

Abstract (in English):

Many non-political factors have significant influence on the many ways of decision-making in politics. Researchers like Masket (2008) found a significant relationship between seating arrangements in parliament and the decisions that the seated politicians take. More interesting, however, are findings by Tunkis (2016) or Škvrňák (2021) that show how social factors influence decisions made in political organizations. However, literature is not clear on the question of how sociodemographic factors like gender or ethnicity wield significantly influence political decision-making. These studies are few and far between and do not focus on countries in the CEE region, like Slovakia. Atop of that, literature on this topic does not use social network analysis, which provides several advantages that this thesis considers as worth exploring. One of them is the concept of optimal graph partitioning, which finds natural groups of like-minded nodes in terms of their links. This is exploited in an interesting way in a paper by Arinik, Figueiredo & Labatut (2020), which aims to analyze the European Parliament by mapping them onto multiplex signed graphs, which introduce more complete mapping of social organizations that contain a mechanism of internal conflict.

This thesis tries to apply the method of multiplex signed graph partitioning by Arinik et al. (2020) on the question of significant influence of sociodemographic variables. This thesis focuses on gender, education, ethnicity and age in its analysis. The data used are original voting data of the 7th term of the Slovak National Council, web-scraped from its public web pages. Through a multi-step process of data cleaning, recoding and final analysis, this thesis outputs characteristic patterns of voting behavior visualized as circular plots for each sociodemographic variable. By way of statistical significance testing, the thesis concludes that only gender and age have a statistically significant influence on characteristic patterns of voting behavior, while education and ethnicity do not. While the thesis is limited by the computational complexity of the research method and the missing data on topic domains compared to Arinik et al. (2020), the thesis also proposes ways to address these issues in further research, like the use of less computationally complex algorithms for better scaling, as well as AI-driven classification task, which could determine main topics of legislation and provide scalable way to topically filter legislative voting data.