Konect Aggregate Statistics Plots

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Plots are calculated calculated on all networks in KONECT as of summer 2021. except Infrastructure Networks. If filtered on size, then N>10000. The dataset, aswell as the code made to generate the plots can be found on `https://github.com/LourensT/Konect-Aggregate-Statistics/`.

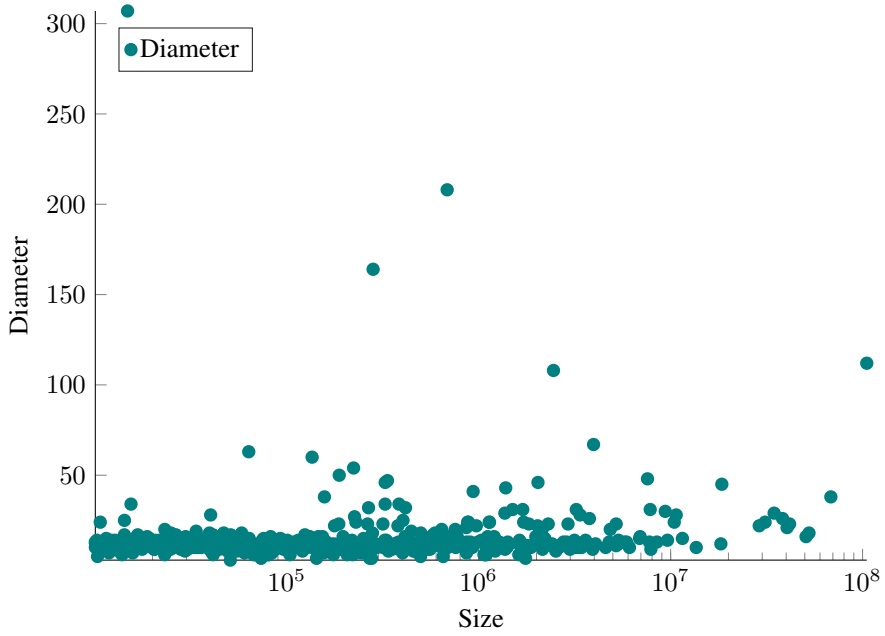

Figure 1: log_Size-Diameter.tikz, size > 10000, total number of networks 727

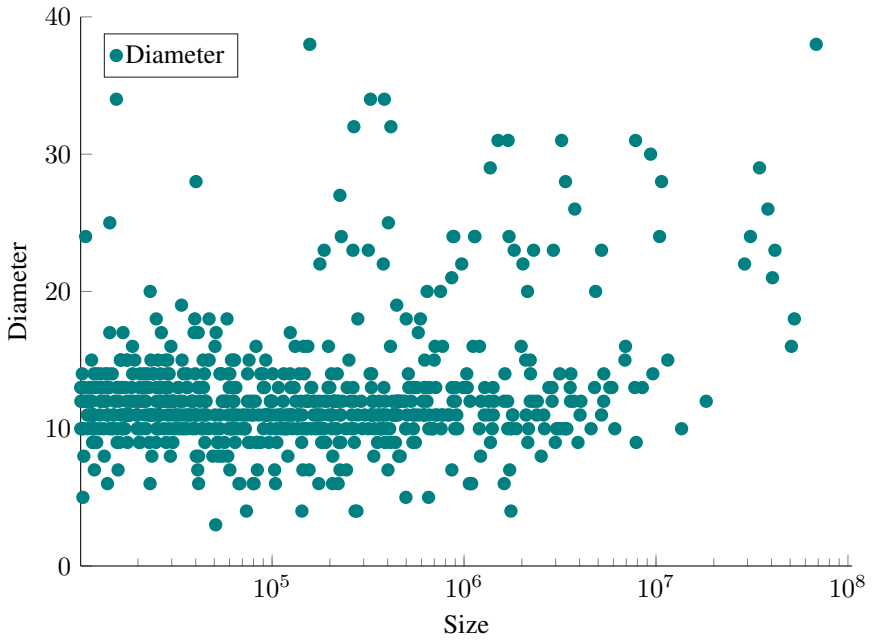

Figure 2: log_Size-Diameter-CROPPED.tikz, size > 10000, diamter < 40 total number of networks 721, y-axis truncated at 40.

