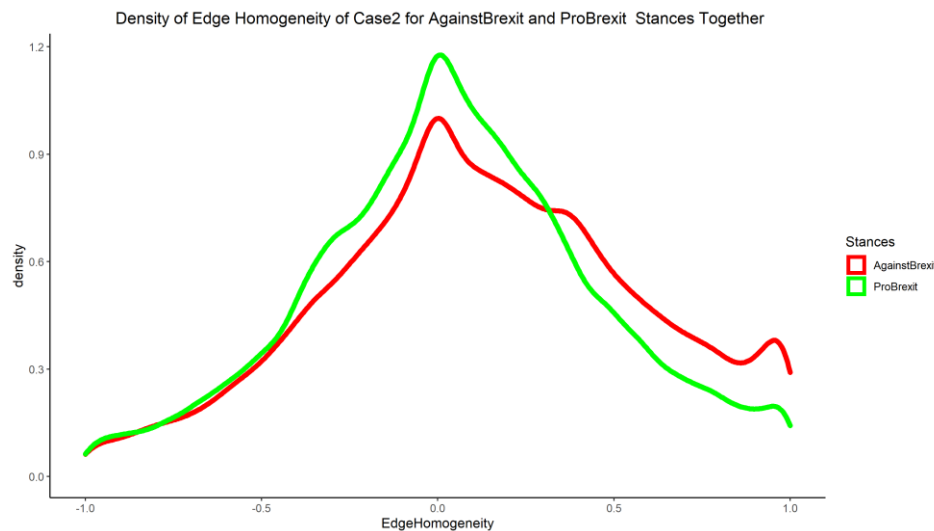


Figure 10 – PDF of Edge Homogeneity of Case2 for Against and ProBrexit Stances

- Going to the each Stance comparison for the Case1 and Case2 towards , we can see the different density in the different Cases, For this firstly we take Neutral as the Stance and compare its density plot for different Cases

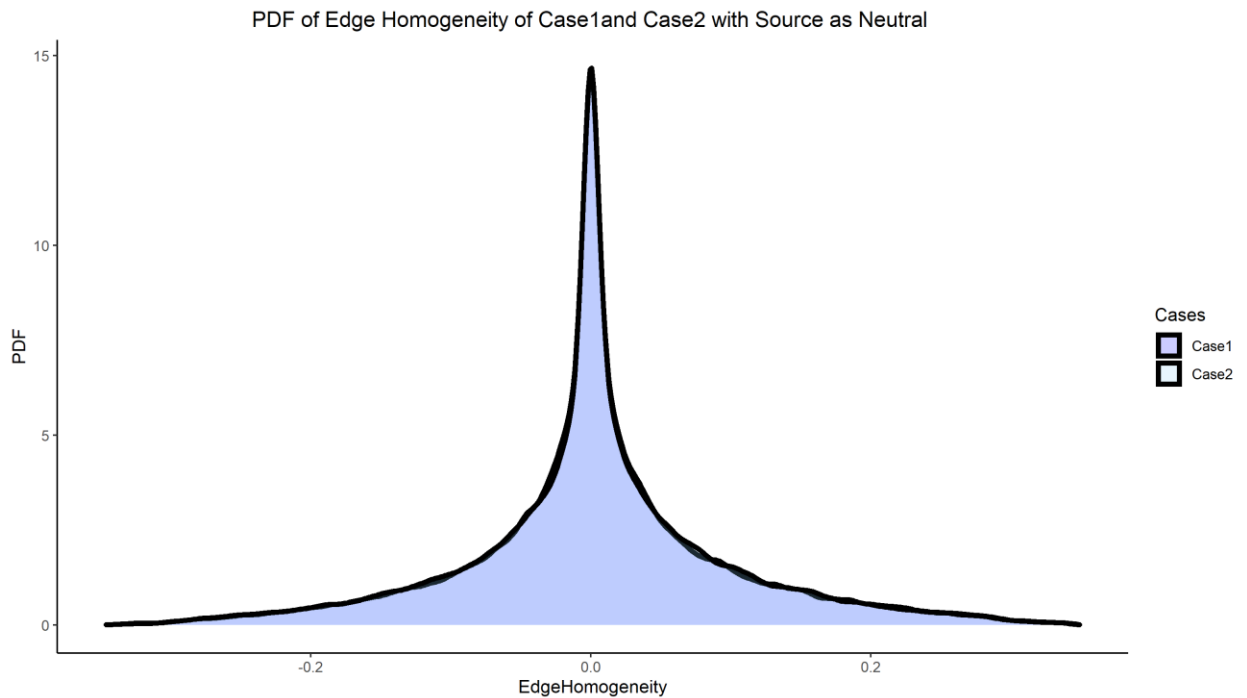


Figure 11 – PDF of Edge Homogeneity of Case1 and Case2 for Neutral Stance

- From the Figure11 we can see the Neutral Stance in Case1 and Case2 are similar and there is no much difference in the two difference Cases

