Trends in Crime Measures: British Columbia, 1999-2013

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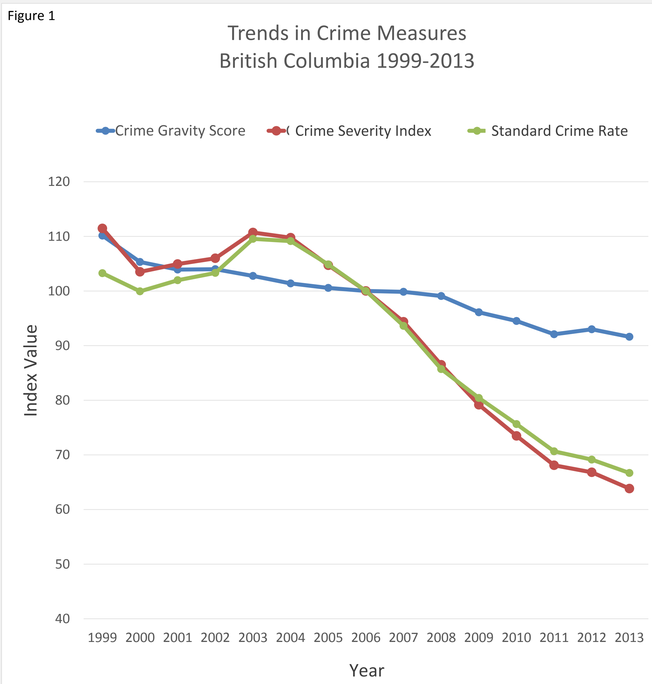
CRIME MEASURES

Three different measures of crime intensity are available in British Columbia: the Standard Crime Rate (SCR) which measures the number of crimes per 100,000 population; the Crime Severity Index (CSI) which measures the weighted risk to residents of a police jurisdiction; and the Crime Gravity Score (CGS) which measures the seriousness of the set of crimes handled by police in a particular jurisdiction. Figure 1 explores trends in these three measures for British Columbia as a whole during 1999-2013.

Figure 1



Values indexed to 2006 =

All three measures show declines over the past decade. British Columbians are safer now than they were in the early 2000's. Police resource implications of the measures are different. The SCR and CSI have both declined by about 45% since their peak in 2003; the CGS has declined much less, about 17% between 1999 and 2013. This difference suggested that the demand for police resources continues at a higher level than the declines in the CSR and CSI suggest: the crime decline has occurred most intensely among high volume, lower seriousness offences; the continuing crime mix has experienced relatively smaller declines among the high seriousness crimes that typically carry higher response and investigative resource requirements.

SPATIAL PATTERNS OF CRIME RATE AND CRIME SEVERITY INDEX

British Columbia as a whole exhibits an overall decline in each of the three available crime measures. When continuing to explore these trends at the police jurisdiction level, further variation can be identified in each of these measures.

Figure 2

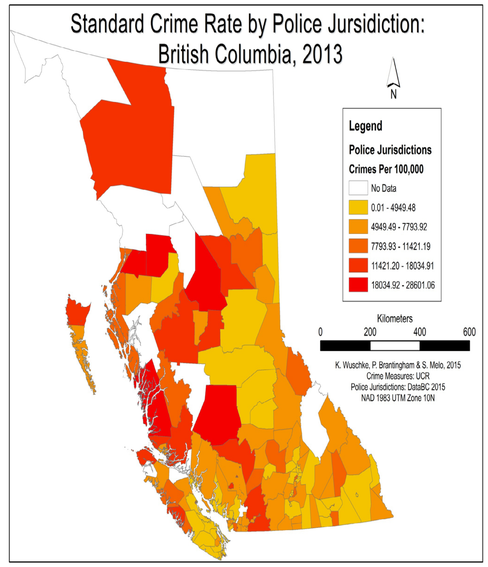
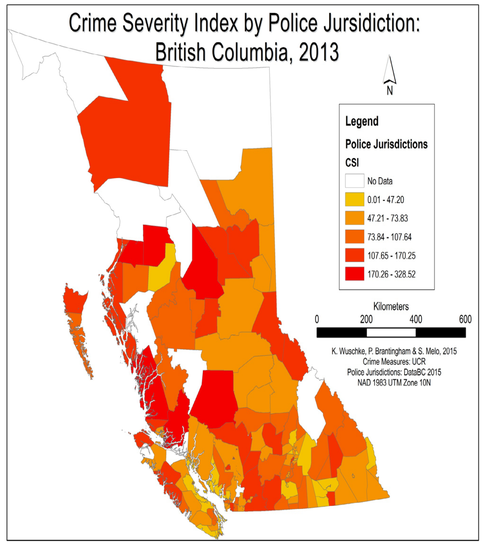


Figure 2 displays the spatial patterns of the Standard Crime Rate across British Columbian police jurisdictions. This includes the rate of Criminal Code offences (excluding traffic-related offences) mapped per 100,000 population. Significant spatial variation exists across the province, with lower rates typically falling in more urbanized jurisdictions and along the Eastern half of the province. Higher crime rates appear to be located throughout the remote areas within the province's coastal and northern regions.

Figure 3 reveals the spatial patterns of the Crime Severity Index as calculated for each policing jurisdiction within British Columbia. Just as the temporal characteristics of the CSI mirror that of the SCR, so too do the spatial patterns. Both the SCR and CSI maps include several police jurisdictions for which crime intensity measures can not be reported. This is due to the low population counts of these within. Such jurisdictions also appear to be clustered in northern and remote areas.

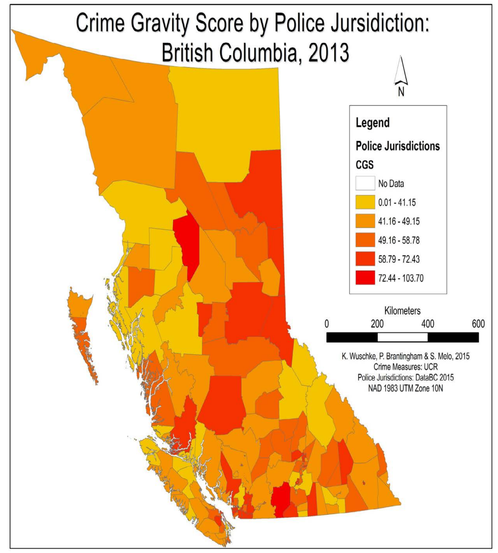
Figure 3



SPATIAL PATTERNS OF CRIME GRAVITY SCORE

Figure 4 displays the Crime Gravity Score for British Columbia's police jurisdictions. Contrary to the patterns displayed in the SCR and CSI figures, higher CGS measures are clustered in BC's north eastern and interior regions.

Figure 4



By analyzing the temporal patterns of crime intensity within British Columbia, a clearer understanding of longer-term patterns emerges. These trends emphasize the overall decline across measures, with less significant reduction in Crime Gravity Scores. When data is analyzed spatially, a distinct urban and remote divide is apparent in maps of the Standard Crime Rate and Crime Severity Index, but this trend is also less prominent when exploring Crime Gravity.

REFERENCES

Brantingham, P.J. (2014) Trends in Crime Measures: British Columbia 1999 – 2013. ICURS Fact Sheet 2014-A01.

Calculations by P.J. Brantingham based on Statistics Canada Uniform Crime Reports and Police Resources data sets. For fuller discussion see: P. J Brantingham, ICURS Technical Note 1.1.

Police jurisdiction spatial files have been created based on existing police detachment boundaries linked with municipal boundary files. Some jurisdictional boundary changes occur throughout the timeline under investigation – this created boundary file aims to act as a suitable proxy.

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