

DEMOGRAPHIC TRENDS AND CRIME IN THE PROVINCE OF ALBERTA

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Abstract: We present forecasts of crime rates in the Province of Alberta, Canada for the decade 2010 to 2020. The results suggest that rates of all types of crime in the province will drop between 2010 and 2020, largely because of the aging of the population. Our forecasts of crime rates rest on three projections of the age-specific and gender-specific composition of the population using sets of assumptions about fertility, mortality, and net migration. We then estimate the rates of total crime, violent crime, property crime, and other crime by taking the age composition of the projected populations into account and presuming that the age-specific crime rates observed from 2006 to 2009 remain constant.

Keywords: crime rates, population projections

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The Canadian economic demographer David Foot (1996) famously declared, “demographics explain about two-thirds of everything” (p. 2). Although the specifics of this claim are debatable, it is undoubtedly the case that demographic variables strongly affect many aspects of society, including criminal behaviour. Because crimes are committed disproportionately by older adolescents and young adults, overall crime rates are very sensitive to the relative numbers of adolescents and young adults in the population. Scholars have demonstrated that the rise and fall of crime rates in the late 20th century are largely explained by the changing age composition of the American and Canadian populations (e.g., Steffensmeier & Harar, 1991).

After the turn of the 21st century, crime rates in Canada declined. For example, the Crime Severity Index (CSI) – offences weighted by the severity of sentences handed down by criminal courts – was 22% lower in 2009 than in 1999. The property crime rate and the non-violent CSI have also declined steadily since 1999. In particular, the Crime Severity Index in the Province of Alberta, Canada, declined 6% (Dauvergne & Turner, 2010). In this paper, we construct three demographic projections of the population of the Province of Alberta and then use these projections to provide forecasts of the trends in three types of crime into the next decade.

Demographic Factors and Crime

Age, gender, and race are among the most powerful and robust individual-level predictors of rates of criminal offending and victimization. Evidence consistently indicates that young people, males, and members of disadvantaged minorities are at a higher risk of becoming offenders and victims than children and older people, females, and members of advantaged groups respectively (see South & Messner, 2000, p. 84; Blumstein & Wallman, 2006; Hartnagel, 2009).