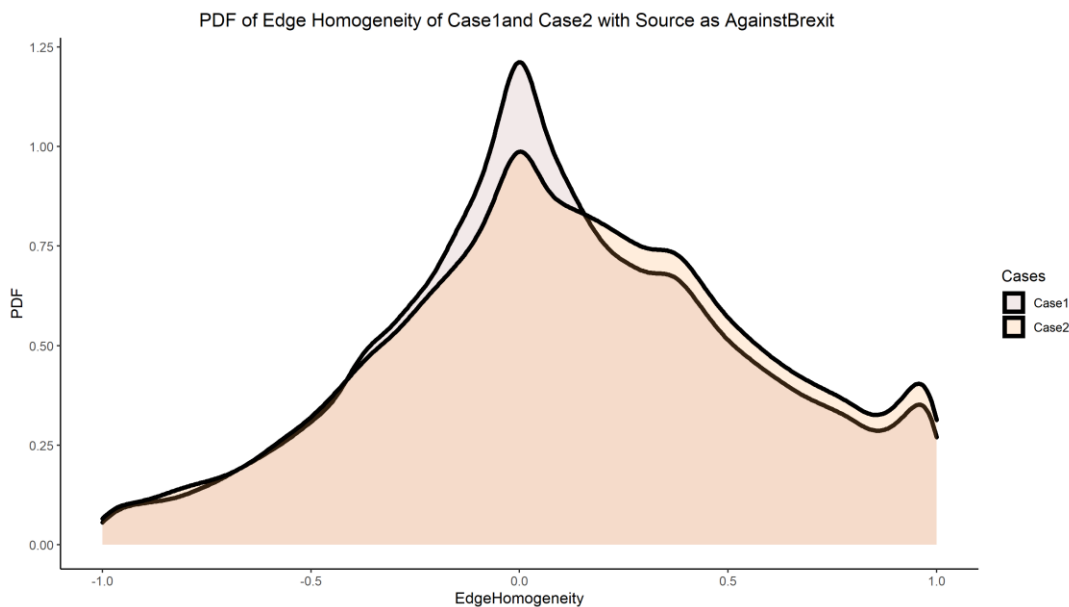


Figure 12 – PDF of Edge Homogeneity of Case1 and Case2 Against Stance

- From Figure 12 we can see the Density of the Against User in Case2 is slightly more than the users in Case1, we can say that user interaction with alike user stance is more in the Case2 compared to the Case1.

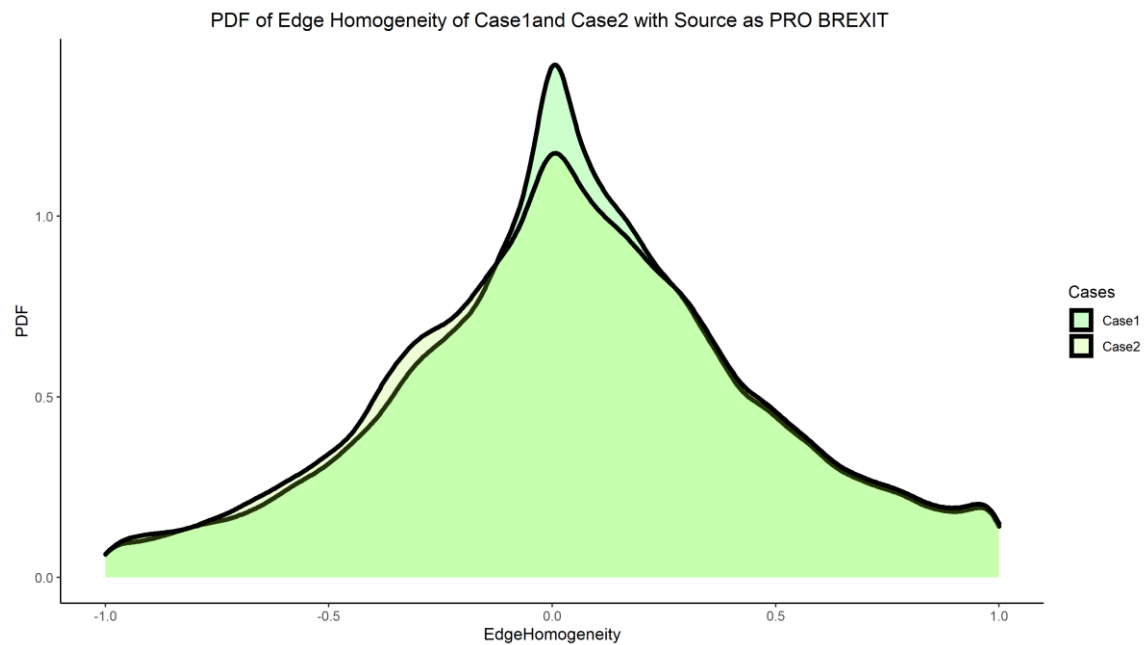


Figure 13 – PDF of Edge Homogeneity of Case1 and Case2 ProBrexit Stance

- From Figure 13 we can see the Case2 where ProBrexit user are interacted more with the other user stances as compared to the Case1.

