

Interconnectedness of companies

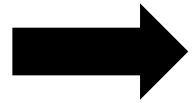
Through the board of directors and key executives

Definition of connectedness...

Two companies are connected if a person is a board member or executive at both companies.

Goals with project

Visualise the interconnectedness in graphs to understand how companies are connected.



Learn to work with and visualise graphs in R.

Inspiration and data sources

- Harvard Business Review article about prior research on the topic which studied companies in different countries at different points in time.
- Nasdaq OMX website, Reuters website and their free APIs OpenPermID.
- Combination of web scraping and API use

Challenges along the way

- Figuring out how the API calls were supposed to be formatted. Luckily the API was well documented.
- Getting the graph to look nice. Lots of data = busy plot.

Data collected and tools used

Data set of:

- 327 companies
- 4077 unique people

For graph creation:

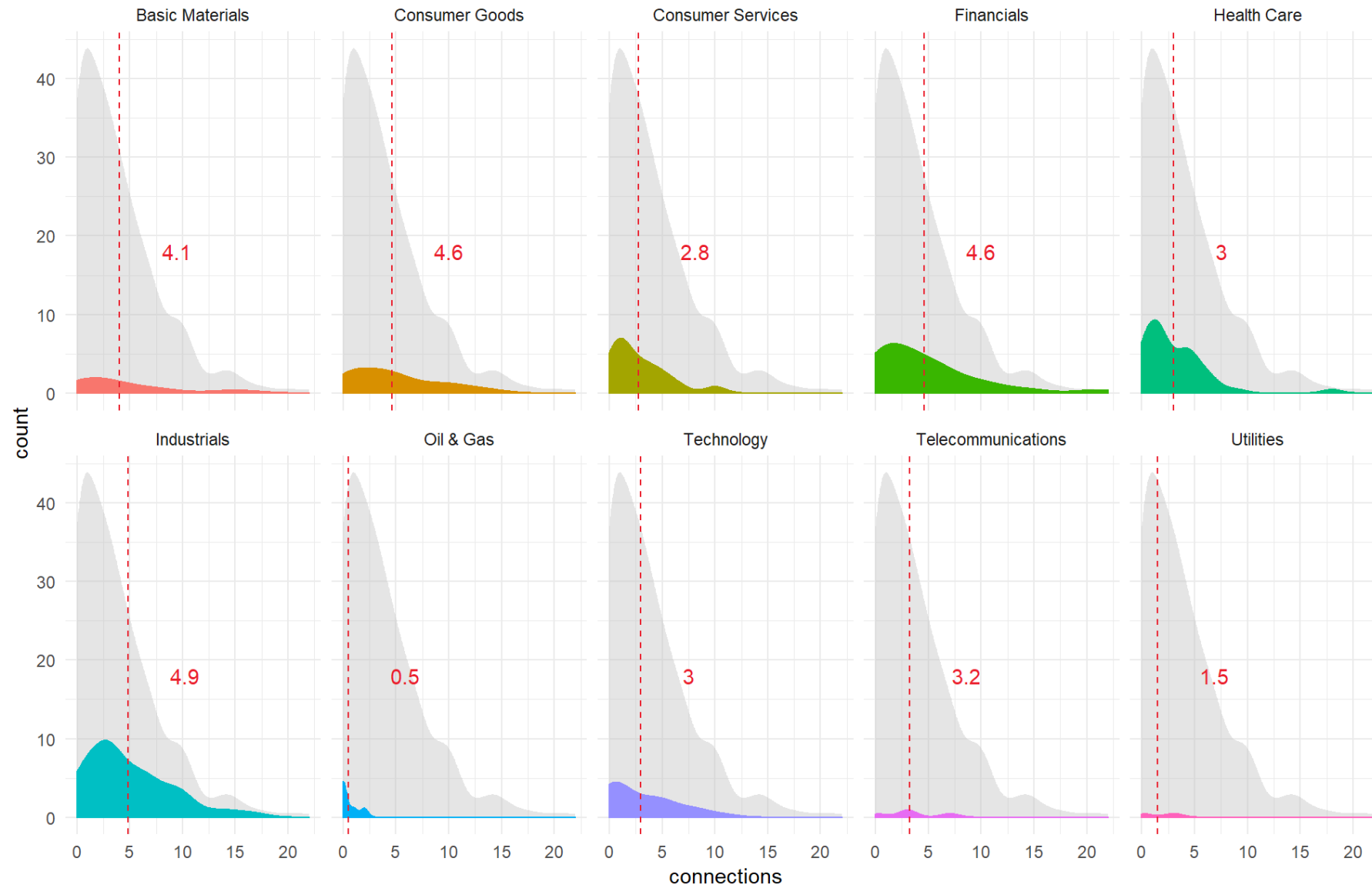
- `tidygraph` for graph manipulation
- `ggraph` for visualisation

Conclusions

- 81 % of companies are connected to another company.
The largest graph component contains 78 % of companies.
- Companies are more likely to have a connection to another company if they operate in the same sector.

Distribution of people connections to other companies

Red line and number is sector mean



Centrality score of companies/nodes

Centrality is measured with betweenness