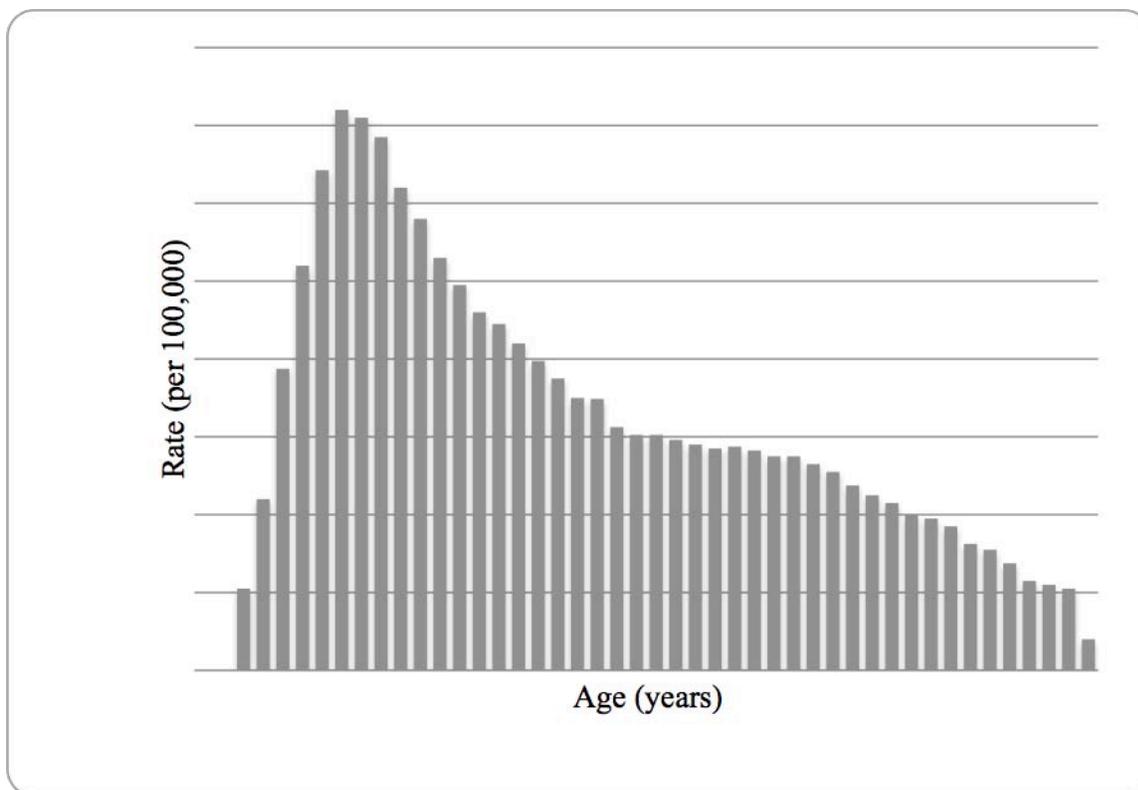
Age

Criminologists have typically explained the relationship between age and crime in terms of age-graded variation in individuals’ experience of informal social controls, and their social positions, over the course of their lives (Laub & Sampson, 2001). Various authors have argued that adolescence is a time of transition between childhood and adulthood and difficulties in making this transition create a variety of problems, of which crime is one expression (Nettler, 1984; Hartnagel, 1998). As youth move into the adult age range and their social status and integration increase, the personal costs of crime borne by individual youth also increase: They now have more to lose. Youth acquire added stakes in conforming behaviour as they begin to occupy social roles and acquire material goods that would be jeopardized by criminal behaviour. As individuals become more socially integrated into relationships, groups, and organizations, they become more dependent on the social rewards of conformity and a reorientation of the costs and benefits of crime is likely to occur (Laub & Sampson, 2001). In addition, research suggests that salient life events such as leaving school, entering the legal labour market, and marrying, all of which are heavily age-dependent, decrease the likelihood of criminal behaviour (Loeber & LeBlanc, 1990; Laub & Sampson, 2001).

The effects of age-specific experiences of social control and age-graded events on individuals’ commission of crimes lead to a strong and statistically important relationship

between age and crime. Statistics from a variety of years and jurisdictions uniformly indicate a higher prevalence of crime among young persons compared with other age groups. For example, Chart 1 shows the age distribution of persons in Canada accused of crime in 2009. The percentage of persons accused of crime increases from early adolescence to young adulthood and then generally declines. In 2009, age-specific rates for those accused of crime were highest among 15- to 20-year-olds, with the peak age at 17 years (Dauvergne & Turner, 2010).

Chart 1: Persons Accused of Crime by Age, per 100 000 Population, Canada, 2009.



Adapted from Dauvergne and Turner, 2010.

It is true, however, that the relationship between age and crime varies slightly according to the type of crime being considered. The commission of some crimes appears to peak at slightly different ages, and rates of some types of crime decline more quickly with increasing age than other types (Steffensmeier, Allan, Harer, & Streifel, 1989). For example, criminal offences where the majority of accused in 2008/2009 were 35 years of age or older included criminal harassment (59%), other sexual offences (59%), prostitution (59%), and sexual assault (57%) (Thomas, 2010). Some crimes, including embezzlement, fraud, and gambling do not conform to the general pattern and peak later in the life cycle (Steffensmeier & Allan, 1991). Braithwaite

(1989) has pointed out that white-collar crimes, which are committed by persons of high occupational status, peak later in life because most people under 25 have yet to attain occupations that provide the opportunities to commit these crimes.

The relationships between age and crime vary only slightly across most types of crime. Because younger adults are consistently overrepresented among criminal offenders for almost all types of crime, changes over time in the overall crime rate reflect, at least in part, changes in the age composition of the total population (Steffensmeier & Harer, 1991; Wellford, 1973). The larger the proportion of young adults in a population the higher the crime rate in that population. Thus the general decline in crime rates since the early 1990s coincided with a decrease in the proportion of persons aged 15 to 24 (Savoie, 2002) although Ouimet (2002) pointed out that improved employment opportunities could also have played a role. Two other Canadian studies reported the changing age composition had a significant impact on the decline in homicide rates (Leenaars & Lester, 2004; Sprott & Cesaroni, 2002). Other studies investigating additional factors suggest that the impact of the relative size of the population aged 25 to 34 was neutralized when the effects of unemployment, inflation, and per capita alcohol consumption were controlled (Bunge, Johnson, & Balde, 2005). Carrington (2001) forecast the levels of crime in Canada for 2000 to 2041 based on the 1999 age-specific crime and victimization rates, population age structure projections to 2041, and the assumption that age-specific crime rates will not change in the future. His overall conclusion was that all types of crime would decline because of the aging of the population.

Gender

Men are much more likely than women to commit crimes. Explanations for the gender-specific pattern have focused on differences in socialization (Lanctôt & LeBlanc, 2002). For example, some scholars argue that females are more constrained by moral evaluations of conduct than are males (Mears, Ploeger, & Warr, 1998) or by internalized values (Heimer, 1996). Hagan, Simpson, and Gillis (1979) claim that boys are socialized to greater independence and risk taking and are, therefore, freer to experiment with deviant conduct. In addition, girls face stricter social controls, are rewarded for compliance and dependence and so have fewer opportunities to experiment with delinquency. The traditional division of labour between the genders further limits women's opportunities to engage in many forms of criminal conduct while providing more opportunities for males.

