

Integration of Principal Component Analysis (PCA) and Geographic Information Systems (GIS) in Mapping Young Voter Aspirations in Sabah, Malaysia

ABSTRACT

Young people are the largest group of voters in Sabah compared to the adults and the elderly. Therefore, the percentage of votes of young people has a great influence on the victory of a certain party. Understanding the political demands of young voters will give an advantage to a political party during the election period and the process of governing a state or country. Thus, this study aims to identify the political demands of young voters in Sabah based on the zone and parliament boundaries. A total of 1609 voters in Sabah aged 21 to 40 were interviewed through survey methods. Raw data obtained were then analyzed using Principal Component Analysis (PCA) techniques presented in the form of thematic maps using the Geography Informatics System (GIS) application. From the analysis, it was found that there are five political demands required among young voters in Sabah according to ranks, i.e., the provision of welfare assistance, high-caliber local leaders, space for political involvement, state stability, and territorial equality rights. The rankings of each of these political demands are found to vary according to the zone and parliament boundaries. For Inland Zones, especially Tenom and Pensiangan Parliaments, the ranking of political demands among young voters in this area is more focused on the aspect of providing welfare assistance. In contrast, the young voters in the Central West Zone, especially in Penampang and Putatan Parliaments, are more focused on the Regional territorial equality rights.