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THE COST *of* CRIME
in
NOVA SCOTIA

Masters Thesis

Colin Dodds



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Canada

"The Cost of Crime in Nova Scotia"

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Thesis submitted in partial fulfilment
of a Masters Degree in Atlantic Canada Studies
at Saint Mary's University
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Abstract

The Cost of Crime in Nova Scotia

Colin Dodds

The Gross Domestic Product (GDP) measures the size of the economy. It does so by counting all economic activity that has market value. But not all economic activity adds to societal or individual quality of life. Increased spending on prisons, police, courts, burglar alarms and security systems is counted as a contribution to well being and prosperity by the GDP.

An alternative way of measuring the economy, the Genuine Progress Index (GPI) distinguishes between economic activity that enhances quality of life and that which harms it. Unlike the GDP, lower crime rates make the GPI go up. Reduced crime costs are regarded as savings that can be invested in more productive private or public welfare-enhancing activities.

The purpose of this thesis is to use the full cost accounting system of the Genuine Progress Index so that the effect crime has on quality of life in Nova Scotia can be better appreciated.

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Introduction

Construction has begun on a new correctional facility at the Burnside Industrial Park in Dartmouth. The facility will cost in the region of \$57 million. The government of Nova Scotia has made this commitment because, according to the Nova Scotia Department of Justice, “the Halifax Correctional Centre is outdated and overcrowded.”¹ The new prison will house 272 inmates.²

Such a financial commitment will put a considerable strain on the Provincial government’s coffers: bearing in mind that the Nova Scotia provincial deficit is more than \$600 million and the debt \$11 billion, and of great concern to the current government.

The money needed to build the new correctional centre can be raised one of two ways. Additional funds can be collected through an increase in taxes, or alternatively, the money can come from the existing Provincial government budget. There are negative quality of life consequences to either approach. If taxes are raised the general public will have less money to spend as they see fit. Any transfer of money from private citizens to public funds reduces the economic options of the former. On average each Nova Scotia household would be taxed \$165 to meet the construction cost of the new correctional facility.³ Such a reduction in the household budget might mean fewer visits to the cinema.

¹ Nova Scotia Government circular, *Project Update: Co-located Correctional Centre & Forensic Psychiatric Hospital*, October 19th, 1999.

² Nova Scotia Government circular, *Project Update: Co-located Correctional Centre & Forensic Psychiatric Hospital*, October 19th, 1999. The exact budget for the project is “\$57.7 million, plus or minus 5%.”

³ The figure of \$165 is arrived at by dividing the budget for the project, \$57.7 million, by the number of households, 349,350. The number of households is from Statistics Canada estimate from their *Survey of Household Spending 1997*.

local restaurant, or sports centre: it could result in the cancellation of an overnight stay at a hotel; it may mean the postponement of a long anticipated shopping trip, or some other leisure activity. In short, an increase in taxes to build the new facility reduces the spending power and so reduces financial options for Nova Scotia taxpayers.

If the government decides to fund construction of the Burnside Correctional Centre from existing government coffers, spending on social and welfare programmes would have to be cut. The Departments of Health or of Education might have to cut their budgets, possibly resulting in a reduction in staffing levels and a corresponding decrease in the frequency, availability and standard of service provided to the general public. Another option would be for the government to cut funding to charities or non-profit groups, leaving the public to pick up the tab through private donations. Wherever the government decides to cut the general public will have to endure a reduced service for the same cost.

It is assumed that the government of Nova Scotia would rather not increase taxes or reduce government services; in short, they would rather not have to build a correctional facility at all. But the government must build a new jail because the old facility is inadequate. The building of the new facility can, therefore, be described as necessary but regrettable. This makes common sense: no one would rather spend funds constructing prisons instead of buying schoolbooks or even visiting the movies. On the other hand, it is the role of government to protect society from criminal offenders. The building of a correctional facility is a way of doing this.

While the new facility is evidence that the government is reacting to criminal activity, it also indicates that crime is still a problem in the Province. It would, therefore,

be surprising if the present government sought re-election on a platform that emphasised its prison building programme. Opposition parties would soon alert the voting public, if they had not already worked it out for themselves, that new prisons are the result of criminal activity, and criminal activity detrimentally affects quality of life. Yet in a perverse and indirect way the government can and does make political capital out of prison construction, and by association, criminal activity. The government is able to do this because the leading economic indicator, the Gross Domestic Product, is flawed.

Any government would be proud if the economy had grown during their tenure. The means by which the economy is measured is the Gross Domestic Product (GDP). The GDP counts all transactions that have market value. The greater the aggregate value of the market transactions, the larger the economy. As the value of market transactions increases, the economy grows. As the economy grows, there is more economic wealth to share. The GDP, therefore, appears to be an indicator of progress. However, unlike the common sense approach to economics employed by the public at large, the GDP makes no distinction between economic activity that is negative or regrettable and that which is positive and desirable. While the general public distinguishes between spending on education and spending on prisons – the former is seen as positive, the latter as regrettable – the GDP sees both expenditures as being positive. This leads to the anomaly of a regrettable expenditure, the construction of a new correctional facility, increasing the size of the GDP, which, because growth is associated with progress, is considered desirable.

The Burnside correctional facility demonstrates that the Gross Domestic Product is a poor tool for distinguishing between market activity that brings economic progress

and that which brings economic decline. However, it is not the only flaw in the GDP. The inadequacy of the GDP as an indicator of economic progress is further compounded by its inability to value anything that does not have market value. Crime, again, is a salient example. Consider the crime of homicide. If the offender is successfully apprehended and prosecuted, the homicide will perversely add to the GDP through the use of police resources, lawyers, courts, and the correctional services. All on the preceding list have market value. However, the victim is also lost to the workforce. In economic terms a deceased worker represents a loss of productive capacity. The operative word being "loss." The GDP ignores the lost productive capacity altogether. Assuming that the worker is replaced the GDP is unaffected. In reality the human capital of the Province is reduced and we are economically poorer for it.

It is important to note that the salaries of prison guards, police officers, judges, and all others employed within the justice system are costs of crime. Without crime these occupations would not exist. Their salaries have a negative impact on quality of life. Having said that, workers in the justice system may well spend their salaries on welfare enhancing activities, thereby improving quality of life for themselves and society. Such activities and purchases are not a cost of crime; therefore, they are ignored in this thesis. A more comprehensive measure of quality of life than the GDP would credit purchases that improve quality of life and debit purchases that do not whether the purchase was by an employee of the justice system or not.

There are alternative measures of social progress. The United Nations produces the Human Development Index (HDI). The HDI is a composite indicator of social, economic, political, health and nutritional variables. Canada has a remarkable record.

ranking first six of the last seven years.⁴ In addition to international indicators, such as the HDI, national and local indicators have been produced in Europe and North America. In the United Kingdom historians have attempted to measure the social impact of the Industrial Revolution.⁵ The United States has alternative measures of social health for cities such as Seattle and Kansas City. In Canada, Hamilton-Wentworth, Edmonton and Toronto have either implemented quality of life indicators or have produced blue prints for possible future implementation.⁶ In the Atlantic Region ACOA have calculated the quality of life standing of the Region in relation to the G7 countries using the UN Human Development Index,⁷ while DRI McGraw-Hill in Halifax have estimated the economic and social standing of the four Atlantic Provinces in preparation for what they see as a technological future.⁸ That these and other attempts at quantifying quality of life are well meaning is beyond doubt. It is also safe to say that they helped broaden debate regarding the factors needed to produce an index that reflects generally accepted social standards and goals. However, governments have been slow to adopt quality of life indicators, preferring instead to rely on the GDP. One possible reason for this is the unit of measurement used by the GDP as opposed to quality of life indicators. The GDP uses money to calculate a bottom line, whereas various quality of life indicators have used a wide range of variables. The rate of cancer might be used for the health section of an indicator, while the teacher-pupil ratio is used for the education sector of the same

⁴ Anton L. Allahar and James E. Cote, *Richer and Poorer: The Structure of Inequality in Canada*, James Lorimer & Co. Ltd. 1998, page 23.

⁵ See bibliography, *Standard of Living Debate*.

⁶ Cobb, Clifford, Ted Halstead and Jonathan Rowe, *Quality of Life Indicators Used in Other Contexts*, Redefining Progress, San Francisco: Unpublished, September 1995.

⁷ Infometrica, Mike McCracken, Mike, Martha Justus and Bing He, *Atlantic Canada Human Development Index Study*, Halifax: Commissioned by ACOA, March 1996.

⁸ DRI McGraw-Hill, *Atlantic Canada: Facing the Challenge of Change*, Halifax.

indicator. The problem for policy makers is that they do not know where they will get the best bang for their buck – health or education. Because of the conflicting and contradictory messages sent by various sections of the same indicator, policy makers can be forgiven for relying on the tried and trusted GDP.

The Genuine Progress Index (GPI) attempts to bridge the gap between the GDP and quality of life indicators by using money as the unit of measurement while including social, economic, and environmental factors in the final calculation. The GPI is designed to demarcate between economic activity, market or otherwise, that improves quality of life and that which does not. Based on the Genuine Progress Indicator, created by Clifford Cobb, Ted Halstead and Jonathan Rowe in San Francisco, the GPI has twenty sections that have their own integrity, while also forming part of the bottom line.¹ One such section is crime. As mentioned earlier, the economic consequences of crime that create market activity add to the GDP. Because the GPI distinguishes between economic activity that enhances economic and social well being and that which does not, crime related economic activity, because it is generally accepted as being undesirable, is placed on the debit side of the GPI ledger.

It is the cost of crime that is the focus of this thesis. The aim is to calculate the economic impact crime has on the people of Nova Scotia. That includes the economic consequences of crime that add to the GDP, as well as that which goes unnoticed by the leading economic indicator. By calculating the economic cost of crime we can get a better understanding of the full social cost. Currently the impact crime has on quality of life is derived from the number of crimes recorded by the police. But the social cost of

¹ See Ron Colman, *Application of the Genuine Progress Index to Nova Scotia: A Pilot Project for Canada*, for a description of the various sections of the GPI.

crime extends beyond the official crime statistics. The Uniform Crime Reporting survey (UCR) does not count the time, effort and money spent trying to prevent crime or ameliorate its effects. For instance, a crime may be prevented by the use of an electronic security system. While such a device brings peace of mind to the owner, it is a cost of crime. The system would not have been installed if crime did not exist. The UCR misses this type of negative input on quality of life. Another example where the UCR is found wanting is the police budget. A society that maintains its crime rate at the same level as another, without having to spend as much on policing as its counterpart, must be less affected by crime. Again, because the UCR only counts the criminal act, it omits the negative impact this expense has on quality of life. Both examples demonstrate that the UCR is an inadequate measure of the social impact of crime. Using money as a common denominator allows for the inclusion of such disparate factors described above in the calculation of the social cost of crime.

While the focus of this thesis is the calculation of the cost of crime in Nova Scotia, the underlying theme is that of measurement. What we measure, how we measure, and why we measure need to be investigated if we are to discover the reasons behind the dominant role that the Gross Domestic Product and Uniform Crime Reporting survey play in the assessment of our quality of life. In chapter one the history of the GDP will be discussed along with its political and philosophical underpinnings. Economic theory, particularly capitalist economic theory, and its effect on the use of the GDP will be assessed. The flaws in the GDP that have led to the emergence of quality of life indicators such as the Genuine Progress Index will be analysed, as well as the background to the GPI.

Chapter two will concentrate on the reasons why the Uniform Crime Reporting survey is an inadequate measure of crime, and how measuring crime in economic terms is a more holistic method of calculating the impact crime has on quality of life.

In chapter three crime trends will be compared spatially and longitudinally. Is Nova Scotia a safer place to live than the rest of the country? How does it compare to the United States? Is crime increasing in the Province? This chapter is essentially the data supplied through the Uniform Crime Reporting survey. It is crime recorded by the police and reported to Statistics Canada. The UCR allows for comparisons between provinces back to 1962. Anecdotal evidence suggests that Nova Scotia is a peaceful society that enjoys a low crime rate; the data presented challenge that assumption. It should be noted that the trends and analysis are not available elsewhere, and so this chapter should be of some use to criminologists in Canada in general and Nova Scotia in particular.

Crime does not happen in a vacuum. The social and demographic background of a person dictates whether he or she is more or less likely to commit a crime than the average person. Chapter four looks at the backgrounds of criminal offenders to see if government funds can be better spent to prevent criminal activity.

Chapter five is a conservative estimate of the economic cost of crime in Nova Scotia. The final total in this chapter is arrived at by adding the direct losses due to property and violent crime, public expenditures on policing, courts and prisons, and individual defensive expenditures on security devices and crime prevention.

Chapter six expands on the conservative cost of crime in the previous chapter by including the direct economic losses due to unreported crime, losses suffered due to a reduction in unpaid work, retail inventory losses, insurance fraud, and the emotional loss

due to crime. These losses are added to the conservative estimate to form a comprehensive total of the economic impact that crime has on the quality of life of Nova Scotians.

Finally, chapter seven summarises the findings of this thesis, before suggesting some policy options that might reduce the cost of crime while improving the lives of those targeted.

The construction of the new prison in Burnside Industrial Park will go ahead. If the level of crime in the Province dictates that it is needed then it must be built. However, the cost of construction and the cost of running the facility should not be counted as economic progress as it currently is. Such construction is a cost of crime, and so has a negative impact on the quality of life of the people of Nova Scotia. The prison and other costs of crime take money away from projects and activities that enhance quality of life: calculating the extent to which they do so is the worthwhile purpose of this thesis.

Chapter One

From GDP to GPI

The Gross Domestic Product is the total market value of all final goods and services produced in the economy in one year. It differs from its predecessor, the Gross National product, in its definition of "economy." The GDP calculates the total output within a geo-political area, for example Nova Scotia, whether the product is produced by a Nova Scotia company or not. The GNP sees the Nova Scotia economy as anything produced by Nova Scotia owned companies whether the company does its business in the Province or elsewhere.

The Gross Domestic Product or Gross National Product as it was at the time, has been used since the 1930s.¹⁰ The GNP came to prominence during the Second World War as the economic means to calculate and encourage wartime production. For this purpose it was an excellent tool. The GNP is an accurate indicator of economic growth, and in wartime economic growth means more war production. If the GNP of the Allies went up it meant that more tanks, planes, guns, ammunition, ships, etc., were being built, which in turn meant there was a greater chance of an Allied victory. It can be reasonably argued that during World War Two the GNP was an accurate indicator of societal progress, because it was instrumental in recording the means by which Nazism was defeated.

Since the Second World War the GDP has maintained its position as the paramount indicator of economic growth. It has been able to do so for a number of reasons. To begin with the GDP is transferable to any economy. It can be used by the most powerful nation state in the world, the United States of America, and by the most poverty stricken countries in sub-Saharan Africa. Provinces, states, counties, and cities.

¹⁰ Clifford Cobb, "If the Economy is Up, Why is America Down?" *Atlantic Monthly*, May 1996.

as well as countries can also use it. It is able to fulfil this function because it is adaptable. For example, within the expenditure approach the GDP calculates personal consumption. As long as the personal consumption creates economic activity the GDP will register the transaction, whether the purchase is a car, or a book, or whatever is available in the location. Indeed, it might be said that the GDP is culturally adaptive, or at least culturally blind.

A second practical reason why the GDP has maintained its position as the leading economic indicator for the last half century is precisely because it has endured for so long. The longer an idea is accepted by society the more difficult it is to challenge or change that idea. The longevity of the GDP has allowed economists to include it in mainstream economic theory. Economists have time, effort, and their academic reputation invested in the study of the GDP. Such a commitment means economists are reluctant to radically alter the GDP. Because of its endurance, and the input of economists, the GDP has been refined so that data is relatively easy to collect, which increases its accuracy and reduces the cost of producing it.

Third, the GDP continued its ascendancy because evidence indicated that it was an accurate indicator of individual prosperity. The post-war economic boom enjoyed in the West translated into an increase in the number and quality of consumer items for the average citizen. More televisions, radios, cars, and better housing were within the economic reach of the majority of workers. The correlation between macro economic growth and individual quality of life looked strong. To many economists the case has been proven. The link between economic growth and quality of life is absolute; therefore,

there is no need to measure the quality of life of individuals because it is bound to rise in step with the GNP/GDP.

The practical reasons for the Gross Domestic Product's longevity are also underpinned by philosophical and cultural theory. It is useful to recall that the GDP came to prominence during the Second World War, and that it was successful in encouraging and tracking economic growth, which meant more war production, and ultimately victory for the Allies. After the war the GDP tracked the aggregate consumption of society, which was no longer primarily for the war effort, but was focused more on individual material accumulation. The key point is that in both cases the GDP recorded economic growth in terms of material production and consumption. In other words, the link that the GDP made between wartime and peacetime was that societal well being could be achieved through economic growth. The fact that Simon Kuznets created the means by which economic growth could be accurately measured, does not mean that he came up with the idea that economic growth equals prosperity. Kuznets designed the GDP while living and working in a culture that has capitalism as its economic base. Prosperity through economic growth is the cornerstone of capitalism.

In order to understand the rationale of capitalism with regard to economic growth, it is useful to think of the economy in terms of a pie. The bigger the pie the more there is to share out. If ten people share a ten-inch pie, on average everyone gets a one-inch slice of pie; on the other hand, if the same ten people share a twenty-inch pie the average slice is two inches big. If I choose not to participate in the economy then I do not receive any pieces of pie. Conversely, if I decide that I require ten pieces of pie then I must seek ways of increasing my share of the pie through innovation, entrepreneurial skill, capital

investment, or by selling my labour. If I choose not to participate then I will starve: if I choose the expansive option, and I am successful, I will not only increase my size of the pie, I will also increase the size of the pie itself.

As can be seen from the pie analogy, equity does not figure as part of capitalist economic growth. Indeed, if everyone was given sufficient means to clothe, feed, and shelter themselves there would be little incentive to work, and without such incentive there would be no pie in the first place. Accusations that capitalism encourages greed and results in great disparities in wealth are accurate. Supporters of capitalism would not, or should not, argue against either statement. It is not the goal of capitalism to create an egalitarian society, but a society where everyone benefits in material terms. According to capitalist theory the more material goods a society consumes the more economically successful, and therefore, prosperous it is.

Consider two societies that have identical population size. Society *A* has a perfect distribution of wealth – each population quintile owns twenty per cent of the wealth, while in society *B* the wealth is not fairly distributed – resulting in the bottom quintile only receiving five per cent of the wealth. If the share of wealth were the only data available then the logical conclusion must be that the bottom quintile in society *A* are more prosperous than their counterparts in society *B*. But the share of wealth cannot be the only data available because it is a derived statistic: it can only be calculated if the total wealth is known. In this scenario society *B* has a GDP one hundred times greater than that of society *A*. Despite the bottom quintile of *A* being proportionately better off within their own society they have only one twenty-fifth of the material wealth of the bottom quintile of *B*. This extra wealth translates into more washing machines.

televisions, cars, etc. for the bottom quintile of society *B* in comparison to their counterparts in *A*.

Society *B* is a successful capitalist society. Material consumption is high, those who are successful are rewarded in material terms, and those at the bottom of the economic ladder are materially better off than elsewhere. The bottom quintile observes the material wealth of others and can use it as an incentive to try and climb the economic ladder. As stated earlier in the pie analogy, if they are successful they not only increase their own wealth, they also increase that of society. The effect is multiplied by the fact that the vast majority of people want to advance materially and relative to others; therefore, there is constant pressure on the economy to expand. The rate of the expansion is measured by the GDP. Ergo, the GDP is the tool by which a particular type of economic growth is measured - that of capitalism.

The relationship between personal material well being and the GDP is a two way street. When the causal arrow points from individual material well being to the GDP the relationship is strong. When the arrow points the other way the relationship is weak. If I buy a personal computer I have not only increased my material well being, I have also increased the GDP. I benefit by having personal access to technology, and society benefits from the addition of the purchase price to the economic pie. This is Adam Smith's theory of capitalism at work: namely that the sum of the wealth of individuals is the wealth of the nation. Conversely, when there is an increase in the GDP there is no guarantee that I have improved my material well being. Indeed, an increase in the GDP cannot guarantee that anybody has increased his or her material well being. Such a correlation is assumed. It is the assumption that an increase in the GDP necessarily leads

to an increase in material well being that is being challenged here. That challenge is the first stepping stone to test if the GDP is an accurate indicator of social progress.

In order to test the link between macro economic growth and social progress it is helpful to recount a spirited debate among British historians in the 1950s and 60s. The debate was whether the massive economic growth of the Industrial Revolution had a positive impact on the lives of the working class or not.¹¹

The Industrial Revolution is an advantageous period to study not only because macro economic growth and social change took place side by side, it is also useful for the fact that measurement increased in importance. The factory system demanded that the efficiency of the production process be measured at every stage – from raw materials entering the factory to finished product exiting it. The factory building itself had to be planned so that space was efficiently utilised. The distance between machines was measured and limited so that operators had enough room in which to function effectively, but not so much that valuable machinery was omitted. Time also became a factor. The more units a worker could produce in an hour the more efficient she was. Driven in large part by the lessons learned through the factory system regarding efficient use of time and space, social factors began to be measured more frequently and with greater efficiency. Sport and health are two such examples. The time allotted for the playing of football matches became standardised and measured for compliance, as was the size of the pitch and the goal posts. Hospitals were built so that space was utilised for maximum efficiency. However, as with today, it cannot be assumed that the measurement process in

¹¹ The debate took place largely in the *Journal of Economic History* and the *Economic History Review*. The bibliography has a full listing of the sources under the heading "Standard of Living Debate."

factories in particular or in society in general during the Industrial Revolution were accurate indicators of quality of life.

If we accept the hotly disputed population figures of the *Optimists* then macro economic growth increased at a faster rate than the general population, resulting in an increase in per capita income. This is the GDP argument. Economic output divided by the population equals per capita GDP. The economic pie has grown, and because the number of people sharing the pie has not grown more than the increase in the size of the pie, the size of the average slice has increased. Therefore, on average Britons were better off financially. Thus it can be seen that the GDP is useful in calculating not only the size of the economy, but also the average share per person. But the issue in the "Standard of Living Debate" was not whether the average Briton was better off because of the Industrial Revolution, but whether a segment of the population was better off – namely, the working class. The macro economic data used by the historians could not show whether the working class increased their income or not. Similarly, the GDP cannot demonstrate a direct link between economic growth in modern day Nova Scotia and the income of particular socio-economic groups in the Province. That is because the GDP deals in averages. It is entirely possible for the per capita GDP to grow at the same time that income drops for the working class. The relationship between economic growth and income for groups is not absolute.

The debate then concentrated on whether there was a practical link between economic growth and the income of the working class. An increase in the size of the economy does not mean that the working class are bound to benefit, but do they in practice? Wage data of men working in various trades was compared to see if their

salaries had increased during the Industrial Revolution. Unfortunately the results of the research were ambiguous. Some trades, such as bricklayers, prospered while others, handloom weavers for instance, witnessed their wages decline.¹² Moreover, as Eric Hobsbawm points out, these are wage rate comparisons and do not reflect income, which was affected by long spells of unemployment.¹³

More accurate and reliable income data are available for twentieth century Nova Scotia. Although income data for the Nova Scotia working class are not available per se, data per income quintile are. If the GDP is an accurate indicator of group well being there should be a strong correlation between trends in GDP per capita and per capita income by quintile. This hypothesis can be tested by comparing the GDP per capita and the market income (income before taxes and transfers) of the lower quintiles.

Nova Scotia Average Income per Quintile and Per Capita GDP, 1981-97 (1998S)¹⁴

	Quintile 1	Quintile 2	Quintile 3	GDP
1981	1.483	13.091	28.911	16,270
1997	543	10.873	26.050	21,598
1981-97 (\$)	-940	-2,218	-2,861	5328
1981-97 (%)	-63.4	-17.9	-10.9	33

The data in the table demonstrate that there is not a strong correlation between the per capita GDP and the average income of the bottom three economic quintiles in Nova Scotia. It can be safely concluded from the data that a rise in the GDP does not

¹² For information on bricklayers see J.E. Clapham quoted in R.M. Hartwell "Interpretations of the Industrial Revolution in England: A Methodological Inquiry," *Journal of Economic History*, Volume 19, 1959, p.234; and for handloom weavers Hartwell, same source, p.245.

¹³ E.J. Hobsbawm, "The British Standard of Living, 1790-1850," *Economic History Review*, 2nd series, volume 10, No.1, August 1957, p.48.

¹⁴ Income data is from Statistics Canada, Survey of Consumer Finances, Income Statistics Division, Custom Tabulation. GDP data is from Statistics Canada, Cansim data base, *Selected Economic Indicators*, Matrix 9222.

necessarily lead to an increase in income for all segments of the population either in theoretical terms or in practical terms. Economic growth does not benefit everyone.

The “Standard of Living Debate” did not stop at income comparisons. Historians, such as the aforementioned Eric Hobsbawm, pointed to social concerns to strengthen their “pessimistic” argument that the lot of the working class declined during the Industrial Revolution. “Pessimists” and “Optimists” thus argued about the trends in health, life expectancy, tuberculosis, mortality rates, poverty, housing, clothing, food consumption, leisure, working conditions and social status to try and prove conclusively whether quality of life improved for the working class while economic growth steamed ahead. The fact that “Standard of Living Debate” historians concerned themselves with social and economic factors is of more importance than the result of the debate, which did not bring a definitive conclusion. The point is that quality of life cannot be assumed to increase just because gross economic output does.

“The Standard of Living Debate” demonstrates the tenuous link between economic growth and quality of life. However, like many other attempts at quantifying quality of life it stumbles in assessing the impact of various social factors. For instance, how can a decline in the number of cases of tuberculosis be reconciled with an increase in the crime rate? Has quality of life improved or not? Because the units of measurement are different it remains a subjective matter – apples and oranges. The problem is one of measurement: and with that we come back to the GDP.

The GDP is calculated using money as the unit of measurement. Measuring growth in financial terms allows for the inclusion of disparate social factors. The problem is the GDP does not distinguish between economic activity that improves quality of life

and that which harms. The GDP is rather like the final total on a grocery store receipt. On the positive side it allows for “apples” to be added to “oranges”, but on the negative side it makes no distinction between food that is healthful and food which is not. While spending more money on groceries may be a sign of greater income, it cannot be said that a larger grocery bill is a sign of a healthy diet. The inability of the final total of a grocery store shopping receipt to separate healthy and unhealthy foods is of concern to the individual consumer. The inability of the leading economic indicator to distinguish between positive and negative market activity should concern us all.

Finally, because the GDP only measures social and economic activity that has market value it ignores many other factors that affect quality of life. In this regard it must again get a failing grade as a measure of quality of life. In sum, economic output, as measured by the Gross Domestic Product, does not lead to an increase in personal income in theoretical terms, nor does it necessarily lead to a higher personal income in practice. The GDP does not distinguish between economic activity that enhances quality of life; instead it aggregates market value, thereby omitting factors that do not have market value.

The aforementioned flaws in the GDP have not gone unnoticed by the academic and economic community. In recent years there has been increasingly widespread

acknowledgement by well-respected academics and economists that the GDP has shortcomings as a comprehensive measure of progress.¹⁵

The architect of the GNP, Simon Kuznets, expressed reservations about the limitations of the system he helped create: he argued that the whole system of national accounting needed to be fundamentally rethought. In 1962 he wrote:

Distinctions must be kept in mind between quantity and quality of growth, between its costs and return, and between the short and the long run....Goals for 'more' growth should specify more growth of what and for what.¹⁶

Increases in crime, traffic accidents, disease, smoking, and toxic pollution all make the GDP grow, simply because they produce additional economic activity. More prisons, security guards and burglar alarms all add to the GDP and are thus counted as progress.

This anomaly led Robert Kennedy to remark 30 years ago:

Too much and too long, we have surrendered community excellence and community values in the mere accumulation of material things....The [GDP] counts air pollution and cigarette advertising and ambulances to clear our highways of carnage. Yet the gross national product does not allow for the health of our children, the quality of their education, or the joy of their play. It measures

¹⁵ These shortcomings and others led to a recent joint declaration by 400 leading economists, including Nobel Laureates: "Since the GDP measures only the quantity of market activity without accounting for the social and ecological costs involved, it is both inadequate and misleading as a measure of true prosperity.... New indicators of progress are urgently needed to guide our society...." See R. Colman, *Measuring Sustainable Development*, March 3, 1998, for a full list of signatories.

¹⁶ Simon Kuznets, *The New Republic*, Oct. 20, 1962, cited in Cobb, op. cit., page 67.

neither our wit nor our courage; neither our wisdom nor our learning; neither our compassion or our devotion to our country. It measures everything, in short, except that which makes life worthwhile.¹⁷

Considerable progress has been made in the last 20 years by the World Bank, OECD, United Nations, World Resources Institute and other international organisations, by national statistical agencies, including Statistics Canada, and by leading research institutes and distinguished economists, in developing expanded economic accounts which include critical social and environmental variables. Human Resources Development Canada (HRDC) has recently issued an Index of Social Health for all the provinces and for the country as a whole.

Some composite economic indices, like the Measure of Economic Welfare (MEW), the Index of Sustainable Economic Welfare (ISEW), the Genuine Progress Indicator (GPI), and the Index of Economic Well-being (IEW), incorporate up to 26 social and environmental indicators.¹⁸ These indices also distinguish direct contributions to economic welfare from defensive and intermediate expenditures, and from economic activities that produce an actual decline in well being.

The current emphasis on “growth” is replaced by a concern with “development,” as defined by former World Bank economist, Herman Daly:

Growth refers to the quantitative increase in the scale of the physical dimension of the economy, the rate of flow of matter and energy through the economy, and the stock of human bodies and artifacts, while **development** refers to the qualitative improvement in the structure, design, and composition of

¹⁷ Robert Kennedy, “Recapturing America’s Moral Vision”, March 18, 1968, in *RFK: Collected Speeches*, Viking Press, 1993.

¹⁸ Hans Messinger, Statistics Canada, *Measuring Sustainable Economic Welfare: Looking Beyond GDP*, June 1997, compares the MEW and the original GPI and replicates the models for Canada. On the original GPI, see Clifford Cobb, Ted Halstead and Jonathan Rowe, *The Genuine Progress Indicator: Summary of Data and Methodology*, Redefining Progress, September, 1995. Lars Osberg and Andrew Sharpe, *An Index of Economic Well-being for Canada*, paper presented to the Centre for the Study of Living Standards Conference on the State of Living Standards and the Quality of Life in Canada, 30 October, 1998, Ottawa.

physical stocks and flows, that result from greater knowledge, both of technique and of purpose.¹⁹

The methodology used in this thesis is that of the Genuine Progress Index (GPI), a modified version of the Genuine Progress Indicator. The GPI method, in essence, is to assess the economic value of our social and environmental assets and to calculate their depreciation or depletion as costs and their increase or improvement as gains. Money is used as the unit of measurement because it builds a bridge between social factors and the conventional world of economics, and because it allows for the inclusion of previously incomparable social factors in an aggregate quality of life index.

While the assignment of monetary values to non-market factors may appear absurd and even objectionable, court awards for grief and suffering and insurance company premiums on life and limbs are necessary measures to compensate actual human loss and suffering. Higher rents are paid for dwellings with aesthetically pleasing views and workers sell their time, labour and intelligence often to the highest bidder. Similarly, in a world where "everything has its price," monetising social and environmental variables assigns them greater value and provides a more accurate measure of progress than excluding them from macro economic accounts. This was a fact not lost on The Anti-Tuberculosis League of The Island of Cape Breton in 1912. In an effort to get the federal and provincial governments to intervene the League described the economic cost of standing pat while tuberculosis detrimentally affected the health of Nova Scotians:

"It is difficult to express in exact monetary terms the loss to the community from [tuberculosis], but its magnitude can be readily appreciated. Reckon in the

¹⁹ Herman Daly, "Operationalising Sustainable Development by Investing in Natural Capital", in Ann Mari Jansson et. al., (eds), *Investing in Natural Capital: The Ecological Economics Approach to Sustainability*, International Society for Ecological Economics, Island Press, 1994, page 7.

bill the loss to the individual in earnings during the months and years of invalidism. Add, too, the cost of education and rearing of children who die of this disease before they reach the age of usefulness as workers. Add the loss of savings which melt away in the course of the long struggle against the so frequent fatal termination, and the cost to the community in caring for the sick and helpless.

"A careful and conservative estimate at a low average valuation of the human life from the industrial standpoint leads to the calculation of \$3,000,000 as the yearly economic loss to Nova Scotia alone through consumption [tuberculosis]."²⁰

Any index is culturally defined, since it measures progress toward social goals. In the case of this thesis, the normative value or goal that serves as the standard for measuring genuine progress is the aspiration to create a more peaceful society with greater personal security. Lower crime rates are an indicator of success in moving towards that goal and in strengthening an important social asset. Higher crime rates signify a depreciation of that social capital and erosion of its value.

In adopting a balance sheet approach to accounting, the GPI explicitly distinguishes between assets and liabilities, between economic activity that creates benefit and that which causes harm. In so doing, it identifies some areas in which growth is not desirable. Crime, and its consequences, are a graphic illustration of negative economic activity. While higher crime rates, reflected in more spending on prisons, police, courts, legal fees, burglar alarms, hospitalisation fees, are good for the GDP and conventionally count as economic growth and "progress", common sense dictates that these should be counted as costs.

²⁰ George H. Cox MD and John W. MacLeod. *Consumption: Its Cause Prevention and Cure*. London: Eyre and Spottiswoode Ltd, 1912. p.17.

Chapter 2

Measuring the Cost of Crime: Why, What, How

Definitions of criminal activity change over time and are relative to prevailing social and cultural norms. The sale of alcohol was prohibited throughout Nova Scotia from 1916 to 1929, for instance.²¹ Economic activities or political dissent that are legal in one society may be criminal in another. Many in society find greed to be abhorrent yet social structures are in place that protect those who accumulate wealth.

Crime is antisocial behaviour, but not all antisocial behaviour is crime. Crime negatively affects quality of life, but not everything that negatively affects quality of life is crime. Crime is culturally defined, but some people within society wield greater power than others and can use that power to influence the majority into believing that some behaviour is criminal and some not. In Canada everybody is equal before the law, yet the law does not affect everyone equally. The definition of what constitutes a crime is culturally defined, as is the method by which society attempts to mitigate its impact on quality of life. Having said that, the goal of this thesis is to calculate the economic impact of crime in Nova Scotia; it is not to create new definitions of what constitutes crime, nor is it to measure the economic impact of all antisocial behaviour. In the first place, any new definition of crime proposed here would also be culturally defined and would probably be more arbitrary than the current Criminal Code, and in the second, calculating the cost of all antisocial behaviour is far beyond the intellectual and economic scope of this thesis. It is, therefore, practical to stay within the confines of the Criminal Code and to measure the economic impact of behaviour that breaks the code.

The “standard offence categories” used in Statistics Canada’s Adult Criminal Court Statistics and throughout this thesis are as follows:

²¹ Peter McGahan, *Crime and Policing in Maritime Canada: Chapters from the Urban Records*, Goose Lane Editions, Fredericton, New Brunswick, 1988, pages 89 and 96.

- *Crimes against the person*: homicide and related, attempted murder, robbery, kidnapping, sexual assault, other sexual offences, major assault, abduction, common assault.
- *Crimes against property*: breaking and entering, arson, fraud, possession of stolen property, theft, property damage – mischief.
- *Other criminal code*: weapons, administration of justice (including failure to appear), public order offences, morals – sexual, morals – gaming, unspecified criminal code (including breaches of probation).
- *Traffic*, criminal code traffic impaired driving.
- *Drug-related offences*: trafficking, possession.
- *Other federal statutes*: all other federal statutes.²²

Staying within the parameters of the Criminal Code does not mean that each criminal act has the same quality of life impact as another, nor does it mean that the response of the justice system is consistent. Thomas Gabor estimates that annual losses from corporate crime may be 50 times the losses from street crimes, that tax evasion amounts to \$30 billion a year in Canada, and that \$300-\$400 million worth of services are fraudulently claimed annually in Canada by doctors, lawyers, academics and other professionals.²³ Few of these cases are ever prosecuted and fewer yet result in convictions.

At the other end of the economic spectrum, Gabor refers to a survey of 1700 people, none of whom had a criminal record, that showed 99% of these law-abiding citizens to have committed a criminal offence. A similar survey of male adolescents in Montreal revealed that 97% had committed a crime during their adolescent years. Other

²² Denyse Carriere, *Adult Criminal Court Statistics, 1996-97*, in Statistics Canada, *Juristat*, volume 18, no.7, page 3, box 1.

studies show that more than 90% of employees pilfer in some work environments, and one estimate attributes one-third of business failures in the US to employee theft and dishonesty.²⁴

In short, those commonly labelled as “criminals” and most frequently punished are those who have committed particular types of offences, like personal violence and theft, that are condemned by this society. “White-collar” crime is less visible, carries less social stigma and is much less likely to be punished though it often carries considerably higher long-term costs. So beyond pointing out the relativity of definitions of crime, this thesis does not go beyond the conventional definitions, and cost assessments are therefore proportional to the activities most commonly regarded as criminal. From that point of view, even the “comprehensive” estimates given in this report are inherently conservative.

Public opinion surveys, nationally and internationally, consistently report that physical security is a top priority for citizens.²⁵ An extensive national opinion survey in British cities by a research team from the University of Glasgow found that the largest number of respondents most often gave low crime rates the highest priority as a quality of life determinant. Among 20 indicators of quality of life, concern with crime, both violent and non-violent, far outweighed standard economic considerations like “employment prospects” and “wage levels,” which ranked 11th and 12th in that survey.²⁶ That this is a

²⁴ Thomas Gabor, *Everybody Does It! Crime by the Public*, University of Toronto Press, Toronto, 1994, pages 91, 93, 94, 118.

²⁵ Ibid, pages 54, 55, 56, 75.

²⁶ Julian Roberts, *Public Knowledge of Crime and Justice: An Inventory of Canadian Findings*. A report prepared for the Department of Justice, 1994, page 7.