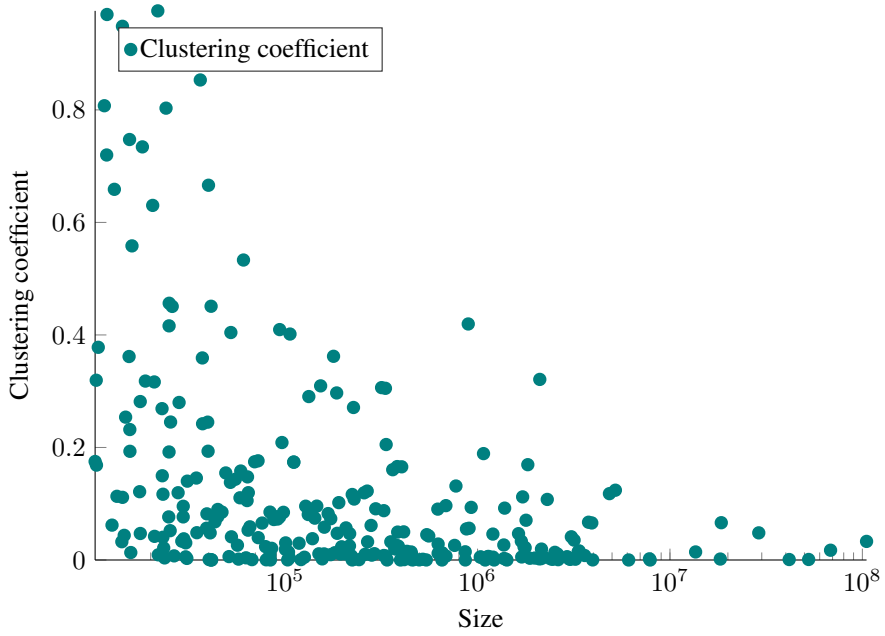

Figure 3: log_Size-Clustering_coefficient.tikz, size > 10000, total number of networks 727

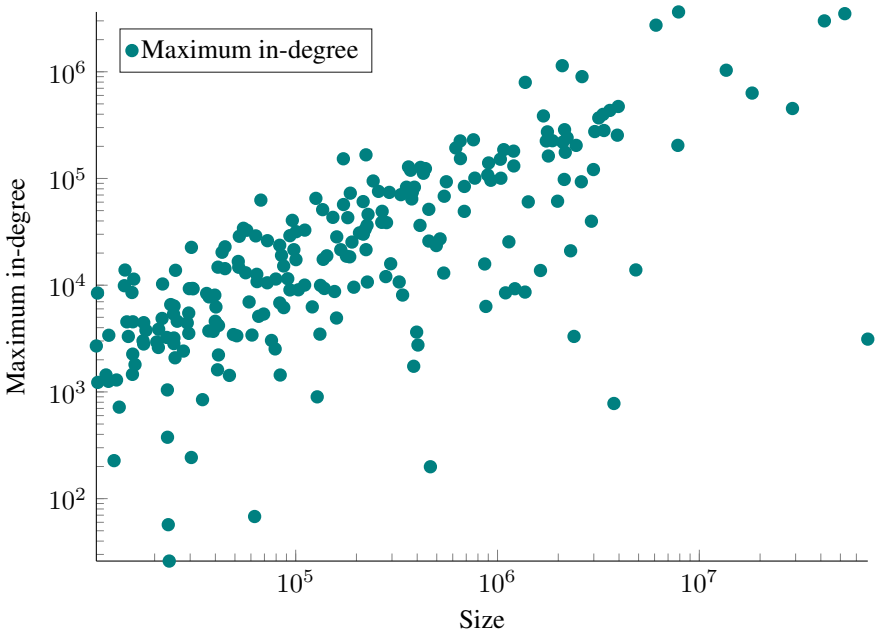

Figure 4: log_Size-log_Maximum_indegree.tikz, with size > 10000, total number of networks 229

