

## **KAJIAN KRIMINALITAS DI KOTA VANCOUVER, BC, KANADA : ANALISIS SPASIO-TEMPORAL TAHUN 2016-2018**

Oleh

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### **Intisari**

Kota Vancouver merupakan sebuah kota yang terletak di Provinsi British Columbia, Kanada dan merupakan salah satu kota yang paling berkembang di Amerika Utara. Tercatat pada tahun 2018 *Crime Severity Index (CSI)* Vancouver sebesar 108.45, melebihi rata-rata nasional Kanada sebesar 75.01. Kriminalitasnya yang dinamis menarik untuk dikaji. Penelitian ini bertujuan untuk menganalisis kejadian kriminal properti *BNE Commercial*, *BNE Residential*, *Theft of Vehicle*, serta *Theft from Vehicle* secara spasial, temporal, spasial-temporal, serta mengidentifikasi beberapa variabel yang diduga memiliki hubungan dengan tingkat kriminalitas yang terjadi.

Analisis spasial dilakukan dengan beberapa metode, yakni dengan uji statistik NNI, *mean center*, *standard deviation ellipses*, serta identifikasi agihan dan *hotspot* setiap sub- kriminalitas properti melalui *binning* dan *optimized hotspot analysis*. Analisis temporal melalui karakteristik temporal per musim dan per jam. Analisis spasial-temporal dengan identifikasi viktimisasi berulang melalui kalkulasi *repeat and near repeat* beserta link spasial-temporal. Identifikasi variabel yang diduga memiliki hubungan dengan tingkat kriminalitas dilakukan melalui teknik korelasi.

Hasilnya menunjukkan bahwa (1) Semua analisis spasial merujuk pada sisi utara kota, terkhusus *Central Business District* sebagai area dengan kriminalitas paling banyak terjadi dengan pengecualian *BNE Residential*. (2) Perubahan musim tidak mempengaruhi tingkat kriminalitas. (3) Terdapat kecenderungan viktimisasi berulang pada setiap sub kategori kriminalitas properti. (4) Ditemukan hubungan variabel sosial-ekonomi terhadap tingkat kriminalitas properti di Kota Vancouver.

**Kata Kunci :** *BNE Commercial*, *BNE Residential*, *Theft from Vehicle*, *Theft of Vehicle*, *Binning*, *Repeat and Near Repeat*, *Optimized Hotspot Analysis*, Korelasi

## CRIME STUDY IN THE CITY OF VANCOUVER, BC, CANADA : SPATIAL- TEMPORAL ANALYSIS, 2016-2018

by

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### ***Abstract***

*Vancouver is a city that located in the Province of British Columbia, Canada and is one of the most developed cities in North America. In 2018, Vancouver Crime Severity Index (CSI) of 108.45, exceeding the Canadian national average of 75.01. Its dynamic crime is interesting to study. This study aims to analyze the property crime incidents of BNE Commercial, BNE Residential, Theft of Vehicle, and Theft from Vehicle spatially, temporally, spatially-temporally, and to identify variables that are suspected to have relationship with the level of crime that occurred.*

*Spatial analysis was carried out by several methods, namely NNI statistical tests, mean centers, standard deviation ellipses, and identification of crime event distribution and its hotspot through binning and optimized hotspot analysis.*

*Temporal analysis carried out through temporal characteristic per season and per hour. Spatial-temporal analysis through the calculation of repeat and near repeat along with spatial-temporal links. Identification of variables suspected to have a relationship with crime rates is done through correlation techniques.*

*The results show that (1) All spatial analyzes refer to the north side of the city, specifically the Central Business District as the area with the most crime occurring with the exception of BNE Residential. (2) Season changes do not affect crime rates. (3) There is a tendency of repeated victimization in each sub-category of property crime. (4) Some variables were found to have relationship with the level of crime.*

**Keywords :** *BNE Commercial, BNE Residential, Theft from Vehicle, Theft of Vehicle, Binning, Repeat and Near Repeat, Optimized Hotspot Analysis, Correlation Technique*