²⁶ RJ Rogerson, A.M. Findlay, and A. S. Morris, “Indicators of Quality of Life: Some Methodological Issues,” *Environment and Planning A*, volume 21, pages 1655-1666; Allan Findlay, Arthur Morris, and Robert Rogerson, “Where to Live in Britain in 1988: Quality of Life in British Cities,” *Cities*, volume 5, pages 268-276.

vital issue in Canada is indicated by the annual *Maclean's* survey of Canadian public opinion. 81% of Canadians think it likely that "the risk of people being exposed to violence and physical harm will be much greater" in the next ten years than it is today.²⁷

Parliamentary debates also demonstrate widespread non-partisan concern with physical security. One Hansard analysis found 139 questions and statements by Canadian Members of Parliament on crime-related issues, compared to a total of 111 on government deficit, employment and wages, and 56 on Quebec.²⁸ The Canadian Constitution recognises that security is a fundamental right in Canada. In the Declaration of Human Rights the United Nations recognises the rights of the citizens of the world to personal security.

While strategies may differ, certainly no political party or community group openly favours an increase in crime, and this thesis accepts this consensus as a reasonable value base for considering a reduction in crime as an indicator of social progress. But it is important not to stop there. For while a reduction in crime is most certainly a welcome occurrence, it should not be seen as the end goal. A reduction in crime may be achieved at the expense of civil liberties or may be bought instead of welfare enhancing goods and services. In other words, the impact crime has on quality of life goes beyond the criminal act. The current method of calculating the impact of crime – the Uniform Crime Reporting survey – only counts crimes recorded by the police. The methodology employed in this thesis, that of the Genuine Progress Index, calculates the impact crime has on quality of life in economic terms, thereby including more factors than the UCR.

²⁷ *Maclean's*, December 30, 1996.

²⁸ Canadian Centre for Policy Alternatives, *Monitor*, cited in *Canadian Forum*, March 1995, page 48.

When crime is measured in economic terms the cost of the justice system – the police, the courts, prisons and lawyers – is included, the losses incurred by victims are included, as are the costs incurred by the general public when they purchase crime prevention hardware, and finally, production losses due to work absence caused by criminal activity are also included. The UCR only measures the number of criminal incidents recorded by the police. Consider two laudable goals: first, the elimination of criminal activity, or a zero crime rate as defined by the UCR, and second, the elimination of spending caused directly or indirectly by crime. In the first scenario crime can probably be eliminated through draconian measures such as the building of new prisons, the employment of more police officers and by extensive and expensive crime prevention strategies. In the second scenario there are no prisons, police officers, or crime prevention hardware because crime and its consequences have been eliminated. If the second scenario can be achieved the first scenario must have been achieved with the added bonus that quality of life has not been detrimentally affected by a transfer of funds from welfare enhancing activities. Measuring crime in economic terms is therefore a more accurate indicator of the impact it has on quality of life, and is a better goal to aim for in the long term.

The use of money to calculate the impact crime has on quality of life brings up the topic of transfers of property that do not have the permission of one of the parties. Theft detrimentally affects the quality of life of the victim – she has to replace the lost goods, either through her own labour or by paying for the labour of others – but it increases the quality of life of the thief. At a superficial level it appears societal quality of life is unaffected. That is of course if the goods do remain in society. The stolen articles may be

transferred out of the Province in that case the material quality of life of Nova Scotia is negatively affected. However, if the stolen goods remain in the Province there is also a negative impact on quality of life. The negative impact is one of missed opportunity. The thief takes time to plan and execute the crime, then lives off the loot. This is time that he could have spent producing goods that would have improved societal overall quality of life. The victim, as stated above, must replace the stolen goods, therefore cannot spend money on goods and services that would improve her own quality of life, and indirectly the overall quality of life. Every theft stops the forward momentum. When compared to provinces that have a lower rate of theft we are losing out, because they are improving their quality of life at a faster rate. Theft, therefore, is a cost of crime that detrimentally affects overall quality of life, and for that reason is included in this thesis.

The Solicitor General of Canada has given several important reasons to measure the costs of crime in economic terms:

Information on the cost of crime can serve several purposes:

- a) Cost data allow a complementary and, in some cases, a particularly meaningful way of quantifying the amount of crime in society;
- b) By reference to such concepts as gross national product or constant dollars, cost data allow standardised historical comparisons of crime and the response to crime;
- c) Cost data allow important comparisons between criminal justice and other basic social expenditures; and
- d) Cost data allow comparative cost-benefit analyses to help evaluate social programs and contribute to social policy development....

Until we link social issues to some economic cost concept, until we know more about the cost of crime to society, to victims, and indeed to criminals, we will be unable to answer our ethical questions to our own satisfaction. That is, ethical choices about crime demand knowledge about the consequences of crime.

Obviously, questions of efficiency demand cost information. But so too do the more fundamental questions about whether social programs and policies are working. If we think they are "working," we still want to know at what price. When we wish to choose among beneficial programs, we will also want to know their relative cost.

Social policy and program development would benefit from knowledge about which crimes cause the greatest losses and which the least, and which groups or categories of people suffer the most heavily.²⁹

As the Solicitor General notes, economic cost-benefit analysis is essential to determine practical policy options to reduce crime. A detailed breakdown of costs is necessary to relate social and economic causes and consequences, without which effective solutions cannot be found. Only a detailed cost analysis of the different categories of crime, including victim losses, public costs and private defensive expenditures, can identify policy options that produce overall gains to society as a whole. By linking social and economic variables, potential savings and investment opportunities may be identified that can reduce crime while creating benefits in other social sectors.

Calculating the impact crime has on quality of life in financial terms also has the benefit of demonstrating the effect criminal activity has on the Gross Domestic Product and by association economic growth.

Although Canadians often express feelings of envy at the US economy and its rapid growth rates, the social costs of that growth and the fact that it is driven in part by factors that signify an actual decline in quality of life are not generally considered in the comparisons.

Imprisonment is today one of the fastest growing sectors of the American economy, with an average growth rate of 6.2% per year throughout the 1990s, significantly outpacing overall GDP growth. The United States spends \$50 billion (US) a

year to keep 1,800,000 of its citizens in prison. Per capita spending on corrections has more than tripled in that country in less than 10 years, helping to fuel the “robust” US economy.

The Wall Street Journal reported that the O.J. Simpson trial alone added \$200 million to the U.S. Gross Domestic Product.³⁰ The car-locking device known as “The Club” adds \$100 million to the American GDP all by itself.³¹ But even this pales by comparison to the estimated contribution to economic growth of the Oklahoma City bombing. Following that crime, government buildings throughout the United States, as well as many private firms, invested heavily in sophisticated new security and surveillance equipment as well as additional security guards. Shortly after the bombing, *The Wall Street Journal* reported: “Analysts expect the share prices [of firms making anti-crime equipment] to gain during the next several months as safety concerns translate into more contracts.” Indeed, the burgeoning crime-prevention and security industry in the U.S. now has revenues of more than \$65 billion a year, all of which counts as “economic growth” and “progress” under our current accounting system.³²

Nova Scotia spends only a quarter as much per capita on corrections as Americans, but the cost saving does not show up in the conventional market statistics. While this lowers GDP per capita in relation to the US, it is a significant quality of life advantage for Nova Scotia. Recognising the value of a peaceful and secure society, and comparing this advantage to the United States, cannot help but raise questions about the

³⁰ Solicitor General of Canada, *Canadian Urban Victimization Survey, Bulletin 5: Cost of Crime to Victims*, 1985, Page 1.

³¹ Wall Street Journal, July 1997.

³² Clifford Cobb, Ted Halstead and Jonathan Rowe, “If the GDP is Up, Why is American Down?,” *The Atlantic Monthly*, October, 1995, page 67.

³³ Ibid., page 65.

American economic model, which conventional economics holds in such high esteem and which has presently found such favour in this country.

Counting crime costs as contributing to a “robust” and “strong” economy and, by implication, to social wellbeing, produces a gross and perverse distortion in our measures of progress. But this is exactly what the GDP does. Describing these costs in detail can clarify the need to adopt better indicators of prosperity and progress such as the Genuine Progress Index.

Chapter 3

Crime Trends In Nova Scotia

Before considering the economic impact crime has, it is useful to study the trends in criminal activity. The level of criminal activity is a benchmark of social progress or decline, and economic costs are assumed to be roughly proportional to trends in these physical indicators. In other words, the costs of crime generally rise if crime rates go up. As crime rates fall, society and households tend to realise savings that can be invested in activities that enhance welfare.

There are four major qualifications that must be borne in mind in relating the data presented in this chapter to the cost estimates that follow. First, as mentioned earlier, it is possible, as dictatorships have demonstrated, to lower crime rates through police-state measures and draconian punishments. In such cases, crime rates would fall even as costs rise.

It is assumed here that civil liberties and basic safeguards of human freedoms remain constant over time, and that this precludes any diminution of human rights for the sake of fighting crime. Without this assumption, it is possible that crime rates and crime costs could move in opposite directions. There is evidence that this is in fact occurring in the United States of America, where lower crime rates in recent years are matched by higher rates of incarceration. Here the hypothesis is advanced, which remains to be tested, that a growing gap between crime rates and crime costs may indicate movement towards a more repressive society.

Second, a fear of crime may raise costs through increased defensive expenditures, even though this fear may not be directly proportional to actual trends in crime rates. This may occur in several ways. For example, if the amount of criminal activity remains constant while population increases, particularly in urban areas, then the crime *rate*

(measured as incidents per 100,000 population) will go down even though the public does not perceive the decrease. Or there may be a time lag. Crime rates in Canada rose rapidly through the 1970s and 1980s and then began to drop in the 1990s. But public perceptions, fears and defensive expenditures in the 1990s may still be responding more vividly to the trends of the previous two decades than to current trends.

Third, official crime rates are dependent on public reporting rates, the discretion and capacity of police officers to respond to complaints, and changes in the social and political climate.³³ All three elements have varied over time, particularly in sensitive areas like domestic violence, sexual assault and child abuse. A 1996 survey found that Canadians report just over half of all criminal incidents.

Certainly official crime rates understate the actual incidence of crime, and, because of increased reporting rates for certain categories of crime over time, they also overstate the rate of increase in crime. In other words, the official statistics cannot be taken too literally, either as representations of the actual rates of victimisation or of trends in crime rates over time.

Though conservative cost estimates are based on the official crime rates described in this chapter, reference will also be made to victim surveys to develop a more comprehensive estimate of crime costs. Canadian victim surveys in 1988 and 1993 revealed increased reporting rates in 1993 for most crime categories, which may affect the trends presented in this chapter.³⁴ As mentioned, victimisation surveys are conducted

³³ Jim Hackler & Kim Don, "Estimating System Biases: Crime Indices that permit Comparisons across Provinces", *Canadian Journal of Criminology*, April 1990, Vol. 32, No. 2, Page 244 and 247.

³⁴ Statistics Canada, *An Overview of the Differences between Police-Reported and Victim-Reported Crime, 1997*, catalogue no. 85-542-XPE, pages 9-11 and see Appendix.

too infrequently, however, to determine with certainty the degree to which trends in the official crime rates are influenced by reporting rates or by changes in police responses.

The most important qualification to the data in this section, therefore, is that they reflect only police-reported crime rates. While the chance of being a crime victim in Canada in 1996, according to these official rates, was one in 11, surveys reveal that fully one in four Canadians was actually victimised in 1996, and that only half of criminal acts are actually reported to police.³⁵ The emphasis on police-reported crime rates therefore produces significantly more conservative results than would the use of victim surveys. This chapter therefore examines the extent to which crime “officially” affects Nova Scotia. The real extent and impact of crime is clearly much greater.

Despite these qualifications, changes in crime rates are still relatively reliable indicators of trends in crime costs. Since crime rates have increased in the last four decades, correlations between the data in this chapter and the unit costs that follow will allow relative assessments of the savings that would have accrued if crime costs and losses had been maintained at previous levels.

The fourth qualification is that overall crime rate statistics make no distinction between the nature and type of crimes. For this reason, the following sections have included some disaggregated data by crime category. This is important in comparing Nova Scotia to the other provinces. Thus the overall official crime rate in Nova Scotia is 98% of the national average, up from 66% 25 years ago, and the composite official

³⁵ Statistics Canada, Canadian Centre for Justice Statistics, “Criminal Victimization: An International Perspective,” *Juristat*, catalogue no. 85-002-XPE, volume 18, no. 6, pages 3-4; and Statistics Canada, David Robinson, Frank J. Porporino, William A. Millson, Shelly Trevethan and Barry MacKilley, “A One-

violent crime rate actually exceeds the national average. However, Nova Scotia has only 63% of the Canadian crime rate for *serious* violent crimes, just 82% of the overall property crime rate, and less than half the rate for motor vehicle theft.

This indicates that a sizeable portion of the registered increase in police-reported crimes in the Province has been in common and minor assaults. This is the category most susceptible to fluctuations in reporting rates. In other words, the Criminal Code crime rate must be used with caution, and examined more closely to determine relative changes over time in particular crime categories.

In determining the true costs of crime, it is necessary to understand the official crime rate. The Uniform Crime Reporting survey (UCR) is the number of Criminal Code violations reported to police per 100,000 population. Criminal code violations are violent crimes, property crimes, impaired driving offences, drug offences, and "other" crimes. Mischief makes up 45 per cent of the total for "other" crimes. 1962 is taken as the starting date for all time series in this study, because official crime statistics have been standardised by the Canadian Centre for Justice Statistics since that date. Earlier statistics are more unreliable and many of the reporting categories are not comparable.

The official police-reported crime rate in Nova Scotia has more than quadrupled since 1962, and more than tripled in Canada as a whole.³⁶ In 1962 the chances of being a crime victim in Nova Scotia were one in 49, counting only police-reported crimes. In

Day Snapshot of Inmates in Canada's Adult Correctional Facilities", *Juristat*, catalogue no. 85-002, volume 18, no. 8, page 2

³⁶ Crime incidents are from Statistics Canada, *CANSIM Database*, matrix 2200, "Crimes by Actual Offences, Canada, Provinces and Territories, by Year"; population statistics used to calculate changes in the crime rate over time are from Statistics Canada, *CANSIM Database*, matrix 1, "Quarterly Estimates of Population for Canada, Provinces and Territories".

1997 they were one in 12.³⁷ Consequently, according to the official statistics, the chances of being a crime victim are now four times greater than 35 years ago (Table 3.1 and Charts 3.1 and 3.2. The crime rate in Table 3.1 has been derived using population data and criminal code incidents. See Appendix for more detail.)

In actual numbers of recorded Criminal Code incidents, there was a 412 per cent increase in Nova Scotia from 1962 to 1997. In 1962 there were 15,187 incidents while in 1997 there were 77,694.³⁸ This dramatic long-term increase may help explain why public perceptions do not match official crime rates. After all, people have no way to gauge the crimes per person, but can come up with a rough estimate of the level of crime based on the number of crimes they witness, directly or indirectly.

Though crime has been rising at a faster rate in Nova Scotia than nationally, overall crime levels are still slightly below the Canadian level because they were so much lower a generation ago. In 1972, Nova Scotia crime rates were only two-thirds the national average. In 1997, they were 98% of the Canadian average (Chart 3.3).

Throughout Canada, crime rates have dropped since peaking in 1991, when the chances of being a crime victim were one in 10. In Canada, the crime rate has fallen by 18% since 1991 and in Nova Scotia by 15.5%. National crime rates have continued to fall steadily for each of the last seven years, but they have levelled off since 1994 in Nova Scotia.

³⁷ These figures are derived by dividing the number of criminal incidents by the population. However, this does not necessarily mean that one in 12 *people* is a crime victim, since one person may be victimised several times in a year. The author wishes to thank John Turner, Chief, Policing Services Programme, Canadian Centre for Justice Statistics, for his clarification of this issue (personal communication, 6 April, 1999).

³⁸ Statistics Canada, Cansim matrix 2200.

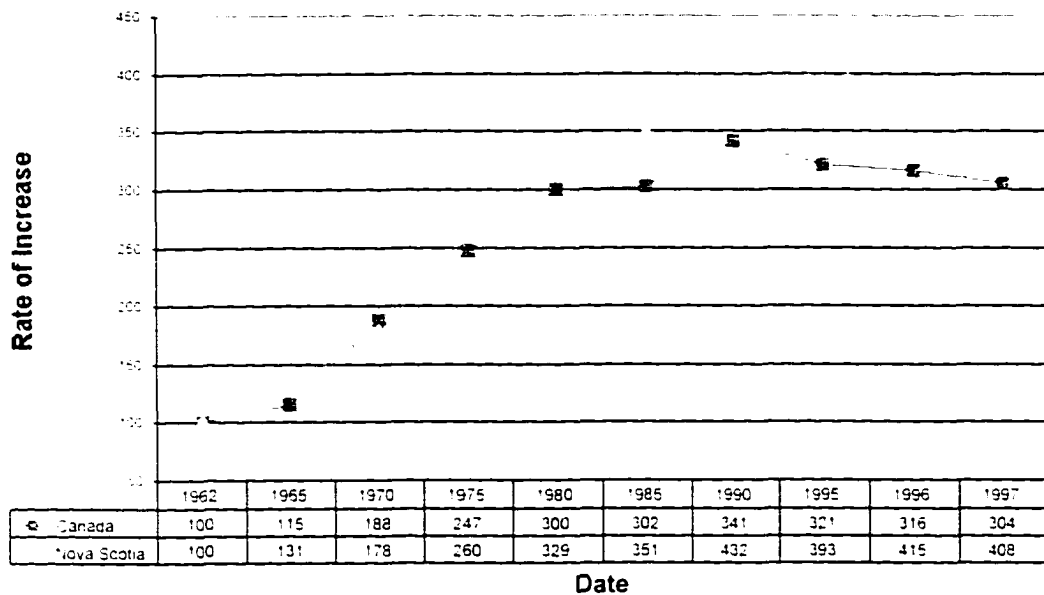
The rate of increase in the Nova Scotia Criminal Code crime rate between 1962 and 1997 has been fifty per cent greater than at the national level, producing a gradual convergence towards the Canadian average. Among the provinces, Nova Scotia has experienced the third largest increase in the Criminal Code crime rate. Only fellow Maritime Provinces New Brunswick and Prince Edward Island have suffered larger increases in crime. All three provinces are still below the national crime rate average, but they are catching up rapidly. As noted above, however, this increase appears to be confined mostly to common assaults and minor crimes. Serious violent crimes in Nova Scotia still occur at less than two-thirds the national rate.

While higher reporting rates are responsible for some of the increase in the crime rate there is no evidence that reporting rates have increased faster in the Maritime Provinces than in the rest of Canada. Therefore the convergence of crime rates and the more rapid rate of increase in crime rates in the Maritimes must still be taken as a sign of eroding advantage. Compared to the rest of Canada, the region is still safer, more peaceful and more secure, especially when differences in serious crimes are considered. However, the advantage is significantly less marked than it was 30 years ago.

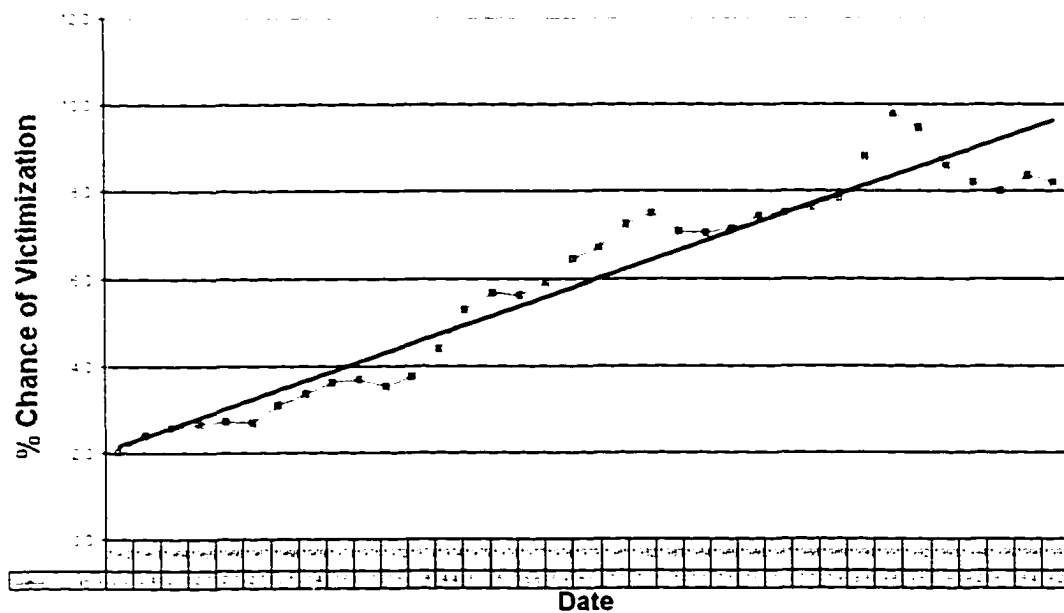
Table 3.1: Criminal Code Crime Rate per 100,000 Population.

	Incidents	Pop.(000s)	Crime Rate	Incidents	Pop.(000s)	Crime Rate	Canada	Nova Scotia	NS as a %
Date	Canada	Canada	Canada	Nova Scotia	NS	Nova Scotia	1962=100	1962=100	of Can Crime Rate
1962	514986	18583	2771	15187	746	2036	100	100	73
1963	572105	18931	3022	17953	751	2391	109	117	79
1964	626038	19290	3245	19446	755	2576	117	127	79
1965	628418	19644	3199	20123	756	2662	115	131	83
1966	702809	20015	3511	20547	756	2718	127	133	77
1967	784568	20378	3850	20529	760	2701	139	133	70
1968	897530	20071	4472	23702	767	3090	161	152	69
1969	994790	21001	4737	26128	775	3371	171	166	71
1970	1110066	21297	5212	28278	782	3616	188	178	69
1971	1166458	22026	5296	29518	799	3694	191	181	70
1972	1189805	22285	5339	28213	804	3509	193	172	66
1973	1298551	22560	5756	30701	814	3772	208	185	66
1974	1456885	22875	6369	36102	820	4403	230	216	69
1975	1585805	23209	6833	43814	828	5292	247	260	77
1976	1637704	23518	6964	47574	837	5684	251	279	82
1977	1654020	23796	6951	47110	841	5602	251	275	81
1978	1714297	24036	7132	49942	846	5903	257	290	83
1979	1855271	24277	7642	55020	851	6465	276	318	85
1980	2045399	24593	8317	57355	855	6708	300	329	81
1981	2168201	24900	8708	62085	856	7253	314	356	83
1982	2203668	25202	8744	64636	862	7498	316	368	86
1983	2148633	25456	8441	61665	871	7080	305	348	84
1984	2147657	25702	8356	61933	880	7038	302	346	84
1985	2174175	25942	8381	63372	888	7136	302	351	85
1986	2277749	26204	8692	66510	892	7456	314	366	86
1987	2368956	26550	8923	67427	896	7525	322	370	84
1988	2390007	26895	8886	68906	900	7656	321	376	86
1989	2425936	17379	8861	71254	907	7856	320	386	89
1990	2627193	27791	9453	80365	913	8802	341	432	93
1991	2898988	28120	10309	90008	918	9837	372	483	95
1992	2847981	28542	9978	87646	925	9475	360	465	95
1993	2735626	28941	9452	80207	931	8615	341	423	91
1994	2646209	29251	9047	76572	934	8198	326	403	91
1995	2639654	29606	8916	75095	938	8006	322	393	90
1996	2644893	29672	8828	78810	931	8463	319	416	96
1997	2530354	30004	8433	77696	936	8298	304	408	98

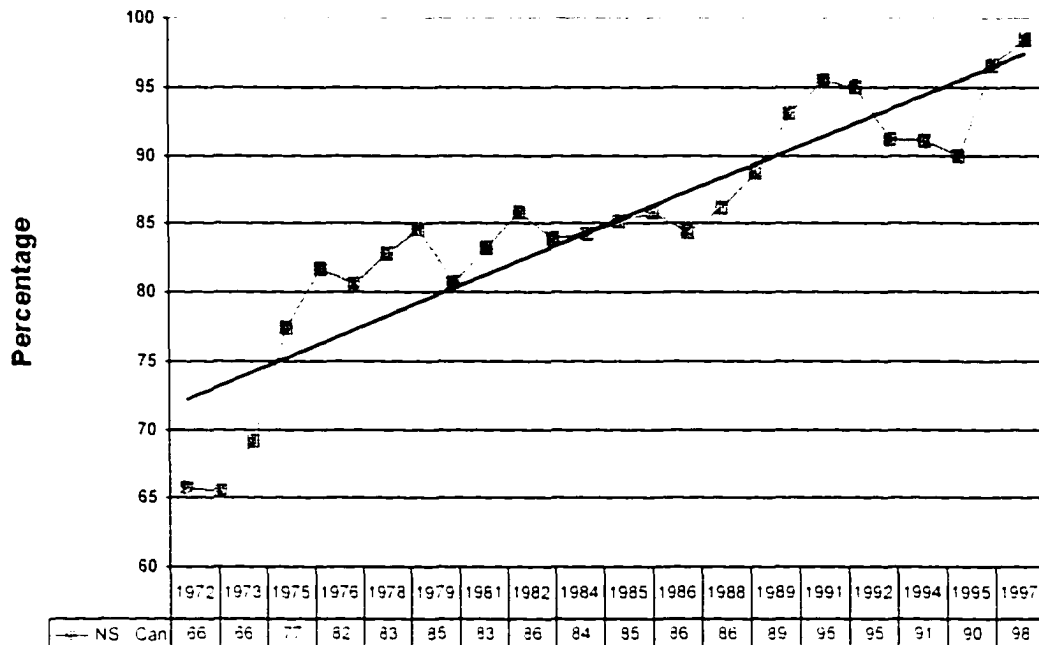
**Chart 3.1: Criminal Code Crime Rate Comparison,
Nova Scotia and Canada Rates of Increase, 1962-1997 (1962=100)**



**Chart 3.2: The Percentage Chance of Becoming a Victim of Crime
Police Reported Crimes, Nova Scotia, 1962-97**



**Chart 3.3: Criminal Code Crime Rate Comparison, Nova Scotia
as a Percentage of Canada, 1972-1997**



Trends in Violent Crime

The overall trends described above conceal significant differences between different categories of crime. In Nova Scotia, violent crime has risen at a faster rate than property crime, and the violent crime rate in the Province, as officially defined, now exceeds the national average. However, on closer inspection, it can be seen that the crime rates for serious violent crimes are still well below the national average, at less than two-thirds the Canadian rate. In fact, all four Atlantic Provinces still have considerably less serious violence than the rest of the country.

Counting only police-reported crimes, in 1997 the chances of being a victim of violent crime were one in 93 in Nova Scotia and one in 102 nationally, compared to one

in 415 and one in 452 respectively in 1962.³⁹ Therefore, according to the official statistics, the chances of being a victim of violent crime in the Province have gone up 445% since 1962 (Table 3.2 and Charts 3.4, 3.5 and 3.6).⁴⁰ Since 1962, Nova Scotia has suffered an increase in violent crime in 28 out of 35 years, according to the Uniform Crime Reporting survey (UCR).

Among the provinces Nova Scotia now has the fourth highest rate of violent crime in the country after Manitoba, Saskatchewan and British Columbia, and the highest rate east of Winnipeg, when reported common assaults are included. It is 20% higher than in Ontario and 40% higher than in Quebec.⁴¹

The actual number of violent incidents recorded by the police in Nova Scotia has increased by 463 per cent since 1962. In 1962 there were 1,904 violent crimes, including robbery; by 1997 that number had increased to 10,153.⁴²

In the last 20 years violent crime in Nova Scotia has been increasing at twice the national rate. Throughout the 1970s and 1980s, the Nova Scotia rate of violent crime averaged 16% below the national rate. Since 1992, the Nova Scotia rate of violent crime has been 8% higher than the national rate. The convergence has been sharpest in the last 12 years, with the Nova Scotia rate of violent crime rising steadily from 79% of the national average in 1986 to 110% in 1997 (Chart 3.7).

³⁹ Statistics Canada, *CANSIM Database*, matrices 2200 and 1. The figures are derived by dividing the number of criminal incidents by the population.

⁴⁰ As noted above, some of the increase may be explained by increased reporting rates for some categories of crime, such as sexual assault, domestic violence and child abuse.

⁴¹ Author's derived percentages from crime data in Statistics Canada, Cansim matrix 2200.

⁴² Statistics Canada, Cansim matrix 2200.

Serious violent crimes present a very different picture. Nova Scotia has only 63% of the Canadian crime rate, a ratio that has remained fairly constant in recent years. Compared to the United States, Nova Scotia has only one-sixth the crime rate for serious violent crimes (Chart 3.8). The United States has 3.5 times as many homicides per 100,000 people as Nova Scotia, and five times as many robberies.⁴³

Examining each category of serious violent crime separately, Canada as a whole also still ranks well below the United States. The crime rate for forcible rapes is 10% that in the U.S., aggravated assaults (with a weapon or causing bodily harm) are at one-third the U.S. level, and robberies are at 40% the U.S. rate.⁴⁴ By contrast, victimisation surveys, which include both reported and unreported crimes in all categories, indicate that the overall chance of being a crime victim is almost the same in Canada as in the U.S.⁴⁵

Among the serious violent crimes, sexual assault is the most likely to be more widely reported today than 35 years ago, and thus the most susceptible to uncertainties as to whether increases in officially reported rates are due to higher rates of victimisation or higher reporting rates. By contrast, homicide is always recorded⁴⁶, and robbery is also

⁴³ U.S. Bureau of the Census, *Statistical Abstract of the United States: 1997* (117th edition) Washington, DC, 1997.

⁴⁴ Government of Canada, Department of Foreign Affairs and International Trade, Investment Marketing Division, *Canada Business Facts 1996*, page 47, citing Statistics Canada, Canadian Centre for Justice Statistics, 1996; U.S. Department of Justice, *Crime in the U.S. 1994*; and F.B.I., *Uniform Crime Reports*, 1995.

⁴⁵ Statistics Canada, Canadian Centre for Justice Statistics, "Criminal Victimization: An International Perspective," *Juristat*, catalogue no. 85-002-XPE, volume 18, no. 6, pages 3-4. It should be noted that comparisons of overall *reported* crime rates with the United States are not possible, both because of significant differences in definitions of particular categories of crime, and because reporting rates are believed to be vastly different. Only those crime categories where comparable definitions are possible and where reporting rates are not believed to be very different (mostly serious violent crimes and motor vehicle theft) are used for comparative purposes in this report.

⁴⁶ This statement needs some clarification. Not all homicides are reported to the police. Unfortunately one can assume that some of the many missing persons are victims of homicide. What can be said is that when a homicide comes to the attention of the police they do not use discretionary reporting powers as they might on a lesser crime. Any homicide that comes to the attention of the police, whether the crime took place in Nova Scotia or any other province will be recorded; the same cannot be said of vandalism, for example.

unlikely to change dramatically over time due to changes in reporting rates.

The small number of annual homicides in the Province makes it necessary to examine averages over several years, in order to correct for unusual fluctuations in particular years. Looking at six-year time periods, it is apparent that the Nova Scotia homicide rate has risen slightly from about 90% of the national average in the 1960's to a rate almost identical with the national average in the 1990's. Over the 35 years, and starting from a lower base, the Nova Scotia homicide rate has gone up by 80%, while the national rate has increased by 60% (Table 3.3).

Even in reporting homicide rates, interpretation of the official statistics can be misleading. According to the most recently released Canadian statistics, as reported in *The Globe and Mail*, had the second highest rate of homicides among Canadian cities for 1997.⁴⁷ Though high by Canadian standards, the Halifax homicide rate (3.15 per 100,000) was still only one-third that in U.S. cities (9 per 100,000).⁴⁸ For 1997 alone the Canadian rate was 1.7 and the Nova Scotia rate 2.3 per 100,000.

However, the year a homicide is reported does not mean that this is the year the crime occurred. A closer examination of the 1997 data, which appear to indicate a higher Nova Scotia homicide rate, reveals that five of the homicides reported in 1997 actually occurred in 1981.⁴⁹ For this reason, averaging rates over longer periods will certainly yield more accurate and comparable results. Thus, for the six-year period 1992-1997, the Canadian and Nova Scotia murder rates were almost identical at 1.91 and 1.88 per 100,000 respectively.

⁴⁷ *The Globe and Mail*, 28 October, 1998, page A3.

⁴⁸ Statistics Canada, Canadian Centre for Justice Statistics, "Criminal Victimization: An International Perspective," *Juristat*, catalogue no. 85-002-XPE, volume 18, no. 6, page 5.

The crime rate for robbery in Nova Scotia is less than half the Canadian average. While the Nova Scotia robbery rate is the highest among the Atlantic provinces, all four Atlantic Provinces remain significantly below the Canadian rate, with Newfoundland and Prince Edward Island at 12% and New Brunswick at 20% of the Canadian average (Chart 3.9). It can be argued that, since reporting rates and social attitudes towards minor violence and common assault have less influence on these results, the provincial comparison of robbery rates is a more accurate reflection of serious crime incidence in the country. Certainly, since robbery directly affects the business climate, the comparison indicates a significant advantage for the Atlantic Provinces in terms of the costs of doing business.

Nevertheless, the inter-provincial comparison is no cause for complacency. Throughout the country, there has been an alarming increase in the incidence of robbery, and Nova Scotia is no exception to this trend. Again averaging the crime rates over 6-year time periods to even out unusual annual fluctuations indicates that robbery rates have increased by 350% nationwide and by nearly 300% in Nova Scotia between 1962-67 and 1992-97 (Chart 3.10). While not as dramatic as the 450% officially reported increase in violent crime, which includes common assaults, this increase in robberies does indicate a significant erosion in social peace and personal security that is not as attributable to reporting rates as the change in common assaults.

¹⁰ Nova Scotia Department of Justice, Policy, Planning and Research Division, personal communication, 17 March, 1999.

