Abstract (in English)

Data visualizations in the public sphere vary significantly between actors. Some utilize titles to convey key messages, others employ multiple annotations to communicate multiple messages, while some prefer pie charts over bar charts. However, when the objective is to attract attention and effectively communicate a specific message, it is often unclear whether some aspect helps or not. To address this uncertainty, a systematic review of academic literature is conducted to identify, which aspects of data visualizations have the influence on message comprehensibility and perceived attractiveness together with identifying the role of receiver and the task for which the visualization is designed. Based on the findings, 3 aspects are selected, visualization type, redundancy, and color usage, whose effects are then examined on 4 real-word visualizations from the Czech public sphere through questionnaire-based survey administered to a representative sample of Czech population. Key findings are that chosen visualization type has no effect when visualization types are very similar. Next that adding key message redundantly to title can significantly enhance comprehension but not perceived aesthetic quality. Then that highlighting key message using color has no effect, at least in case of visualizations already rich in color. And finally, that both visualization literacy and education of users influence comprehension and perceived aesthetic quality.