Because of the strong differences between men and women in the commission of crimes, the ratio of men to women has often been included as a control variable in macro-level criminological research (see, e.g., Messner & Sampson, 1991; Barber, 2000; Altheimer, 2007, 2008). However, it frequently exhibits null effects on rates of violent crime (Messner & Sampson, 1991), perhaps because societies do not vary significantly in their gender ratio (Fox & Piquero, 2003).

Race

Race is also a strong predictor of criminality, at least in the United States, although its effect is not as strong as age or gender (Tonry, 1995). Canadian research on race and crime is very limited because race-specific information is rarely collected by the criminal justice system. The information that is available suggests that certain racial minorities, particularly Blacks and

Aboriginals, are overrepresented in the correctional system relative to their proportion of the population.

One factor that may contribute to this overrepresentation is the age composition of the Aboriginal population. The high-risk age group for homicide and other violent crime is 15 to 24, and this age group accounted for 17% of the Aboriginal population in 2001, compared with 13% for the rest of the population (Brzozowski et al., 2006). Overall, Canada's Aboriginal population is younger than the non-Aboriginal population because of higher fertility rates among Aboriginal women. In the 2001 census children 14 years of age and under accounted for 33% of the Aboriginal population, compared with 19% within the non-Aboriginal population. The proportion of the Aboriginal population under 15 years old is higher than this national average in Saskatchewan, Manitoba, Alberta, and Nunavut; this may contribute to higher crime rates in these regions as this group moves into the high-risk age range for crime (Gannon, Mihorean, Beattie, Taylor-Butts, & Kong, 2005).

Demographic Projections and Forecasts of Crime in Alberta

Age, gender, and race are strong predictors of crime among individuals. In the aggregate, however, gender is less important because the sex-specific composition of a population remains quite stable over the course of a decade. Our population projections (and crime forecasts) would be more nuanced had we been able to obtain or estimate the appropriate demographic and crime-specific data for visible minority groups in Alberta. Unfortunately, these data are not available for the Province of Alberta. We therefore used detailed age-specific and gender-specific data to project the population of Alberta from 2010 to 2020, and then applied age-specific crime rates to these projections to forecast trends in crime from 2010 to 2020.

Demographic Projections

The components of population growth or decline over time are births, deaths, and net migration. Projections of a population into the future rest on the attributes of the starting or base population, and assumptions about what will happen to fertility, mortality, and net migration into the future. There are several approaches to projecting populations but the most accurate approach for projections into the near future is to decompose the total base population into specific age groups in time t , and then to project the age-specific counts one year into the future using the following equation:

$$P_{i,t+1} = P_{i,t} + M_{i,(t-t+1)} - D_{i,(t-t+1)} + B_{0,t+1}$$

- $P_{i,t+1}$ refers to the count of the population aged i at time t ;
- $P_{i,t}$ refers to the count of the population aged i at time t ;
- $M_{i,(t-t+1)}$ refers to the number of (net) migrants aged i entering the population during the interval t to $t+1$;
- $D_{i,(t-t+1)}$ refers to the number of deaths occurring to individuals aged i during the interval t to $t+1$;
- $B_{0,t+1}$ refers to the number of births during the interval t to $t+1$.

The counts of births, deaths, and (net) migrants occurring in the interval can be generated from assumptions about birth and death rates and levels of migration during the interval. In all cases, the results refer to Alberta's permanent population and do not include temporary workers.

The Base Populations and the Estimation of Births, Deaths and Net Migration

The characteristics of the base populations for the Province of Alberta were obtained from Statistics Canada's CANSIM tables (Statistics Canada, 2011). Age-specific fertility rates were calculated for single ages using Alberta Health and Wellness estimates of birth rates for women aged 15 to 49 in 2009 living the Province of Alberta (Government of Alberta, 2011). The life expectancies for males and females were obtained from Alberta Health and Wellness and age-specific death rates for females and males were obtained from the 2001 detailed life tables for the Province of Alberta (Statistics Canada, 2006).

Migration statistics for Alberta were derived from Statistics Canada tables and published statistics from Alberta Finance and Enterprise (Government of Alberta, 2010). In the base population figures for the Province of Alberta, the levels of net migration are based on age-specific and gender-specific counts from 2006 to 2009. We used four years of data on migration to smooth out year-to-year fluctuations. The net migration figures include net migration from interprovincial and international sources but do not include estimates of non-permanent resident migrants.

Assumptions Underlying the Three Series

We generated three series of population projections from 2010 to 2020 for the Province of Alberta. The three projections rest on three different sets of assumptions about fertility, mortality, and net migration. One series is based on assumptions that tend to produce higher population growth over time (labelled the "high" series); the second series presumes stability in levels of fertility, mortality, and migration (the "medium" series); while the third series is based on assumptions that tend to produce lower levels of population growth (the "low" series). In general, levels of fertility were assumed to remain fairly stable and below the replacement level of 2.1 births for all three series with only slight differences between the high, medium, and low series. Life expectancy was also expected to remain quite stable in this period for all three series. Levels of net migration, on the other hand, were allowed to vary dramatically across series. The high, medium, and low series for the province were constructed using the application of the assumptions about fertility, mortality, and net migration (as described below) to age-specific data for each year to produce the age-specific and gender-specific population counts for the following year.