Table 3.2: Violent Crime Rate per 100,000 Population

Date	Incidents	Pop (000s)	Violent Crime I	Incidents	Pop (000s)	Violent Crime	1962=100	1962=100	NS as a % of	Yearly % Increase	% Increase in Comparison
	Canada	Canada	Canada	NS	NS	Nova Scotia	Canada	Nova Scotia	Can Crime Rate	Nova Scotia	To 1962, Nova Scotia
1962	41026	18583	221	1804	746	242	100	100	110		
1963	47229	18931	249	2021	751	269	113	111	108	11.3	11.3
1964	54769	19290	284	2539	755	336	129	139	118	25.0	39.1
1965	58780	19644	299	2549	756	337	136	139	113	0.3	39.4
1966	69386	20015	347	2783	756	368	157	152	106	9.2	52.2
1967	77614	20378	381	2723	760	358	173	148	94	-2.7	48.2
1968	87544	20071	436	2991	767	390	198	161	89	8.8	61.3
1969	95084	21001	453	3232	775	417	205	172	92	6.9	72.5
1970	102358	21297	481	3391	782	434	218	179	90	4.0	79.3
1971	108095	22026	491	3505	799	439	222	181	89	1.2	81.4
1972	110468	22285	496	3294	804	410	225	169	83	-6.6	69.4
1973	117760	22560	522	3492	814	429	236	177	82	4.7	77.4
1974	126053	22875	551	3664	820	447	250	185	81	4.2	84.8
1975	135424	23209	583	3918	828	473	264	196	81	5.9	95.7
1976	136935	23518	582	4095	837	489	264	202	84	3.4	102.3
1977	135745	23796	570	4076	841	485	258	200	85	-0.9	100.4
1978	138972	24036	578	4401	846	520	262	215	90	7.3	115.1
1979	147528	24277	608	4437	851	521	275	216	86	0.2	115.6
1980	155864	24593	634	4742	855	555	287	229	88	6.4	129.3
1981	162228	24900	652	4793	856	560	295	232	86	1.0	131.5
1982	168646	25202	669	4914	862	570	303	236	85	1.8	135.7
1983	172315	25456	677	5115	871	587	307	243	87	3.0	142.8
1984	179397	25702	698	5161	880	586	316	243	84	-0.1	142.5
1985	189822	25942	732	5203	888	586	331	242	80	-0.1	142.3
1986	204917	26204	782	5509	892	618	354	255	79	5.4	155.4
1987	219381	26550	826	5902	896	659	374	272	80	6.7	172.4
1988	232606	26895	865	6352	900	706	392	292	82	7.1	191.9
1989	248579	27379	908	7034	907	776	411	321	85	9.9	220.7
1990	269503	27791	970	7830	913	858	439	355	88	10.6	254.6
1991	296962	28120	1056	9108	918	992	478	410	94	15.7	310.3
1992	307512	28542	1077	10130	925	1095	488	453	102	10.4	352.9
1993	310201	28941	1072	9874	931	1061	485	439	99	-3.2	338.6
1994	303398	29251	1037	10187	934	1091	470	451	105	2.8	351.0
1995	294603	29606	995	10239	938	1092	451	451	110	0.1	351.4
1996	291437	29672	982	10548	931	1133	445	468	115	3.8	368.4
1997	296737	30004	989	10153	936	1084	448	448	110	-4.3	348.4

Increase in 28 of 35
years

Chart 3.4: Violent Crime Rate, Nova Scotia and Canada, 1962-1997

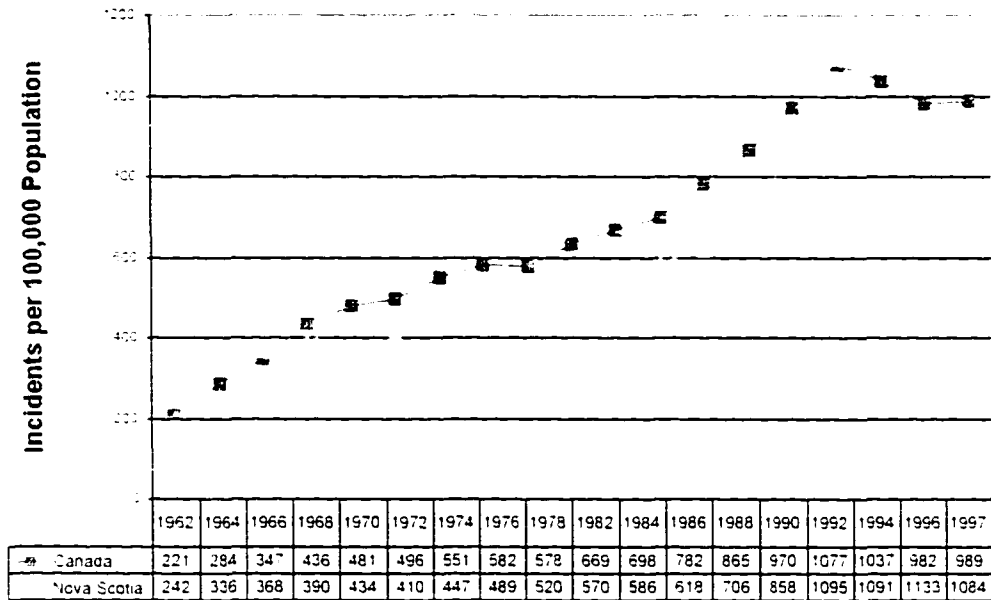


Chart 3.5: The Percentage Chance of Being a Victim of Violent Crime in Nova Scotia, 1962-1997

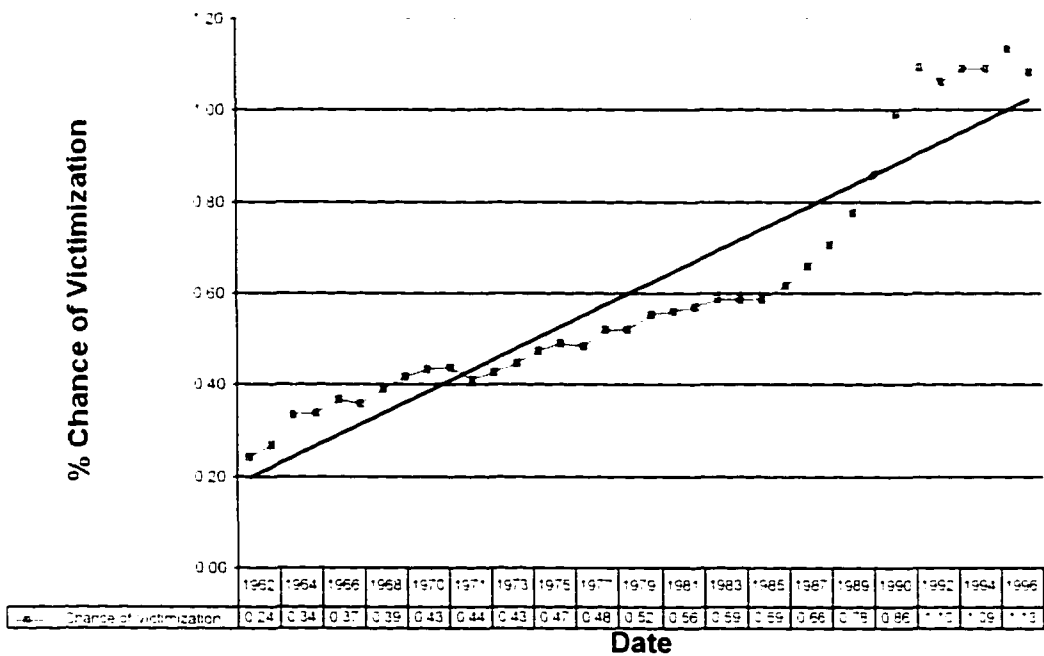


Chart 3.6: Nova Scotia Violent Crime Rate as Percentage of the Canada Violent Crime Rate (Canada = 100%)

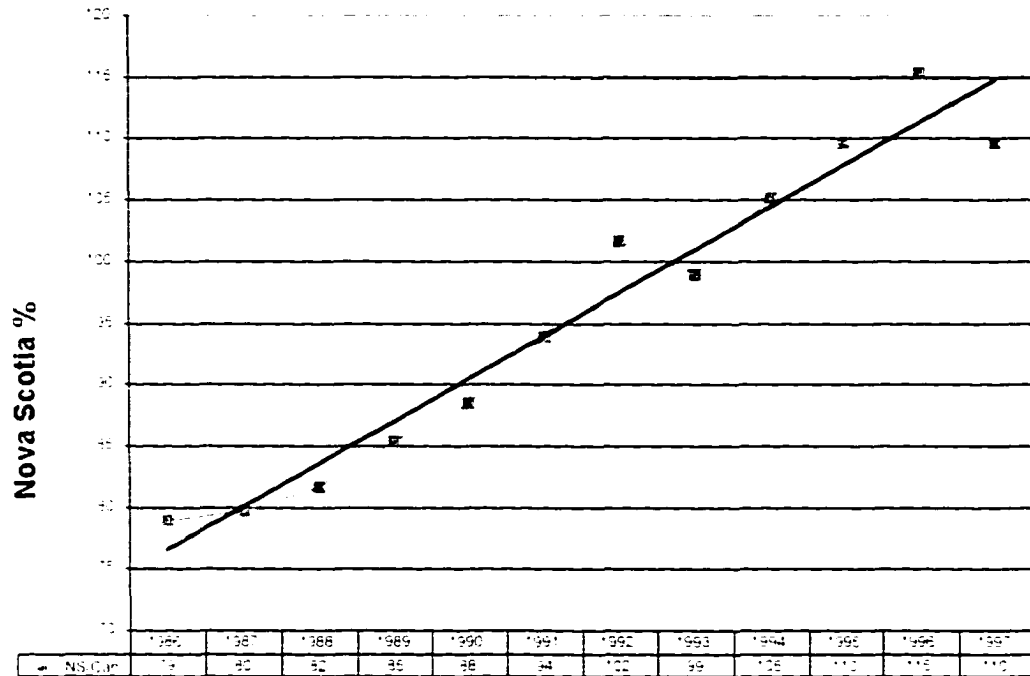


Chart 3.7: Violent Crime Rate, 1962-97

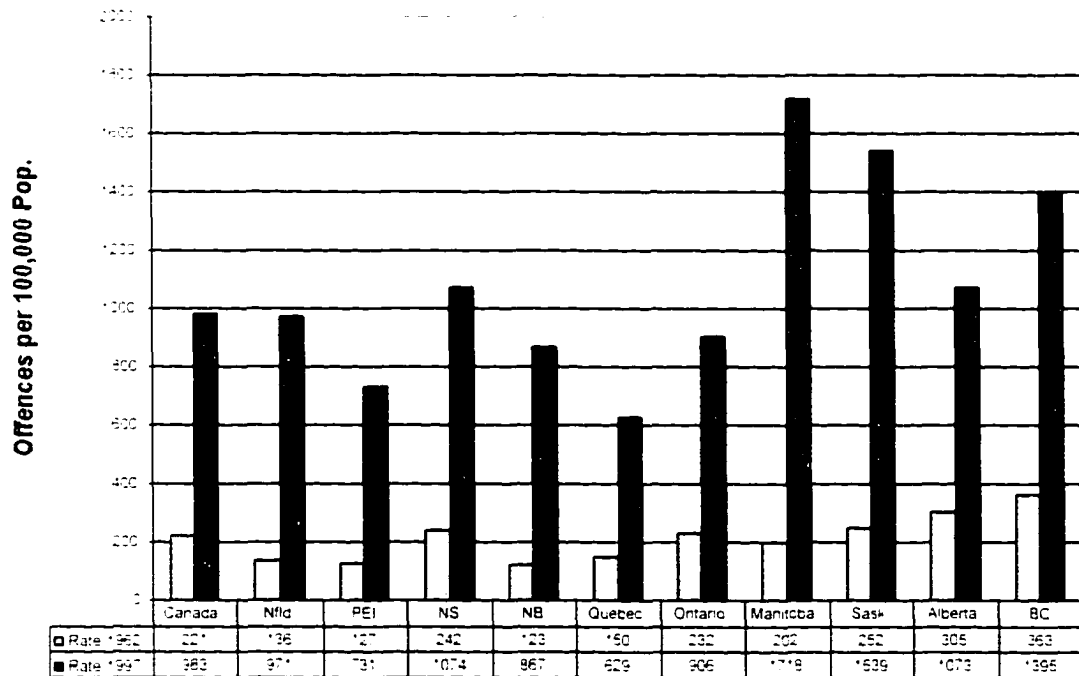
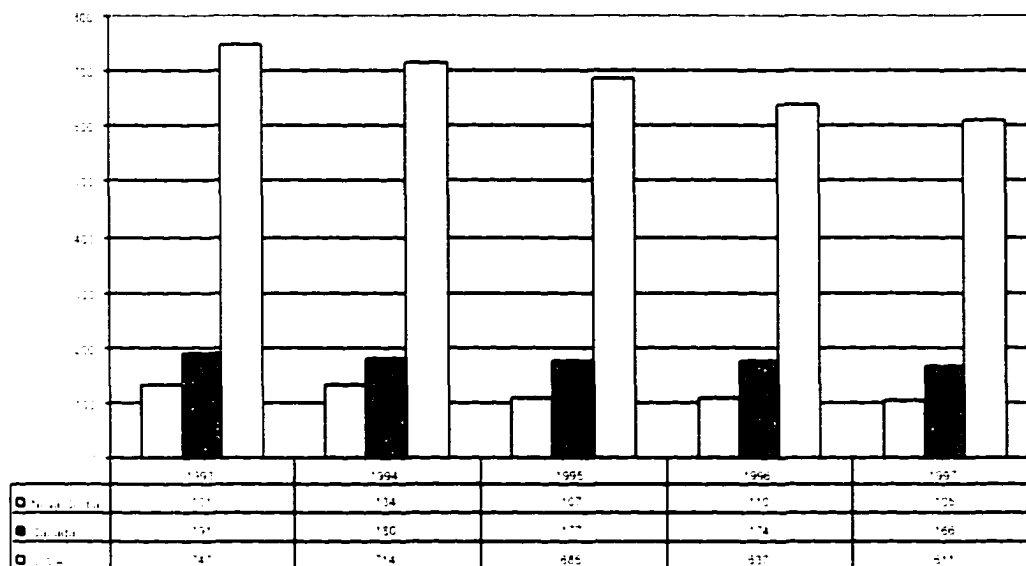


Chart 3.8: Serious Violent Crimes, Nova Scotia, Canada, U.S.A., 1993-1997
 (Rate per 100,000 for homicide, robbery, "aggravated assault" (U.S.) / assault (3) (Can.),
 forcible rape (U.S.) / sexual assault (1) and (2) (Can.)



Sources: Statistics Canada, FBI Crime Statistics, NS Department of Economic Development and Tourism. In particular, I am grateful to Mr. John Odenthal, senior policy analyst in the NS Department of Economic Development and Tourism, for his assistance in identifying comparable crime categories for purposes of this comparison.

Table 3.3: Increase in Homicide Rate, Canada and Nova Scotia, 1962-67 to 1992-97

	Canada	Nova Scotia
1962-67 Av. Rate /100,000	1.19	1.06
1992-97 Av. Rate /100,000	1.91	1.88
Percentage increase	61%	78%

Chart 3.9: Robbery Crime Rate, 1962 & 1997

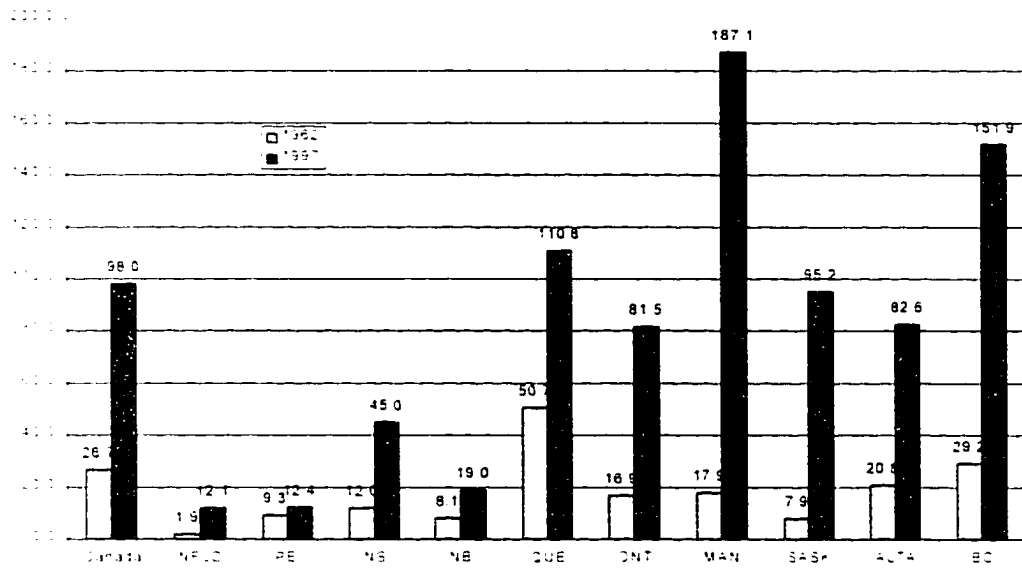
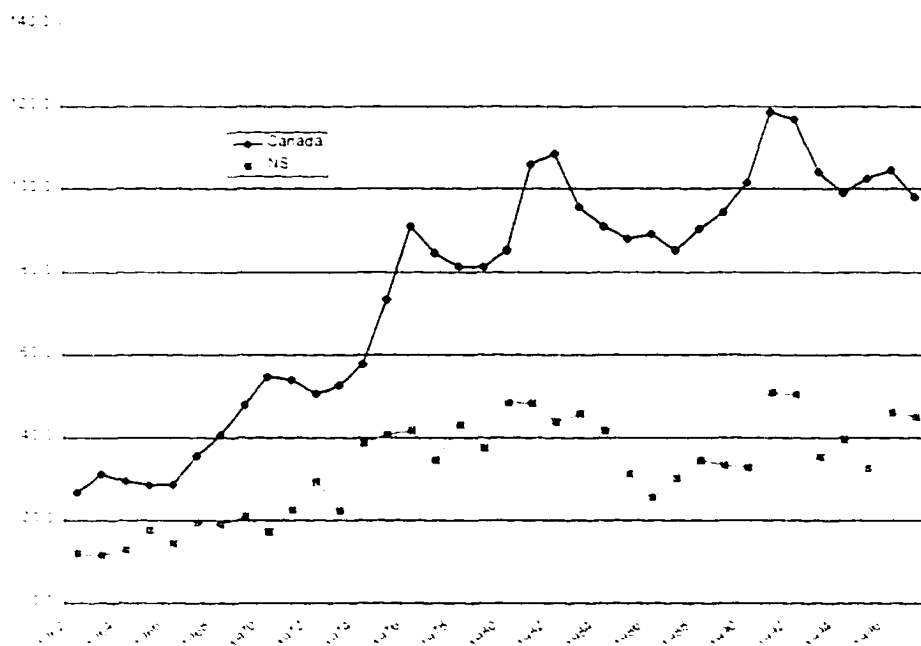


Chart 3.10: Increase in Robberies, Canada and Nova Scotia, 1962 – 1997
(Rate per 100,000 population)



Trends in Property Crime

Property crime rates in the Province have remained consistently below the Canadian average, but the gap has been closing as the Nova Scotia rate of increase in property crimes exceeds the national average. The Nova Scotia property crime rate was 62% of the Canadian rate in 1962, 60% in 1972, 72% in 1982, and 82% in 1997 (Table 3.4 and Chart 3.11). As in other categories of crime, there is a gradual convergence towards the national average. For the most serious of property crime categories, break and enter, the Nova Scotia rate was 67% of the national average in 1962 and 79% of the national average in 1997.⁵⁰

The official Nova Scotia property crime rate has fallen by nearly 20% since 1990 and by 26% from its 1991 peak, but it has levelled off since 1994 and is still 340% higher than it was in 1962. The Canadian rate is 257% higher than it was in 1962. For police-recorded crimes, the chances of being a victim of property crime in Nova Scotia were one in 25 in 1997, compared to one in 86 in 1962, and one in 21 nationally today (Chart 3.12). Note that the decrease in the property crime rate in the 1990s in Nova Scotia is not so dramatic as the decrease at the national level, so there is still a convergence.

The 1996 International Crime Victimization Survey found that property crimes and car theft generally have high rates of reporting, partly for insurance reasons.⁵¹ More dramatic changes in reporting rates have likely occurred for assaults and sexual assaults, which traditionally have the lowest rates of reporting. The increase in the property crime

⁵⁰ Crime incidents from Statistics Canada, *CANSIM Database*, matrix 2200; population statistics used to calculate crime rates over time from Statistics Canada, *CANSIM Database*, matrix 1.

⁵¹ Statistics Canada, Canadian Centre for Justice Statistics, "Criminal Victimization: An International Perspective," *Juristat*, catalogue no. 85-002-XPE, volume 18, no. 3, 1996.

rate over time is therefore probably subject to a less severe discount than the violent crime rate.

Among the provinces Nova Scotia has just the 7th highest rate of property crime in the country and only half the rate of British Columbia, but Nova Scotia's rate of increase has been the 4th fastest in the last 20 years (Chart 3.13). Among crime categories, the Nova Scotia official police-reported crime rate for break and enter was 3.3 times as high in 1997 as in 1962, 3.4 times as high for theft, 2.9 times as high for motor vehicle theft, and 6.4 times as high for fraud (Chart 3.14).

In actual numbers of reported incidents, there were more than four times as many thefts and break and enter incidents in 1997 as there were in 1962, 3.4 times as many motor vehicle thefts, five times as many robberies, and eight times as many reported frauds.⁵²

It is worth recalling here that these property crime rates refer almost exclusively to "street crime." As noted earlier, estimates of corporate crime are not included because of data and reporting difficulties, except for the rare cases where such incidents are prosecuted. While half the top 1,000 Canadian companies reported being victims of fraud, the vast majority of incidents remain unreported.⁵³

Trends in motor vehicle theft illustrate the advantage that the Atlantic provinces still enjoy in lower property crime rates, and also the fact that this advantage is eroding. Motor vehicle theft is also a useful illustration since reporting rates are traditionally high

⁵² Note that robbery is officially classified as a crime against the person rather than against property, but is included here for illustrative purposes.

⁵³ Statistics Canada, Rebecca Kong, "Canadian Crime Statistics, 1997," *Juristat*, catalogue No. 85-002-XPE, Volume 18, No. 11, Ottawa: Minister of Industry, July 1998.

for this crime category because victims are likely to be compensated through insurance theft claims, and the rates are unlikely to change significantly over time.

The four Atlantic Provinces still have the lowest rate of motor vehicle theft in the country. Nova Scotia's rate, though the highest in Atlantic Canada, is still less than half the Canadian average. In 1995, 9 out of 1,000 Nova Scotia vehicle owners had a vehicle stolen, compared to 18 out of 1,000 in Canada, 21 in France, 22 in the U.S.A and 33 in England.⁵⁴

Based on motor vehicle thefts (MVT) per 100,000 registrations, the Nova Scotia rate of motor vehicle thefts has actually fallen by 9 per cent since 1975, while nationally there has been an increase of 36%. In 1977 the Nova Scotia motor vehicle theft rate per 100,000 vehicle registrations was 77 per cent of the national rate, and only 33% in 1994.⁵⁵

Since 1994, however, the rate of motor vehicle thefts has been rising steeply, and it is now 46% of the national average. There were 2558 incidents of motor vehicle theft in Nova Scotia in 1997, the highest annual total on record, and the highest rate since 1979. In the last few years, the Nova Scotia motor vehicle theft rate has risen considerably faster than the national rate. From 1994 to 1997 it increased by 50% compared to 8% nationally. Canada even experienced a decline in its vehicle theft rate in 1997, the first decrease in a decade.⁵⁶

⁵⁴ Statistics Canada, Canadian Centre for Justice Statistics, Julie Sauve, "Motor Vehicle Theft in Canada, 1996", *Juristat*, catalogue no. 85-002, volume 18, no. 1, January, 1998, page 2.

⁵⁵ Statistics Canada, Rebecca Kong, "Canadian Crime Statistics, 1997," *Juristat*, catalogue No. 85-002-XPE, Volume 18, No. 11, Ottawa: Minister of Industry, July 1998.

⁵⁶ Statistics Canada, Canadian Centre for Justice Statistics, Julie Sauve, "Motor Vehicle Theft in Canada, 1996", *Juristat*, catalogue no. 85-002, volume 18, no. 1, January, 1998, page 2.

In 1996 alone, the rate of increase in vehicle thefts was 30% in Nova Scotia, the largest jump in the country. Halifax had the largest increase of any Canadian city, 59%, followed by Saint John at 58%.⁵⁷ In fact, 64% of Nova Scotia motor vehicle thefts are committed in Halifax. The overall trends illustrate a quality of life advantage still enjoyed in this region, and one that has been eroding rapidly in recent years. The substantial advantage of a motor vehicle theft rate less than half the national average is important for the business climate as well as for personal security and cost savings. Recent trends indicate that this advantage must be actively protected if it is not to slip away.

The conclusion is the same for trends in other categories of reported property crime. The Nova Scotia rate for break and enter incidents was 67% of the Canadian rate in 1962 but 79% in 1997. The Nova Scotia theft rate was 64% of the national average in 1962, and 95% of the national average in 1997. In cases of reported fraud, Nova Scotia has already surpassed the national average. In 1962, Nova Scotians committed fraud at 40% of the Canadian rate and at 128% the Canadian rate in 1997.

There is no evidence to demonstrate that reporting rates have changed more dramatically in the Maritime Provinces than in the rest of Canada. Therefore, even if higher rates of reporting qualify the absolute rates of increase in police-reported crimes, they do not explain the *relative* narrowing of the gap between this region and the rest of the country.

In sum, police-reported crime rates overall have declined by 15% since peaking at the height of the recession in 1991, but they are still much higher than they were 35 years

⁵⁷ John Turner, Chief, Policing Services Programme, Canadian Centre for Justice Statistics, recommends that inter-city comparisons be done using Census Metropolitan Area (CMA) data (personal communication, 6 April, 1999).

ago. While part of the increase is undoubtedly due to higher reporting rates for some crimes, there is also no doubt that the chances of being a crime victim both in Nova Scotia and in Canada as a whole have risen markedly in the last four decades.

The official statistics must be qualified by the higher reporting rates in some crime categories. A higher propensity to report sexual assault, domestic violence and common assault, for example, may be regarded as a refusal to tolerate levels of violence once accepted. To the extent that higher official crime rates reflect increased reporting, the trend may actually signify movement towards a more civil society. Only regular victim surveys can reveal the extent to which reporting rates affect the official police-reported statistics.

Despite this major caveat, it is clear that crime rates and have risen substantially. The three-fold increase in robberies, where reporting rates are unlikely to have changed significantly, is indicative of the scale of the crime increase nationally. It is difficult to interpret this in any other way than as a decline in societal quality of life.

As recently as 25 years ago Nova Scotia's crime rate was less than two-thirds the Canadian average. But this "comparative advantage" has eroded, as the rate of crime increase in Atlantic Canada has far exceeded the national average, and Nova Scotia's overall reported crime rate stands today at 98% of the Canadian rate. Common assault accounts for most of the increase, and the region retains a significant advantage when serious violent crimes and property crimes are considered, with offence rates still substantially below the Canadian average. However, since reporting rates are not likely to have changed more in one part of the country than another, it is difficult to escape the conclusion that the overall crime trends demonstrate a gradual convergence towards the

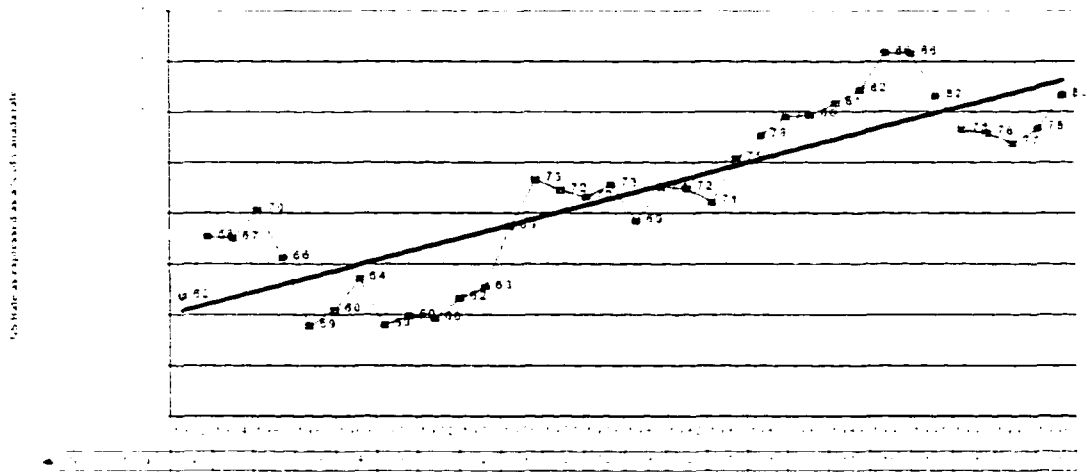
national average. This is one area where convergence towards the national average is clearly not what this region needs for its development, nor is it the type of growth that improves individual quality of life.

Table 3.4: Property Crime Rate per 100,000 Population

Date	Incidents	Pop.(000s)	Crime rate	Incidents	Pop.(000s)	Property Crime rate	1962=100	1962=100	NS as a % of
	Canada	Canada	Canada	NS	NS	Nova Scotia	Canada	Nova Scotia	Can Crime Rate
1962	351483	18583	1891	8714	746	1168	100	100	62
1963	387517	18931	2047	10403	751	1385	108	119	68
1964	414048	19290	2146	10937	755	1449	114	124	67
1965	410688	19644	2091	11108	756	1469	111	126	70
1966	451980	20015	2258	11199	756	1481	119	127	66
1967	506151	20378	2484	11109	760	1462	131	125	59
1968	584996	20071	2915	13508	767	1761	154	151	60
1969	655304	21001	3120	15369	775	1983	165	170	64
1970	748519	21297	3515	16203	782	2072	186	177	59
1971	801379	22026	3638	17400	799	2178	192	186	60
1972	807468	22285	3623	17367	804	2160	192	185	60
1973	833148	22560	3693	18528	814	2276	195	195	62
1974	946793	22875	4139	21281	820	2595	219	222	63
1975	1041036	23209	4485	25493	828	3079	237	264	69
1976	1062952	23518	4520	27730	837	3313	239	284	73
1977	1059688	23796	4453	27050	841	3216	235	275	72
1978	1097242	24036	4565	27641	846	3267	241	280	72
1979	1186697	24277	4888	30279	851	3558	258	305	73
1980	1334619	24593	5427	32122	855	3757	287	322	69
1981	1429520	24900	5741	35657	856	4166	304	357	73
1982	1466923	25202	5821	36338	862	4216	308	361	72
1983	1422703	25456	5589	34586	871	3971	296	340	71
1984	1408663	25702	5481	36339	880	4129	290	354	75
1985	1408717	25942	5430	37444	888	4217	287	361	78
1986	1448550	26204	5528	39174	892	4392	292	376	79
1987	1468591	26550	5531	39480	896	4406	293	377	80
1988	1457361	26895	5419	39448	900	4383	287	375	81
1989	1443048	27379	5271	39293	907	4332	279	371	82
1990	1554348	27791	5593	43828	913	4800	296	411	86
1991	1726769	28120	6141	48223	918	5270	325	451	86
1992	1674773	28542	5868	44268	925	4786	310	410	82
1993	1599037	28941	5525	40221	931	4320	292	370	78
1994	1524931	29251	5213	37915	934	4059	276	348	78
1995	1549877	29606	5235	37738	938	4023	277	344	77
1996	1555800	29672	5193	37880	931	4068	275	348	78
1997	1458930	30004	4862	37177	936	3971	257	340	82

**Chart 3.11: Nova Scotia Property Crime Rate
as Percentage of Canada Property Crime Rate**

Chart 3.8 Nova Scotia Property Crime Rate
as Percentage of Canada Property Crime Rate



**Chart 3.12: The Percentage Chance of Being a Victim of Property Crime,
Police-Reported Property Crimes, Canada and Nova Scotia, 1962-1997**

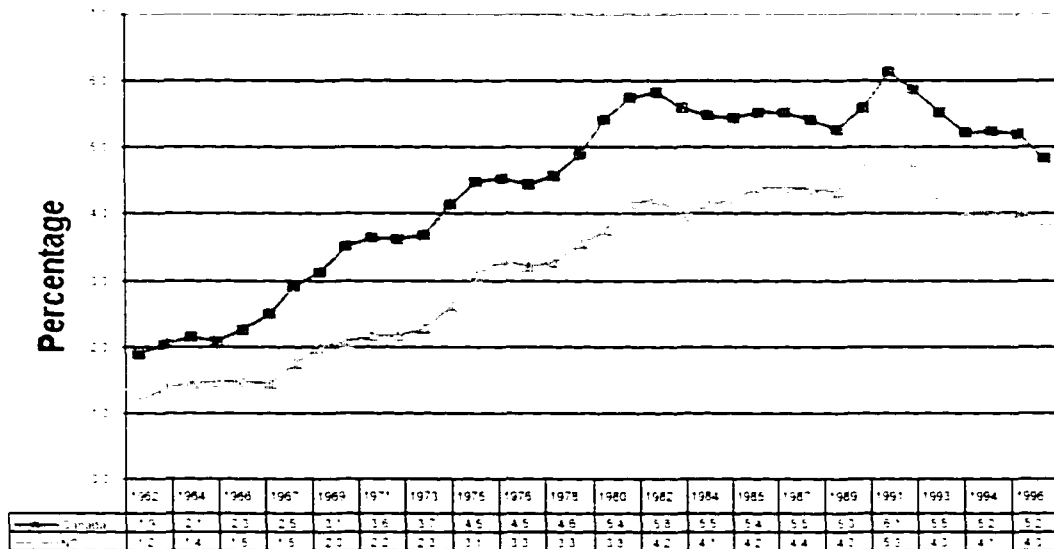


Chart 3.13: The Rise in the Property Crime Rate across Canada

Chart 5.13 The Rise in the Property Crime Rate Across Canada

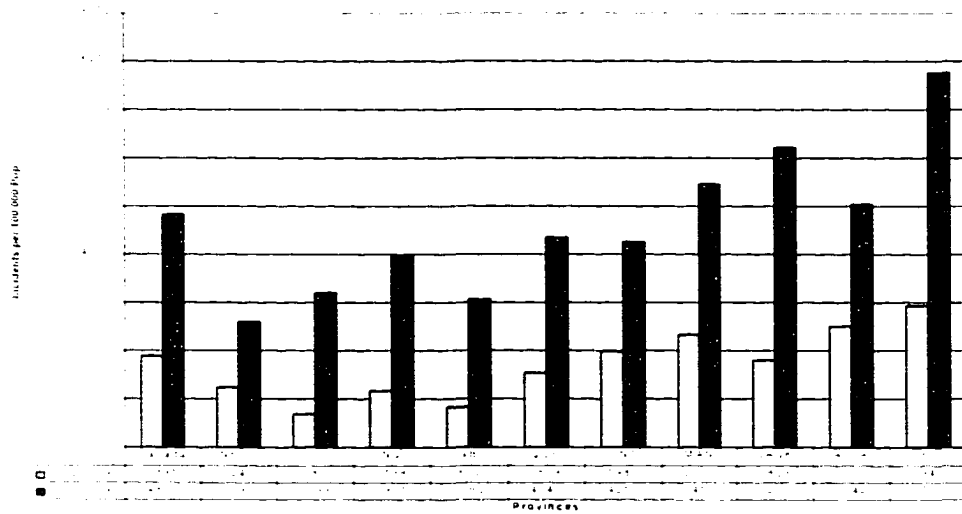
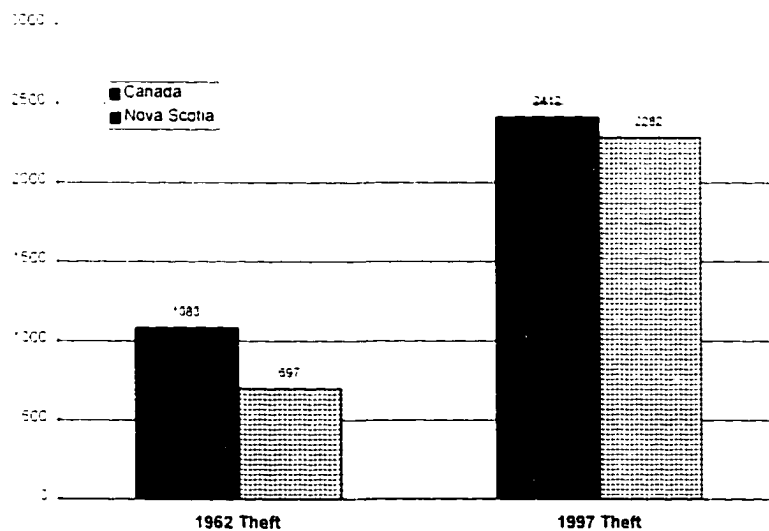
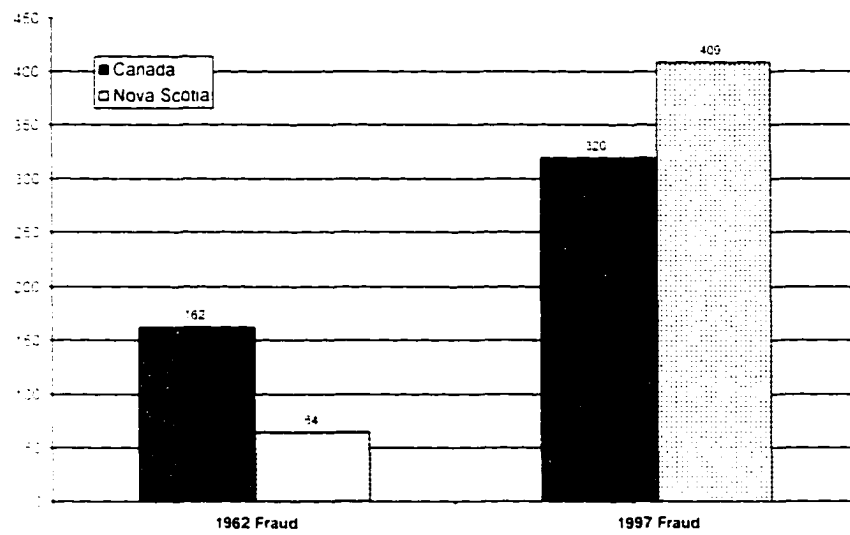


Chart 3.14: Crime rates per 100,000 population for various property crimes: Nova Scotia and Canada, 1962 and 1997.

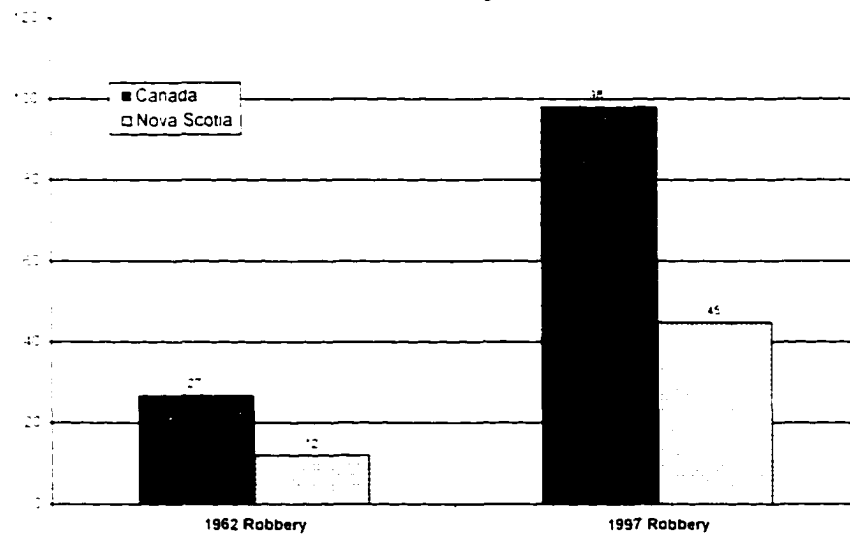
Theft



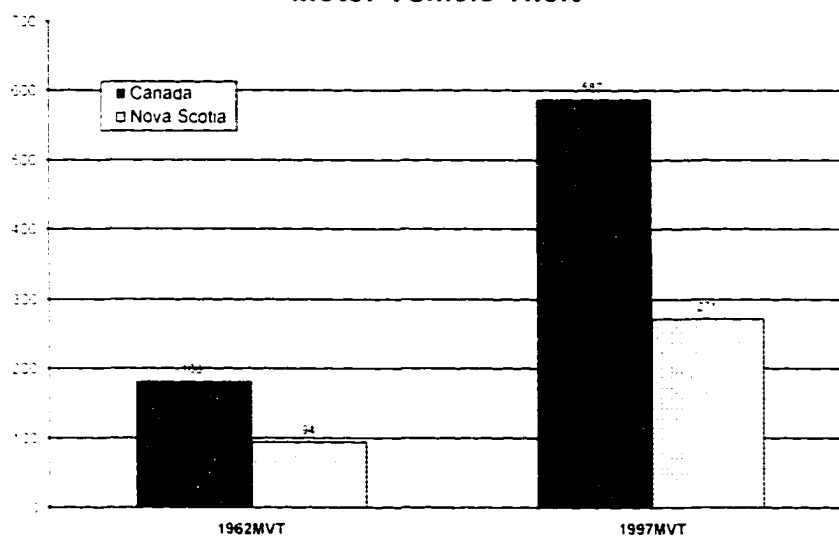
Fraud



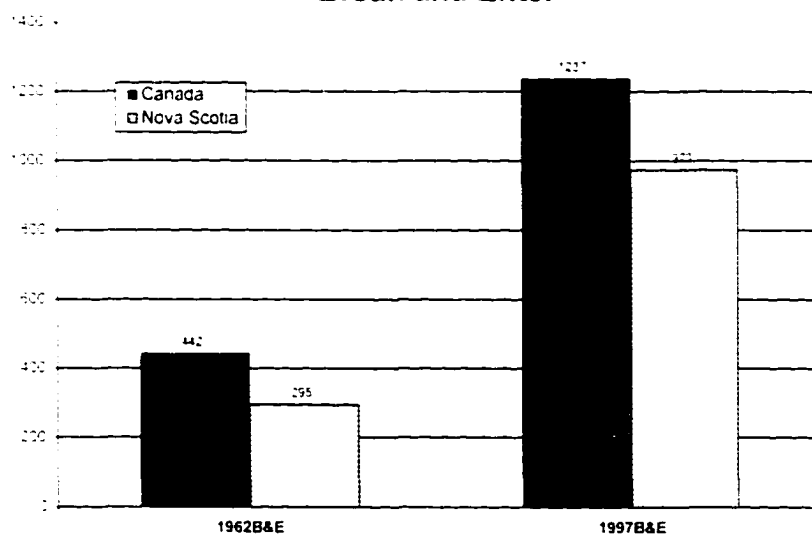
Robbery



Motor Vehicle Theft



Break and Enter



Chapter Four

Social and Demographic Characteristics

Crime is not an independent variable, but is correlated with social and demographic characteristics. In particular, high rates of crime are associated with gender, substance abuse, recidivism, unemployment, low education, and age. Understanding these correlations is particularly important in identifying cost-effective investments that can reduce crime rates and produce long-term economic savings and social benefits.

