Derviving Voting Blocs

Contents

Overview

This Rmarkdown file generates voting blocs for the Eurovision Song Contest (ESC) using historical voting data. Network analysis is used to generate the voting blocs, and the resulting categorical voting bloc information is used as independent variables to explain contest scores. The presence of Voting blocs within the ESC has been noted by both commentators and academics for many years.

Data Profiling / Preparation

The historical voting data records the number of points given from one country to another across the various years of the ESC. The historical voting data is further subdivided by round, either semi-final or final, and by voting method, either jury or televote.

From.country	To.country	Points	Year	X.semi...final	Edition	Jury.or.Televoting
Germany	Belgium	7	1975	f	1975f	J
Sweden	Belgium	2	1975	f	1975f	J
The Netherlands	Belgium	5	1975	f	1975f	J
Germany	Finland	12	1975	f	1975f	J
Ireland	Finland	5	1975	f	1975f	J
Israel	Finland	8	1975	f	1975f	J

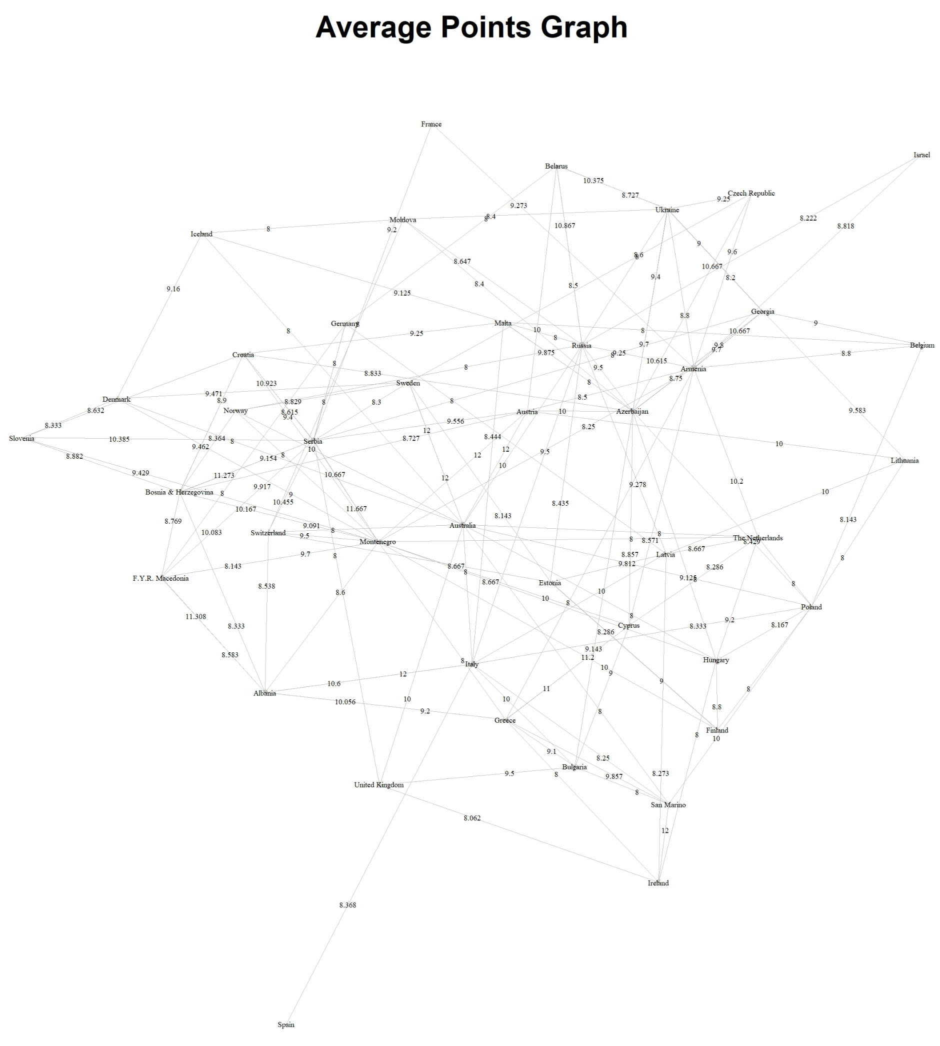
Average Points Dataframe

The historical voting data between all 'from country' and 'to country' combinations are aggregated across the years and the average number of points is calculated.

From.country	To.country	Average.Points
Albania	Armenia	3.333333
Albania	Australia	3.000000
Albania	Austria	5.000000
Albania	Azerbaijan	6.142857
Albania	Belarus	3.000000
Albania	Belgium	2.000000

Average Points Graph

The aggregated historical voting data is further filtered to return cases where the average number of distributed points is greater than 8.