Although the three population projections were prepared using the component age-specific rates of the total fertility rate (i.e., age-specific birth rates), and life expectancy at age zero (i.e., the age-specific death rates) along with age-specific estimates of net migration, the table lists the total fertility rate (TFR) and life expectancy at age zero (e_0) because the TFR and e_0 are summary measures of the age-specific matrix of age-specific fertility and mortality rates respectively. The total fertility rate (TFR), which is the weighted sum of the age-specific birth rates for women aged 15 to 49, can be interpreted as the average number of births a woman will bear under the prevailing regime of age-specific birth rates. The life expectancy (e_0) is the

weighted sum of person-years lived that is generated by a prevailing regime of age-specific death rates and can be interpreted as the average age at death.

Table 1 shows that for the “high” population projections, the TFR decreases only slightly from 1.88 to 1.80 births per woman, and that the life expectancies (e_0) for males and females increase by a total of about a half a year between 2009 and 2020. In addition, this series assumes that net migration increases by 10% a year between 2012 and 2020.

Table 1. Summary of Assumptions Underlying the High, Medium, and Low Population Projections for the Province of Alberta.

| Population Projection Series | Range |
|------------------------------|-----------------------------------|
| HIGH | |
| TFR | 1.88 to 1.80 |
| e_0 males | 78.52 to 79.38 |
| e_0 females | 83.21 to 83.78 |
| Net migration | increases 10% annually after 2012 |
| MEDIUM | |
| TFR | 1.88 to 1.80 |
| e_0 males | 78.52 to 79.38 |
| e_0 females | 83.21 to 83.78 |
| Net migration | same as 2009-2010 |
| LOW | |
| TFR | 1.88 to 1.80 |
| e_0 males | 78.52 to 79.38 |
| e_0 females | 83.21 to 83.78 |
| Net migration | decreases 20% annually after 2012 |

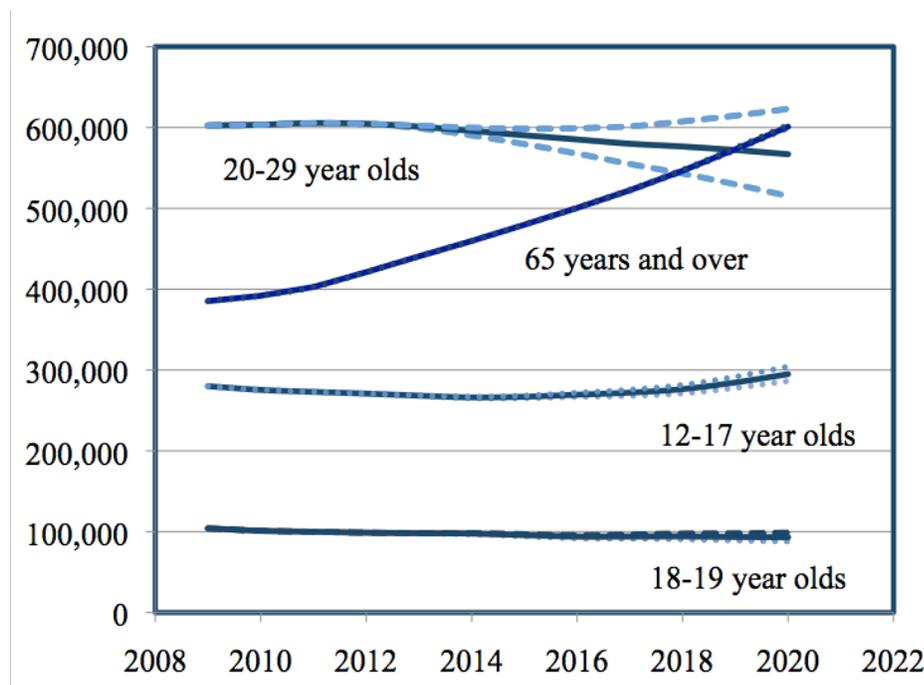
Population Projections and Changes in the Age Structure

Chart 2 shows the changes in the age composition of the total Albertan population under each of the high, medium, and low series of population projections. The chart focuses on the changes in the sizes of key age groups. For example, the top set of lines shows the changes in the number of 20 to 29 year olds under the high, medium, and low projections respectively. In the medium series, the number of young adults declines during the interval 2010 to 2020. Because migrants are disproportionately young adults, the number of young adults increases if levels of net migration are high and positive, and decreases if levels of net migration are negative. The next three lines, which refer to the three projections of retirement-age populations aged 65 and over, lie almost on top of one another. The projected numbers of elderly people are not affected by changes in fertility and are affected little by variation in levels of mortality or migration. The lines all slope upwards because of the aging of the baby boom cohorts over the interval.