Essentially, this section points out the relationship between over-represented groups and the crime rate. Solutions to crime are far more complex than merely pointing out the fault. For example, the high correlation between crime trends and unemployment rates over time cannot be taken as a causal relationship in any absolute sense, as the high unemployment and low crime rates in Newfoundland attest.

With these caveats and qualifications, it is still necessary at least to list the major demographic linkages that do exist, in order to demonstrate the dependent nature of crime. Social programmes targeted in particular areas may have a significant crime prevention function while producing other social benefits. It is therefore an economically prudent strategy to identify such “win-win” measures that improve work skills, productivity and performance, raise educational levels, reduce social service costs and increase the tax base, while reducing crime at the same time.

85% of adult criminal court cases in Nova Scotia involve males, and 95% of those incarcerated are male.⁵⁸ In 1996 just five per cent of admissions to Nova Scotia jails were female, a figure that has remained fairly constant over the last two decades. Nationally, more women are being imprisoned, and the female share of total admissions to provincial

⁵⁸ Statistics Canada, Canadian Centre for Justice Statistics, Denyse Carriere, “Adult Criminal Court Statistics, 1996-97”, *Juristat*, catalogue no. 85-002, volume 18, no. 7, April, 1998, page 1; Statistics

jails has risen from five per cent in 1978 to nine per cent in 1996.⁵⁹ In federal penitentiaries 98% of inmates are male, indicating that men overwhelmingly commit the most serious crimes.⁶⁰

Between 1986 and 1997 women committed only 13% of all criminal code violations, 10% of violent crimes, 7% of robberies, and just 5% of break and enters and motor vehicle thefts. In every criminal category men significantly outscore women. Men committed more break and enters, robberies and stole more motor vehicles in 1997 than women did for the whole period of 1986-97 (Table 4.1).

From an economic perspective this effectively means that women are subsidising the costs of crime committed by men, even though Nova Scotia women working full-time earn only 66 cents on average to the male dollar.⁶¹ Female tax dollars pay for prisons and police, and women bear substantial costs of victim losses, theft insurance, higher prices due to crime, and home security expenditures - costs incurred largely because of crime committed by men.

One positive gender-related aspect of crime that may be reflective of a more civil society is the higher propensity to report sexual assault, domestic violence and spousal abuse to the police. Higher reporting rates for these crimes indicate that levels of violence once tolerated are no longer socially acceptable. This is one instance where higher official crime rates are not indicative of a depreciating social asset, but rather of higher social standards.

Canada, David Robinson, et. al., "A One-Day Snapshot of Inmates in Canada's Adult Correctional Facilities," *Juristat*, catalogue no. 85-002, volume 18, no. 8, gives the male percentage as 96%.

⁵⁹ Statistics Canada, *Number of Admissions to Provincial facilities*, Cansim Matrix 318

⁶⁰ Federal penitentiaries are used to house offenders who are given sentences in excess of two years.

⁶¹ Statistics Canada, *Women in the Workplace*, 2nd edition, catalogue no. 71-534, page 42.

Table 4.1: Crimes by Sex, Nova Scotia, 1997 and 1986-1997

Adults Charged by Actual Offences, 1986-1997.⁶²				
	Female 1997	Female Total: 1986-97	Male 1997	Male Total: 1986-97
All Offences. Total	2438	37334	11423	256346
Criminal Code. Total	2302	28036	10387	128303
Crimes Of Violence	501	3558	3221	29825
Murder	4	31	10	128
Attempted Murder	3	20	7	108
Manslaughter	1	2	1	14
Robbery	9	97	137	1390
Property Crimes	1353	18308	3693	53814
Breaking & Entering	67	660	886	12960
Theft-Motor Vehicle	14	133	205	2569
Theft	754	12242	1810	26170
Frauds	503	5022	608	9792

The evidence is that men commit more crimes than women, but the conclusion cannot be drawn that all men are more likely to commit crimes than women are. Not all men react in the same way: most men do not commit crimes. The circumstances that increase the chances of men committing crimes must be considered if prevention is to be achieved. Age is one such factor.

A one-day survey of Canada's inmate population revealed that the median age of those on-register was 32 years old, (31 in provincial prisons and 34 in federal prisons), whereas the median age in the general adult population was 41. In Nova Scotia, the median age of inmates was 30, compared to the general population median of 42. Of those found guilty in adult criminal courts in Nova Scotia, 1995-96, 31% were aged 18-

⁶² Statistics Canada, Cansim Disc 1998-2, Cat. No. 10F0007XCB, Matrix 2198: *Adults Charged by Actual Offences. Canada. Provinces & Territories.*

24, 32% 25-34, 21% 35-44, 9% 45-54, and 5% were aged 55 or over.⁶³ In other words, most criminals are relatively young.

It has been suggested that changes in the crime rate are partly dependent on changes in the number and proportion of young male adults in the population. Since crime is highly correlated with this demographic group, the ageing of the Canadian population should produce a proportionate decline in the crime rate. This appears to make common sense. However, when this proposition was tested it brought somewhat indeterminate results (Chart 4.1).⁶⁴

It can be seen that the sharpest drop in the percentage of 15 to 34 year-old males in the Nova Scotia population has occurred in the last 10 years, and this may well be reflected in declines in the property crime rate in the 1990s, though the correlation is less clear for violent crime and for the 1980s as a whole. Also, the sharp increase in crime in the early 1990s occurred despite an ongoing drop in the proportion of young males in the population, and seems more highly correlated with the recession than with age factors.

Needless to say, both factors may work together, and high unemployment rates among male youth may produce the highest correlation with increased crime rates. This proposition needs to be tested further.

Nationally, youth unemployment has remained steadily high since 1990 and has consistently been about 80% higher than for older groups. Youth unemployment reached 20% during the recession of the early 1980s and 18% during the 1990s recession. But

⁶³ Statistics Canada, *Criminal Justice at a Glance: Data Highlights from the Canadian Centre for Justice Statistics, 1997*, CD Rom, File: *Adult Criminal Court – Most Serious Sentence, 1995-96*.

⁶⁴ The author wishes to thank Dr. Don Clainmont, Department of Sociology, Dalhousie University, for recommending that this proposition be tested.

unlike the 1980s, in which the recovery produced a steady drop in youth unemployment to 11% in 1989, the economic recovery of the 1990s has not proportionately benefited youth. While overall unemployment rates fell during the 1990s, youth unemployment remained steadily high, averaging 17% in 1997, more than twice the rate for adults.⁶⁵

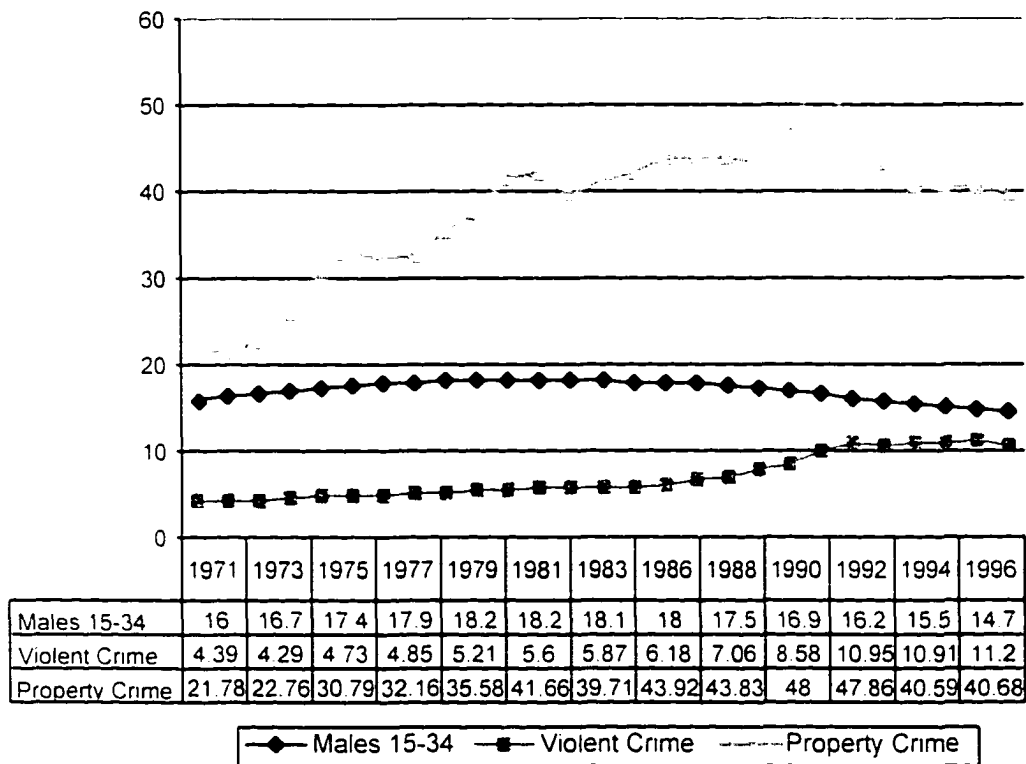
As Statistics Canada notes:

Since the end of the last recession, the beneficiaries of employment growth have been adult men and women. Aside from a little spark around the end of 1994, youths' employment growth has yet to be rekindled.⁶⁶

⁶⁵ Statistics Canada, *Canadian Economic Observer*, catalogue no. 11-210-XPB, table 8, page 34.

⁶⁶ Statistics Canada, *Perspectives on Labour and Income*, Autumn 1997, catalogue no. 75-001-XPE, p. 12.

Chart 4.1: Percentage of Young Males, age 15-34, in the Population, and Changes in the Crime Rate, Nova Scotia, 1971 – 1997
(Violent Crime and Property Crime Rates per 1,000 population)



Among those who are employed, young workers have also experienced the greatest growth in temporary, part-time, and limited-term jobs,⁶⁷ and therefore have the highest rates of underemployment. Again, no definitive causal correlation can be made with crime; it is likely that combining age and gender specific data with employment characteristics will yield useful information.

Nova Scotia youth courts hear more cases than in the past, a trend that runs counter to that in the country as a whole. In 1996 3,549 Nova Scotia youth appeared in

⁶⁷ Statistics Canada, *Perspectives on Labour and Income*, Winter, 1995, catalogue no. 75-001E, pp. 38-39.

court, up from 3.078 in 1992.⁶⁸ Nationally the figure has dropped from 115.187 in 1992 to 110.065 in 1996. Though the number of Nova Scotia youth appearing in court has increased at a rate in excess of the national average, the overall rate of youth criminal cases is now about the same as the national average. It is noteworthy that the fastest rates of increase in youth arrests in Nova Scotia have been among the younger age groups, with court appearances by 14-year-olds up 93% since 1992, 15-year-olds up 42%, and 13-year-olds up 33% (Table 4.2).

Table 4.2: Cases Heard in Youth Court, Canada and Nova Scotia, 1992 – 1996:
(Rate of youth court cases per 10,000 youth within each age group)

	92	92	93	93	94	94	95	95	96	96	92-96	92-96
Age	Can	NS	Can	NS	Can	NS	Can	NS	Can	NS	Can %	NS %
12	88	68	93	54	91	75	97	75	95	78	7	15
13	224	151	232	185	221	161	234	192	229	201	2	33
14	446	235	433	282	407	304	419	351	421	453	-6	93
15	615	384	630	427	577	443	581	570	589	545	-4	42
16	751	686	732	683	703	809	684	785	660	793	-12	16
17	781	816	773	779	720	755	712	834	677	706	-13	-14

The trend in youth court cases is worrying. If criminals learn their trade when they are young the overall crime rate in Nova Scotia looks set to increase. Further research is needed to understand more about the socio-economic and demographic background of young offenders. In particular, it seems important to examine the relationship between child poverty and crime, and to determine whether the increase in child poverty rates in Nova Scotia are responsible in part for the higher numbers of children appearing in youth courts.

Like men, aboriginal people are over represented in the corrections system. Aboriginals in Nova Scotia are jailed at four times their share of the population. While

⁶⁸ Statistics Canada, *StatCan: CANSIM Disc. 1998-2*, Cat. No. 10F0007XCB, Matrix 8901: *Cases Heard*

they make up only 1.5% of the general population. they accounted for 6% of all admissions to custody in 1997-98. Of 3,318 admissions to provincial and federal custody and on remand, 199 were natives. Considering only provincially sentenced offenders, 5% were aboriginals in 1996 and 3.8% were in 1997-98.

This disproportion is in line with the rest of the country, where aboriginals accounted for 16% of prison admissions compared to a 3% general population share. In Saskatchewan, aboriginals are jailed at nearly seven times their share of the population. 74% of prisoners in that province are aboriginals, compared to an 11% population share. This undesirable correlation between a visible ethnic minority and the crime rate is one repeated in the United States. In the case of the U.S. black men are over-represented in the corrections system. No such data are collected in Canada.

The correlation demonstrates that job creation and social support programmes in aboriginal communities may be cost-effective investments that to reduce crime rates and crime costs while raising the standard of living and quality of life in general. Because the absolute number of aboriginal admissions to custody is small, such investments would certainly need to be justified primarily by their larger social and economic purposes and objectives, from a cost accounting perspective. But a full cost-benefit analysis would certainly include the potential reduction in crime costs as a beneficial side effect of such programmes.

Ethnicity is an ascribed status, as is age and sex. We are born into such groups and have little opportunity to change. According to Conrad Phillip Kottak, Professor of Anthropology at the University of Michigan, "People are born members of a certain

group and remain part of that group all their lives.”⁶⁹ If I am born a black man, I will die as a black man. And of course no one can stop the ageing process. On the other hand, an achieved status is one that is not “automatic, but comes through traits, talents, actions, efforts, activities, and accomplishments.”⁷⁰

Marriage is an achieved status. Single people are more likely to commit crimes than married people. The Canadian Centre for Justice Statistics survey of Nova Scotia prison inmates found that 55% were single, another 11% were separated or divorced, and only 33% were married. If assessed on a per capita basis against the proportions of the general population single, married and divorced, the disproportion is even more dramatic.⁷¹

An achieved status that has an impact on crime rates and the cost of crime is that of drug addict. Those who are dependent on drugs are more likely to commit crimes than those who are not. Recreational and illegal drugs are a major black market industry in Canada. The crimes committed in the trafficking and the consumption of drugs and the criminal activity that takes place to feed the habit of those who are dependent on drugs all adds to the crime rate. Studies indicate that 80% of offenders in Canada have used psychoactive substances; that 50-75% had drugs in their urine at the time of arrest; that 30% were actually under the influence when charged; and that 30-50% of prison inmates have a drug-dependency problem.⁷²

⁶⁹ Conrad Phillip Kottak, *Anthropology: The Exploration of Human Diversity*, Sixth Edition, McGraw-Hill, New York, 1994, Page 52.

⁷⁰ Conrad Phillip Kottak, *Anthropology: The Exploration of Human Diversity*, Sixth Edition, McGraw-Hill, New York, 1994, Page 52.

⁷¹ Statistics Canada, *A One-Day Snapshot of Inmates in Canada's Adult Correctional Facilities, Nova Scotia*, catalogue no. 85-601, page 121.

⁷² Serge Brochu, “Estimating the Costs of Drug-Related Crime”, *CCSA web site*, <http://www.ccsa.ca/brochu.htm>

Being a single male dependent on drugs most assuredly increases the chances of criminal activity that leads to conviction. So too does a previous criminal record. Like that of "drug addict," previous offender is a negative achieved status. Statistics Canada's *One-Day Snapshot* of inmates revealed that 83% had at least one previous adult conviction.⁷³ 72% of Canadian inmates have served a prior term of provincial incarceration. The "Snapshot's" profile of 401 inmates in Nova Scotia adult correctional facilities, who had been convicted of a "crime against the person," showed that 82% had one or more prior convictions.⁷⁴ The latter sample clearly refers to prisoners convicted of more serious offences, rather than those found guilty of non-violent property crimes. Recidivism rates are not regularly maintained, although they are potentially important indicators of the effectiveness of prisons and rehabilitation programmes.

In 1954 only 18% of Nova Scotia inmates had a previous conviction. That figure rose steadily through the 1950s when provincial data on prior conviction rates were maintained annually, until 1961 when 36% of inmates had a previous conviction. In other words, the percentage doubled in less than a decade. While data for the intermediate years are not readily available, 55% of Nova Scotia inmates currently incarcerated have served a prior term of incarceration.⁷⁵

But this does not necessarily mean that a higher percentage of offenders are re-offending than previously. As with reporting rates, the statistics may be conveying a double message, and may be telling us more about trends in sentencing than about the

⁷³ Statistics Canada, Robinson, "Snapshot", op. cit., Shelley Trevethan, Chief, Corrections Program, Canadian Centre for Justice Statistics, cautions that the percentage is based on data that were available at the time (personal communication, 6 April, 1999).

⁷⁴ Statistics Canada, *A One-Day Snapshot of Inmates in Canada's Adult Correctional Facilities, Nova Scotia*, catalogue no. 85-601, page 121.

⁷⁵ The 55% prior incarceration statistic is supplied by Paul Smith, N.S. Department of Justice, personal communication, March 17, 1999.

propensity to re-offend. Paul Smith of the Nova Scotia Justice Department correctly points out that the tendency to keep less serious offenders out of prison and to seek alternative forms of sentencing means that only those with a fairly significant criminal record are likely to receive a custodial term. This is particularly true in Nova Scotia, which has the lowest incarceration rate in the country.

Thus, higher rates of inmates with prior convictions may simply reflect that those guilty of minor offences with no previous records are less likely to go to jail than in the past. New legislation and amendments to earlier laws have actually created more non-prison sentencing options and kept more first-time offenders out of jail. By the time an offender ends up in prison, he is likely to have accumulated quite a criminal record. This will show up in the statistics as a high proportion of inmates with prior convictions.⁷⁶

If provincial recidivism rates were published annually it would be possible to assess the extent to which increases in the number of inmates with prior convictions reflect changes in sentencing, and whether a higher or lower proportion of criminals are re-offending after release. It would be helpful to present such recidivism data according to number of offenders as well as number of inmates. These data seem to be critical to any analysis of the success or failure of alternative sentencing options and rehabilitation programmes.

The recidivism data initially lead to what seems like an absolute and concrete conclusion, but further research shows that the case is not so cut and dried. In the same vein, care must be taken in interpreting the correlation between unemployment and criminal activity. Analysis conducted by the Canadian Centre for Justice Statistics

⁷⁶ Robert Roe, Senior Policy Analyst, NS Department of Justice, personal communication, 18 March, 1999.

demonstrates a strong statistical link between crime and unemployment.⁷⁷ In a 1984 study prepared for the U.S. Joint Economic Committee, Harvard University professor Harvey Brenner found that a 14.3% increase in the U.S. unemployment rate (from 4.9% to 5.6%) from 1973 to 1974, was associated with 403 additional homicides and 7,000 additional assaults in that country, with many of the effects spread over a period of six years.⁷⁸

In federal prisons, 52% of all prison inmates and 59% of Nova Scotia inmates were unemployed at the time of admission to sentenced custody, five times the unemployment rate in the general population (Table 4.3). A Canadian Centre for Justice Statistics survey of inmates in Nova Scotia prisons found that 67% were unemployed at the time of admission to the correctional facility.⁷⁹

Each decade, both unemployment rates and crime rates have risen substantially (Table 4.4). The chance of being a crime victim, as mentioned earlier was four times greater in 1997 than in 1962, and the chance of being unemployed was three times greater. When official crime statistics are discounted for changes in reporting rates, the correlation is very close indeed.

In addition to employment status, economic security may also affect crime rates. Among the unemployed, and especially among unemployed youth, economic insecurity is rising in proportion to the declining percentage eligible for employment insurance benefits. Only 15 per cent of unemployed Canadian workers aged 15 to 24 qualified for benefits in 1997, down from 55 per cent in 1989. In Nova Scotia, the percentage of

⁷⁷ Statistics Canada, Canadian Centre for Justice Statistics, *Criminal Justice Trends Canada from 1962: Corrections Programme*, page 21.

⁷⁸ Brenner, Harvey, *Estimating the Effects of Economic Change on National Health and Social Well Being*, a study prepared for the Subcommittee on Economic Goals and Intergovernmental Policy of the Joint Economic Committee, Joint Committee Print 98-198, U.S. Government Printing Office, Washington D.C., 1984; cited in Cobb, Clifford, Ted Halstead, and Jonathan Rowe, *The Genuine Progress Indicator: Summary of Data and Methodology*, Redefining Progress, San Francisco, September, 1995.

⁷⁹ Statistics Canada, Canadian Centre for Justice Statistics, *A One-Day Snapshot of Inmates in Canada's Adult Correctional Facilities*, catalogue no. 85-601, page 120. For Canada, the "Snapshot" shows 55% of provincial prisoners and 43% of federal prisoners unemployed at the time of admission.

unemployed youth receiving employment insurance benefits declined by 70% from 66% in 1989 to 21% in 1997. Among unemployed adults of all ages in Nova Scotia, the percentage receiving benefits fell by 50% from 93% in 1989 to 48% in 1997.⁸⁰

As noted earlier, it is not possible to make an absolute correlation between unemployment status and the propensity to commit crime, as the case of Newfoundland, with the highest unemployment rate and the lowest crime rate in the country, clearly demonstrates. The correlation is strongest in *relative* terms, when trends *within* a particular jurisdiction are tracked over time. Crime rate peaks at the height of both the last recessions occurred in Canada as a whole and in almost every province.

What is perhaps most remarkable about the trends is the degree to which robbery rates appear to follow the business cycle and, in particular, the unemployment rates. Both in Canada and in Nova Scotia and, indeed, in almost all provinces, the robbery rates peaked during the recessions of the early 1980's and early 1990's, easing off as employment rates rose.

Just as the average overall unemployment rate has been higher in each decade, never quite returning to pre-recession levels, so robbery rates have also increased steadily each decade as well. As Canadian unemployment rates rose from an average of 4% in the late 1960s to 6.7% in the 1970s to 9.3% in the 1980s to an average of 10% between 1992 and 1997, robbery rates rose correspondingly from 34 per 100,000 in the 1960s to 68, 93 and 106 per 100,000 in each of the succeeding decades. The Nova Scotia trend follows a similar trend, as do most other provinces.⁸¹

⁸⁰ Canadian Labour Congress, *Left out in the Cold: The End of UI for Canadian Workers*, 1998; McCarthy, Shawn, "Just 36% of Jobless get UI: Tight Rules Blamed as Labour Study Finds Number of Recipients at Record Low," *The Globe and Mail*, Jan 27, 1999, P. A1 & A4.

⁸¹ Unemployment rates from Statistics Canada, *Estat Database*, and *Canadian Economic Observer, Historical Statistical Supplement*, catalogue no. 11-210-XPB; robbery rates from Statistics Canada, *CANSIM Database*, matrix 2200.

**Robbery Rates and Unemployment Rates, Canada and Nova Scotia,
1962 – 1997 (Average Rates by Decade)**

	Canada		Nova Scotia	
	<i>Robbery Rate (per 100,000)</i>	<i>Unemployment Rate</i>	<i>Robbery Rate (per 100,000)</i>	<i>Unemployment Rate</i>
1962-69	33.6	4.0%*	16.0	4.9%*
1970-79	68.1	6.7%	32.8	8.1%
1980-89	93.3	9.3%	38.3	11.8%
1992-97	105.7	10.0%	41.6	12.5%

Sources: Statistics Canada, *ESTAT* and *CANSIM* databases.

NOTE: Unemployment rates are averaged for the years 1966-69, the earliest available on Statistics Canada's *ESTAT* and *CANSIM* databases.

It should be noted that the high correlation between robbery rates and unemployment rates is only sound relatively speaking, when examining a particular provincial or a national trend over time. Social and cultural factors clearly play a major role as well in determining crime levels, and no claim can be made that an absolute level of unemployment is likely to produce a certain rate of robbery. Thus Newfoundland, for example, consistently has the lowest robbery rate and the lowest overall crime rate in the country, and also has the highest unemployment rate. However, within each province over time, there is a significant enough correlation between unemployment rates and robbery rates, even to the extent of following temporary short-term fluctuations in the business cycle, that the relationship warrants serious attention.

**Table 4.3: Employment Status at Time of Admission to Sentenced Custody,
Nova Scotia; 1995-96 to 1997-98⁸²**

Employment Status	1995-96	1996-97	1997-98
Full Time	23.6%	23.6%	21.6%
Other	1.3%	2%	2.2%
Part Time	1.5%	1.8%	1.6%
Seasonal	1.3%	1.5%	1.5%
Student	1.9%	1.3%	1.4%
Unemployed	57.4%	58.4%	58.8%
Unknown	12.8%	11.5%	12.9%
Total Admissions	2622	2134	1914

Unemployment is experienced by all segments of society. However, some segments suffer disproportionately. Data show that there is a direct relationship between low levels of education and high levels of unemployment. The negative consequences of a low level of education are also seen in the relationship with crime. In Canada as a whole, only 19% of the population have less than a grade 10 education. But 36% of all inmates, 34% of provincial inmates, and 46% of federal prisoners, who are the most serious offenders, have less than a grade 10 education. A Canadian Centre for Justice Statistics survey of Nova Scotia prison inmates found that 42% had less than a grade 10 education, compared to 19% in the population as a whole.⁸³ Since offenders given sentences of two years or more serve their time in federal facilities, there appears to be a direct correlation between poor education and both overall crime rates and seriousness of

⁸² Nova Scotia Justice Department, Policy, Planning and Research Division kindly supplied these data in personal correspondence, January, 1999. The table includes all persons sentenced to custody terms in Nova Scotia. It includes persons sentenced to provincial custody and federal custody.

⁸³ Statistics Canada, Canadian Centre for Justice Statistics, *A One-Day Snapshot of Inmates in Canada's Adult Correctional Facilities*, catalogue no. 85-601, page 120.

offence. By contrast, crime rates appear to go down in direct proportion to level of education.⁸⁴

Both education and employment are achieved statuses that can be altered through personal effort and government intervention. People with jobs and a decent education are far less likely to commit crimes than those who are unemployed and poorly educated. While this certainly does not prove that unemployment and poor education *cause* crime, the correlation does indicate that investments in job creation and education are likely to produce positive spin-off benefits in reduced crime.

A low level of education leads to an increased chance of unemployment and lower income. Those who qualify for unemployment benefits receive 55% of the income they earned while working. This shortfall in income puts stress on the family budget. Indeed, low income whether caused by unemployment or low wages seems to correlate with higher crime rates. A United States study found that male offenders who were employed at the time of their arrest earned 15% to 25% less than their law-abiding counterparts.⁸⁵ North of the border, the Retail Council of Canada has found a correlation between low wages and employee pilfering. A study released by the Council revealed that retailers that paid 20% less than the competition were the victims of employee theft more often, and retailers who paid 20% more were victimised less than average.⁸⁶

When comparing economic and social factors with crime it is important not to assume that the links are causal. Further evidence and study is needed before a causal link

⁸⁴ Statistics Canada, Robinson, David, et. al., "A One-Day Snapshot of Inmates in Canada's Adult Correctional Facilities", *Juristat*, catalogue no. 85-002, volume 18, no. 8, pages 5 and 6.

⁸⁵ Peter H. Rossi, Richard A. Berk and Kenneth J. Lenihan, *Money, Work, and Crime: Experimental Evidence*, New York: Academic Press, 1980, p.130.

⁸⁶ Zena Olijnyk, "Workers Steal Less When Paid More," *Financial Post Daily*, Volume 10, No.40 (April 15, 1997), p.25.

can be established, if one can be established at all. Of equal importance is the need to examine factors that may have an effect on crime even if the result of the enquiry seems a foregone conclusion. Anecdotal evidence strongly suggests that the crime rate is far higher in large cities than it is elsewhere. In Nova Scotia that means Halifax. The crime rate for Halifax for all reported criminal code offences was 9.388 per 100,000 population in 1997, up slightly from 9.198 in 1995.⁸⁷ This was actually lower than the reported rate in 16 other Nova Scotia municipal areas with smaller populations (Table 6.3: arranged according to percentage change in crime rates between 1986 and 1995). Clearly Halifax is not the only Nova Scotia jurisdiction with a crime problem. From the data in Table 4.4, there does not appear to be a direct correlation between crime rates and population size.

On the other hand, the victimisation survey in Statistics Canada's 1993 General Social Survey found that when reported and unreported crimes are both considered, the nationwide results did reveal a difference between rural and urban areas. In that survey, 27% of urban residents and only 17% of the rural population reported that they were victims of crime in 1993.

Nationally, there is also no correlation between crime and population size. According to the official statistics, Halifax has the highest reported crime rate among major cities east of Winnipeg, including Toronto and Montreal, but less than most western cities (Table 4.5). Again the official numbers must be treated with caution. Whether city boundaries include only inner city areas or whether they include suburbs and even rural areas may affect reported crime rate statistics. For example, Vancouver's high crime rates compared to Toronto (consistently double the rate) may have a lot to do

⁸⁷ These numbers are not strictly comparable due to the major boundary changes that have taken place as a result of amalgamation in the Halifax metropolitan region.

with their respective city boundaries. Similarly, differences in provincial and municipal police policies may affect reporting rates, since police discretion may vary widely.

Table 4.4: Crime Rate: Nova Scotia Municipal Areas: 1986 - 1995

Criminal Code Offences⁸⁸	Rate/100000	Rate/100000	% Change
	1986	1995	
Sydney Mines	6822	3030	-55
Windsor (RCMP)	16361	12162	-26
Glace Bay	5296	4478	-15
Yarmouth (RCMP)	17667	15063	-15
Lunenburg	10677	9259	-13
North Sydney	8675	7577	-13
Sackville	6062	5828	-4
Berwick	12176	12783	5
Truro	15963	16943	6
Bridgewater	14357	15304	7
Springhill	5388	5791	7
Port Hawkesbury (RCMP)	8308	9098	10
New Glasgow	12804	14370	12
Kentville	10060	11717	16
Digby (RCMP)	18385	21636	18
Pictou (RCMP)	8283	10075	22
Liverpool (RCMP)	7909	9967	26
Oxford (RCMP)	5667	7143	26
Sydney	8919	11362	27
Blacks Harbour	4429	5727	29
Middleton	10053	15833	58
Stellarton	4204	8868	111
Trenton	4781	10517	120
Mahone Bay	4000	9818	145
Wolfville	6719	18132	170

⁸⁸ Statistics Canada. *Criminal Justice at a Glance: Data Highlights from the Canadian Centre for Justice Statistics, 1997*. CD Rom. File: *Common Offences, Selected Municipal Areas, 1986-95*.

Table 4.5: Crime Rate: Selected Census Metropolitan Areas: 1995 - 1997⁸⁹

CMA	1995	1996	1997	% Change 95-96	% Change 96-97
Toronto	7452	6920	6549	-7.14	-5.36
Montreal	7776	7981	7531	2.64	-5.64
Vancouver	14516	14868	13029	2.42	-12.37
Ottawa-Hull	10245	9045	7825	-11.71	-13.49
Edmonton	8573	8569	8836	-0.05	3.12
Calgary	7889	7843	7796	-0.58	-6
Quebec	6082	6398	5664	5.2	-11.47
Winnipeg	10543	9829	10281	-6.77	4.6
Halifax	9198	9608	9388	4.46	-2.29
Victoria	12683	12014	11434	-5.27	-4.83
Saskatoon	10996	11638	12126	5.84	4.19
St. John's	6471	7526	7077	16.3	-5.97
St. John, NB	6822	7973	6980	16.87	-12.45

From the above correlations, it is clear that poorly educated, unemployed, poor, young, single males are the most likely socio-demographic group to commit crimes. A drug habit, a prior conviction, and being a member of an aboriginal group increase the likelihood further. Where the status of the individual offender is ascribed, such as age, sex, and ethnic group, caution must be exercised in recommending sweeping solutions. While aboriginals commit disproportionately more crimes than the rest of the population it does not follow that they and the rest of society would benefit from assimilation, isolation, or some other draconian measure. Similarly with young men, imposing ideas of discipline and service on a segment of society purely because of a circumstance of birth is a potential solution that may well have a negative impact on their quality of life.

Achieved statuses such as unemployment, low education level, and drug addiction are undesirable in themselves. Lessening the impact of such negative factors is useful to

⁸⁹ Statistics Canada, *Canadian Crime Statistics, 1995-97*, Table 3.2.

the people concerned and may well have a positive impact on societal quality of life by reducing crime.

Programmes that target socio-demographic groups in the belief that such investment will bring an economic dividend have an impact on the limited resources of the various branches of government, and by association on the spending power of the tax payer. On the other hand, if no investment is made there are still economic costs. Those costs are the costs of crime. The following two chapters describe the economic impact crime has in the province of Nova Scotia. With this knowledge it is easier to see the financial cost of standing pat as opposed to investing in social development.

Chapter Five

A Conservative Estimate of the Cost of Crime in Nova Scotia

This chapter addresses only the value of direct economic losses due to crime which are calculable in monetary terms. But there are also psychological costs, like the trauma of being violated, and there are clearly indirect consequences of crime. High crime areas may induce individuals to live elsewhere if they fear their possessions will be stolen, entailing moving expenses. Property values may decline, potential investors may be discouraged, and tourism may be affected if the likelihood of personal loss is high. Fear of violence, personal violation or theft may also restrict movement and reduce economic activity, particularly at night time. There is also an economic opportunity cost to forgone activities, and to the time and effort devoted to replacing stolen possessions, producing and installing security devices, and recovering from and fighting crime.

Because these and other indirect costs are not measured, the losses described in this chapter clearly understate the full economic impact of crime and are therefore described as “conservative” estimates. They estimate only:

- those direct victim losses due to property crime and violent crime that are calculable in monetary terms;
- public expenditures on police, courts and prisons; and
- individual defensive expenditures on security devices and crime prevention.

The conservative estimate omits some direct monetary losses for other crime categories, such as property damage to vehicles and hospitalisation costs due to accidents caused by impaired driving – a criminal offence and the economic and medical costs of “victimless” crimes like illegal drug use and prostitution.

Despite these limitations, the trends in victim losses, public expenditures on justice, and defensive expenditures over time provide an indicator of the economic impact of changes in the crime rate. They also show clearly that a decline in personal

security and quality of life due to crime directly lowers the economic standard of living. And they demonstrate the absurdity of adding these costs to the official estimates of economic quality of life and of assuming that any kind of growth signifies an increase in prosperity.

Because of the severe limitations of the conservative estimate in actually describing the full economic impact of crime, chapter 6 attempts to construct a more comprehensive estimate of crime costs, based on court awards for “shattered lives,” and retail trade figures on “shrinkage” due to theft, which translates into higher consumer prices. Valuations of unpaid work from the Genuine Progress Index, made by Dr. Ronald Colman, director of the Atlantic Genuine Progress Index, are also used to approximate some of the costs of activity loss due to crime. Even this comprehensive estimate clearly does not include many of the indirect costs of crime mentioned above.

In the following two chapters economic costs and potential savings are listed for each section separately. The cumulative total costs are given in the summary table in chapter seven, along with total potential savings to Nova Scotia that would accrue if crime rates were still at 1962 levels. From a quality of life perspective the savings that would have been made had the crime rate been maintained at its historical level could have been invested in services and programmes that would have benefited individuals and the community.

The cost estimates in this chapter represent the total value of direct victim property losses due to crime. That is the money or property stolen from the victim during the execution of a crime. Many of these losses are uncompensated and borne entirely by

the victims. To the extent that they are compensated by insurance claims, the cost is met by society in the form of theft insurance premiums. In order to avoid double counting, only the difference between actual insurance claims and premiums are counted under "defensive expenditures".

As noted in chapter three, Nova Scotia's property crime rate is still well below the Canadian average. While property crimes constituted 62% of total criminal code violations nationally in 1997, they amounted to only 48% of Nova Scotia's 77,696 reported criminal code incidents.⁴⁰ In the course of these crimes it is estimated that Nova Scotians lost more than \$100 million in property and money, equal to the total production value of the entire forestry and logging industries in the Province. In the last two decades Nova Scotians have lost more than two billion dollars in property and money due to crime, equal to a quarter of the Provincial debt (Table 5.1).⁴¹

If reported property crimes had been at the 1975 level, Nova Scotians would have saved \$34 million in property and money in 1997. If crime had remained at the 1962 level, they would have saved \$80 million. If the crime level had remained at the 1962 level throughout the last 35 years, Nova Scotians would have saved a total of \$1.8 billion in direct property losses alone.

⁴⁰ Statistics Canada, Rebecca Kong, "Canadian Crime Statistics, 1997", *Juristat*, volume 85-002-XPE, volume 18, no. 11.

⁴¹ See Appendix for more detailed description of methodology. In sum, average loss per incident is derived from Brantingham, Paul and Stephen Easton, "The Crime Bill: Who Pays and How Much?", *Fraser Forum*, 1996, The Fraser Institute, page 23, which in turn derives its values for motor vehicle theft from the Insurance Corporation of British Columbia, and for other crimes from Statistics Canada, *Juristat*, volume 12, no. 5, 1981. Losses per crime are not available separately for the provinces, and it is therefore assumed that the national averages apply to Nova Scotia. Number of crimes in each category is from Statistics Canada, *Juristat*, volume 85-002-XPE, 1997. Monetary figures have been translated into 1997 dollars using Statistics Canada, *The Consumer Price Index*, volume 62-001, for Nova Scotia and Halifax. Forestry industry figures are from Statistics Canada, *Provincial Gross Domestic Product by Industry, 1984-1997*, catalogue no. 15-203-XPB, page 20. NOTE that robbery is officially classified as a "violent crime" rather

That substantial saving would have contributed to a higher quality of life and been available for more productive welfare-enhancing investments. Either the money was spent replacing lost property or it produced a direct decline in living standards. If it was invested in higher theft insurance premiums, it incurred an opportunity cost in lost investment opportunities that will adversely affect future generations. Rather like government budgets, the annual deficit caused by direct victim losses is enlarging the crime-related debt society carries.

Though Nova Scotians still have lower property losses due to crime, there has been a gradual decline in comparative advantage over time. Averaged out among all households, including those that were not victims of crime, direct victim losses in 1997 were \$297 per household in Nova Scotia compared to \$319 nationally. In 1962 the loss was \$132 per household in Nova Scotia compared to \$205 in Canada as a whole. In other words, Nova Scotia households enjoyed a 36% economic advantage in reduced property crime losses compared to other Canadian households in 1962, but only a 7% advantage in 1997.¹² The good news is that Nova Scotians retain a direct income advantage in lower property crime losses. The bad news is that Nova Scotians are rapidly losing this advantage and will do so completely if current trends continue.