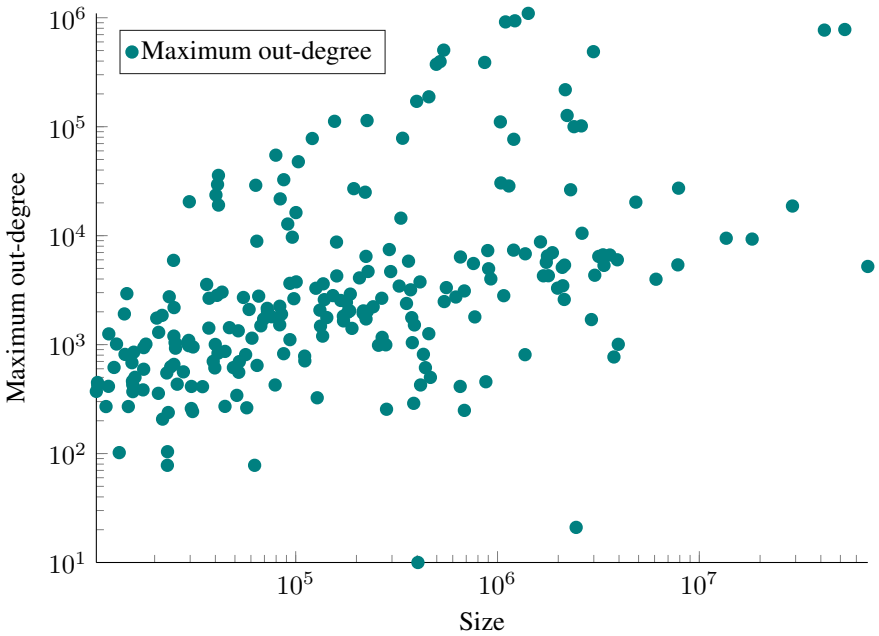

Figure 5: log_Size-log_Maximum_outdegree.tikz, with size > 10000, total number of networks 229

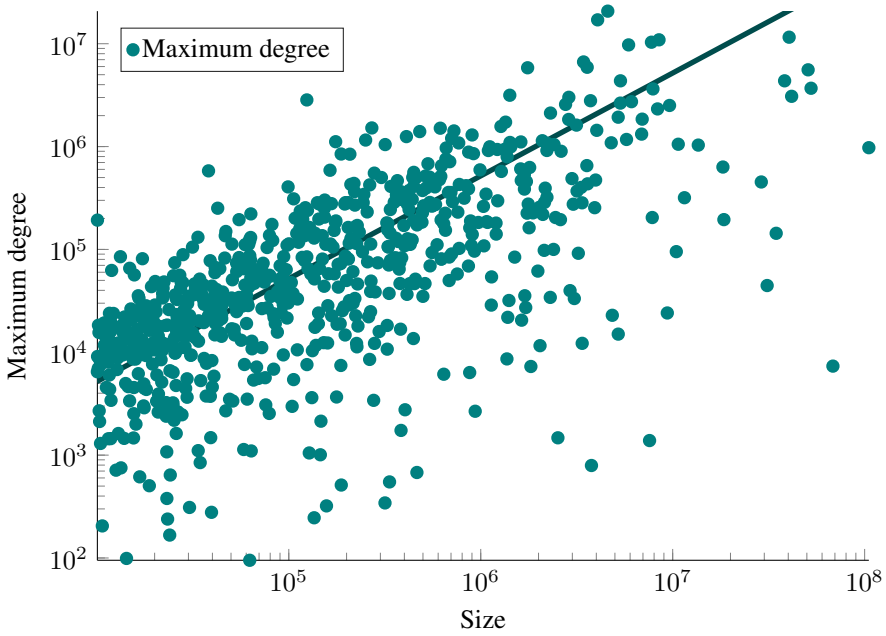

Figure 6: log_Size-log_Maximum_degree.tikz, with size > 10000, total number of networks 727. Linear regression gives $\log M_n = 0.742 + 0.519 \log n$. With $\hat{\beta} = \frac{1}{\hat{\tau}-1} = 0.519$ implies that $\hat{\tau} \approx 2.927$, with $M_n \sim M \frac{1}{n^{\tau-1}}$