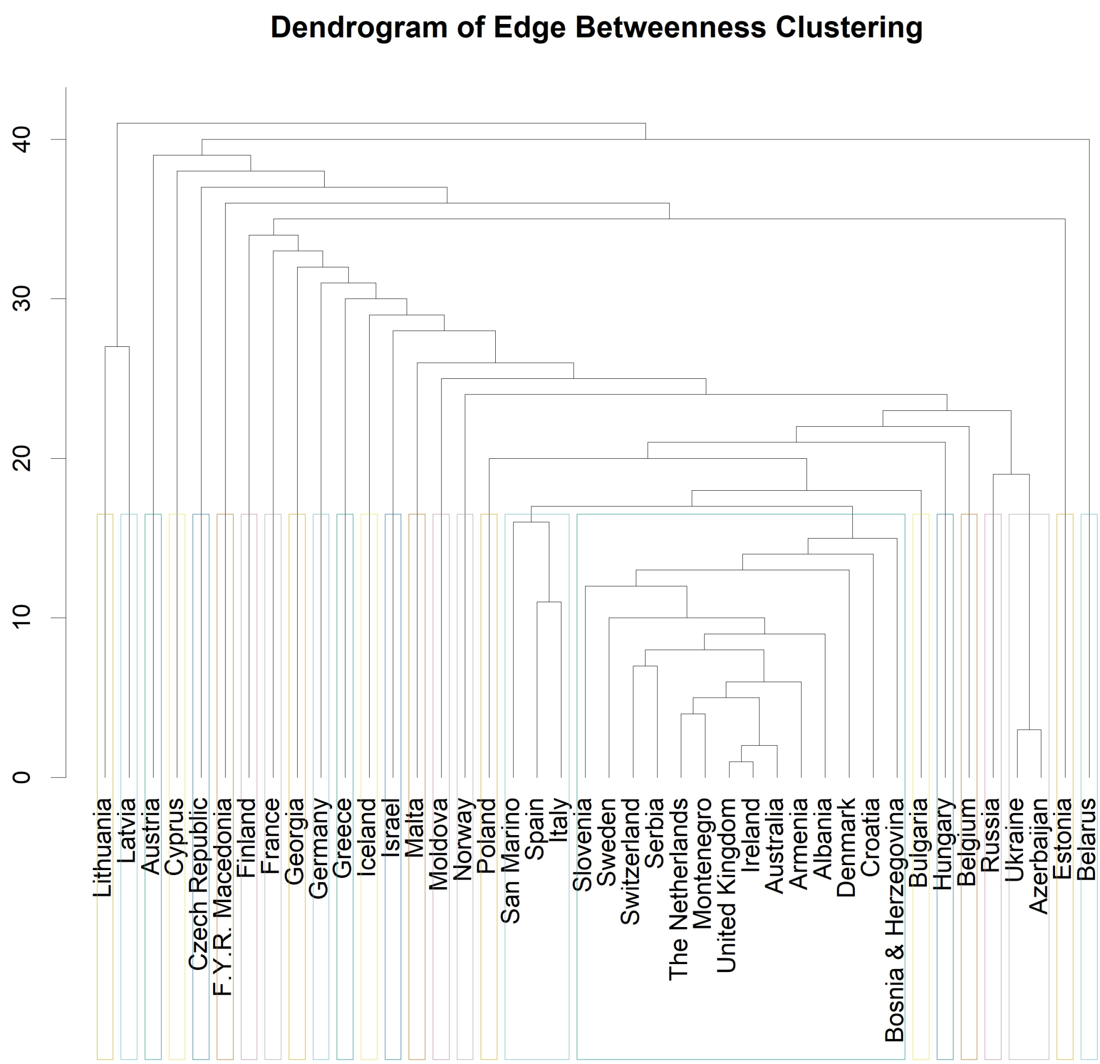


Voting Blocs

The two network clustering algorithms used are edge betweenness clustering, and short random walks. The connectedness of the clusters / communities are evaluated using modularity. The modularity of a graph with respect to some division (or vertex types) measures how good the grouping is. The higher the modularity the greater the division between communities and the better grouping