In Table 5.1 below, victim losses (in millions of 1997 dollars) are derived from the Solicitor-General's estimates on average losses per property crime in Canada, as follows:

than a "property crime", but property losses due to robbery are included here in order to maintain consistency in this report.

¹² Direct victim property losses (\$102.4 million in N.S. and \$3.5 billion in Canada) are divided by the number of dwellings (344,779 in N.S. and 10,899,427 in Canada) to derive losses per household. Dwelling counts are from Statistics Canada, *A National Overview: Population and Dwelling Counts*, catalogue no. 93-357-XPE, page 11, and from the 1961 census.

- Theft: \$2,188;
- Mischief: \$655;
- Break and Enter \$2,370;
- Motor Vehicle Theft: \$3,728;
- Robbery \$2,934;
- Fraud \$3,625.

These are the only values available at present: they are based on national figures and are badly outdated. A comparison with comparable and more recent US figures issued by the US Federal Bureau of Investigation, reveals that the robbery and theft losses given may be overestimated, while the motor vehicle loss is probably understated, and the break and enter losses are broadly comparable.”³

There is a pressing need for a Provincial level victim survey that can determine average property losses for different crime categories. The amount of money and the value of goods stolen are known to police. This information is passed on to the Canadian Centre for Justice Statistics (CCJS), but is not released to the general public. CCJS only release figures based on thefts above and below \$1,500. If the original data were released to academia the direct economic impact of property crime could be calculated on an annual basis without further cost to CCJS and the taxpayer.

³ US Bureau of the Census. Statistical Abstract of the United States: 1997 (117th edition) Washington, DC, 1997.

Table 5.1: Direct Victim Losses due to Property Crime, Nova Scotia, 1962 – 1997
(Millions of 1997 dollars)

	Break & Enter	Motor Vehicle Theft	Robbery	Theft	Fraud	Vandalism	Annual Total	Potential Savings '75	Potential Savings '62	
	5.21	2.62	0.26	11.38	1.74	1.93	23.14			2
	6.67	2.86	0.26	13.60	1.74	2.27	27.39		4.25	
	6.93	2.91	0.28	14.45	1.82	2.44	28.84		5.70	54
	5.91	3.32	0.39	15.24	2.35	2.52	29.74		6.60	55
	6.22	2.81	0.32	15.70	1.93	2.58	29.55		6.41	56
	6.57	2.91	0.43	14.96	2.03	2.56	29.46		6.32	57
	7.37	3.45	0.43	18.78	2.65	2.93	35.60		12.46	58
	9.33	4.05	0.48	20.40	3.07	3.20	40.52		17.38	69
	9.56	3.40	0.39	22.28	3.23	3.43	42.29		19.15	70
	10.65	4.69	0.52	22.55	4.26	3.50	46.18		23.04	71
	11.26	4.71	0.69	21.98	4.13	3.33	46.10		22.96	72
	12.70	4.87	0.53	23.00	4.16	3.58	48.83		25.69	73
	14.02	5.41	0.93	26.98	5.07	4.17	56.58		33.44	74
	16.94	6.65	0.99	31.53	6.53	5.02	67.67		44.53	75
	18.62	7.07	1.02	34.20	6.46	5.78	73.15	5.48	50.01	76
	17.58	7.37	0.85	33.95	6.27	6.13	72.16	4.49	49.02	77
	17.51	6.84	1.07	35.30	7.35	6.48	74.55	6.88	51.41	78
	18.05	8.10	0.93	39.29	7.87	7.11	81.34	13.68	58.20	79
	19.89	7.93	1.21	41.57	8.02	6.72	85.34	17.68	62.20	80
	20.91	7.66	1.21	47.96	9.03	7.50	94.27	26.60	71.12	81
	19.54	6.22	1.10	50.55	10.78	7.40	95.61	27.94	72.47	82
	16.86	5.36	1.17	48.91	12.26	7.05	91.61	23.94	68.47	83
	18.05	5.28	1.08	51.28	12.81	7.08	95.58	27.91	72.43	84
	19.09	5.78	0.81	51.02	15.14	7.12	98.97	31.30	75.82	85
	20.41	5.86	0.67	53.38	15.17	7.51	103.00	35.33	79.86	86
	20.66	5.55	0.79	53.87	15.36	7.91	104.14	36.47	81.00	87
	20.34	5.50	0.91	54.06	15.20	8.31	104.31	36.65	81.17	88
	18.30	6.04	0.88	54.11	17.26	8.70	105.29	37.62	82.14	89
	22.40	6.55	0.88	59.27	17.76	9.10	115.96	48.29	92.82	90
	27.81	7.39	1.36	62.00	20.03	10.44	129.04	61.38	105.90	91
	25.27	7.03	1.36	56.76	19.21	9.70	119.33	51.67	96.19	92
	22.23	6.62	0.96	53.22	15.50	8.63	107.17	39.50	84.03	93
	20.79	6.23	1.09	49.77	15.30	8.10	101.29	33.62	78.15	94
	20.94	6.70	0.89	49.13	15.24	7.82	100.72	33.05	77.58	95
	22.52	8.98	1.27	47.26	14.28	8.42	102.74	35.07	79.59	96
	21.79	9.54	1.25	47.19	14.28	8.38	102.42	34.75	79.27	97
	578.91	204.28	29.70	1,346.87	335.26	214.86	2,709.88	669.30	1,876.78	total

The relationship between property crime and economic loss is an obvious one. One of the first questions police officers ask the victim of a property crime is "what is the value of the stolen property?" The relationship between violent crime and economic loss is less straightforward. It may even seem crass to estimate the economic cost of violent crime when it is only a small part of the emotional and physical suffering a victim has to endure. Indeed, seen in isolation, any property lost during the commission of a violent crime does not reflect the full extent to which the victim suffers. In isolation the losses incurred during the execution of a violent crime are on average far less than during a property crime, leading to the spurious conclusion that property crime has a more detrimental affect on quality of life than violent crime. However, it is not the intention here to separate the economic losses caused during a violent crime from the economic losses incurred post crime. In this *conservative* estimate of the economic cost of violent crime direct monetary losses are combined with hospitalisation costs and productivity losses. Including post attack expenses at least begins to approximate the social cost of violent crime, and as such is a step forward from the Uniform Crime Reporting survey, which concentrates purely on the crime itself. However, even this expanded estimate does not come close to estimating the actual costs of violent crime, and must be regarded as extremely conservative.

For example, the loss of a human life is clearly far more devastating in human and social terms than the economic loss of productive output. Even more seriously, the murder of an elderly person, age 65 or over, counts for nothing in this estimate since homicide assessments are in terms of economic productivity only. Future research on the lost consumption of victims could potentially overcome this problem. As before, only

reported crimes are counted. Non-hospital medical and drug costs, counselling costs and other expenditures are also excluded because accurate data are not currently available.

These limitations produce significant underestimates of victim costs due to violent crime. Chapter six strives to give a more accurate (if less precise) portrait of actual crime costs by including estimates for victim pain and suffering based on court awards.

Direct financial losses in money and possessions stolen from victims of assault and sexual assault amounted to more than \$600,000 in 1997 (Table 5.2). This represents a 450% increase in annual victim losses in real terms since 1962. A cumulative total of \$11.8 million worth of possessions has been stolen from victims of assault and sexual assault during this 36-year period. If the rate of victimisation had remained at 1962 levels the potential savings in direct monetary losses due to assault would have been about \$8 million. And if the rate had remained at 1975 levels there would have been a saving of approximately \$4 million.⁴

⁴ Solicitor General of Canada. *Canadian Urban Victimization Survey, Bulletin 5: Cost of Crime to Victims*, 1985, page 3.

Table 5.2: Direct Victim Monetary Losses due to Assault and Sexual Assault, Nova Scotia, Constant 1997S, (\$000s)

Date	Estimated \$ Loss: Sexual Assault	Estimated \$ Loss: Assault	Total \$ Loss: Assault & Sexual Assault	Potential Savings if Rate Remained at '62 Level	Potential Savings if Rate Remained at '75 Level
1962	26.5	83.7	112.2		
1963	29.7	93.8	125.4	15.2	
1964	37.3	117.8	157.1	46.9	
1965	37.4	118.3	157.7	47.5	
1966	40.8	129.2	172.0	61.8	
1967	40.0	126.4	168.3	58.1	
1968	43.9	138.8	184.7	74.5	
1969	47.4	150.0	199.4	89.2	
1970	49.8	157.4	209.1	98.9	
1971	51.4	162.7	216.1	105.9	
1972	28.3	152.9	203.2	93.0	
1973	51.2	162.1	215.3	105.1	
1974	53.8	170.0	225.8	115.6	
1975	57.5	181.8	241.3	131.1	
1976	60.1	190.1	252.1	141.9	12.8
1977	59.8	189.2	251.0	140.8	11.6
1978	64.6	204.3	270.8	160.6	31.5
1979	65.1	205.9	273.0	162.8	33.7
1980	69.6	220.1	291.7	181.5	52.3
1981	70.3	222.4	294.8	184.6	55.4
1982	72.1	228.1	302.2	192.0	62.8
1983	75.2	237.4	314.4	204.2	75.1
1984	75.7	239.5	317.2	207.0	77.9
1985	76.4	241.5	319.8	209.6	80.5
1986	80.8	255.7	338.5	228.3	99.2
1987	86.6	273.9	362.5	252.3	123.2
1988	93.2	294.8	390.0	279.8	150.7
1989	103.2	326.5	431.7	321.5	192.3
1990	123.3	361.2	486.5	376.3	247.2
1991	134.4	418.1	554.5	444.3	315.1
1992	163.0	460.3	625.3	515.1	386.0
1993	160.9	452.2	615.1	504.9	375.7
1994	143.2	474.3	619.5	509.3	380.2
1995	140.7	484.0	626.8	516.6	387.4
1996	137.2	499.0	638.2	528.0	398.8
1997	139.1	475.9	617.0	506.8	377.6

Sources: Solicitor General Canada. *Canadian Urban Victimization Survey: Cost of Crime to Victims*. Bulletin No. 5, 1985, p. 2& 3. Statistics Canada. *Canadian Crime Statistics*, 1990-1997, table 3.3. Statistics Canada. Cansim CD Rom. Cat. No. 10F0007XCB, matrix 2200.

A seven city Statistics Canada victim survey in 1982 found that 350,000 criminal incidents resulted in 50,500 nights in hospital and 405,700 days lost due to some form of criminal incapacitation. Extrapolating from these data, Nova Scotia victims spent an estimated 2,412 days in hospital as the result of criminal activity in 1997. At an annual operating expense of \$662 per patient day, hospitalisation expenses due to crime amounted to \$1.6 million in 1997. Hospitalisation costs due to crime have risen by more than 1000% since 1962 due in part to higher violent crime rates and in part to higher hospitalisation costs (Table 5.3).

Since 1962 an estimated \$28 million has been spent on hospitalisation due to violent crime in Nova Scotia. Had hospitalisation expenditures due to crime remained at the 1962 level an additional \$25 million would have been available for progressive social programmes including improved medical care. Had such expenditures remained at 1975 rates \$14.5 million would have been saved.

Caution must be exercised when interpreting these data. Savings would have been considerably less had the cost per day for hospitalisation remained constant over time. It is possible to impute a constant dollar figure for hospital care so that hospital expenditures due to criminal activity can be isolated from general increases in hospital costs. However in reality, Nova Scotia taxpayers have to pick up the bill for crime related hospitalisation regardless of increases in the cost of hospital care.

Data were not available for non-hospital medical costs, counselling and drug expenses due to crime. These costs may be considerable. It is reasonable to assume, then, that the medical costs incurred by victims are substantially higher than that of hospitalisation alone. If we want to calculate the full impact of crime, a comprehensive

victimisation survey is the means by which information such as the amount of money spent on non-hospital medical costs can be gleaned.

Table 5.3: Cost of Hospitalisation due to Crime in Nova Scotia.

Constant 1997\$. (\$000s)

<i>Date</i>	<i>Estimated \$ Cost</i>	<i>Potential Savings if Rate Remained at 1962 Level</i>	<i>Potential Savings if Rate Remained at 1975 Level</i>
1962	137		
1963	160	23	
1964	173	36	
1965	176	39	
1966	175	38	
1967	171	34	
1968	190	53	
1969	200	63	
1970	209	72	
1971	235	98	
1972	237	100	
1973	272	135	
1974	347	210	
1975	479	342	
1976	571	434	92
1977	545	408	66
1978	555	418	76
1979	643	506	164
1980	655	518	176
1981	715	578	236
1982	859	722	380
1983	848	712	370
1984	894	757	415
1985	947	811	469
1986	1044	907	565
1987	1070	933	591
1988	1138	1001	659
1989	1255	1118	776
1990	1485	1348	1007
1991	1765	1629	1287
1992	1857	1720	1378
1993	1765	1628	1287
1994	1598	1461	1119
1995	1567	1430	1088
1996	1643	1506	1164
1997	1621	1484	1142

Sources: Solicitor General Canada. *Canadian Urban Victimization Survey: Cost of Crime to Victims*. Bulletin No. 5. 1985, p4. Statistics Canada. Cansim CD Rom. Cat. No. 10F0007XCB, matrix 2200. Statistics Canada. *Hospital Indicators*. Cat. No. 83-246, Table 12 and *Hospital Statistics*. Cat.No.83-217. Table 12.

As stated in chapter three, the relatively few instances of homicide in Nova Scotia may produce dramatic fluctuations in the number of homicides committed from one year to the next, making annual trend assessments problematic. In order to assess long-term trends more reliably and to average out annual fluctuations, the period 1962-1997 has been divided into six six-year periods. From the first period to the most recent period, there has been a 78% increase in the murder rate.

Comparing the same two periods, the actual number of murders has risen from 48 to 106 (Chart 5.1). From 1962 to 1967 there were an average of eight murders per year. Between 1968 and 1991, the number of murders remained steady, averaging 13 per year. From 1992 to 1997, there was an average of 18 murders a year. Since 1962 there have been a total of 463 murders in Nova Scotia.

The economic cost of these murders is assessed here by calculating the lost potential production of homicide victims, or the productive capacity lost when homicide victims aged 18-65 are taken from the workforce. No argument is made that this even begins to approximate the real losses due to murder. The assessment of potential production losses is simply a proxy measure to indicate that homicide does have direct economic costs. A clear flaw in this method is that no valuation for production losses is made for elderly homicide victims, since they are no longer in the workforce. The estimates given in this section should therefore be regarded as extremely conservative.

Though care has been taken in developing the methodology described below, the use of production losses to estimate murder costs cannot be taken too literally. The limited data available suggest that homicide victims actually have higher rates of

unemployment and marginal employment than the general population.⁹⁵ But since production loss is the only valuation used in the conservative crime estimate of the value of a human life, the assumption is made that victims could have contributed a full-time full year of work. Even if they were not actually working these hours at the time they were killed, the method is justifiable from the perspective of "opportunity cost." It is the contribution they *could* have been making to the economy had they lived.

The investment-based approach of the Genuine Progress Index is applied here to human capital. From that perspective the death of a homicide victim cannot be written off in a single year, but must be measured over the productive life span of the individual. This is in line with sound business practices and domestic accounting.

Applying this accounting approach to measuring the loss of human capital in the case of a homicide victim requires that the full productive life span of the victim be considered and that production losses be calculated on an annual basis over that expected life span rather than deducted in a single year. This is probably the first attempt made to assess lifetime potential production losses of homicide victims in this way.

Cold-hearted though this approach appears on the surface, it actually serves in practice to recognise lifetime human potential rather than simply to write off the loss of life and then forget about it. The major flaw in its current application is to confine that human potential to market economic production alone, but this is consistent with the narrow approach adopted in the conservative estimate of crime costs altogether. Clearly the loss of a human life in practice is far greater than the loss of economic production in the market place.

In the comprehensive cost estimate in chapter 6, the homicide victim's unpaid work is included. Even this, of course, is a very limited view of full human potential and

⁹⁵ Paul Smith, N.S. Department of Justice, personal communication, 17 March, 1999.

worth, and so court awards for pain and suffering are also used to assess values for emotional losses due to violent crime in that comprehensive estimate.

For the purposes of this thesis, data have been tabulated on all homicide victims in Nova Scotia back to 1921. Age data have been assessed to determine the number of victims who would have been of working age (16-65 years) in any given year. For example, if someone age 20 were murdered in 1950, the value of one year of productive work would be assessed as a cost of crime for each year up to 1995. Similarly, a 20 year old killed in 1996 would register only one year's lost potential production in 1997, but the costs of that crime would continue to appear until the year 2042.

The crime of homicide meant that 452 people were lost to the workforce in 1997 in Nova Scotia. In stark terms this means that one of the six victims of homicide in 1932, an infant boy, would still have been in the workforce had he lived. By recognising this fact, and giving his absence meaning in economic terms, we are actually remembering the boy in some small way. Based on the average weekly wage of \$503.77⁹⁶ homicide victims would have added an additional \$11.8 million to the Nova Scotia economy in 1997 had they lived.⁹⁷

However, wages represent only a portion of the value of actual output or economic production, which is a more accurate gauge of the actual economic loss sustained by the death of a worker. In order to gauge the actual value of lost production, the Nova Scotia GDP is divided by employment figures to obtain the real GDP per person at work, \$51,855 in 1997.⁹⁸ Multiplied by the 452 homicide victims between 1921

⁹⁶ Statistics Canada, *CANSIM Database*, Cat. No. 10F0007XCB, matrix 4330, "Average Weekly Earnings (including Overtime) of all Employees, Firms of all Sizes, by Industry, 1980 SIC, Unadjusted Data, N.S., Monthly and Annual".

⁹⁷ See Appendix on methodology for details.

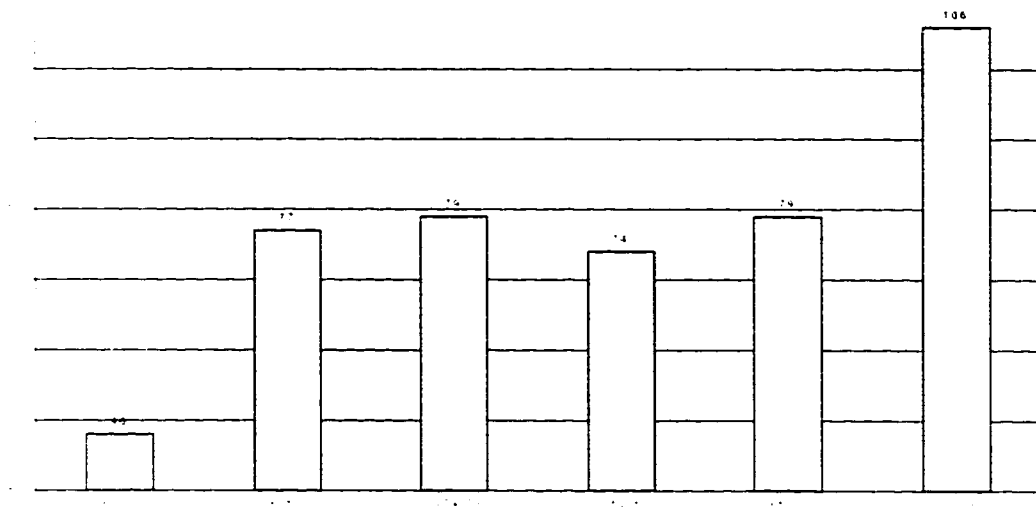
⁹⁸ Per capita GDP data or refer to the appendix.

and 1997 who would have been of working age in that year, this yields a total loss of productive output of \$23.4 million. This is the figure used in the conservative estimate for the economic loss due to homicide.

In this way, the 1997 homicide cost actually reflects homicide rates in earlier years. Conversely, a higher homicide rate in 1997 will not show up immediately in this method of calculation, but will continue to reverberate as higher crime costs for the expected life span of the victims.

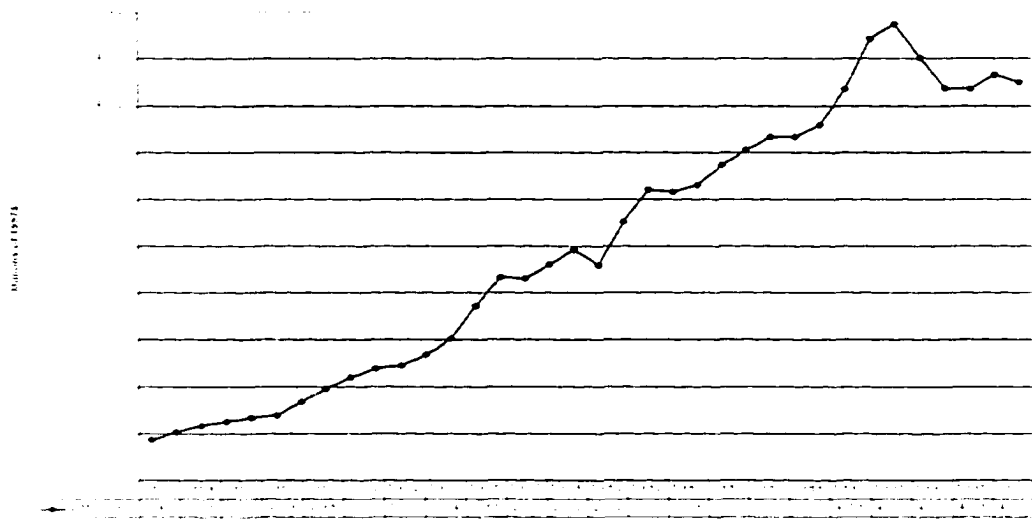
To test whether the \$23.4 million figure derived from the method described above is realistic in absolute terms, Transport Canada's monetary cost valuation of \$1.56 million per road fatality is used to compare to the average of 18 murders per year for the 1992 – 1997 period. There is no intrinsic reason why a homicide victim should be counted differently than a road fatality. This completely different valuation method would yield an annual loss of \$28 million a year due to homicide in Nova Scotia. It can be seen that the methodology employed here yields a somewhat more conservative result, but one that is within a reasonable range of alternative valuation methods.

Chart 5.1: Number of Murders in Nova Scotia, 1962-1997



In 1997, absenteeism due to crime cost the economy nearly \$2 million in lost wages, again using the assumption of full-time full-year employment status as described above. This is a three-fold increase since 1971. However, each worker contributes more to the economy than his or her worth in wages. The actual contribution of workers' production to the Gross Domestic Product also includes profit they generate for the firm in which they are employed, part of which is then invested in capital improvements. Workdays lost due to absenteeism caused by crime have therefore been calculated by the loss to the GDP as a whole rather than by wage equivalents alone. In 1997 the economy lost \$4.25 million due to crime-induced absenteeism. Since 1962 the cumulative loss due to crime-related absenteeism is \$43 million (Chart 5.2).

Chart 5.2: Loss to the Economy due to Absenteeism Caused by Crime, NS



The economic costs of victimisation are largely hidden from view. The losses incurred due to personal victimisation have to be estimated, as do productivity losses. More exact figures are available for Justice costs. Expenditures on police, courts and prisons are taxpayer costs and are the direct consequence of criminal activity. Without crime they would not be required. More crime translates into more spending on police, lawyers, court costs and prisons, which appear in the GDP as economic growth.

The per capita costs of the criminal justice system in Canada and in Nova Scotia for 1997 are given in Chart 5.3, with the distribution of those costs summarised in Chart 5.4. Expenditures on police account for 55% of the public justice bill. Corrections for 29% and courts for 16%.⁹⁹

The correlations between police strength and crime rates are complex, as regression analyses carried out by the Canadian Centre for Justice Statistics (CCJS) have demonstrated. While simplistic causal links cannot be drawn, the CCJS conclusions demonstrate the importance of raising the issue of the relationship between police strength and crime rates:

...The incidence of crime is increasing more rapidly than the ability of police forces to deal with it. As we have seen, crime has increased more than police strengths¹⁰⁰.

The major caveat for the data presented here, therefore, is that statements about the nature of the links between crime rates and police to population ratios should be treated as hypotheses to be tested, rather than as definitive conclusions.

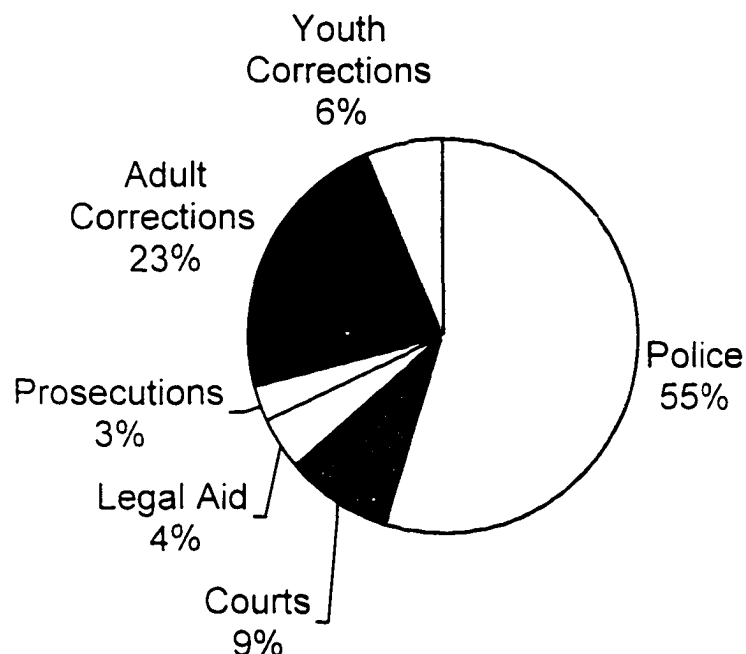
⁹⁹ Statistics Canada, Canadian Centre for Justice Statistics, *Canadian Criminal Justice at a Glance*, page 8.

In 1997 there was one police officer for every 584 Nova Scotians. In 1965, one police officer for every 848 Nova Scotians. In 1977, Nova Scotia needed only 74% of the number of police officers per 100,000 population compared to the national average, by 1997 that figure had risen to 94%.¹⁰¹

¹⁰⁰ Statistics Canada, Canadian Centre for Justice Statistics, *Criminal Justice Trends Canada from 1962: Corrections Program*, page 17.

¹⁰¹ 1965 police data from Statistics Canada, *Police Administration Statistics, 1967-77*, catalogue no. 85-204, page 27. 1997 police data from Statistics Canada from Statistics Canada, *CANSIM Database*, catalogue no. 10F0007XCB, matrix 301. Population data from Statistics Canada, *CANSIM Database*, catalogue no. 10F0007XCB, matrix 1. See Appendix on methodology and data sources for more details.

Chart 5.4: Distribution of Public Justice Costs, Nova Scotia, 1994-95¹⁰²



In 1997 municipal and provincial expenditures on policing in Nova Scotia totalled \$105.6 million.¹⁰³ Nova Scotia taxpayers' share of non-provincial RCMP costs, based on share of the national population, was \$38.1 million.¹⁰⁴ The total bill paid by Nova Scotia taxpayers for policing in 1997 was therefore \$143.7 million.

¹⁰² Statistics Canada, *Juristat*, catalogue no. 85-002-XPE, volume 17, no. 3, table 5, page 12. Distribution is based on 1994-95 figures, but is not believed to have changed significantly since then. To the estimates given in Table 5 of that document have been added the estimated Nova Scotia share for federal corrections, courts, prosecutions, and RCMP expenditures, as described in more detail in the rest of this chapter.

¹⁰³ Statistics Canada, February 1999, *Police Personnel and Expenditures in Canada - 1997 and 1998*, Cat. No. 85F0019, p.17.

¹⁰⁴ Statistics Canada, Canadian Centre for Justice Statistics, *Police Administration Annual Survey*, catalogue no. 85F0019-XPE, February, 1999. RCMP Federal, Administration, Headquarters and Training Academy costs not paid for by the provinces came to \$1,220 million in 1997. Using a simple population share ratio (3.12% of the total), it has been assumed that the Nova Scotia share of these costs came to \$38 million in 1997.

Not only are there more police per population, but the cost of policing has risen. In the last 10 years alone the cost per police officer across Canada has gone up more than 15%, from \$95,000 to \$110,000 per officer in constant dollars, when civilian support staff are included.¹⁰⁵ Since 1974 the number of police officers has grown by 33% in Nova Scotia compared to 14% in Canada as a whole, producing a correspondingly higher per capita cost increase.¹⁰⁶

This increased spending, due partly to a more rapid increase in the crime rate from a markedly lower base represents a decline in comparative advantage for the Province. If the policing expenditures had remained at the 1962 level, Nova Scotia taxpayers would have saved \$129 million in 1997. This could have paid the salaries of 2,800 additional teachers or 3,700 additional nurses.¹⁰⁷ In total, Nova Scotians would have realised a cumulative saving of more than \$2 billion since 1962 if Provincial policing expenditures had remained at 1962 levels.

Halifax had one police officer for every 479 citizens in 1997, compared to one per 584 citizens in Nova Scotia as a whole.¹⁰⁸ Table 5.4 lists police to population ratios in different Nova Scotia municipalities.

¹⁰⁵ The figures are derived by dividing the total cost of policing by the number of police officers. Because the total policing expenses include the costs of civilian support staff, whose work is essential for policing functions, these per-officer figures are clearly not police officer salaries.

¹⁰⁶ Statistics Canada, *Cansim* matrix 301, www.statcan.ca.

¹⁰⁷ Source data on teachers and nurses.

¹⁰⁸ Statistics Canada, *Crime and Police resources in Canadian Municipalities, 1997*, catalogue no. 85-223, December, 1998. The author wishes to thank Karen Swol, Survey Manager, Police Administration Survey, Canadian Centre for Justice Statistics, for her assistance with these data. She points out that the Halifax figures are for the Halifax regional Municipality police force only, and exclude RCMP officers. Since RCMP strengths are not available by municipality, comparisons of total police strengths between municipalities are difficult. Police to population ratios in Table 5.4 exclude RCMP officers (personal communication, 6 April, 1999). John Turner, Chief, Policing Services Program, Canadian Centre for Justice Statistics, points out that comparisons of police strengths between Canadian cities should use Census Metropolitan Area (CMA) data (personal communication, 7 April, 1999). Because of time constraints such a comparison has been omitted from this report.

Kit Waters, Director of Policy Planning and Research, Nova Scotia Department of Justice, correctly points out that there are many other factors related to the increase in officer strength other than an increase in crime rates. She notes that having more police on the streets produces higher reported rates of crime, both as a result of increased police initiative and from the creation of more reporting opportunities. In addition the emphasis on community based policing in recent years will, if successful, have produced more confidence in the police and consequently higher reported crime rates.¹⁰⁹

From that perspective the low reported crime rates of the 1960s and the fewer officers per capita at that time may reflect less reporting as much as less crime. As noted in chapter three, evidence is not currently available to estimate the precise relationship between officer strength, crime rates, and reporting rates. Waters may be correct in her assertion that the police are more accessible than in the past, but it cannot be proven for certain. One cannot even say that an increase in police strength makes police officers more accessible to the general public; a study of the deployment patterns would have to be undertaken before such a conclusion could be reached. Given the fact that the police would not be needed if crime did not exist, it is hypothesised here that an increase in police strength is a result of increased criminal activity.

Despite or perhaps because of the increased number of police, the Nova Scotia reported crime rate has quadrupled since 1962 and nearly doubled since 1974. It is now 98% of the Canadian average compared to 66% 25 years ago. In 1974 there were 29 reported crimes per police officer in Nova Scotia; in 1984 there were 43 reported crimes

¹⁰⁹ Statistics Canada, Besserer, "Criminal Victimization: An International Perspective," *Juristat*, catalogue no. 85-002-XPE, volume 18, no. 6, reports that 80% of Canadian respondents say their police are doing a good job, the highest percentage of any industrialised country.

per officer: and in 1996 there were 48 reported crimes per officer, ratios that are almost identical with the Canadian average.

While the increase over time is certainly due in part to higher reporting rates for some crime categories, the numbers may also indicate that the dramatic increase in the proportion of police per population has not stemmed the rise in crime. Depending on which factor is seen as the causal component, the increased number of police may lead to higher reporting rates, or higher actual crime rates may necessitate more police. The truth is probably a combination of both factors. A Canadian Centre for Justice Statistics analysis of the relationship concluded that “the incidence of crime is increasing more rapidly than the ability of police forces to deal with it.”¹¹⁰

Table 5.4: Population per Police Officer, Canada and Provinces, 1965 – 1997

	1965	1974	1997
Canada Average	612	476	554
Newfoundland	933	734	710
Prince Edward Island	1048	667	673
Nova Scotia	848	671	584
New Brunswick	1055	654	584
Quebec	595	416	540
Ontario	631	467	535
Manitoba	814	539	514
Saskatchewan	851	369	547
Alberta	739	544	636
British Columbia	689	567	583

Sources: 1965 Police data from Statistics Canada, *Police Administration Statistics, 1967-77*, Cat. No. 85-204, p.27. 1974 & 1997 Police data from Statistics Canada, Cansim matrix 301, Cat. No. 10F0007XCB. Population data from Statistics Canada, Cansim matrix 1, Cat. No. 10F0007XCB.

¹¹⁰ Statistics Canada, Canadian Centre for Justice Statistics, *Criminal Justice Trends Canada from 1962, Corrections Programme*, page 17.

Chart 5.5: Population per Police Officer, Nova Scotia and Canada, 1977 - 1997

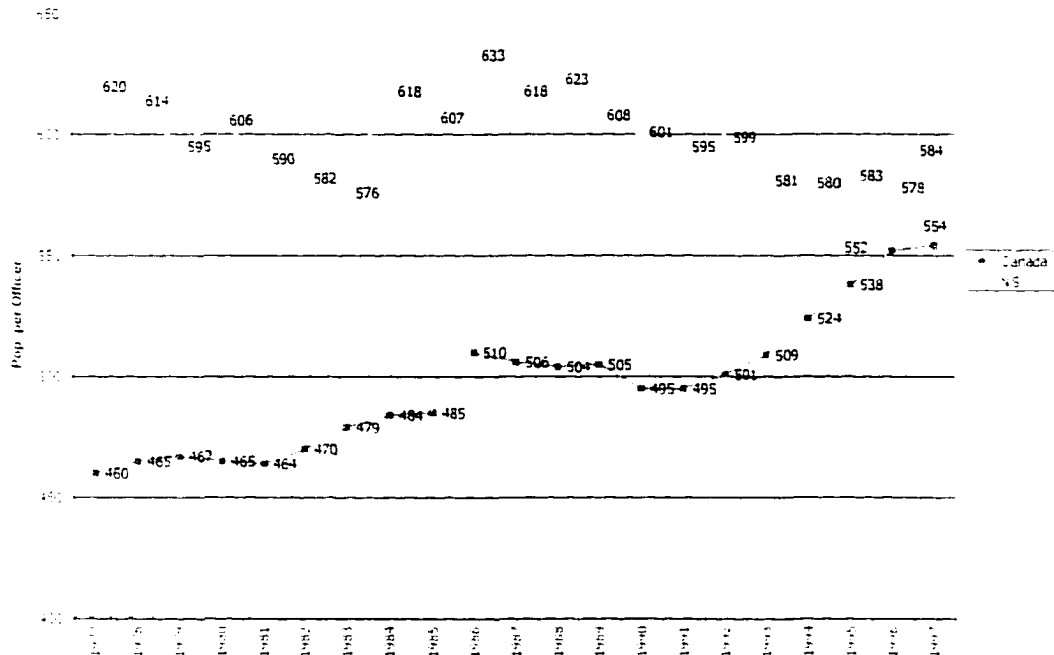


Chart 5.6: Nova Scotia Police Strength in Relation to Canada, 1977-1997
(NS police per 100,000 as percentage of Canada police per 100,000, Canada = 100)

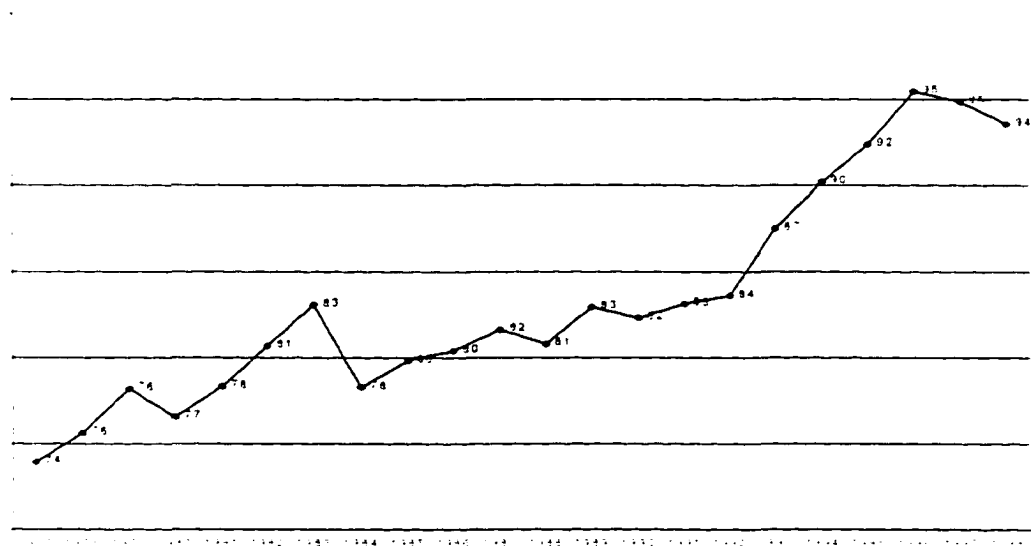


Table 5.5: Police Strength and Costs, Nova Scotia Municipalities, 1997S

Police Force	Police Officer Total	Per Capita Cost	Population per Police Officer
Halifax	435	162	460
Cape Breton	154	129	462
Amherst	19	121	537
Bridgewater	18	140	444
Kentville	13	131	462
New Glasgow	29	127	486
Stellarton	9	114	589
Truro	27	164	444
Yarmouth	16	116	494
Annapolis Royal	3	209	200
Berwick	6	150	383
Hantsport	4	186	300
Lunenburg-Mahone Bay	10	157	370
Middleton	6	195	300
Springhill	9	149	467
Trenton	7	169	414
Wolfville	11	163	345
Antigonish	8	99	588
Digby	5	148	440
Oxford	3	142	467
Parrsboro	3	115	533
Pictou	6	93	650
Port Hawksbury	5	75	840
Shelburne	4	108	550
Windsor	6	107	633

Source: Police Resources in Nova Scotia, 1996¹¹¹

The economic costs of the criminal court system include salaries of judges, prosecutors and defence lawyers, including legal aid staff, plus overhead and administrative costs. Civil justice costs are not included here, nor is the lost economic production due to court time of jurors and witnesses.

