Analysis of the movement distribution pattern of violent Crime in Malaysia's capital region-Selangor, Kuala Lumpur, and Putrajaya

ABSTRACT

Previous studies of violent crime have been focused on identifying hot spots areas, ignoring crime movement and distribution, particularly violent-related land use on four different time frames. Studies showed that they have used police station boundaries or sectors to detect crime hotspots without considering land use type and the distribution and movement of crime. Understanding the relationship between violent crime and land use allows stakeholders to make informed decisions about land use, urban planning, and community development projects that can help reduce crime and improve overall community safety and quality of life. The aims of this study to investigate the relationship between violent crimes, time and land use in Selangor State, Kuala Lumpur Federal Territory (KLFT) and Putrajaya Federal Territory (PFT) from 2015 to 2020 using Mean Center and Standard Deviational Ellipses (SDE). These methodologies can assist authorities such as the Royal Malaysia Police (RMP) and Local Authority (LA) to identify potential variables leading to the high prevalence of violent crime in specific locations, which can then be used by police and local authorities to collaborate, establish crime prevention initiatives, and more effectively allocate resources. This study considers four-time frames, namely midnight (12:00-6:59 am), morning (7:00-11:59 am), evening (12:00-6:59 pm) and night (7:00-11:59 pm). The main concern in this article is that the SDE and Mean Center are still being investigated for use in studies of violent crime that are related to land use and spatial temporal. The overall Direction Mean Center and SDE at evening time, has the highest area of 128,146,621.17m2 . All SDEs are within the boundaries of Kuala Lumpur Contingent Police Headquarters (KLCPH) and Selangor Contingent Police Headquarters (SCPH) has been justify in a shape of Figure and Table in this article. However, only District Police Headquarters (DPH) Putrajaya, namely the police station in Presint 11 and 7 are not included in the analysis. Overall, police and local authorities may find it useful to employ SDE and the Mean Center technique to investigate violent crime using land use and spatial-temporal data their efforts to reduce violent crime, enhance public safety, and implement preventative measures in high-crime areas.