Meanwhile, the numbers of adolescents subsides slightly and then recovers over the interval for all three projections. (There is little change across the interval because the number of young adolescents during the interval is hardly affected by fertility, mortality, or migration.). The numbers of older adolescents, those aged 18 and 19, slide slightly downward under all three series of projections.

There are therefore two main conclusions about changes in the age structure of the Albertan population during the interval between 2009 and 2020. First, the numbers of older Albertans increases substantially no matter what the assumptions are about fertility, mortality, or migration during the interval. Second, the number of young adults remains fairly stable or increases slightly if net migration is presumed to be high, and drops if net migration remains stable at 2006 to 2009 levels or decreases.

Chart 2. Numbers of Albertans in Selected Age Groups in High, Medium, and Low Population Projections.



Forecasting Crime Rates: Methodology

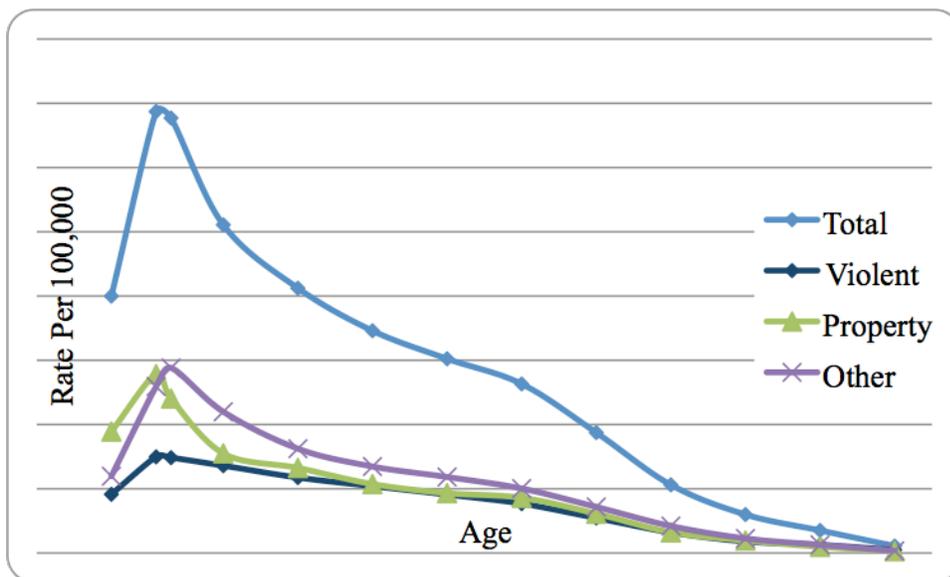
The main goal of this research was to forecast crime rates for 2010 to 2020 for Alberta. Our general approach was to construct a series of population projections for the province, assume that age-specific rates of crime remain constant, and then to multiply the age-specific rates of crime by the age-specific numbers of people in the projected population. The sum of the products over age is the estimated total crime rate for the province in the specified year.

The data for the age-specific rates of crime were provided in customized special tabulations produced by the Canadian Centre for Justice Statistics (CCJS) at Statistics Canada. The crime data refer to counts of persons charged and the total age-specific populations between 2006 and 2009 for total Criminal Code offences (excluding traffic offences), and the three major types of crime (violent crime, property crime, and “other” crime) for Alberta. The population data in these tabulations were based on police servicing areas that report incidents, accused persons, and persons charged data to the CCJS. (According to the CCJS, about 99% of the population of the province is covered by the police servicing areas).

Discussions between the authors and CCJS personnel concerning the most appropriate aggregating of the data resulted in the following age categories: 12 to 17, 18, 19, 20 to 24, 25 to 29, 30 to 34, 35 to 39, 40 to 44, 45 to 49, 50 to 54, 55 to 59, 60 to 64, and 65 and over. The implication of this selection of ages was that forecasted populations also had to match the above listed age groupings. To smooth annual fluctuations, the data were pooled over the years 2006 to 2009 to yield average counts and rates.

Chart 3, which is based on data from the special tabulations provided by the CCJS, shows the age-specific rates (per 100,000 population) of persons in Alberta charged for total crime, violent crime, property crime, and all “other” crime. The graph displays the expected relationships between age and crime with much higher rates for older adolescents and young adults followed by a steady decline in the rates referring to successively older age groups.

Chart 3. Persons Charged by Age and Type of Crime: Alberta, 2009.