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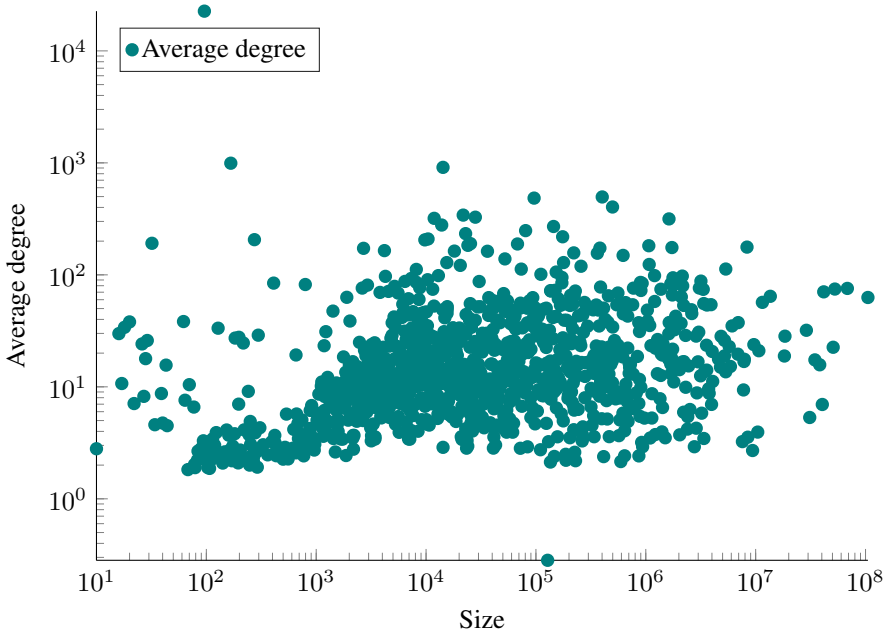

Figure 7: log_Size-log_Average_degree.tikz, with size > 0, total number of networks 1203

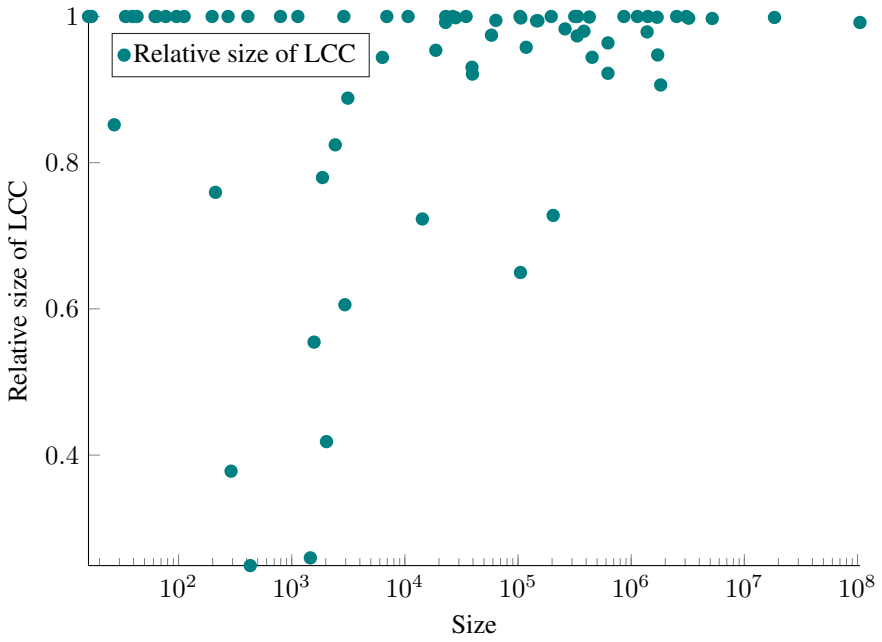

Figure 8: log_Size-Relative_size_of_LCC.tikz, all unipartite, undirected with size > 0, total number of networks 74