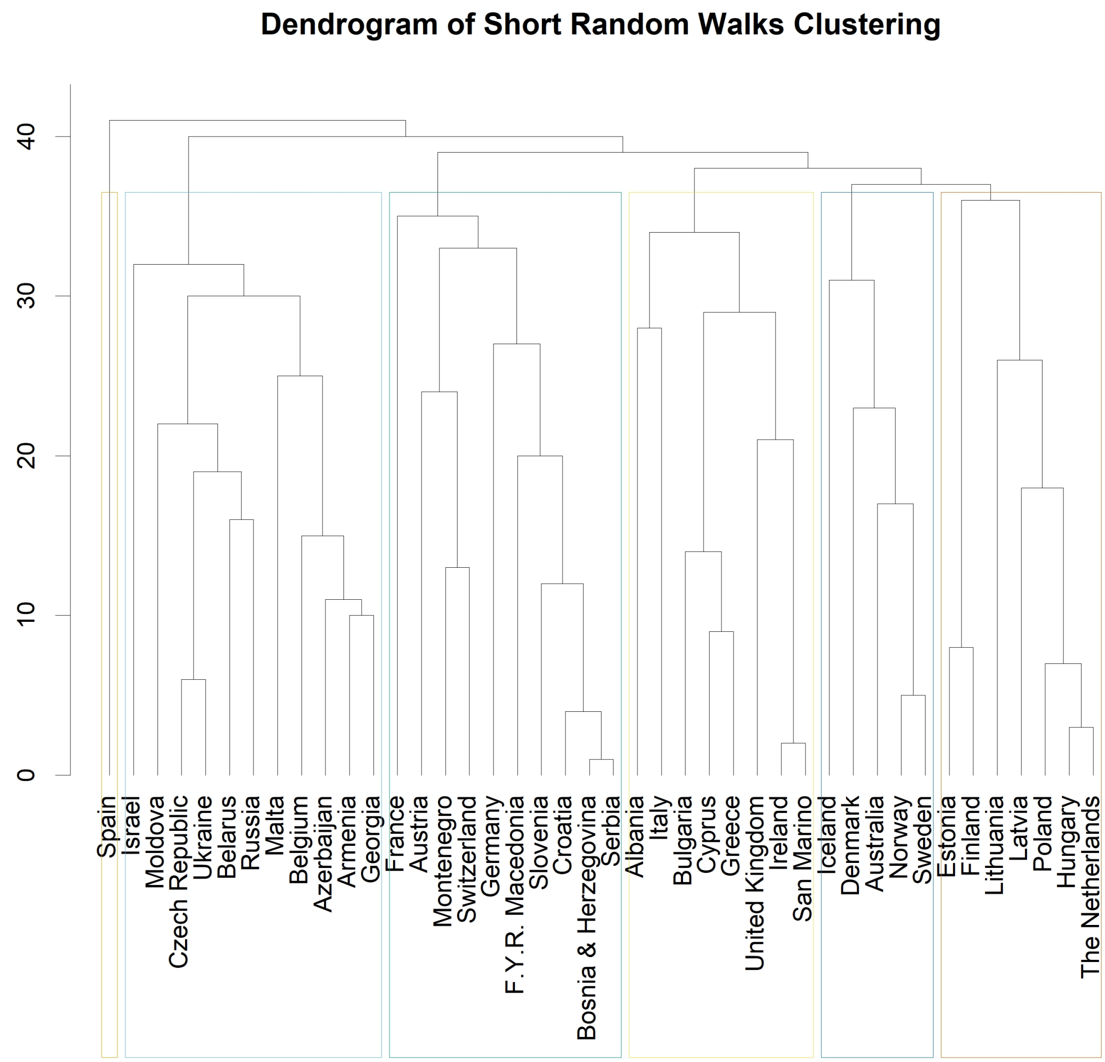
Edge Betweenness Clustering

Edge betweenness clustering works by iteratively removing edges with the highest edge betweeness score from the graph until no edges remain. This results in a dendrogram between when points when the graph is a single component and when the graph is fully disconnected. The number of clusters generated by edge betweenness is 26. The modularity for the edge betweenness clusters is 0.0672.



Short Random Walks

Short random walks clustering works by performing short random walks between nodes in a graph. Vertices within common communities will tend to occur together more frequently during the short random walks. The number of clusters generated by short random walks is 6. The modularity for the short random walks clusters is 0.3911.



Combined Voting Blocs

Here the edge betweenness and short random walks voting blocs are combined into a single dataframe for further analysis later on.

Country	VBlocs1_EB	VBlocs2_SRW
Albania	1	3
Armenia	1	4
Australia	1	5
Austria	2	2
Azerbaijan	3	4
Belarus	4	4
Belgium	5	4
Bosnia & Herzegovina	1	2
Bulgaria	6	3
Croatia	1	2
Cyprus	7	3
Czech Republic	8	4
Denmark	1	5
Estonia	9	1
F.Y.R. Macedonia	10	2
Finland	11	1
France	12	2
Georgia	13	4
Germany	14	2
Greece	15	3
Hungary	16	1
Iceland	17	5
Ireland	1	3
Israel	18	4
Italy	19	3
Latvia	20	1
Lithuania	21	1
Malta	22	4
Moldova	23	4
Montenegro	1	2
Norway	24	5
Poland	25	1
Russia	26	4
San Marino	19	3
Serbia	1	2
Slovenia	1	2
Spain	19	6
Sweden	1	5
Switzerland	1	2
The Netherlands	1	1
Ukraine	3	4
United Kingdom	1	3