However, this graph, which is based on the data in the special tabulations, refers only to persons charged and not to incidents of crime. The actual number of crime incidents is unknown because not all crime incidents are reported to the police or discovered by them. The incidents appearing in the Uniform Crime Reports issued by Statistics Canada include only those known to the various police jurisdictions and reported to Statistics Canada. Furthermore, only a percentage of these incidents result in arrests, and only a percentage of those persons arrested are charged. The age of offenders is only available for incidents resulting in an arrest or charge. The data on persons charged therefore severely understates the number of crime incidents. To address this shortfall, we obtained Uniform Crime Report aggregate statistics from CANSIM for all of Alberta for the four categories of crime and compared them to the persons-charged file provided by the CCJS. Table 2 shows the ratios of total counts of incidents (from UCR data) to the weighted sum of age-specific counts of persons charged (from the CCJR data) by type of crime for Alberta.

Table 2. Ratios of Total Counts of Incidents to the Sum of Age-Specific Counts of Persons Charged by Region and Crime Category, 2006 to 2009.

| Year | Violent Crime | Property Crime | Other Crime | Total Crime |
|-----------|---------------|----------------|-------------|-------------|
| 2006-2009 | 2.48 | 7.16 | 2.04 | 4.01 |

Multiplying the persons-charged counts by the ratios in Table 2 results in a more realistic estimate of incidents of crime. The crime rates (by type) for each series of projected populations for each specific year “t” were therefore estimated as

$$C_t = \text{ratio} \times \sum_i (P_i \times C_i) / P \times 100,000$$

in which C_t refers to the overall crime rate in year t for the specific category of crime and region, “ratio” refers to the appropriate ratio from Table 2, P_i refers to the number of people in age category i in the projected population, C_i refers to the age-specific crime rate, and P refers to the total population.

Demography and Crime in Alberta, 2010 to 2020

Figure 1 presents the forecasted total Criminal Code crime rates for the years 2010 to 2020 under the three population projections of high, medium, and low change for the Province of Alberta. In this and subsequent figures the rates of crime are displayed on the vertical dimension, the years on the horizontal dimension, and the starting point is the specified crime rate averaged over the years 2006 to 2009. The shapes of the curves in Figure 1 indicate substantial forecasted decreases in the *total* crime rate between 2010 and 2020 under all three population projections. The forecasted rates under each of the three population projections are very similar for the years up to 2015 but then begin to diverge. While all three series of rates decline in subsequent years, the decline is greatest under the low projection series, somewhat less in the medium series, and

least under the high series. By 2020, the forecasted crime rates range from 9,305 per 100,000 people to 9,708 per 100,000 people across the three population projections.

Figure 1. Rates of Total Crime Under Three Population Projections for Alberta.

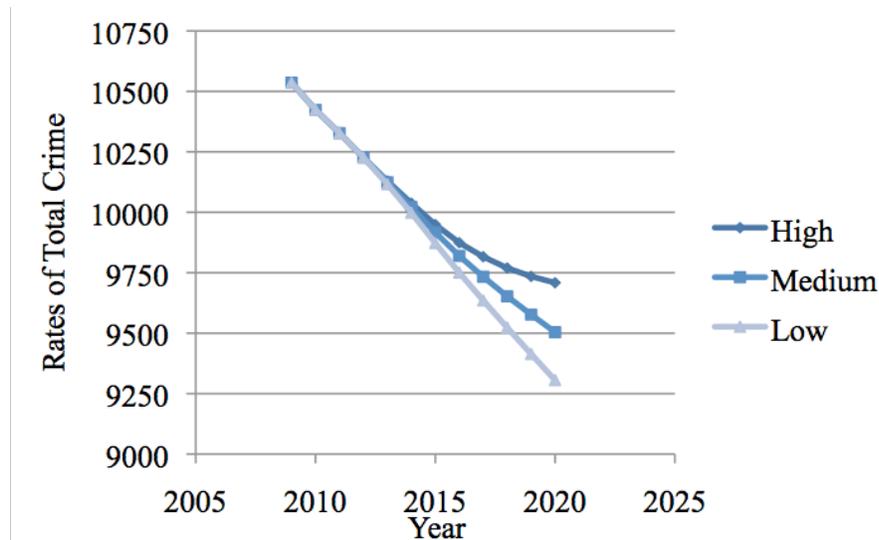
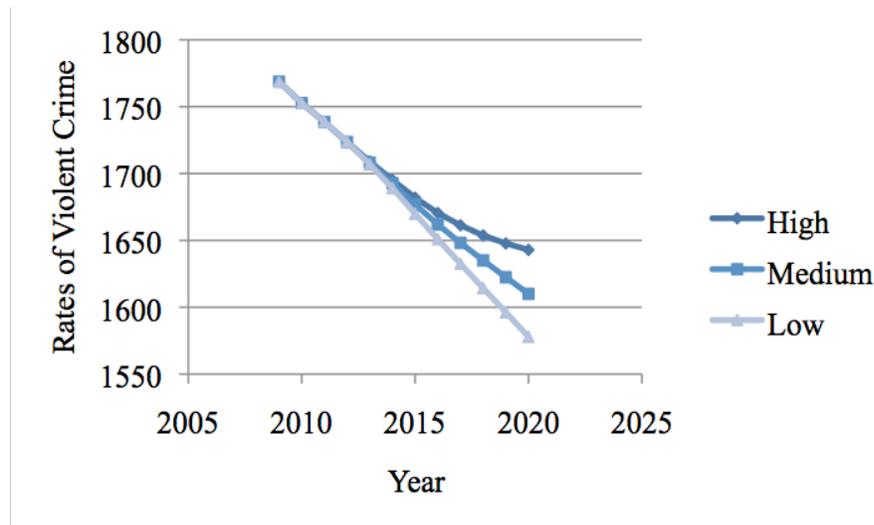