¹¹¹ Nova Scotia Department of Finance, *Nova Scotia Statistical Review, 1998*, p.121.

Statistics Canada has estimated that legal aid constitutes about 4% of total public justice spending in Canada, prosecutions account for 3%, and other court costs for another 9%.¹¹² This includes both federal and provincial spending. Since precise court costs are not separately available for the provinces, the Nova Scotia share has been extrapolated from Statistics Canada estimates for criminal court costs in Canada to estimate a 1997 expenditure of \$39.4 million for total public criminal court costs, including legal aid, in Nova Scotia.¹¹³

The estimate includes one-half of legal aid spending in the Province, the approximate percentage attributable to criminal cases.¹¹⁴ Nova Scotia's prosecution expenses in 1994-95, the latest available year for precise data, were nearly \$8 million, the second highest per capita rate in the country.¹¹⁵ The Nova Scotia share of federal prosecution costs is estimated at about \$1.3 million per year based on population share. These expenses are also included in the composite \$39.4 million estimate, as are half the expenses of municipal courts, normally excluded from the composite court cost figures

¹¹² Statistics Canada, Canadian Centre for Justice Statistics, "Justice Spending in Canada," *Juristat*, catalogue no. 85-002, volume 17, no. 3, January, 1997.

¹¹³ Statistics Canada, *Juristat*, catalogue no. 85-002-XPE, volume 17, no. 3, table 5, "Spending on Selected Justice Services in the Provinces and Territories", notes that municipal courts, amounting to 15% of the caseload in Nova Scotia, are excluded from the provincial estimates provided. Using the 50% break-down of civil and criminal cases derived from the legal aid figures, I have therefore added an additional 7.5% to the criminal court costs to account for the cost of municipal court proceedings.

¹¹⁴ The 1995-96 ratio of legal aid expenditures in Nova Scotia was almost exactly 50:50 for criminal and civil justice cases. Statistics Canada, *Legal Aid in Canada*, catalogue no. 85FOO15XPB, page 43.

¹¹⁵ Statistics Canada, Canadian Centre for Justice Statistics, "Prosecutions: Resources, Expenditures and Personnel, 1994-95", *Juristat*, catalogue no. 85-402, October, 1996, page 4, table 1. Statistics Canada, Canadian Centre for Justice Statistics, Denyse Carriere, "Adult Criminal Court Statistics," *Juristat*, catalogue no. 85-002, volume 18, no. 7, page 6 indicates that Nova Scotia has the second highest number of prosecutors in the country on a per capita basis, but the second lowest rate of convictions (59.1%), and the lowest rate of any province on a per prosecutor basis.

released by Statistics Canada. The total estimate has been tested against a model used by the Fraser Institute and found to be comparable.¹¹⁶

With cuts in government services, legal aid services are in a state of crisis across the country, and it has been suggested that more people are appearing in court without adequate legal representation.¹¹⁷ According to Statistics Canada, "fewer people are applying for legal aid, and even fewer applications are being approved for full service."¹¹⁸ Nova Scotia is now in the final year of a four-year budget reduction programme that has included cutting the number of approved cases.

Legal aid spending in Nova Scotia dropped by 8% between 1995 and 1996. Nevertheless, Nova Scotia still approved 76% of applications for legal aid in 1996-97 compared to only 62% nationally. 59% of legal aid approvals in the Province were for criminal cases, while most approvals across the country were for civil cases. Nova Scotia's legal aid spending, while below 1991 levels, is still more than double the level 10 years ago.¹¹⁹

¹¹⁶ About one-half of all legal aid cases in Canada are attributable to civil rather than criminal cases, according to Statistics Canada. See also Brantingham and Easton, *The Crime Bill*, op. cit., Fraser Forum, page 28, for the methodology used to derive estimates for Canadian criminal court costs. The authors of that study use the percentage of legal aid cases attributable to criminal cases (50%) to estimate the percentage of total Canadian court costs devoted to criminal proceedings, and assign legal aid and prosecution expenses in the same way. In 1992 dollars, the Nova Scotia population share of the Fraser Institute's total estimate for Canadian court costs, including legal aid and prosecutions, would be \$32.5 million. Adjusted to 1997 dollars, the amount is \$34.3 million, which is comparable to the estimate derived here directly from Canadian criminal court costs. The difference in the two estimates can be explained because the GPI estimate includes the Nova Scotia share of *federal* prosecution costs, because it is derived directly from criminal court costs rather than extrapolated from total court costs, because it adds in municipal court costs, and because the GPI estimate is from more recent data. With appropriate adjustments for the additional costs included in the GPI estimate, the total expense would be almost identical to the Fraser Institute result.

¹¹⁷ Statistics Canada, Canadian Centre for Justice Statistics, Rebecca Johnstone and Jennifer Thomas, "Legal Aid in Canada: 1996-97", *Juristat*, catalogue no. 85-002, volume 18, no. 10, page 9

¹¹⁸ Johnstone, op. cit., *Juristat*, catalogue no. 85-002, volume 18, no. 10.

¹¹⁹ Johnstone, op. cit., *Juristat*, catalogue no. 85-002, volume 18, no. 10, page 8, table 5.

While the national reduction in legal aid in the 1990's appears superficially as a fall in crime costs and partially reflects declining crime rates since 1991, it may also reflect a decline in due process afforded to those charged with an offence. As noted at the beginning of chapter 3, the correlation of economic costs with crime rates rests on the assumption that there is no erosion of civil rights. Further research is necessary to determine whether cuts in legal aid have in fact reduced opportunities for a fair trial.

While this study deals only with the costs of crime, civil justice costs are also "regrettable" expenditures in so far as litigation cannot be considered to enhance welfare and are generally considered necessary in response to perceived harm or wrongdoing. In addition, many civil cases arise from crime. If the justice system as a whole is understood as necessary to redress perceived wrongs, then it makes sense to consider civil justice expenses as "costs" rather than "gains" to the economy in the same way that crime costs are considered in this thesis. If total court costs, including legal aid and prosecution expenses, were included, another \$40 million would be added to the bill.

Extrapolating from national data, Nova Scotia households would have spent more than \$33.3 million in 1996 on legal services. Nova Scotia miscellaneous household consumption expenditures are about 90% of the national average, while the Province has only 81% as many lawyers on a per capita basis. For this reason, the \$33 million estimate should probably be discounted by a further 10% to \$30 million for a more accurate estimate.¹²⁰

¹²⁰ Statistics Canada, *Family Expenditure in Canada*, catalogue no. 62-555: Legal expenditures are included in "Miscellaneous Expenditures" (Lines 3600-3622), with legal services on Line 3603 disaggregated at the national level only in the published reports. In Canada as a whole, legal services amount to 7.67% of total miscellaneous expenditures. Applying the same ratio to Nova Scotia yields a per household average expenditure of \$99.40 on legal services, compared to the Canadian average of \$110 per household. The household expenditure is then multiplied by the 335,150 Nova Scotia households.

Alternatively, earnings data for Nova Scotia reveal lawyer costs of \$86.8 million in 1995. This would include business and government as well as household spending, but does not include costs for paralegals and legal secretaries, nor of law firm overheads. Paralegals earn an additional \$8.5 million in Nova Scotia, and legal secretaries earn \$17.4 million, for a total “litigation cost” of \$112.8 million for the legal profession.¹²¹ These data are given for illustrative purposes only in order to reveal the magnitude of civil justice costs. Further analysis would be required before these costs could be included in an estimate of total justice costs.

If fewer lawyers mean less litigation, Nova Scotia is a considerably less litigious and contentious society than the United States, and somewhat less litigious than Canada as a whole. There is one lawyer for every 700 Nova Scotians compared to one for every 300 Americans and one for every 500 Canadians. But perhaps Nova Scotians are taking each other to court more than they once did. Between 1990 and 1995 alone, the proportion of lawyers to the general population rose by 6% in Nova Scotia compared to 3% nationally. As with crime, less legal spending is a quality of life advantage that still stands in the Province. But the recent trend is disturbing, and a valuable but invisible asset may be eroding.

Among the many forms of sentencing, only Corrections costs are included here. From a quality of life perspective, fines have a neutral function, since they are simply a transfer of funds from one population group to another. On the one hand, they can be seen as providing social benefit and a potential increase in welfare. On the other hand,

¹²¹ Earnings data are from Statistics Canada, **EO 12 (Line 4112)**, indicating 1,350 lawyers with average earnings of \$64,310, for a total of \$86,818,500. Nova Scotia has 81% as many lawyers as the Canadian average, and Nova Scotia lawyers earn 83% the average earnings of lawyers in the rest of the country.

there is an opportunity cost to these fines. Had the crime not been committed, these fines could have been invested in welfare-enhancing activities rather than as a form of restitution for harm done. For this reason, fines are omitted from the calculations.

It costs taxpayers an estimated \$121 to keep an inmate in a Nova Scotia prison for a single day, or \$44,165 for a year (Table 5.6).¹²²

Table 5.6: Daily Cost per Inmate in Nova Scotia Provincial Jails
(1997 Constant Dollars)¹²³

<i>Year</i>	<i>Cost Per Day</i>
1978	\$86
1980	\$88
1982	\$95
1984	\$88
1986	\$109
1988	\$121
1990	\$135
1992	\$128
1994	\$120
1996	\$119
1997	\$121*

*Estimate

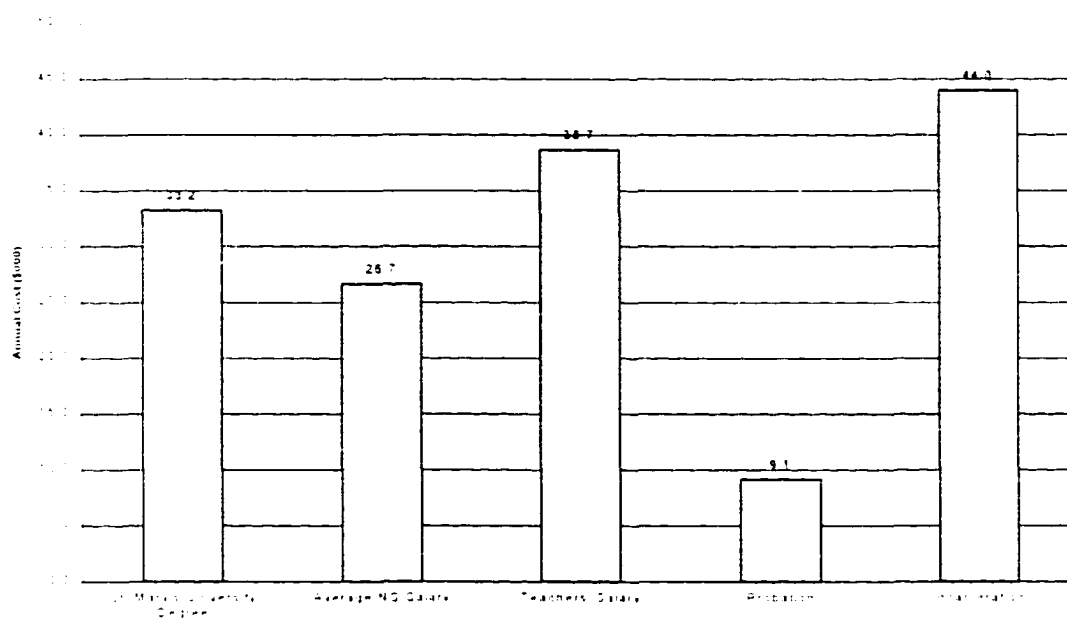
The institutional operating cost for Nova Scotia provincial jails for 1997 is estimated to be \$17.6 million.¹²⁴ Most of the expenses are for staffing, since corrections require almost a one-to-one ratio of custodial staff to inmates: 0.88 staff per inmate in prisons.¹²⁵ For the cost of incarcerating an inmate for a year, \$44,000, it would be possible to hire an extra secondary school teacher (average salary \$37,138) or to send a person to university for a three year undergraduate degree (including full-credit tuition.

¹²² Statistics Canada, *1978-1996 Adult Correctional Services in Canada*, (Statistics Canada Catalogue No. 85-211), Table 11.

¹²³ Statistics Canada, *1978-1996 Adult Correctional Services in Canada*, (Statistics Canada Catalogue No. 85-211), Table 11. Inmate days are 1996 figures, but estimates are in 1997 dollars. Statistics Canada, "Average Daily Inmate Cost of Corrections by Province", *Juristat*, catalogue no. 85-002, volume 12, no. 22, page 8, and Statistics Canada, *Criminal Justice at a Glance*, catalogue no. 85-211.

residence accommodation and meal plans).¹²⁶ Considering the correlation between crime and low education, certain preventive investments may be more cost-effective than dealing with the consequences of crime (Chart 5.6).

Chart 5.7: The High Cost of Incarceration



The \$17.6 million annual Provincial incarceration costs are only for custodial service expenditures. When Community Supervision Services and Headquarters and Central Services costs are included, as they should be to estimate the full costs of adult corrections resulting from crime, the total cost to the taxpayer is in excess of \$25 million. (Chart 5.7).¹²⁷

¹²⁵ Brantingham and Easton, *The Crime Bill*, The Fraser Forum, page 29.

¹²⁶ Footnote and pie chart. The cost of a three year degree at Saint Mary's University in Halifax is based on data from the 1998-99 Registration catalogue, p.21. A Canadian student taking five full undergraduate courses pays \$4025.50, a meal plan costs \$4950, and apartment rental on campus is \$2105. The total cost for the year is \$11080. To get the total cost for a degree the one-year total has been multiplied by three. The average salary for secondary school teachers in Nova Scotia is from Statistics Canada, 1996 Census, Cat. No. 93F0029XDB96005. The data is for 1995, but has been updated to 1997 figures using the Consumer Price Index. The average wage in Nova Scotia is from Statistics Canada, 1999, *Employment, Earnings and Hours*, October 1998, p. 53.

¹²⁷ Statistics Canada, March 1997, *Adult Correctional Services in Canada, 1995-96*, catalogue no. 85-211, page 48.

Nova Scotia spends a considerably smaller percentage of its Adult Corrections budget on Custodial Services than any other province in Canada.¹²⁸ This leaves more money and resources for community supervision programmes.¹²⁹ The Nova Scotia government's commitment to restorative justice, conditional sentencing and adult diversion programmes would seem to indicate that the Justice Department will continue to favour community programmes over incarceration.¹³⁰

In fact, the most dramatic increases in Nova Scotia Corrections have been in community supervision and probation. The number of offenders committed to community supervision rose 73% between 1992 and 1996 to 8,370.¹³¹ The average number of offenders partaking in Nova Scotia probation programmes increased by 22% during the same period to 4,339.¹³² Probation supervision costs the taxpayer only \$1,344 a year per offender, a fraction of the cost of incarceration.¹³³

It should be noted that "parole" is quite different from probation or community supervision, which are alternative sentencing options. Parole refers to prisoners released back into the community after a penitentiary stay. These ex-prisoners are required to report to a parole officer regularly for a specified period of time. Provincial expenditures on parole and approved temporary absence programmes are included in the total Provincial correctional expenditures described above.

¹²⁸ Statistics Canada, March 1997, *Adult Correctional Services in Canada, 1995-96*, catalogue no. 85-211-XPB, table 8.

¹²⁹ Statistics Canada, March 1997, *Adult Correctional Services in Canada, 1995-96*, catalogue no. 85-211-XPB, table 8.

¹³⁰ Nova Scotia Department of Justice, June 1998, *Restorative Justice: A Program for Nova Scotia*.

¹³¹ Statistics Canada, March 1997, *Adult Correctional Services in Canada, 1995-96*, catalogue no. 85-211-XPB, table 21.

¹³² Ibid.

¹³³ Average offender count on probation programme is from Statistics Canada, March 1997, *Adult Correctional Services in Canada, 1995-96*, catalogue no. 85-211-XPB, table 21. The cost of probation is

Chart 5.8: Adult Corrections Expenditures in Nova Scotia¹³⁴

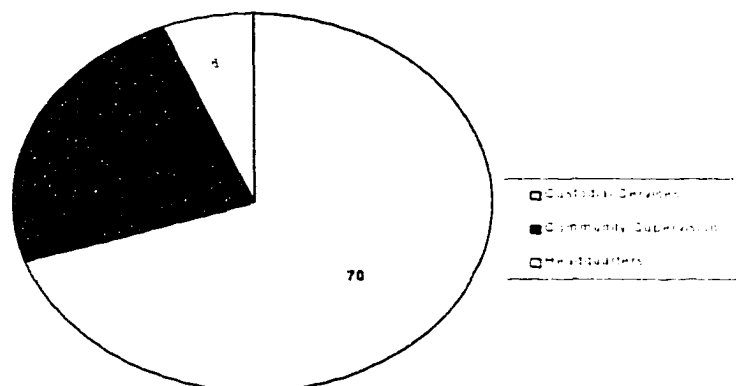
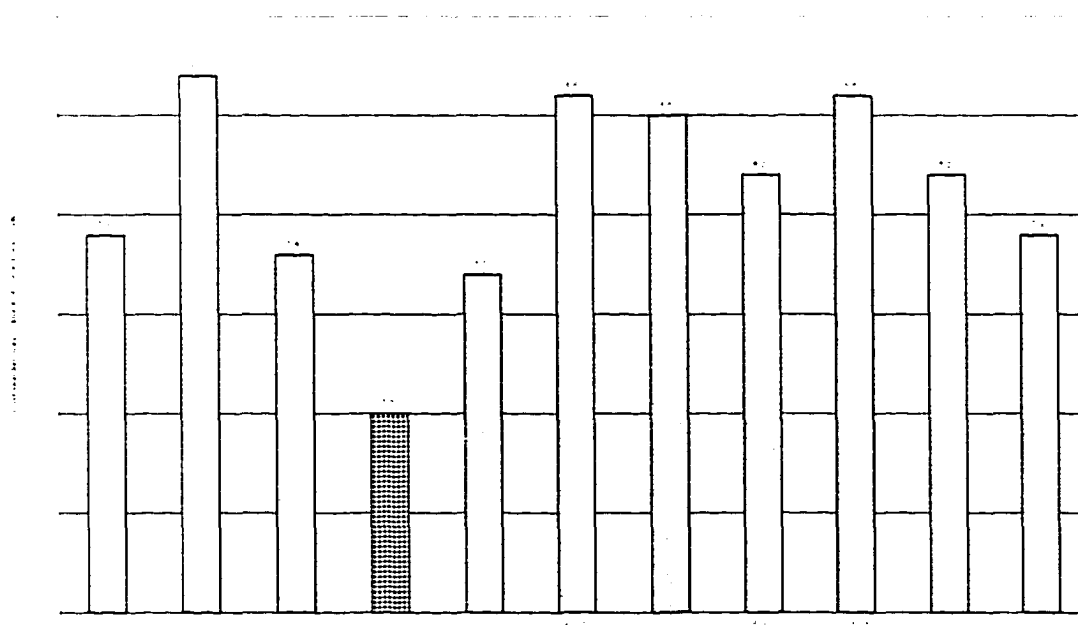


Chart 5.9: Nova Scotia Spends Less on Imprisonment in Proportion to Total Corrections Costs than other Provinces



from Statistics Canada, March 1997, *Adult Correctional Services in Canada, 1995-96*, catalogue no. 85-211-XPB, table 10.

The overall cost of corrections in Nova Scotia, including probation and administrative costs, has increased by nearly 80% since 1979 from \$14 million to \$25 million a year in constant dollars.¹³⁵ On a per capita basis, Nova Scotians are each spending 60% more on corrections than they were in 1979, compared to an increase of only 3% nationally. Nova Scotians are still spending less on corrections than other Canadians but, as with the crime rate, the gap is narrowing. In 1979, Nova Scotians spent only 53% as much as other Canadians on corrections. In 1996, they were spending 81% as much (Charts 5.9, 5.10, 5.11).¹³⁶

However, in marked contrast to the trend in the United States, most of the increased corrections costs are not for imprisonment. In fact, the actual rate of incarceration has declined since the early 1980s with the growing use of community supervision and probation instead of imprisonment (Chart 5.12). Sentenced inmate counts have dropped from a high point of 6.4 per 10,000 adults in 1982 to 4.4 per 10,000 in 1997, due to increased reliance on adult diversion programmes, conditional sentencing and other alternatives to incarceration. With the exception of a dramatic decline in custody admission rates due to the Bail Reform Act of 1970-71, on register inmate counts have remained fairly steady since the Second World War at about 6 per 10,000 population.¹³⁷

¹³⁵ Statistics Canada, *Adult Corrections in Canada*, table 8, catalogue No. 85-211.

¹³⁶ Municipal, provincial and federal data for Corrections dating from 1963 are available, but they are not comparable to the data from 1979 to 1997. Paul Smith, Nova Scotia Department of Justice, points out that in 1986 the Province took over the running of provincial institutions from the municipalities, accounting for a large part of this increase in expenditures. It is not clear whether the Statistics Canada data, on which these figures are based, include municipal prison costs. In addition, the narrowing of the gap between Nova Scotia and the other provinces may be due as much to cost cutting by other jurisdictions as to increased expenditures by this Province.

¹³⁷ Inmate counts supplied by Paul Smith, N.S. Department of Justice, personal communication, 17 March, 1999.

Nova Scotia still has the lowest rate of imprisonment in the country, 36% below the national average, though *median* sentences are consistently longer than the Canadian average, 60 days in 1996 compared to 31 days for the rest of the country.¹³⁸ Only one in eight people charged in Nova Scotia ends up in prison, compared to one in five in the rest of Canada. Of those actually found guilty of a crime, Canada imprisons one-third, and Nova Scotia only one-fifth, 55% of convictions in Nova Scotia result in a fine.¹³⁹ In 1996, just 2,113 offenders were given prison sentences.

In other words, the Nova Scotia pattern seems to be to keep less serious offenders out of prison, but to send serious offenders to jail for longer. This would also help explain the high rate of Nova Scotia prisoners with prior convictions noted earlier. Indeed, for each of the last 20 years, Nova Scotia has imposed longer sentences than the national average. Over the past two decades, Nova Scotia courts have handed down average median sentences of 52 days compared to the national average of 30 days.¹⁴⁰

Also, as demonstrated below, Nova Scotia has the highest rate of admissions to federal prisons in the country, 3.6 per 10,000 adult population, compared to 2.0 per 10,000 in Canada as a whole. This is significant, since federal admissions are for serious offences and carry sentences of two or more years.

¹³⁸ Statistics Canada, *CANSIM database*, matrix 318. Note that comparative incarceration rates are subject to several alternative interpretations. Comparing "on-register" counts, which include inmates on temporary leaves of absence, work programs and other leaves, yields different results than comparing "in-house" counts. Even within in-house counts, there are significant differences between comparing total incarceration rates, including prisoners on remand awaiting trial, and comparing only sentenced inmates. Additional confusion exists in assessing the provincial proportion of federal penitentiary inmates. For this reason, the comparative incarceration rates given here vary somewhat from the international comparison below, since attempts have been made to reconcile the latter figure with U.S. estimates.

¹³⁹ Statistics Canada, Canadian Centre for Justice Statistics, Denyse Carriere, "Adult Criminal Court Statistics," *Juristat*, catalogue no. 85-002, volume 18, no. 7, April, 1998, pages 1 and 9.

¹⁴⁰ Ibid

The two sentencing trends – fewer offenders incarcerated and longer sentences for those given custodial time – raises a rather troubling question: “Are sentencing trends the result of deliberate Provincial government policy to save money”? By imposing fines more readily than other provinces Nova Scotia raises funds while saving custodial costs, and by sentencing offenders to penitentiary stays at a much higher rate than any other province the government of Nova Scotia passes the cost of incarceration onto the federal government. If this supposition is correct, then at the very least those offenders sent to penitentiaries so that the government can save money are getting unnecessarily long sentences, and are therefore having their civil rights violated. Unfortunately it is beyond the scope of this thesis to investigate whether this hypothesis is sound; the most that can be done at this stage is to raise the issue.

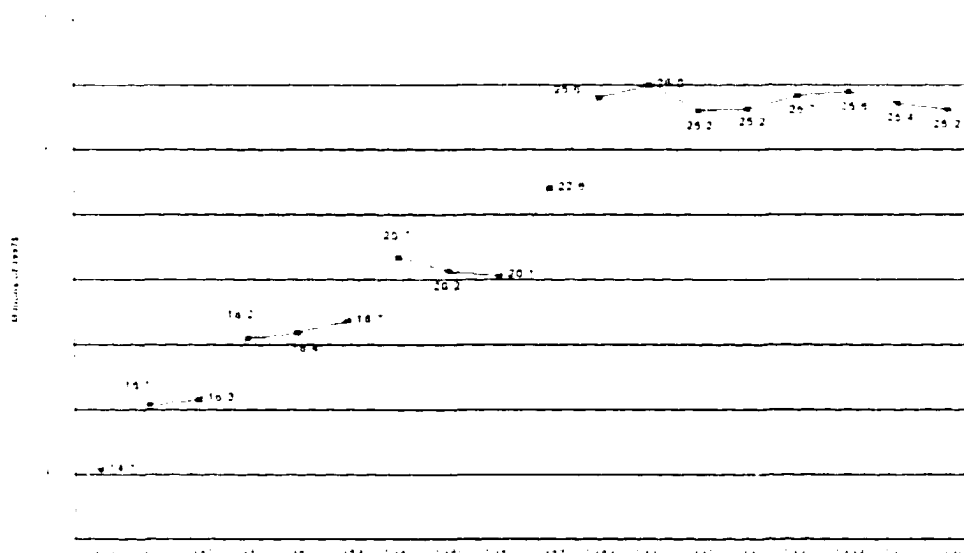
Still, despite the propensity to keep minor offenders out of prison in the Province, long sentences for serious offences are still the exception to the rule. In Nova Scotia 37% of prison sentences are for less than one month and only 6% of all prisoners are sentenced for a year or more. In 1997-98, the *average* sentence length in the province was 114 days, with an average sentence served to release of 55 days.¹⁴¹ Though media publicity tends to emphasise the most sensational and alarming crimes, the vast majority of prison sentences are actually for relatively minor crimes, such as non-payment of fines.

The “typical” Nova Scotia prisoner is 20-24 years old, male, and sentenced to a 1-3 month term for a property crime. 19% of prison sentences are for violent crimes, 24% are for property crimes, 12% for impaired driving, and 22% for other offences, such as

¹⁴¹ Paul Smith, N.S. Department of Justice, personal communication, 17 March, 1999.

obstruction of justice or non-payment of fines.¹⁴² In the last ten years there has, however, been a significant change in the type of admission. Just as the violent crime rate in the province has increased more rapidly than the property crime rate, violent crime prison admissions have jumped from less than 30% of property crime admissions 10 years ago to more than 70% today.¹⁴³

Chart 5.10: Cost of Corrections in Nova Scotia
(1997\$ millions)



¹⁴² Statistics Canada, *Adult Correctional Services in Canada, 1995-96*, catalogue no. 85-211-XPB, pages 56-58.

¹⁴³ Statistics Canada, *Adult Correctional Services in Canada, 1995-96*, catalogue no. 85-211-XPB, pages 56-58.

Chart 5.11: Nova Scotia and Canada per capita Corrections Costs, 1979 - 1996¹⁴⁴

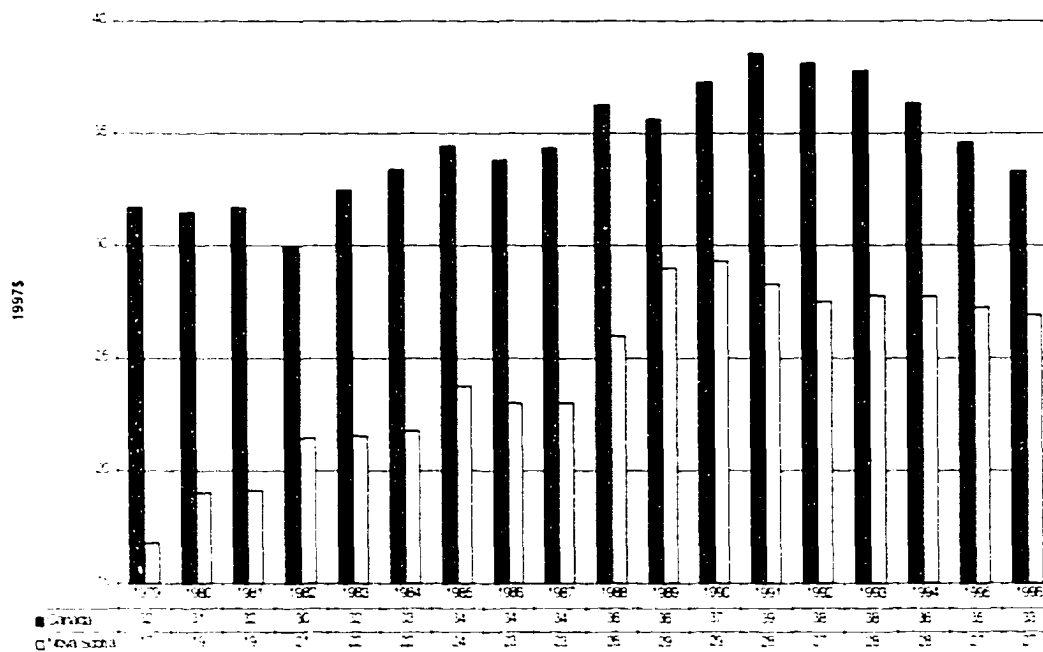
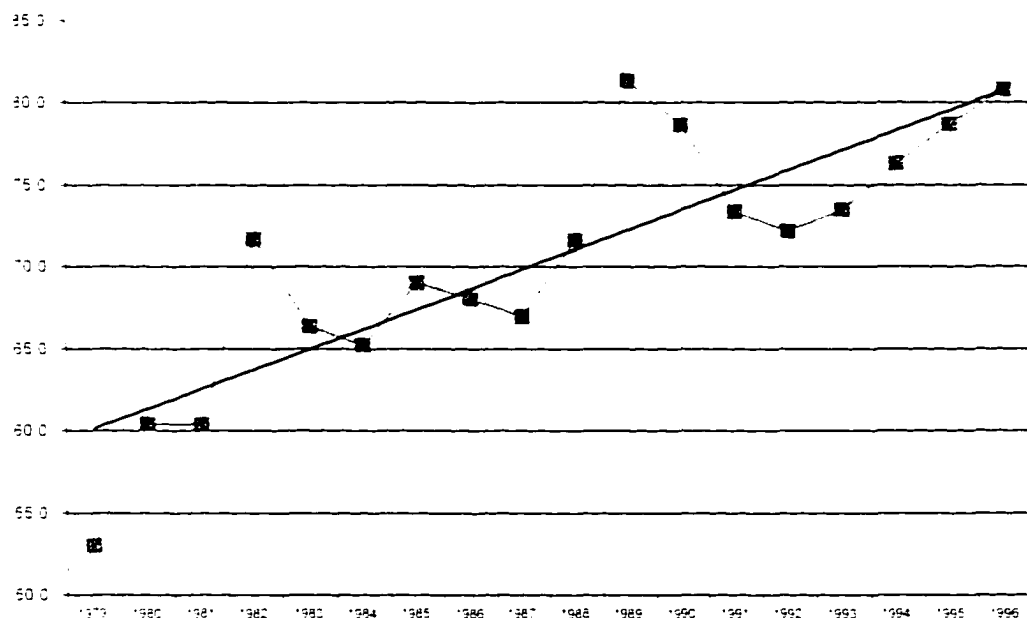
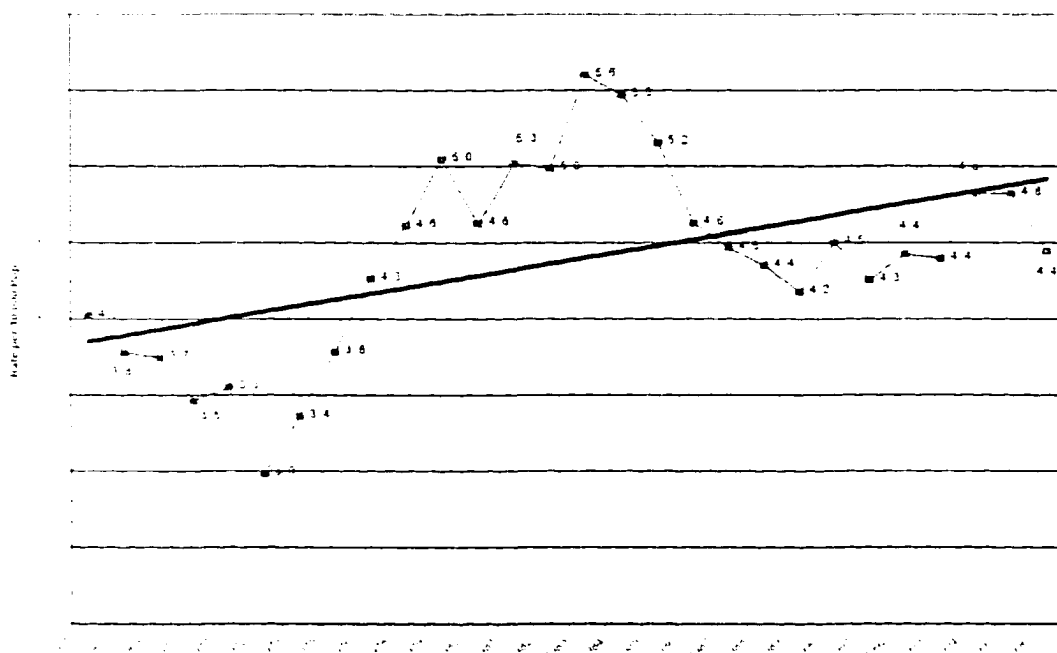


Chart 5.12: Nova Scotia Costs as Percentage of Canadian Costs: Canada = 100



¹⁴⁴ Statistics Canada, *Operating Expenses for Provincial Prisons*, Table 8.

Chart 5.13: Inmates in Nova Scotia Provincial Prisons, 1967 - 1997¹⁴⁵
(Rate of Incarceration per 10,000 population)



Since Nova Scotia taxpayer dollars help fund both federal and provincial prisons, federal expenditures on Nova Scotia criminals must be added to the corrections costs. Federal prisons house the most serious offenders. It costs \$133 a day or \$48,500 a year to imprison someone in a federal penitentiary, which holds criminals with sentences of two or more years.¹⁴⁶ Since the general population pays the taxes that fund federal penitentiaries, the Nova Scotia share of the nearly one billion dollar cost of operating federal corrections, based on share of the general population, comes to 30 million dollars of taxpayers money.¹⁴⁷

¹⁴⁵ Statistics Canada, *Criminal Justice at a Glance*, Catalogue No. 85-201, page 167 and *In custody at End of Year*, Catalogue No. 85-207 and 9300-506.

¹⁴⁶ Statistics Canada, *Adult Correctional Services in Canada, 1995-96*, catalogue no. 85-211-XPB, page 85. The numbers are for 1996 but have been altered to 1997 values using the Consumer Price Index.

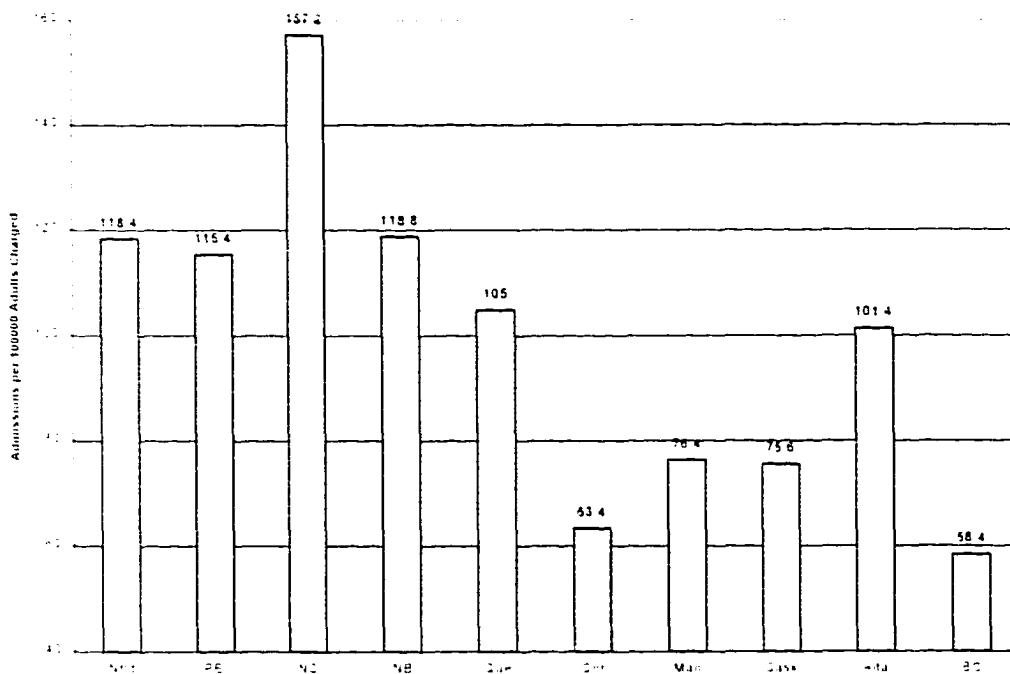
¹⁴⁷ See Appendix on methodology for more details.

Estimating the cost of federal corrections based on population probably underestimates the real cost of incarcerating Nova Scotia criminals in federal institutions. Without knowing the number of federal inmates sentenced in the province it is not possible to calculate the real cost of crime attributable to inmates who committed their crime in Nova Scotia. However, Nova Scotia federal inmates make up a larger share of the penitentiary population than Nova Scotians do of the general population. Nova Scotia has had the highest rate of admissions to federal penitentiaries per 10,000 adults charged of any province for the last two years, and has incarcerated federally at a higher rate overall for the last five year period based on aggregate figures for that period (Chart 5.13).

This trend is also true in relation to the general adult population. The Nova Scotia rate of admissions to federal custody in 1996 was 80 per cent higher than the national average of two adults per 10,000 population (Chart 5.14). If admissions are an accurate indicator of prison population, and federal corrections costs were apportioned according to the home province of admissions, Nova Scotia would be responsible for 5.88 per cent of incarceration costs instead of the 3.13 per cent the taxpaying population currently pays.¹⁴⁸ In such a scenario Nova Scotia would have to pay \$57 million.