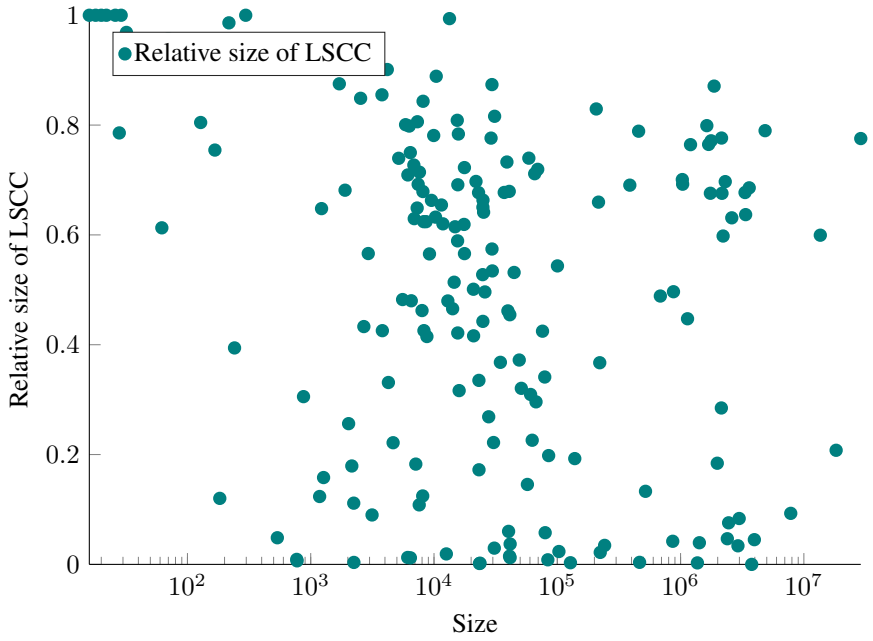

Figure 9: log_Size-Relative_size_of_LSCC.tikz, all directed with size > 0, total number of networks 302

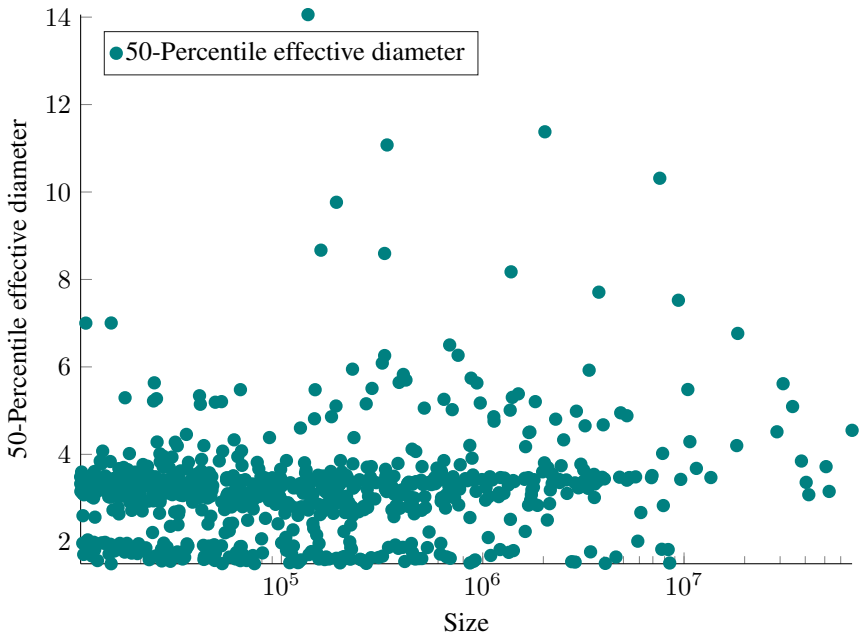

Figure 10: log_Size-50-Percentile_effective_diameter.tikz, size > 10000, total number of networks 727