Figure 2 shows the forecasted *violent* crime rates to the year 2020 under the three population projections of high, medium, and low change for the Province of Alberta. There are sizeable decreases under all three population projections. Again, the decrease is greatest under the low population change projection, somewhat less under the high population change projection, with an intermediate-sized forecasted violent crime decrease under the medium population change projection.

From the starting point of the average violent crime rate of 1,768 per 100,000 population for the years 2006 to 2009, the forecasted rates under each of the three population change projections are very similar for the first several years, but start to diverge noticeably in the year 2015. While the rates under all three population projections continue to decline to 2020, the forecasted violent crime rate under the high population projection does so to a lesser degree (to 1,642 in 2020) while the forecasted rate under the low population projection continues a fairly steady decline to a low of 1,577 per 100,000 population in 2020.

Figure 2. Rates of Violent Crime Under Three Population Projections for Alberta.



The same general pattern is visible in Figures 3 and 4, which display the forecasted property and other Criminal Code rates, respectively, to the year 2020 under the three population projections. The forecasted property crime rates under the three population projections are quite similar for the first few years in the series but begin to diverge around the year 2015.

For the low population projection the forecasted property crime rate decreases from a high of 6,785 per 100,000 population at the starting point to a low of 5,980 per 100,000 population in 2020. Under the high population projection, the forecasted property crime rates decline from the high of 6,785 per 100,000 population to a low of 6,226 per 100,000 in 2020. The forecasted rates for the medium population projection are again intermediate between the low and high projection series.

Figure 4 presents the same pattern of forecasted rates for “other” Criminal Code violations. These forecasted rates decrease from 1967 to 1,728 per 100,000 population under the low population change projection, to 1,768 under the medium projection, and to 1,809 under the high projection.

Figure 3. Rates of Property Crime Under Three Population Projections for Alberta.

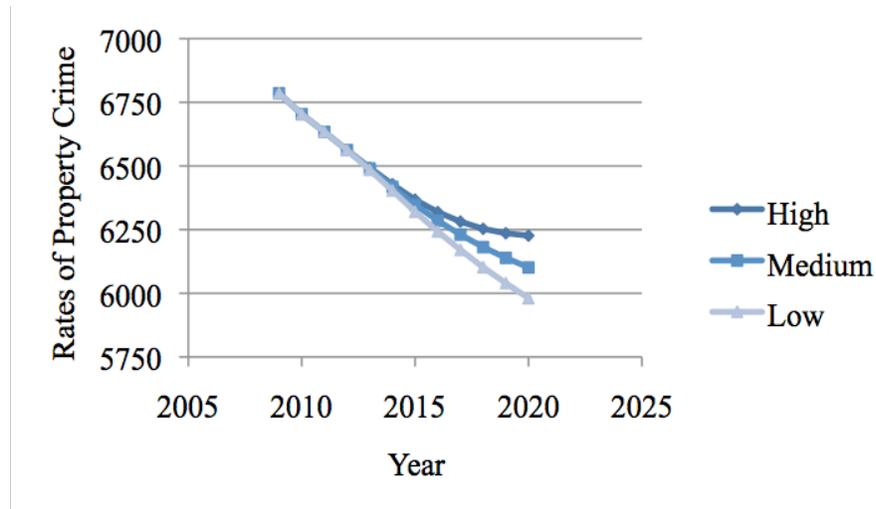
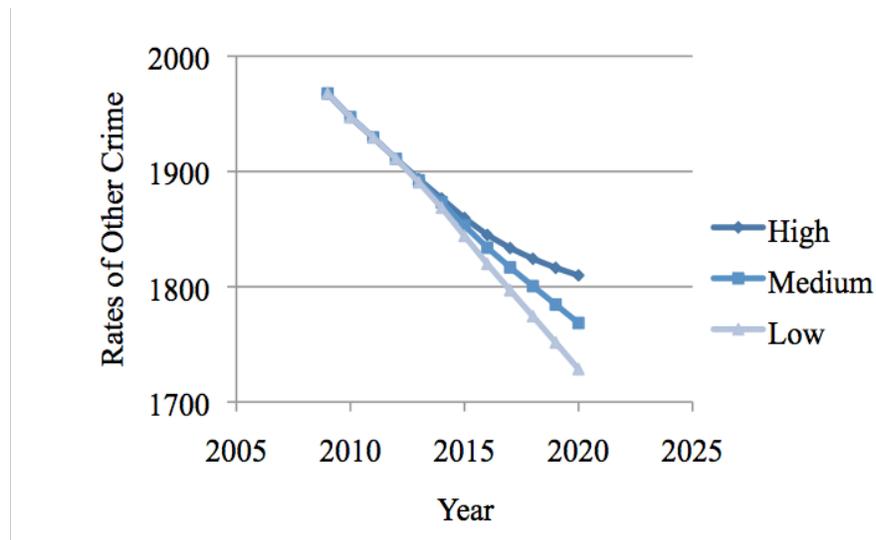


Figure 4. Rates of Other Crime Under Three Population Projections for Alberta.