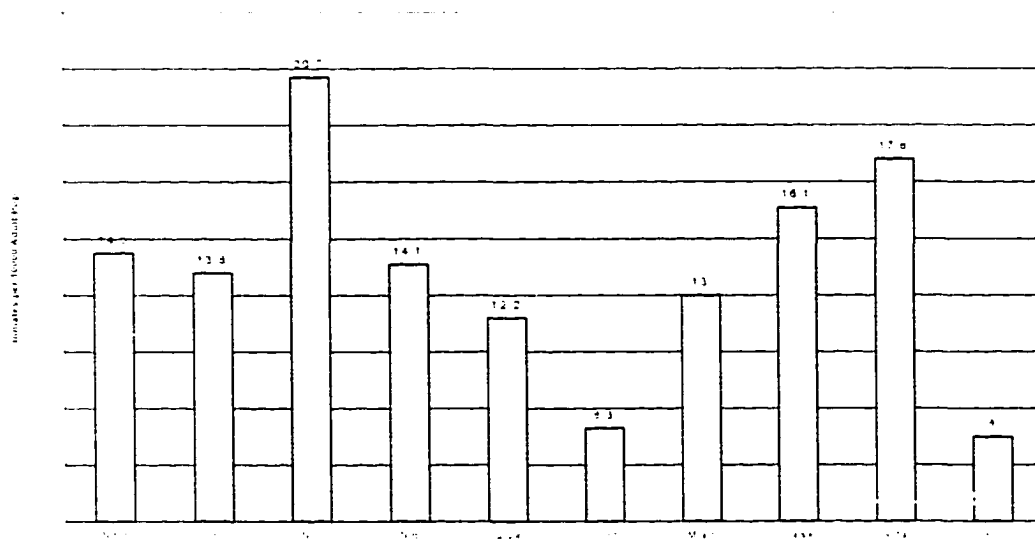
¹⁴⁸ Statistics Canada, March 1997, *Adult Correctional Services in Canada, 1995-96*. In 1995-96 there were 259 admissions from Nova Scotia, and 4402 in Canada overall.

**Chart 5.14: Nova Scotia Criminals are sent to
Federal Penitentiaries at Higher Rate than Other Provinces**
(Admissions per 100,000 adults charged)¹⁴⁹



¹⁴⁹ Statistics Canada, *Criminal Justice at a Glance*, Catalogue No. 85-211.

Chart 5.15: Inmates per 100,000 Adult Population in Federal Penitentiaries, by Province¹⁵⁰



Imprisonment not only imposes a cost on the taxpayer through incarceration costs, it also economically affects quality of life by removing potentially productive men and women from the workforce. Counting only the 28% of inmates who were employed at the time of incarceration, the lost economic production of prisoners would cost the Nova Scotia economy an additional \$1.25 million a year, at average weekly industrial wages. This is based on 22% who were employed full-time, and 6% working at part-time, seasonal and other forms of employment. Since the education data in chapter 4 indicate generally lower educational levels for inmates, the cost estimate here has been discounted for the lower wages paid to less educated workers for a total estimated loss of about \$1 million a year.¹⁵¹

¹⁵⁰ Provincial penitentiary data supplied by Paul Smith, Nova Scotia Department of Justice.

¹⁵¹ Employment data from Paul Smith, Nova Scotia Department of Justice.

In 1996-97 on average there were 174 youths, 17 and younger, in custody in Nova Scotia. This represents a rate of 23 per 10,000 youths.¹⁵² In the same period, the average number of youths on supervised probation at month end in Nova Scotia was 1,495, a rate of 197 per 10,000 youths.¹⁵³ This is broadly in line with the national average. In 1995 the government of Nova Scotia spent \$16.7 million on youth corrections, in constant 1997 dollars.¹⁵⁴

Adding together provincial and federal corrections expenses in Nova Scotia, including parole, probation and community supervision, plus youth corrections costs and inmate production losses, means that the corrections system as a whole costs Nova Scotians \$75 million a year.¹⁵⁵

South of the border incarceration rates are far higher than either the Canadian national average or the Nova Scotia rate. The higher incarceration rate results in higher per capita incarceration costs. The United States spends 50 billion dollars a year on corrections.¹⁵⁶ This amounts to US\$186 or CAN\$280 per person per annum, compared to \$92 per person per year in Canada¹⁵⁷ and just \$78 in Nova Scotia¹⁵⁸.

In the last fifteen years the United States has increased spending on corrections by more than 230%. For the average American this translates into an almost threefold per capita increase from US\$64 per year in 1993. Prisons are one of the fastest growing

¹⁵² Statistics Canada, "A Profile of Youth Justice in Canada", *Juristat*, catalogue no. 85-544, page 44.

¹⁵³ *Ibid.*, page 48.

¹⁵⁴ Statistics Canada, "Justice Spending in Canada", *Juristat*, Statistics Canada Cat. No. 85-002, Vol. 17, No.3.

¹⁵⁵ It is important to note that simple remedies are not advocated here. Arbitrarily cutting incarceration expenditures merely to save money may result in greater crime related expenditures elsewhere. Fining an offender guilty of robbery instead of imposing a custodial sentence, may result in him committing more crimes and hence having a greater negative impact on quality of life than if he had been imprisoned. Cost-benefit analysis must be employed before policy decisions are made.

¹⁵⁶ Estimate is based on data from *Statistical Abstract of the United States, 1997*, 117th edition, U.S. Department of Commerce. See Appendix on methodology and data sources for more details.

areas of the American economy, and the growth has helped fuel the increase in the American GDP.¹⁵⁹

Finally, the Nova Scotia Justice Department uses funds to try to assist victims through the prosecution process and the rehabilitation stage after an attack. Such spending is a cost of crime. The Nova Scotia Justice Department's Victims' Services Division administers a Victims' Assistance Fund for victims of crime generated from a victim surcharge on fine and non-fine dispositions on both provincial statute and federal offences.¹⁶⁰ The fund is used for services, research and promotion of the rights of victims of crime, but cannot, by law, be used to provide direct compensation to individual victims.

Most of the revenue comes from motor vehicle and liquor control offences. Due to a decline in charges laid, there has been an annual decrease in surcharges collected in each of the last six years for a total loss of 20% since 1992. The 1997-98 surcharge collected was \$650,405, and there is currently \$706,000 in uncommitted revenues in the fund.¹⁶¹

Total awards for 1996-97 were \$792,372. Awards are made by the Director of Victim Services.¹⁶² On an annual basis the Victims' Assistance Fund supports the Child Victim Witness Programme and staffing for the Regional Victims' Services offices. It has also supported new initiatives such as the Production of Records in Sexual Offences Pilot Programme, and the Department's Framework for Action Against Family Violence.

¹⁵⁹ Statistics Canada, "Justice Spending in Canada", *Juristat*, Vol.17, No.3, p.12.

¹⁵⁸ Statistics Canada, Cansim matrix 1. Population estimate for 1997 is 945,080.

¹⁵⁹ Linda McQuaig, *Shooting the Hippo*, Toronto: Penguin Books, 1995, page 57.

¹⁶⁰ This section is based on N.S. Department of Justice, Victim Services' Division, "Victims' Assistance Fund," *Activity Report 1997-98*, pages 50-56.

¹⁶¹ "Victims' Assistance Fund," *Activity Report 1997-98*, pages 50-56.

Since its initiation in August 1989, disbursements and commitments from the fund total nearly \$6.2 million.

It may be argued that the Victims' Assistance fund is simply a transfer of funds from offender to victim, and not therefore a cost to society. It is not. It is included here as a cost of crime because there is an opportunity cost to the investment. The fund represents money that could be spent more productively on welfare-enhancing measures if the crimes had not occurred. Victimization itself is regrettable, and the funds spent assisting victims are regrettable for the same reason – society wishes that they did not need to be spent, and could instead be invested in more productive actions.

Strictly speaking, all Justice Department spending is a defensive expenditure for the same reason, and a cost of crime paid by the taxpayer. If crime were to disappear, the spending would not be necessary and could be invested in more productive activities. While crime exists, it is an essential expenditure. However, due to time constraints, the Justice Department budget has not been analysed here, and only the Victims' Assistance Fund included in the calculations as a very direct and immediate crime cost.

The justice system helps protect innocent people from those who would do them harm. It is not perfect: if it were there would be no crime in the Province. Because of the inadequacies of the system many individuals and businesses opt for the added protection that the private security industry can supply. Such measures are commonly referred to as "defensive expenditures." They do not contribute to welfare in a positive sense, but are designed to guard against any decline in security and well being, or to compensate for a past decline. Specifically, private spending on locks, burglar alarms, surveillance

¹⁰² Information on administration of programme from Joanne Marriott-Thorne, Victim Services Division, Nova Scotia Department of Justice, personal communication, 19 March, 1999.

systems, security guards, and theft insurance premiums for the purpose of crime prevention and detection are counted as defensive expenditures.

Defensive expenditures increase in direct response to the fear of crime and to subjective perceptions of the likelihood of crime, as well as to objective changes in the crime rate itself, and are, therefore, an important indicator of public perceptions of personal security.

Once again, the conservative definition of costs used here is confined to monetary expenditures only. Fear of crime can clearly produce defensive behaviour as well as defensive expenditures. Restricting one's movements by staying home at night, or taking a taxi to avoid walking in the dark may be reactions to the fear of crime that have a direct impact on the quality of life and, in some cases, produce indirect costs that are not measured here.

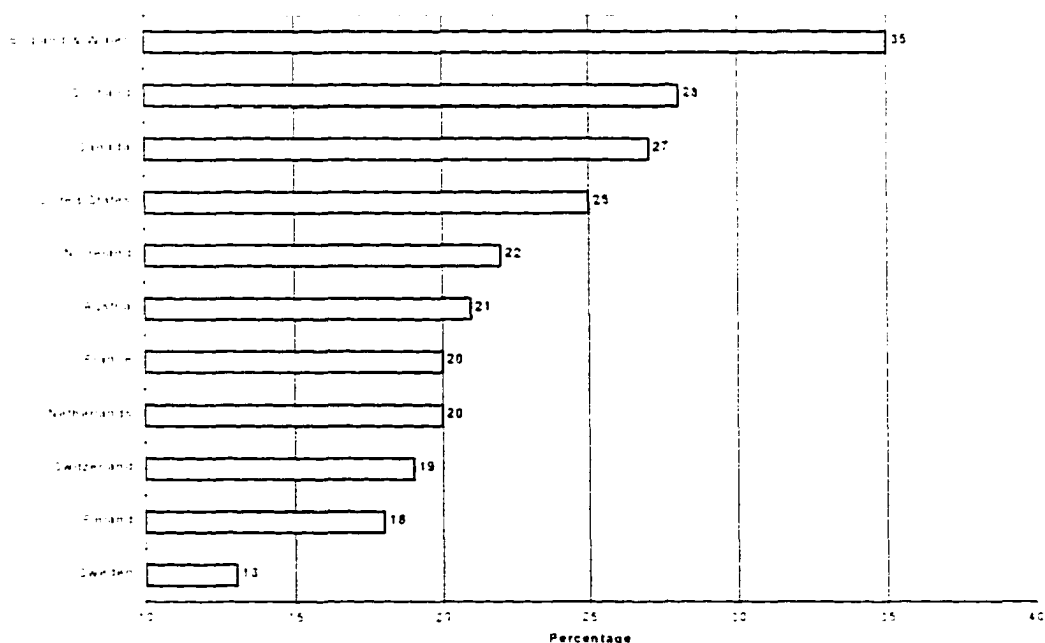
Overall Canadians feel less safe than they did just a few years ago. In 1996, 27% of Canadians reported that they did not feel safe walking alone in their area after dark, compared to 22% who gave that response in 1992. Compared to 10 other western countries surveyed in the 1996 International Crime Victimization Survey, Canadians felt less safe than any country except the United Kingdom. 25% of Americans did not feel safe and only 13% of Swedes said they did not feel safe (Chart 5.15).¹⁶³

Data for the Halifax-Dartmouth area shows a different trend. The 1984 Canadian Urban Victimization Survey found that 48 per cent of Halifax-Dartmouth interviewees

¹⁶³ Statistics Canada, Canadian Centre for Justice Statistics, Besserer, Sandra. "Criminal Victimization: An International Perspective", *Juristat*, catalogue no. 85-002-XPE, volume 18, no. 6, March 1998, page 9.

felt unsafe walking alone in their neighbourhood after dark.¹⁶⁴ The same survey showed that only 40 per cent of respondents from across Canada reported similar feelings.¹⁶⁵ Recent data indicates that Nova Scotians feel safer in their communities than had previously been the case. Thirty per cent of Nova Scotians felt unsafe walking alone in their community at night in 1993. By 1998, according to the Nova Scotia Justice Department, only 19 per cent reported such feelings.¹⁶⁶ If the data are comparable to those in the International Crime Victimization Surveys described above, then they seem to contradict the national trend.

Chart 5.16: Percent of Population Who Do Not Feel Safe Walking Alone in Their Area After Dark, International Perspective



Source: Sandra Besserer, Statistics Canada, "Criminal Victimization: An International Perspective, Results of the 1996 International Crime Victimization Survey, *Juristat*, catalogue no. 85-002, volume 18, no.6, page 9, figure 11.

¹⁶⁴ Ministry of the Solicitor General of Canada, *Programs Branch User Report: Preliminary Findings of the Canadian Urban Victimization Survey: Halifax-Dartmouth*, catalogue no. 1984-50, page 17, table 8.

¹⁶⁵ Ibid, Table 9.

¹⁶⁶ Nova Scotia Justice Department Website: <http://www.gov.n.s.ca/just/outcomem.htm>.

Paul Smith, Nova Scotia Justice Department, notes that an in-depth re-interviewing process following the 1995-96 British victimisation survey revealed that the survey probably overestimated the "fear of crime" by 15-20%. The interviews suggested that many of the respondents' fears were actually related to specific and particular circumstances, and were not generalised as the survey results implied.¹⁶⁷ For this reason, the results reported in this section should be treated with caution.

However, it is also clear that fear of crime translates into actual defensive behaviour. 24% of Canadians said that they avoided certain places or people when they were last out in their area after dark, up from 20% in 1989 and 21% in 1992. Canada ranked third after the USA (29%) and the United Kingdom (28%) in adopting such defensive behaviour.¹⁶⁸

Canadian women are more than four times as likely than men to feel unsafe walking alone in their area after dark, and about three times as likely to worry about being home alone at night. Persons 65 and over are twice as likely to feel unsafe walking alone in their area after dark than the average Canadian.¹⁶⁹

30% of Canadians feel the chance of break-in is "likely" or "very likely" in the next 12 months, the third highest rate among the surveyed countries, and well ahead of the United States (23%), Sweden (16%), Austria (13%) and Finland (11%). In the 1993 General Social Survey, 25% of Canadians reported feeling worried when alone in their homes in the evening or at night.¹⁷⁰

¹⁶⁷ Paul Smith, personal communication, 26 March, 1999.

¹⁶⁸ Sandra Besserer, Statistics Canada, Ottawa. "Criminal Victimization: An International Perspective - Results of the 1996 International Victimization Survey," Ottawa: March 1998, *Juristat*, Catalogue No. 85-002, Volume 18, No. 6.

¹⁶⁹ Vincent Sacco, Statistics Canada, Ottawa: March 1995, "Fear and Personal Safety," *Juristat*, Catalogue No. 85-002, Volume 15, No. 9, page 1.

¹⁷⁰ Op. cit., page 5; and Statistics Canada, Besserer, op. cit., page 9.

Not surprisingly, Canada also ranks third among countries adopting special household security measures, after Great Britain and the USA. 78% of Canadian households have a burglar alarm, special door locks, special door/window grills, a watch dog, a high fence, a neighbourhood watch scheme, or a security guard or caretaker, compared to only 54% of Austrians, 53% of Swedes, and 49% of Swiss. The use of each of these seven specific measures was higher than average in Canada.¹⁷¹

Again, trends over time are significant, because the fear of crime and defensive expenditures in Canada appear to be growing despite a downturn in the actual crime rate since 1991. Between the 1992 and 1996 victimisation surveys, burglar alarm use in Canadian households increased from 12% to 19%, the use of special door locks was up from 42% to 52%, and the proportion of households with watch dogs increased from 23% to 27%.¹⁷² In sum, the fear of crime translates into actual monetary expenditures on crime prevention.

Evidence from victimisation surveys indicates that across Canada, households are investing more money in home security systems than ever before. Burglar alarm use in Canada increased from 12% of households in 1992 to 19% in 1996, and the use of special door locks rose from 42% of households in 1992 to 52% in 1996.¹⁷³ These growing crime prevention expenditures are not a sign of increased well being and prosperity as the GDP implies. Home security expenditures are regrettable costs, signifying a less secure society and a lower quality of life.

¹⁷¹ Statistics Canada, Besserer, op. cit., pages 9 and 10.

¹⁷² Op. cit., pages 10 and 11.

¹⁷³ Statistics Canada, Canadian Centre for Justice Statistics, "Criminal Victimization: An International Perspective", *Juristat*, catalogue no. 85-002-XPE, volume 18, no. 3, 1996.

Using 1982 constant dollars, the original U.S. Genuine Progress Indicator estimated that the cost of crime borne directly by households was \$20.1 billion in 1992. Of this total, \$5.2 billion was spent on locks and safe deposit boxes, and another \$2.8 billion was spent on burglar alarms and other electronic security systems.¹⁷⁴

Using the original GPI methodology, Hans Messinger and Abe Tarasofsky of Statistics Canada have made an estimate of crime costs for Canada, which is used in Osberg and Sharpe's new *Index of Economic Well-being for Canada*. In constant 1992 dollars, this amounts to \$112 per capita in 1971, rising 39.4% to \$156 in 1997. Converted to 1997 dollars, this amounts to \$118 in 1971 and \$165 in 1997.¹⁷⁵

Of this total, direct victim crime costs have already been counted earlier in this chapter. Therefore, only household spending on security devices is counted here, amounting to 39% of the household costs estimated in the US GPI, or \$61 per capita in Canada. Government and business costs are excluded in the US GPI, and so this figure reflects only spending on home security devices.

The 1996 International Crime Victimization Survey found that 78% of Canadian households had at least one security measure, such as burglar alarms and special door

¹⁷⁴ Cobb, Clifford, Ted Halstead and Jonathan Rowe, *The Genuine Progress Indicator: Summary of Data and Methodology*, Redefining Progress, San Francisco, September, 1995, pages 17-18. The 1992 figures are derived by using Cobb et. al.'s assumed 2.8% growth rate in spending on locks and safe deposit boxes based on their \$4.3 billion estimate for 1985 from Laband, David and John Sophocleus, "An Estimate of Resource Expenditures on transfer Activity in the United States", *Quarterly Journal of Economics*, August 1992, pages 959-983. Their estimate for alarms and electronic security systems is from Gary Parr, "\$12.5 Billion Targeted for 1995", *Security Distributing and Marketing*, January, 1995.

¹⁷⁵ Hans Messinger and Abe Tarasofsky, "Measuring Sustainable Economic Welfare: Looking Beyond GDP", paper presented at the annual meeting of the Canadian Economics Association, St. Johns, Newfoundland, June, 1997; Osberg and Sharpe, op. cit., page 9.

locks, compared to 84% of U.S. households that employ such measures.¹⁷⁶ Using this proportion reduces per capita spending on security devices to \$57 for Canada.

Furthermore, in the interests of accuracy the comparative rate of police-reported break and enter offences for Nova Scotia and Canada has been used as a proxy here for the likelihood of household investment in security devices here. In 1997, Nova Scotia reported 9,193 break and enter incidents compared to 373,355 in Canada as a whole. In proportion to population, the Nova Scotia break and enter rate is 22% less than the Canadian rate.

It has therefore been calculated that annual expenditures on security devices in Nova Scotia amount to \$44.5 per capita, compared to \$57 in Canada as a whole. This amounts to \$42.1 million a year in Nova Scotia and \$1.7 billion a year in Canada, in direct proportion to the comparative rate of break and enter offences. Adjusted to 1997 dollars, the totals are \$45.47 million in Nova Scotia and \$1.84 billion in Canada. Because no direct measurements are available, it has been assumed that there is a constant ratio between the rate of break and enter offences in the province and defensive expenditures on security devices. (Table 5.7)

Since 1962 a cumulative total of more than \$1.2 billion has been spent on security devices in the Nova Scotia. If 1962 estimated levels of expenditures had been maintained, the potential savings to the Province would have been in excess of \$815 million. If the Nova Scotia public had continued spending at the same rate as that of 1975 the potential savings to 1997 would have been around \$160 million.

¹⁷⁶ Sandra Besserer, Statistics Canada, Ottawa, "Criminal Victimization: An International Perspective," *Juristat*, catalogue no. 85-002-XPE, volume 18, no. 6, page 10.

It should also be noted that this may be a low estimate for Nova Scotia, because the assumption that household expenditures are reduced by the lower rate of break and enter offences is not proven. Thus, the International Crime Victimization Survey found that 53% of Canadians who believed the chance of break-in was "very likely" or "likely" used special door locks, compared to 52% of those who thought it unlikely. As well, Canadians who had been victimised during the previous five years were no more likely to have special home security measures than those who had not been victimised.¹⁷⁷ Nevertheless, this thesis errs on the side of conservatism by discounting Nova Scotia expenditures by 22% until better evidence is available.

The best circumstantial evidence for a direct relationship between break and enter rates and defensive expenditures is found in Statistics Canada's 1988 General Social Survey, which reported that 14% of Atlantic region households installed security devices in 1987 compared to 23% in Canada as a whole.¹⁷⁸ This corresponds to 61% of the Canadian average. In that year the per capita rate of police-reported break and enter offences in the Atlantic Provinces was 59.5% of the Canadian rate. The Nova Scotia rate in that year was 70.8% of the Canadian rate.¹⁷⁹

An alternative method of assessing household defensive expenditures would be to determine the average cost of each type of household security measure and to apply this to the percentage of households that use these measures. Thus, the 1996 International Crime Victimization Survey found that 52% of Canadian households use special door

¹⁷⁷ Statistics Canada, Sandra Besserer, op. cit., page 11

¹⁷⁸ Statistics Canada, Sacco, Vincent, and Holly Johnson, "Patterns of Criminal Victimization in Canada," General Social Survey Analysis series no. 2, catalogue no. 11-612, March, 1990, Figure R, page 81.

¹⁷⁹ These are derived figures. The break and enter rates are arrived at through the number of incidents and population data. Statistics Canada *Cansim disc* Cat. No. 10F0007XCB, "Crimes by Actual Offence," Matrix No. 2200, and Statistics Canada *Cansim disc* Cat. No. 10F0007XCB, "Quarterly Estimates of Population for Canada, Provinces and Territories," Matrix No.1.

locks. 19% have a burglar alarm. 20% have special door/window grills. 19% have a high fence. 27% have a watch dog. 12% employ a caretaker or security guard. and 34% participate in a Neighbourhood Watch programme.¹⁸⁰

For example, Weiser deadbolts sell in Nova Scotia for between \$53 and \$220 before tax.¹⁸¹ Though time did not permit a full costing of such specific household defensive expenditures based on sample sales data, this method could in future provide a useful test for the estimate derived above. As a small step in this direction, a calculation for annual expenditures on locks is made below.

Statistics Canada's *Products Shipped by Canadian Manufacturers, 1994-95* gives the value of locks and keys produced in Canada as \$431 million for 1995.¹⁸² To this must be added imports of locks and keys to the value of \$295 million.¹⁸³ Locks and keys exported from Canada, amounting to \$140 million,¹⁸⁴ are subtracted from this total for a total value of \$586 million. Translated to 1997 dollars this amounts to \$603 million.

There are three major qualifications to this figure, which make it likely that \$603 million is a significant underestimate of actual Canadian expenditures on locks and keys:

- 1) This is not the retail price of locks and keys, but the value after manufacture. In the case of imports and exports, it is the value at the point of entry or exit. No figures are available for retail sales of locks and keys in Canada, either in absolute numbers or in dollar values.
- 2) The figure also does not include the costs of installation.

¹⁸⁰ Ibid.

¹⁸¹ Based on visit to Kent Building Supplies, Micmac Mall, Dartmouth, Nova Scotia.

¹⁸² Statistics Canada, *Products Shipped by Canadian Manufacturers, 1994-95*, sections 8301, 8301.2 and 8301.4, catalogue no. 31-211-XPB, page 223, table 1.

¹⁸³ Statistics Canada, catalogue no. 65-203-XPB, pages 1043-1045, lines 8301.10 to 8301.70.

¹⁸⁴ Statistics Canada, catalogue no. 65-202-XPB, pages 751-753, lines 8301.10 to 8301.70.

3) It should be noted that the \$603 million figure applies to all locks and keys used in government and business enterprises as well as households. Since this section focuses on home security devices, the figure has not been adjusted upwards to represent the normal retail mark-up, on the assumption that this downward bias will compensate for any potential double-counting in the government and business sectors.

Nevertheless the \$603 million value is used to provide a provisional estimate here for the purposes of testing the derived estimates given above. Based on the Nova Scotia share of Canada's break and enter incidents, provincial expenditures on locks and keys would be \$3.5 million in 1962, and \$14.8 million in 1997.

Compared to the estimate of \$45.5 million in Nova Scotia and \$1.84 billion in Canada for total expenditures on security devices, derived from Messinger and Tarasofsky above, it seems reasonable that locks and keys would amount to one-third of total defensive security expenditures. In dollar values, U.S. spending on locks accounted for slightly under one-third of the US GPI estimate for defensive expenditures due to crime, with safe deposit boxes, burglar alarms and other electronic security systems accounting for the rest. In other words, this preliminary test using Canadian manufacturing data indicates that the estimate of \$45.5 million is a valid one.

Table 5.7 The Cost of Household Defensive Measures in Nova Scotia, 1962 – 1997
(millions of 1997\$)

Date	Defensive Expenditures	Potential Savings if 1962 Levels Maintained	Potential Savings if 1975 Levels Maintained
1962	10.87		
1963	13.93	3.06	
1964	14.47	3.60	
1965	12.33	1.46	
1966	12.98	2.11	
1967	13.72	2.84	
1968	15.38	4.51	
1969	19.47	8.60	
1970	19.96	9.09	
1971	22.23	11.36	
1972	23.50	12.63	
1973	26.50	15.63	
1974	29.26	18.39	
1975	35.35	24.48	
1976	38.86	27.98	3.50
1977	36.68	25.81	1.33
1978	36.54	25.67	1.19
1979	37.67	26.80	2.31
1980	41.51	30.64	6.16
1981	43.63	32.76	8.28
1982	40.78	29.91	5.43
1983	35.20	24.32	-0.16
1984	37.66	26.79	2.30
1985	39.84	28.97	4.49
1986	42.59	31.72	7.24
1987	43.51	32.24	7.76
1988	42.45	31.58	7.10
1989	38.18	27.31	2.83
1990	46.75	35.88	11.40
1991	58.03	47.16	22.68
1992	52.74	41.87	17.39
1993	46.38	35.51	11.03
1994	43.40	32.52	8.04
1995	43.70	32.83	8.35
1996	47.00	36.13	11.64
1997	45.47	34.60	10.11
	1208.13	816.76	160.40

Burglar alarms and locks are the hardware used to ward off victimisation. Security personnel represent the services used to protect property and person. The Solicitor General's Department, which licenses private security guards and investigators, shows that there were 2,008 licensed guards and investigators in Nova Scotia in 1997-98, a 12% increase from the previous year.¹⁸⁵ Statistics Canada employment and earnings data shows that salaries paid to security guards and private investigators came to \$56.3 million in 1997 (Table 5.16).

Extrapolating back to 1962, Nova Scotia businesses and individuals have spent a cumulative total of \$1.7 billion in 1997 dollars on private security guards and investigators since 1962. If the need for the services of the two professions had been maintained at the rate experienced in 1962 over \$900 million could have been saved and spent on more productive and welfare-enhancing activities. The potential savings if the 1975 rate had held steady to the present day would have been about \$200 million.¹⁸⁶

Brantingham and Easton's report on crime costs for the Fraser Institute correctly points out that since overhead, clerical and managerial expenses are counted in the estimate of public policing costs, these should be taken into account in estimating private security costs as well.¹⁸⁷ Assuming that private security has the same overhead as public policing, we should add 24% to the total for salaries for a total 1997 expenditure of \$69.8 million in Nova Scotia.

¹⁸⁵ Document PS540N00, "Private Guard Licensing System", from Karen Forsyth, Department of the Solicitor-General; provided by Paul Smith, N.S. Department of Justice.

¹⁸⁶ Sources for Table 10.2: Statistics Canada, *1961 Census of Canada*, vol. 3, part 3, "Wage-Earners: Earnings & Employment," p. 21.35, *1971 Census of Canada*, vol.3, part 6, "Income of Individuals," p.17.25, *1981 Census of Canada*, "Worked in 1980 – Employment Income by Occupation," Cat. No. 92-930, p. 1.45, *1986 Census of Canada*, The Nation: Employment Income by Occupation, Cat. No. 93-116.

Interestingly, Nova Scotia proportionately spends one-third less on a per capita basis on security guards than the national average. This reflects a property crime rate almost 20% less than the national average, and a rate for serious violent crimes less than two-thirds the national average. From a full cost accounting perspective, these savings are a direct quality of life advantage enjoyed by the Province that translates into potential productive investments in welfare-enhancing activities.

The Fraser Forum report demonstrates that the number of private security guards is increasing much faster than the number of police in Canada. There are today almost twice as many private security guards in the country as police. In 1971 there were only 28% more. But because private security guard salaries are so much lower than police salaries, the total salary bill for private and public policing is almost identical.¹⁸⁸ The use of security guards saves money in the short term, but if property is less equitably protected this may lead to more property theft, thus proving to be a false economy.

p.1-47, *1996 Census of Canada*, CD Rom Cat. No. 93F0029XDB96005, p. 2.85. See Appendix on Methodology and Data Sources for more details.

¹⁸⁷ Brantingham and Easton, *The Crime Bill*, The Fraser Forum, page 28.

¹⁸⁸ Ibid.

**Table 5.8: The Cost of Security Guards and Private Investigators
Operating in Nova Scotia, 1962-1997, (Millions of 1997\$)**

Date	Total Salaries of Security Guards & Private Investigators	Potential Savings if 1962 Levels Maintained	Potential Savings if 1975 Levels Maintained
1962	22.8		
1963	25.1	2.3	
1964	27.4	4.6	
1965	29.8	7.0	
1966	32.1	9.3	
1967	34.4	11.6	
1968	36.7	13.9	
1969	39.0	16.2	
1970	41.3	18.5	
1971	42.5	19.7	
1972	43.6	20.8	
1973	44.7	21.9	
1974	45.8	23.0	
1975	46.9	24.1	
1976	48.0	25.2	1.1
1977	49.1	26.3	2.2
1978	50.2	27.4	3.3
1979	51.4	28.6	4.5
1980	52.5	29.7	5.6
1981	55.4	32.6	8.5
1982	58.4	35.6	11.5
1983	61.4	38.6	14.5
1984	64.4	41.6	17.5
1985	67.4	44.6	20.5
1986	64.4	41.6	17.5
1987	61.4	38.6	14.5
1988	58.4	35.6	11.5
1989	55.4	32.6	8.5
1990	52.4	29.6	5.5
1991	53.0	30.2	6.1
1992	53.5	30.7	6.6
1993	54.1	31.3	7.2
1994	54.6	31.8	7.7
1995	55.2	32.4	8.3
1996	55.8	33.0	8.9
1997	56.3	33.5	9.4

Business also takes crime prevention measures. The Retail Council of Canada reports that store theft costs retailers \$4 billion a year.¹⁸⁹ Extrapolating according to both population share and comparative theft rates, this would mean a loss of \$118 million a year in Nova Scotia, a cost which produces higher prices for consumers. Retailers respond to this threat by hiring security guards and installing electronic surveillance equipment and other crime prevention and detection systems.

The methodology used here to calculate the cost of "target hardening" is that of the Australia Institute's GPI.¹⁹⁰ Hellman points out that situational crime prevention strategies, including target hardening and "operation identification" techniques, are designed to "increase the cost of doing business for criminals."¹⁹¹ Of course, they also increase the cost of doing business, which is passed on to consumers in the form of higher prices.

The Retail Council of Canada states that 56% of respondents with annual sales under a million dollars reported spending more than 0.51% of sales revenues on loss prevention equipment. For larger retailers, defensive spending may take the form of Electronic Article Surveillance (EAS).¹⁹² According to K-Mart President, Don Beaumont, loss prevention is actually built into the layout of new or renovated stores throughout Canada.¹⁹³

Once sophisticated target hardening is employed in some stores, there is increasing pressure for other businesses to follow suit, in order to prevent the displacement of theft onto easier targets. Thus, Safeway spokesman Grant Hardman has expressed concern that Electronic Article Surveillance in some grocery chains will drive criminals to Safeway stores

¹⁸⁹ *Canadian Press Newswire*, April 15, 1996, from CBCA Database.

¹⁹⁰ Clive Hamilton, *The Genuine Progress Indicator: A new index of changes in well-being in Australia*, The Australia Institute, October, 1997, page 42.

¹⁹¹ Hellman, op. cit., page 105.

¹⁹² "Electric Barriers Deter Shoplifters," *Canadian Grocer*, Volume 108 (10) (October 1994), p.14-18.

¹⁹³ "Electric Barriers Deter Shoplifters," *Canadian Grocer*, Volume 108 (10) (October 1994), p.14-18.

that have not installed the system. In response, Mike Boudreau, director of loss prevention for Atlantic Wholesalers, based in Dartmouth, Nova Scotia, claims that this is a good argument for all stores to install E.A.S.¹⁹⁴

Clearly the salaries of loss prevention officers like Boudreau should also be included in business crime prevention costs. However, no direct measurements are available for large retailer investments in target hardening and crime loss prevention. Since slightly more than half the Retail Council of Canada respondents reported spending *more* than 0.51% of sales on loss prevention equipment, that figure may be assumed here to represent a median estimate for business expenditures.¹⁹⁵

On the basis of Boudreau's argument that loss prevention techniques in one establishment produce pressure on other retailers to adopt similar measures, it is also assumed that all these costs are passed on directly to consumers in the form of higher prices. If this were not the case, then those businesses that did invest in such equipment might experience a decline in their profit margins and become less competitive than businesses that somehow managed to prevent crime without such investments.

Statistics Canada's monthly retail sales figures¹⁹⁶ are used here to estimate the percentage of all retail sales revenues that can be attributed to business defensive expenditures on electronic article surveillance and other crime prevention and detection equipment. 0.51% of the \$7.255 billion in annual retail sales in Nova Scotia amounts to \$37 million for 1997.

This means that the average Nova Scotia household pays \$110 a year more in higher prices for groceries and other household goods due to in-store crime prevention and detection measures. The average Canadian household pays \$121 a year more for this particular crime

¹⁹⁴ "Electric Barriers Deter Shoplifters," *Canadian Grocer*, Volume 108 (10) (October 1994), p.14-18.

¹⁹⁵ "Electric Barriers Deter Shoplifters," *Canadian Grocer*, Volume 108 (10) (October 1994), p.14-18.

cost. If crime prevention and detection costs were similar for other areas of consumption expenditures than retail sales, which is likely but not currently known, then the average Nova Scotia household would be spending \$158 a year more in higher prices, based on annual average consumption expenditures of \$30,469 per household. The average Canadian household would be spending \$174 extra a year based on average household consumption of \$34,024.¹⁹⁷

In estimating past business costs due to crime, it has been assumed that business defensive expenditures are directly proportional to changes in the crime rate for common theft (Table 5.7). This parallels the earlier assumption that household defensive expenditures on security equipment are directly proportional to the rate of break and enter incidents over time.

Based on the estimates in Table 5.7, cumulative total business defensive expenditures since 1962 in Nova Scotia amount to about \$850 million. If 1962 expenditures had been maintained to date shopkeepers and store owners would have saved \$780 million, and if the 1975 level had held steady retailers would have saved \$380 million. Since these losses are passed on to the consumer through higher prices, it can be assumed that consumer shopping bills would have been proportionately lower had lower rates of defensive expenditure continued.

Not included in these estimates are business defensive expenditures on internal fraud investigations and other internal company measures designed to prevent corporate and white-collar crime. Because this entire category of crime is so hard to document, it is excluded from

¹⁹⁶ Statistics Canada, E-Stat Table, Cansim matrix 2399.

¹⁹⁷ Estimates based on 335,150 households in Nova Scotia, and 10,900,500 households in Canada. Annual consumption expenditures of \$30,469 per household in Nova Scotia and \$34,024 in Canada are from Statistics Canada, *Family Expenditure Survey*, 1996. Of this total approximately 70% is taken as retail goods expenditures.

this study. As noted earlier, the magnitude of corporate crime may be enormous, with costs estimated at up to 50 times the value of street crime.¹⁹⁸ There are many other indirect defensive expenditures, such as the development of computer software programmes for the criminal justice system and for business crime detection, that are also excluded from these estimates. The fact that these costs are indirect should not obscure the reality that they contribute directly to higher prices for goods and services paid by the public.

¹⁹⁸ Gabor, *op. cit.* estimates the annual costs of corporate crime at \$200 billion in Canada.

**Table 5.9: Business Defensive Expenditures on Crime Prevention Equipment,
Nova Scotia 1962-1997, (Millions of 1997\$)**

Date	Expenditures	Potential Savings if 1962 Levels Maintained	Potential Savings if 1975 Levels Maintained
1962	2.1		
1963	2.8	0.71	
1964	3.4	1.25	
1965	3.9	1.81	
1966	4.4	2.33	
1967	4.7	2.55	
1968	6.3	4.24	
1969	7.4	5.31	
1970	8.8	6.73	
1971	9.8	7.69	
1972	10.3	8.17	
1973	11.1	8.99	
1974	14.0	11.84	
1975	16.6	14.52	
1976	18.7	16.56	2.04
1977	18.3	16.23	1.71
1978	20.5	18.36	3.84
1979	23.6	21.46	6.93
1980	23.4	21.33	6.81
1981	28.2	26.13	11.61
1982	29.1	27.03	12.51
1983	30.3	28.19	13.67
1984	35.0	32.92	18.39
1985	37.8	35.72	21.20
1986	40.0	37.87	23.35
1987	42.7	40.56	26.04
1988	44.4	42.32	27.80
1989	43.9	41.84	27.32
1990	45.8	43.68	29.16
1991	42.9	40.77	26.25
1992	40.6	38.52	23.99
1993	39.5	37.44	22.92
1994	37.0	34.94	20.42
1995	35.8	33.71	19.19
1996	36.7	34.54	20.02
1997	37.2	35.10	20.57

Sources: Retail sales: Statistics Canada, E-Stat Table, Cansim matrix 2399

<http://cansima.statecan.ca/cgi-win/CNSMCGI.EXE> and Cansim CD Rom, Cat. No.