Discussion

There are several main insights to draw from these forecasts of crime rates in Alberta from 2010 to 2020. The most important is that most crime rates are likely to decline for the province between 2010 and 2020. This forecasted decline occurs under three different population projections, each presuming different, although plausible, levels of fertility, mortality, and migration. In the population projections, the numbers of young adolescents increases slightly under all three projections, the numbers of older adolescents remain fairly stable, and the numbers of young adults decline under the medium and low population projections. Because crime rates are sensitive to the age composition of a population, the projected declines in the absolute numbers of adolescents and young adults depress the forecasted crime rates in the province between 2010 and 2020.

A second insight is that our forecasted decreases in crime for the province, into the near future, suggests a continuation of recently observed trends. Our forecasted decreases in the various types of crime rates in the Province of Alberta are also consonant with Carrington's (2001) forecast of declines in crime rates in all of Canada from 2000 to 2041. He concluded that all types of crime, particularly those typical of younger aged groups such as breaking and entering, and robbery, will decline as the Canadian population ages.

The major categories of violent, property, and other Criminal Code offences that we have forecast include, of course, a number of specific offence types. Some of these specific offences may respond differently to demographic changes. For example, as the population ages, fraud may also increase. In addition, as Foot (1998) pointed out, an aging population contains more potential crime victims because it has more people who own something worth stealing. Carrington (2001), who forecasted rates of several specific offences, concluded:

rates of particular types of crime are related to their age profiles: crimes such as robbery, break and enter and other indictable property crime, and drug offences, which are characteristic of teenagers and young adults, are forecast to decline somewhat faster and farther; whereas crimes such as sexual assault, Criminal Code traffic offences, and miscellaneous offences against the person, which are more characteristic of older adults, are forecast to decline less. (p. 348)

It is possible, then, that the general crime categories forecasted in the present paper may mask some differences in the likely future rates of some specific offence types.

The focus on the entire Province of Alberta also masks the possibility of variation across regions for several reasons. First, the non-metropolitan areas of Alberta are home to several large Aboriginal reserves and communities. We lack data on the Aboriginal status of persons charged and are therefore not able to forecast their specific crime rates, but it is very likely that they are disproportionately involved in certain crimes relative to their proportion of the population. LaPrairie (1992, 1996) has described the breakdown of traditional social relations and controls in some Aboriginal communities contributing to the disproportionately high rates of crime and

violence. However, it is also the case that the Aboriginal population is younger on average than the non-Aboriginal population. According to the 2006 Census of Canada (20% sample), the median age of Alberta's total population was 35.8 years while the median age of Alberta's Aboriginal population was 24.8. Our population projections thus account, at least in part, for the possibility of relatively higher crime rates among the Aboriginal population in Alberta.

A second reason that our focus on the entire Province of Alberta may mask important variation across regions in forecasted crime rates concerns the impact of migration. Our population projections took into account the overall impact of interprovincial and international in-migrants and out-migrants, many of whom are young male adults. However, migrants tend to settle in specific locations rather than being uniformly spread out across a province. In the case of Alberta, many migrants settle in the non-metropolitan areas of the province to take advantage of the employment opportunities provided by the oil and gas industries. More detailed research focusing on differences among regions suggests that crime rates may increase in the non-metropolitan areas of Alberta (see Stevens, Hartnagel, Odynak, & Brazil, 2011).

It is important to recall that this exercise in the forecasting of crime rates has been based upon selected demographic variables. Demographic changes are not the only – or even the strongest – contributor to crime rates; other variables occurring during the same time period as these demographic changes can have important effects on crime (Fox & Piquero, 2003). As Carrington (2001) has pointed out, predicting future crime would require knowledge of future levels of all other variables thought to affect crime, as well as a model of how they impact on crime. Various social and economic factors and criminal justice policies are quite likely to have a continuing impact on crime through time. LaFree (1999) identified numerous factors likely to affect crime rates over time including economic stress, family disorganization, drug markets, changes in routine activities of everyday life that affect the opportunities for crime, as well as such features of public policy as various policing initiatives, incarceration rates, education, and welfare programs. It is likely that crime rates in the upcoming decade in Alberta will reflect many of these factors along with shifts in the demographic composition of its population.

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