10F0007XCB, Theft: Statistics Canada *CANSIM Database*, CD Rom, Cat. No. 10F0007XCB, matrix 2200. See Appendix on methodology for more details. Savings calculations are based on estimated expenditure levels in 1962 and 1975.

Despite private and public attempts to prevent crime it still takes place. The next best option to successful prevention is the limitation of economic loss incurred because of crime. Theft insurance is clearly a regrettable expenditure due to crime that reduces spending on welfare-enhancing measures. Designed to guard against losses due to crime, it is as defensive in nature as the installation of burglar alarms or the hiring of security guards. A small portion of life insurance premiums and a portion of other insurance that compensates for bodily harm are protections against losses due to violent crime. But because of the difficulty in estimating these percentages accurately, they are presently excluded from the estimates here, and only theft insurance is considered.

Since direct victim losses from property crimes have already been counted, only the difference between premiums and claims is counted here, in order to avoid double counting. Consequently, it is assumed that theft insurance claims actually compensate a portion of victim losses due to property crime. Only the amount paid in premiums above and beyond these claims is therefore truly a “defensive” expenditure.

In 1997 the theft insurance portion of property insurance premiums was \$25 million higher than claims for property theft.¹⁰⁰ Between 1962 and 1997 the cumulative total difference between premiums and claims is estimated at \$424 million. Because the data used in compiling this information are from two disparate sources, calculating the potential savings if premiums were at 1962 and 1975 levels, as in earlier sections, is problematic. The historic figures would have to be reconciled with modern data before such estimates can be attempted.

¹⁰⁰ From the Canadian Insurance Bureau. The claims due to theft are derived from total claims.

Statistics Canada's 1993 General Social Survey (GSS) reported that of all stolen property incidents, nothing was recovered in 82.5% of cases. The 1988 GSS reported that nothing was recovered in 85.6% of cases. In that year all stolen goods were recovered in 7% of cases and some portion were recovered in another 7%. The 1985 Canadian Urban Victimization Survey (CUVS) reported that nothing was recovered in 87% of cases.²⁰⁰

Insurance claims for property theft have steadily declined. The 1993 GSS reported that only 11% of victims surveyed received insurance compensation for stolen property, and 27% were compensated for motor vehicle theft. The 1988 survey reported that 12% of property crime victims received insurance compensation while 79% did not even try to claim. For motor vehicle theft, 30% of victims received insurance compensation in 1987, and 62% made no claims. The 1985 CUVS reported that private insurance provided compensation for stolen property in about 19% of cases.²⁰¹

These averages conceal a significant distribution difference. The CUVS revealed that the recovery rate, through both police intervention and insurance claims, is much higher for those in the highest income bracket than for those with lower incomes. As a result, the mean net loss from property crime is actually less for the wealthiest sector than for those with lower incomes.

However, the most significant trend in theft insurance has been the growing gap between claims and premiums. Between 1971 and 1996 theft insurance premiums in

²⁰⁰ Statistics Canada, General Social Survey, catalogue no. 12 FOO 42-XPE, table 27; Statistics Canada, catalogue no. 11-612, page 102, table 27; Statistics Canada, Canadian Urban Victimization Survey (CUVS) no. 5, *Cost of Crime to Victims*, 1985, page 3, table 4.

²⁰¹ Statistics Canada, General Social Survey, catalogue no. 12 FOO 42-XPE Table 34; Statistics Canada, catalogue no. 11-612, page 113, table 34; Statistics Canada, CUVS, no. 5, *Cost of Crime to Victims*, 1985, page 3, table 4.

Nova Scotia have jumped by 142%, while claims have gone up by only 72% in constant dollars. In 1971, claims amounted to 69% of premiums. In 1996, claims were just 48% of premiums. Claims are still at the same level they were 25 years ago, while premiums have doubled in that time. Interestingly, insurance companies have also reported record profits - \$1.6 billion in 1995 – as the gap between premiums and claims has widened dramatically.²⁰²

While there have been fluctuations in these proportions over time, the gap between premiums and claims in the province has been growing steadily wider since 1991. Theft insurance premiums have continued to rise even while the property crime has been declining (Chart 5.17).

In 1996 defensive expenditures in theft insurance premiums minus claims amounted to \$24.6 million, down slightly from \$27.6 million in 1995. These two years represent the largest recorded gaps between premiums and claims. Because claims were greater in some years than others, the trend line for this item does not follow the steady direction of crime rates. In fact, the measurements given here are not derived from the crime rates but are based directly on insurance industry figures.²⁰³

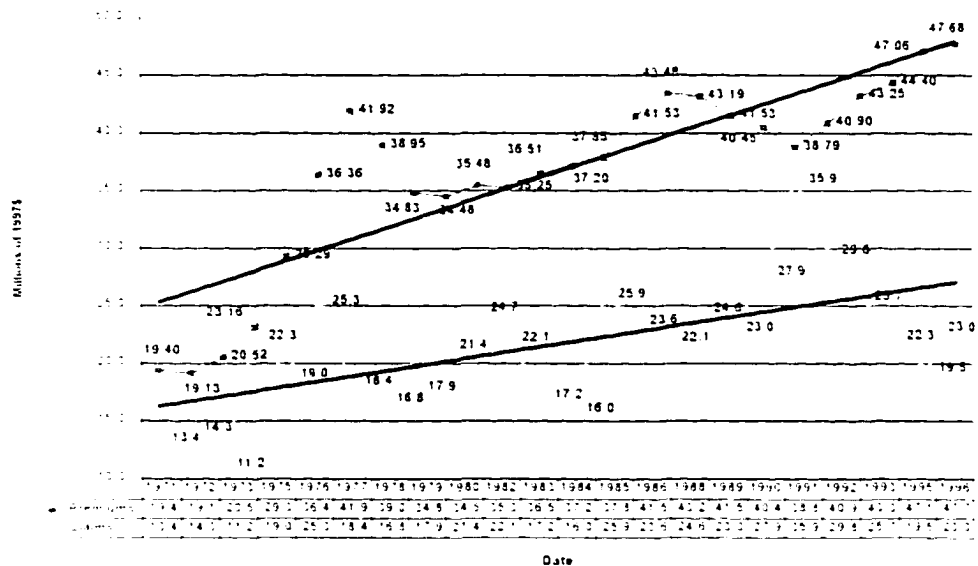
This is obviously an area of concern. Nova Scotians are paying more than they used to for insurance. It is not immediately obvious why the gap has been widening between premiums and claims, but it certainly warrants further investigation. Possible areas of research might be the trends in ownership of insurance companies operating in the Province. For example, are there more out-of-Province companies operating in Nova Scotia than in the past? If so, do these companies set premiums based on their overall

²⁰² *Facts of the General Insurance Industry in Canada*, Insurance Bureau of Canada, November 1997.

²⁰³ *Facts of the General Insurance Industry in Canada*, Insurance Bureau of Canada, November 1997.

claims record or are premiums set using local claims? If it is the former, Nova Scotians may be paying for crime committed elsewhere.

Chart 5.17: Property Theft Insurance Premiums and Claims, Nova Scotia, 1971-1996 (1997\$ millions)



Chapter Six

A Comprehensive Estimate of the Cost of Crime in Nova Scotia

The true or full costs of crime are significantly greater than the direct economic losses and expenditures described in chapter five. Crime may also shatter lives, cause psychological trauma and long-term physical disabilities, restrict movement, disrupt plans, lower property values and have a variety of negative consequences that induce further social and economic losses not measured in the conservative estimate.

As mentioned earlier, several crime costs are omitted from this thesis altogether, because data are unavailable, including the costs of impaired driving, production losses of missing persons, non-hospital medical and drug costs due to violent crime, economic losses due to juror and witness time in court, private legal defence costs, most employee theft in government and business except for retail trade, health costs and production losses from drug and prostitution offences, and so on.²⁰⁴ In addition, most corporate crime, fraudulent professional claims, tax evasion, embezzlement and other white-collar crimes are rarely prosecuted and, are therefore excluded from this study because of lack of data.

Certain measures that have a dual function, one of which is to prevent crime, are also omitted from this comprehensive cost of crime estimate. Electronic library cards not only allow librarians to track the whereabouts of books: they also act as a deterrent to theft. Since it is impossible to separate the crime prevention function from the organisational function, it is not counted here. Passwords on personal computers give the user privacy while at the same time providing security. Again, one function cannot be separated from the other. Similarly, street lighting deters criminal activity while

performing its primary function of providing light so that people can see after dark. There is a strong possibility that the number of crimes committed would rise if library cards, computer passwords, street lighting or a host of other dual function devices did not exist. Strictly speaking some value should be apportioned to the cost of crime arising from the cost of dual function devices, but at this stage no credible estimate is available.

However, this chapter does attempt to estimate five categories of cost that are not included in the conservative estimate of crime costs, but for which it is possible at least to derive certain estimates. While certainly not a complete description of crime costs, the comprehensive cost estimate attempted in this chapter at least begins to approximate a truer picture of how crime actually affects people and of the larger losses incurred by individuals and society.

The five categories of losses which, together with the conservative estimate in chapter five, make up the comprehensive estimate of crime costs in this chapter are:

- 1) ***Unreported Crimes.*** The conservative estimate counts only losses due to police-reported crimes.²⁰⁵ In this chapter, victim surveys are used to estimate losses due to unreported crimes.
- 2) ***Unpaid Work Losses.*** The conservative estimate of crime costs includes only economic losses to the market economy, and excludes any losses incurred through the disruption of lives outside the work place. The methodology and values used by Ron Colman, Director, Genuine Progress Index Atlantic, to estimate the economic impact of housework and volunteerism are used in this section.²⁰⁶

²⁰⁴ Legal costs are given in Chapter 5. Since civil justice costs are omitted from the final totals in this study, and because it has not been possible to break down private legal expenditures into criminal and civil costs, therefore private legal spending on criminal cases is also omitted from this report.

²⁰⁵ Two exceptions are the hospitalisation costs and production losses due to absenteeism caused by violent crime in chapter 5, since these estimates are based on victim surveys which include both reported and unreported crime and are not calculated on a per incident basis.

²⁰⁶ Ronald Colman, *The Economic Value of Civic and Voluntary Work in Nova Scotia*, GPI Atlantic, Halifax, July 1998 and February 1999; Ronald Colman, *The Economic Value of Unpaid Housework and Child Care in Nova Scotia*, GPI Atlantic, Halifax, November, 1998.

- 3) **"Shrinkage"**. Reports from the retail trade industry are used to estimate inventory losses due to theft. These losses are generally passed on to the consumer in the form of higher prices.
- 4) **Insurance Fraud**. Reports from the insurance industry are used to estimate the additional amount paid by consumers in higher premiums due to fraudulent claims against insurance companies. In order to avoid double counting, theft insurance premiums, already considered in chapter 5, are excluded from the estimates in this chapter.
- 5) **"Shattered Lives"**. Most importantly, court awards for grief and suffering are used to approximate the human and psychological costs of crime that cannot be captured in a simple economic cost analysis. For example, the only victim cost included for homicide and assault in the conservative estimate is the economic production lost through work place absence. Clearly this is a severe underestimate of the losses actually experienced both by victims and their families and friends. Losses incurred by family and friends are effectively ignored entirely in the conservative estimate, though children may lose their parents and spouses may suddenly be forced to fend for themselves. In fact, the economic production estimate in chapter 5 effectively places no value at all on the murder of an elderly person who no longer works in the market economy.

To remedy these shortcomings, this chapter uses estimates from a University of Ottawa criminology study that examines court awards, and from a Fraser Institute study by criminologists Brantingham and Easton that derives economic estimates for "shattered lives" due to crime, in order to produce a more comprehensive estimate of crime costs in Nova Scotia.²⁰⁷

Again it must be repeated that, while these five costs form the basis for the comprehensive estimate of crime costs, they still exclude some major categories of loss mentioned earlier. Gabor, for example, estimates that there is \$200 billion worth of corporate crime annually in Canada compared to \$3-4 billion of street crime; that tax evasion costs Canadians \$30 billion a year; and that between \$300 and \$400 million

²⁰⁷ Brantingham, Paul and Stephen Easton, "The Crime Bill: Who Pays and How Much?" *Fraser Forum*, Vancouver: The Fraser Institute, 1996.

worth of services are fraudulently claimed every year in Canada.²⁰⁸ While this crime translates directly into higher prices and reduced services for Canadians and thus constitutes an actual economic loss, it is excluded entirely from this study due to lack of hard data, except for the rare instances where cases are brought to court.

The conservative estimate of crime costs in chapter 5 considered only police-recorded crimes. However, there are many more crimes that are not reported to police. Victim surveys in Canada have found that less than 30% of personal thefts and just over half of violent assaults were reported to police. By contrast, motor vehicle theft is mostly reported, probably because reporting renders the victim eligible for insurance claims.²⁰⁹

There have been only two national Canadian victim surveys administered as part of the 1988 and 1993 General Social Surveys (GSS). In 1981, a Canadian Urban Victimization Survey (CUVS) collected data for seven Canadian cities. With the exception of one pilot study in British Columbia and a study of burglary victims in Toronto, no major victimisation surveys were undertaken before the 1980s, and there is therefore no way of knowing to what extent changes in reporting rates influenced the official crime statistics in the 1960s and 1970s.²¹⁰

While the CUVS is not entirely comparable to the later GSS surveys, it does appear that police reporting rates increased for assaults and for break and enter incidents between 1982 and 1993, though they seem to have decreased for robbery. Unfortunately

²⁰⁸ Thomas Gabor, *Everybody Does It! Crime by the Public*, University of Toronto Press, Toronto, 1994, pages 91, 93, 94, 118.

²⁰⁹ Assault ratio from 1988 and 1993 General Social Survey data compared to Uniform Crime Reporting statistics, in Statistics Canada, *An Overview of the Differences between Police-Reported and Victim-Reported Crime, 1997*, catalogue no. 85-542, pages 9-11; personal theft ratio from Solicitor-General Canada, *Canadian Urban Victimization Survey: Reported and Unreported Crimes*, bulletin no. 2, 1984, page 5.

²¹⁰ Evans and Leger, *op. cit.*, page 167.

the data are insufficient to estimate how much of the increase in reported crimes is due to higher reporting rates in some categories.

A 1997 Statistics Canada publication compares data collected from the General Social Survey victim surveys (GSS) of 1988 and 1993 with Uniform Crime Reporting (UCR) statistics (Table 6.1).²¹¹ The 1981 Canadian Urban Victimization Survey (CUVS) provides data specific to Halifax-Dartmouth (Table 11.2).²¹²

Table 6.1: Ratio of Total Crimes (GSS) to Police-Reported Crimes (UCR)

Crime	GSS/UCR Ratio, 1988	GSS/UCR Ratio 1993
Sexual Assault	–	1.8:1
Robbery	3:1	2.7:1
Assault	2.3:1	1.8:1
Break and Enter	1.3:1	1.2:1

²¹¹ Statistics Canada, May 1997, *An Overview of the Differences between Police-Reported and Victim-Reported Crime, 1997*, Cat. No. 85-542, p.9-11.

²¹² Solicitor General Canada, 1984, *Canadian Urban Victimization Survey: Reported and Unreported Crimes*, Bulletin No.2, p.5.

**Table 6.2: Percentage of Criminal Incidents Coming to the
Attention of the Police, Canadian Cities, 1982**

Crime	Halifax-Dartmouth: %	Seven-City Average: %
Sexual Assault	29	38
Robbery	45	45
Assault	35	34
Break and Enter	61	64
Motor Vehicle Theft	74	70
Household Theft	48	44
Personal Theft	28	29
Vandalism	40	35
Overall % Reported	42	42
Overall % Not Reported	58	58

Based on these ratios, the number of unreported crimes in Nova Scotia is estimated in Table 6.3 below. Because of the inadequacy of the data, no claim to accuracy is made here. However, the 1982 survey indicates that Halifax reporting rates were in line with the national average at that time, and it is therefore assumed that Nova Scotia reporting rates are not markedly different from the Canadian averages given in the General Social Survey.

The average property losses per crime used in Table 6.3 are the same as those in chapter 5, and are based on estimates by the Solicitor General derived from a victim survey. Since police-reported crimes are likely to be more serious than unreported crimes and to involve larger losses, the loss calculations in chapter 5 are likely to be substantial underestimates, since they are based on average losses in the victim survey which includes both reported and unreported crimes. Conversely, the use of these average losses per crime in this section is likely to inflate the losses actually incurred in unreported crimes. However if the same average loss per crime is used here as in chapter 5, the

disparities should even out, and the total comprehensive estimate for victim losses in both reported and unreported property crimes will reflect the actual values in the victim surveys which include both categories.

The same reasoning applies to monetary losses, hospitalisation costs and production losses due to violent crime. The results in chapter 5 are also based on the average losses per incident reported in victim survey data, which includes both reported and unreported crime. Since reported crimes are likely to be considerably more serious than unreported ones, the monetary loss, hospitalisation cost and production loss estimates in chapter 5 should be considered underestimates and those in this chapter will be overestimates. Again, the comprehensive loss estimate will even out these results to reflect the actual survey data.

When losses from reported and unreported property crime are added together, Nova Scotians lost nearly \$270 million in money and property in 1997 (Table 6.3). Based on reported crime rates over time, and assuming a constant ratio between reported and unreported crime, the cumulative loss in property and money due to all crime since 1962 is more than five billion dollars.

**Table 6.3: Estimated Victim Losses from Unreported Property Crimes,
Nova Scotia, 1997, (1997\$ millions)**

	# Reported Incidents	#Unreported Incidents	Average Loss/Crime	Total Loss Unreported	Total Loss All Crime
Theft	21.568	50.325	\$2.188	\$110.1	\$157.3
Break/Enter	9.193	1.837	\$2.370	\$4.4	\$26.2
Motor Vehicle Theft	2.558	900	\$3.728	\$3.4	\$12.9
Vandalism	12.788	19.182	\$655	\$12.6	\$21.0
Fraud	3.861	9000	\$3.625	\$32.6	\$46.9
Robbery	425	722	\$2.934	\$2.1	\$3.3
			TOTAL:	\$165.2	\$267.6

NOTES:

- Estimates of unreported crime incidents are based on the ratio between total crimes reported in victim surveys in the 1993 General Social Survey and in the Halifax-Dartmouth rates reported in the 1982 Canadian Urban Victimization Survey, in proportion to reported crimes in the Uniform Crime Reporting statistics.
- No estimates are available from the victim surveys for unreported fraud. The ratio of unreported to reported fraud has here been assumed to be the same as that for theft.
- Robbery is officially classified as a violent crime rather than a property crime, but property losses due to robbery are included here, as they have been in chapter 5.
- Average losses per crime are from the Solicitor-General Canada, in Statistics Canada, *Juristat*, volume 12, no. 5, 1981, except for motor vehicle theft, which is from the Insurance Corporation of British Columbia, as reported in Brantingham, Paul, and Stephen Easton, "The Crime Bill: Who Pays and How Much?", *Fraser Forum*, 1996, The Fraser Institute, page 23.
- The total losses in column 5 add the unreported losses from this table to the reported losses from chapter 5. Since the average loss per crime is taken from the victim surveys and includes both reported and unreported crime losses, this total loss figure in column 5 can be considered more reliable than the separate estimates for either reported or unreported crimes, since the former are likely to be more serious than the latter and to involve larger losses.

Victim monetary losses from unreported assaults and sexual assaults.

hospitalisation costs due to unreported violent crime, and economic production lost due to absenteeism, cost Nova Scotians an estimated \$5.2 million in 1997. Reported and unreported incidents combined cost Nova Scotians \$11.7 million (Table 6.4). Based on reported rates of assault and sexual assault over time, and assuming the same ratio of reported to unreported incidents which is particularly questionable in this case, the

cumulative cost of victim losses due to assault and sexual assault in Nova Scotia since 1962 is nearly \$250 million.

Since the data on both hospital stays and absenteeism are from victimisation surveys, the basis for calculation is the same for both reported and unreported crimes: Based on the Solicitor General's report, for every 100 criminal code incidents, victims spent 3.15 days in hospital, and missed 25.3 days of work. From this it has been extrapolated that Nova Scotians spent an estimated total of 4,405 days in hospital due to crime in 1997, and missed an estimated 35,383 days, or about 100 person-years of work due to crime.

As mentioned above, because these losses are averaged out over reported and unreported crimes, the reported costs listed below are likely to be underestimated and the unreported costs to be overestimated. More credence may be given to the total rather than to the breakdown between the two categories.

Table 6.4: Estimated Victim Losses due to Unreported Assault and Sexual Assault, Nova Scotia, 1997, (1997\$ millions)

	Reported Incidents	Unreported Incidents	Total Incidents
# Incidents	9598	7678	17,276
Monetary Losses	\$0.62	\$0.49	\$1.11
Hospitalisation	\$1.62	\$1.30	\$2.92
Absenteeism	\$4.25	\$3.40	\$7.65
TOTAL LOSSES	\$6.49	\$5.19	\$11.68

NOTES:

- The ratio between total incidents in the 1993 General Social Survey victim survey and reported crimes in the Uniform Crime Reporting statistics is the same for assault and sexual assault (1.8:1). For this reason, they are considered together here.
- In 1997 there were 8,431 reported cases of assault, and 1,167 reported cases of sexual assault in Nova Scotia.
- As in the previous table, the average losses per crime are taken from the victim surveys and include both reported and unreported crime losses. Therefore the total loss figure in column #3 can be considered more reliable than the separate estimates for either reported or unreported crimes, since the former are likely to be more serious than the latter and to involve larger losses.

While the conservative estimate of crime costs in chapter 5 assesses only market production losses, the actual loss experienced by crime victims and by society at large clearly goes beyond the work place. An assault victim may not be able to take care of children or household tasks, and may incur additional expenses by hiring someone to perform this work. A crime victim may also be unable to perform customary voluntary and community service work.

Statistics Canada defines unpaid work as only that which could be performed for pay by a third party in the market economy. In other words, loss of leisure time due to crime and loss of household activities which do not constitute work that could be replaced for pay, are not considered here. The dollar figures may be taken as a proxy for lost quality of life in the home and in the community due to crime, as experienced by the recipients of household services and of volunteer services.

As noted above, there were an estimated 35,383 work days lost to crime in Nova Scotia in 1997. At eight hours a day, this amounts to 283,064 hours of work lost. Based on Statistics Canada's time use and labour force surveys, Ronald Colman, author of the GPI module, *Economic Value of Unpaid Housework and Child Care in Nova Scotia* found that Nova Scotia adults put in an average of 25% more unpaid household work hours per year than paid work hours.²¹³ This would indicate 353,830 hours of lost unpaid household work.

Statistics Canada has determined that the market value replacement rate for household domestic services in Nova Scotia is \$9.20 an hour in 1997 dollars. For childcare, the going rate is \$7.58 an hour. Apportioned among the actual hours spent doing household chores and primary childcare, the average is \$9.02 an hour.²¹⁴ On this basis, unpaid household work time lost due to crime in Nova Scotia is worth \$3.2 million a year.

Chapter five demonstrated that 452 person-years of work were lost to the Nova Scotia economy in 1997 due to homicide. Each Nova Scotian contributes an average of 1,230 hours per year of unpaid household work to the economy,²¹⁵ resulting in more than half a million hours of lost unpaid work time per year due to homicide, worth \$5 million in 1997.

This calculation is not merely an academic statistical exercise; it reflects very real, practical losses. The loss in unpaid work is actually the loss in child-rearing time

²¹³ Ronald Colman, *The Economic Value of Unpaid Housework and Child Care in Nova Scotia*, GPI Atlantic, November 1995, page 48. Unpaid work hours from Statistics Canada, *Households' Unpaid Work: Measurement and Valuation*, catalogue no. 13-603E, 1995; paid actual average work hours for all jobs, from Statistics Canada, *Labour Force Annual Averages, 1996*, catalogue no. 71-220-XPB, table 19, page B-47.

²¹⁴ Replacement values from Statistics Canada, *Households' Unpaid Work*, catalogue no. 13-603E.

experienced by the child of a murdered parent, or the necessity for the spouse of a homicide victim to manage all household duties alone or else to contract these lost services out for pay in the market economy.

The average Nova Scotian puts in 3.38 hours of volunteer work every week outside the home. This work provides direct benefit to the elderly, sick, disabled, children and youth, and other vulnerable groups, as well as to the environment, the local community, and society at large. Nova Scotians serve at food banks and soup kitchens, provide assistance to victims of abuse, lead scout groups, coach sporting teams, help out at hospitals and nursing homes, and provide countless other voluntary services for a cumulative total of about 134 million hours a year. Based on total hours contributed, Nova Scotians have the highest rate of voluntary activity in the country, 26% above the national average.²¹⁶

As noted above, Nova Scotians missed an estimated 283,064 hours, or 147 person-years, of paid work due to crime in 1997. If Nova Scotians contributed 176 average hours per year of voluntary work, Nova Scotian crime victims would have missed nearly 26,000 hours of voluntary work a year due to crime, creating a substantial loss of services to recipients.

Statistics Canada has calculated the replacement rate for voluntary services in Nova Scotia at an average \$13.02 an hour.²¹⁷ This signifies what it would cost to hire

²¹⁶ Ronald Colman, *The Economic Value of Civic and Voluntary Work in Nova Scotia*, GPI Atlantic, Halifax, November, 1998.

²¹⁷ Statistics Canada, *Initial Data Release from the 1992 General Social Survey on Time Use*, catalogue no. 11-612, #30, Table 1.

²¹⁸ Unpaid work hours from Statistics Canada, *Households' Unpaid Work: Measurement and Valuation*, catalogue no. 13-603E, 1995

someone in the market economy to perform equivalent work. On this basis, voluntary services lost due to crime amount to more than \$340,000 a year in Nova Scotia.

If the voluntary services of homicide victims are included, on the basis of 452 lost person-years of work in 1997, as described in the previous section, an additional 80,000 additional hours of lost voluntary work worth must also be included. This is worth more than one million dollars, for a total of \$1.37 million a year.

These calculations do not include *either* the unpaid work losses of offenders *or* the community service work contributed by offenders as conditions of their sentence. While the latter is not strictly speaking “voluntary,” it may be argued that it nevertheless makes a contribution to society and should therefore be counted as a benefit in this section on voluntary work.²¹⁸

Aside from the victim losses already described, the existence of volunteer organisations devoted to law and justice issues must be counted as a cost of crime by the criteria used in this study. The time actually spent on crime prevention and detection activities by volunteers for Neighbourhood Watch, the Crime Prevention Society, Block Parents and Crime Stoppers is a defensive expenditure in the same way as hiring security guards or investing in alarm and surveillance systems. The functions performed are similar and have the same purpose – crime prevention. Lower crime rates would render such voluntary activity less necessary, and the time of these volunteers would correspondingly be freed up for more welfare-enhancing activities.

Legal aid volunteers, voluntary parole and probation officers, volunteers for Victim Services, and voluntary organisations like the John Howard Society and the

²¹⁸ This insight is contributed by Kit Waters, Director of Policy Planning and Research, Nova Scotia Department of Justice, personal communication, 26 March, 1999.

Elizabeth Fry Society, which work with prisoners and ex-prisoners, do not perform preventive defensive functions, but deal directly with the consequences of crime after the fact. Their activities are more similar to some of those described in chapter 5 on public justice costs. Nevertheless, they exist as a direct result of crime.

Again, if there were less crime, there would be correspondingly less need for this voluntary work. In the meantime volunteer efforts that are the consequence of crime should be valued. If paid legal aid services are counted as public justice costs then voluntary legal aid services should also be counted in some way.

According to Statistics Canada's volunteer surveys, law and justice volunteers account for about 1.2% of all volunteers. However, they put in the longest hours of any group of volunteers, six hours and 40 minutes per week on average, compared to a weekly average of 3 hours and 23 minutes a week for all volunteers. About 3,500 Nova Scotians volunteer their time for legal aid work, Neighbourhood Watch, Crime Stoppers and other crime prevention groups, and prisoner support networks, contributing more than 23,000 hours a week or 1.2 million hours a year to this voluntary work. Based on the volunteer replacement rate of \$13.02 an hour, their work is worth nearly \$16 million per year to the Nova Scotia economy and to society.²¹⁹

Adding together all three categories above, more than \$25 million worth of unpaid work per year in Nova Scotia is due to crime, partly as victim production losses, partly as defensive expenditures, and partly as contributions to the court and corrections systems.

²¹⁹ Average weekly hours and volunteer numbers for law and justice volunteers from Doreen Dushesne, *Giving Freely: Volunteers in Canada*, Statistics Canada, Labour Analytic Report No. 4, catalogue no. 71-535, #4, Minister of Supply and Services, Canada, August, 1989.

The time and effort volunteers spend trying to ameliorate the effects of crime and the lost volunteer capacity due to criminal activity are costs of crime. Such a loss is not a decline in quality of life; rather it is a brake on forward progress. It is a missed opportunity. Increased retail prices due to pilfering, on the other hand, represent a decline in quality of life. Consumers are worse off because of shoplifting. The consumer has to pay an additional cost because the retailer compensates herself for the loss of stolen merchandise by raising prices. This is money that for all intents and purposes is taken out of the consumers' pocket. When the culprit is caught and the crime recorded by the police, the cost is identified in the *theft* part of this thesis. When the losses are not identified until the stock is counted it is called shrinkage.

Shrinkage is the retail industry term for inventory losses that are primarily due to shoplifting and employee theft. It is the difference between the inventory recorded in business ledgers and that actually on the shelves. The retail industry reports annual average shrinkage of 1.56%. Based on 1997 annual retail sales of \$7.3 billion, the loss due to shrinkage was \$113.8 million in Nova Scotia. For earlier years, it has been assumed that shrinkage rates have changed in direct proportion to the changing incidence of reported theft in society at large. Shrinkage costs have therefore been derived in proportion to both retail sales and reported theft rates in those years. On that basis, it is estimated that shrinkage cost Nova Scotians \$6.4 million in 1962, and \$50.8 million in 1975, compared to \$113.8 million in 1997 (all figures in constant 1997 dollars).

The figure is comparable to the estimate in chapter five, based on the Retail Council of Canada's estimate that store theft costs retailers \$4 billion annually in Canada. Extrapolating for Nova Scotia on the basis of both population and comparative property

crime rate, the cost of store theft to Nova Scotia retailers, and ultimately to consumers, is about \$118 million a year. The slightly more conservative figure of \$113.8 million is used here.

Since these costs are passed on to the consumer in higher prices, this means that the average Nova Scotia household paid \$340 more in 1997 due to in-store retail theft. If the same proportional cost of shrinkage were to apply to all consumption expenditures, the figure would be \$484 a year. For Canadian households nationally, the comparable losses are \$370 for retail expenditures and \$530 for all consumption expenditures.

If these higher prices due to shrinkage are added to the costs of in-store crime prevention and detection equipment considered in Chapter 5, then the average Nova Scotia household is paying \$448 extra per year in higher prices for groceries and other retail goods due to crime. The loss is \$642 per year per household in higher prices for all consumption expenditures, if the same rates of in-house theft and electronic surveillance expenditures apply to non-retail business establishments.

If the \$53 million spent annually by business and government on private security guards is also passed on to the public in the form of higher prices and taxes, this translates into an additional \$158 per year per household. In sum, Nova Scotia households are probably paying \$800 a year total in higher prices due to crime, amounting to 2.6% of their annual consumption budget. Nationally, the figure is closer to \$900 a year.

These hidden expenses are concealed in the everyday price tags of groceries and other consumption items. Although they constitute real losses for individuals, these

additional expenses and higher prices are all currently counted as adding to the Gross Domestic Product and add to economic growth.

Like shrinkage, insurance fraud leads to higher prices for consumers. According to Ann Walker of the Canadian Coalition against Insurance Fraud, an industry-sponsored group, fraudulent claims against insurance companies add an average of 15% to the cost of insurance premiums for Canadians.²²⁰

Based on this 15% rate, higher premiums cost Nova Scotians \$25.5 million in property insurance and \$45.2 million in auto insurance in 1997, for a total of \$70.2 million in higher prices due to fraud. Since the \$25 million excess of premiums over claims for theft insurance in particular has already been counted as a defensive expenditure in chapter 5, it is necessary to deduct 15% of that amount here, or \$3.8 million, in order to avoid double counting. Thus \$66.4 million annually should be added to the comprehensive costs of crime as a result of higher prices due to insurance fraud. Put another way, if individuals did not break the law by submitting fraudulent insurance claims, Nova Scotians would save \$200 per household every year in insurance payments.

While it is important to chronicle the economic impact of shrinkage and insurance fraud, and the effect crime has on volunteerism, these costs are hidden and so do not have the same impact as the psychological and emotional loss victimisation has. It is worth repeating the words of the Solicitor General, quoted in chapter 2:

Many of the most important costs of crime – the psychological and emotional suffering of victims, the fear and insecurity of those who believe they are at risk, the pain and often anger of the families of victims, the loss of freedom and potential productive labour that incarceration means for the criminal who is

²²⁰ Jeffrey Simpson, "Insurance Claims Costly for Everyone", *The Chronicle-Herald*, Halifax, 21 December, 1998, pages A1 and A2.

caught – cannot be measured in dollars. But these largely unmeasurable costs must be a significant part of any cost-benefit equation.²²¹

A crime victim, if injured or disabled by a violent attack, may experience a severe curtailment of his activities for the rest of his life. Families of victims may suffer long-lasting trauma. Crime diminishes the quality of life in countless overt and subtle ways. Here only the most direct forms of pain, suffering and grief are considered in estimating the effect on lives actually “shattered” by crime. The term is taken from a Fraser Institute report, which in turn bases its cost estimates for “shattered lives” on a University of Ottawa Criminology Department study that examines court awards for victim suffering.²²² The awards were for suffering, disabilities and discomfort resulting from crimes such as assault, rape and murder, and also include additional costs of social services used by victims.

Using the University of Ottawa study, the Fraser Institute estimated that the cost of “shattered lives” due to crime totalled \$12.1 billion a year in Canada in 1993 dollars, or \$12.6 billion converted to 1997 dollars. This added 72.5% to that study’s conservative estimates of crime costs based on direct victim losses, economic production losses, public justice costs and spending on private security guards.

By population share alone, the Nova Scotia share of this federal total would be \$393 million a year. However, this total has been adjusted to account for the fact that serious violent crimes in Nova Scotia average 36.7% below the national average, on the assumption that the cost of “shattered lives” are directly proportional to the seriousness of

²²¹ Solicitor General of Canada, “Cost of Crime to Victims”, *Canadian Urban Victimization Survey*, no. 5, 1985, page 1.

²²² Brandon Welsh, and Irvin Waller, *Crime and its Prevention: Costs and Benefits*, Department of Criminology, University of Ottawa, April, 1995; Brantingham, Paul, and Stephen Easton, “The Crime Bill: Who Pays and How Much?” *Fraser Forum*, The Fraser Institute, 1996.

violent crimes. Therefore, 63.3% of \$393 million is \$249 million, which is the estimate for the cost of “shattered lives” due to crime in Nova Scotia used in this thesis.²²³

It is rightly argued that the actual losses incurred due to suffering, disabilities and discomfort caused by crime cannot be compensated or valued in dollar terms. However, it also widely accepted that the insurance industry places dollar values on lives and limbs, and that courts grant monetary awards for grief and suffering in order to ensure that losses do not go entirely uncompensated and that there is at least some compensatory principle in effect.

This estimate for comprehensive crime costs is within the range of earlier studies estimating crime costs for Canada. The Fraser Institute estimated Canadian crime costs at \$37.3 billion in 1993 dollars, and the National Crime Prevention Council (NCPC) estimated the 1996 costs at \$46 billion. Converting to 1997 dollars, and estimating the Nova Scotia share of these costs on a population basis only, would indicate a Fraser Institute estimate of \$1.2 billion and a NCPC estimate of \$1.5 billion for the Province. While some of the measurement methods and costs included differ, the results are broadly comparable.

The final cost of crime in the Province in 1997 is estimated at more than one billion dollars. The itemised list that follows demonstrates that crime has a bigger impact on quality of life than merely the execution of the crime alone. It is Nova Scotians who must pick up the tab. Or to put it another way, the cost of crime takes money away from

²²³ It is recognised that court awards for grief and suffering may also include some of the factors considered in the estimation for the loss of unpaid work, and that there may therefore be an element of double-counting in using the Fraser Institute estimate. However, the valuation of unpaid work is based on production value only, and the discounting of the Fraser Institute estimate by 37% for Nova Scotia is considered a conservative step already. Therefore no further attempt has been made here to estimate whether a percentage of the shattered lives estimate is previously counted as unpaid work loss.

the budget of Nova Scotians that could have be spent on activities and programmes that enhance quality of life.

Table 6.5: Costs of Crime in Nova Scotia, 1997
(1997\$ millions)

Conservative Estimate	
<i>Victim Losses: Reported Crimes²²⁴</i>	
Direct Victim Losses due to Property Crime	102.4
Direct Victim Monetary Losses in Assaults and Sexual Assaults	0.6
Cost of Hospitalisation due to Violent Crime	1.6
Lost Potential Economic Production due to Homicide	23.4
Lost Production due to Absenteeism resulting from Criminal Attack	4.2
Subtotal	132.2
<i>Public Justice Costs</i>	
Police Expenditures, incl. NS share of RCMP expenditures	143.3
Courts, Legal Aid, and Prosecutions	39.5
Corrections, Provincial, NS share of Federal, and Youth	74.8
Subtotal	257.6
<i>Private Defensive Expenditures on Crime Prevention/Detection</i>	
Home Security Systems	45.5
Private Security Guards and Private Investigators	56.3
Retail Business Defensive Costs (Store Surveillance, Alarms, etc.)	37.0
Theft Insurance (Premiums minus Claims)	25.0
Subtotal	163.8
Total Conservative Estimate	553.6
Comprehensive Estimate	
<i>Total Conservative Estimate (from above)</i>	553.6
Victim Losses due to Unreported Property Crime	165.2
\$ Losses, Hospitalisation, Absenteeism: Unreported Violent Crime	5.2
Unpaid Household Work Losses	8.2
Unpaid Voluntary Work Losses	1.4
Voluntary Work: Crime Prevention and Legal Aid	16.0
Business Shrinkage due to Shoplifting, Employee Theft, Retail Only	113.8
Insurance Fraud (higher premiums)	66.4
"Shattered Lives" (based on court awards for serious violent crimes)	249.0
Total Comprehensive Estimate	1,178.8

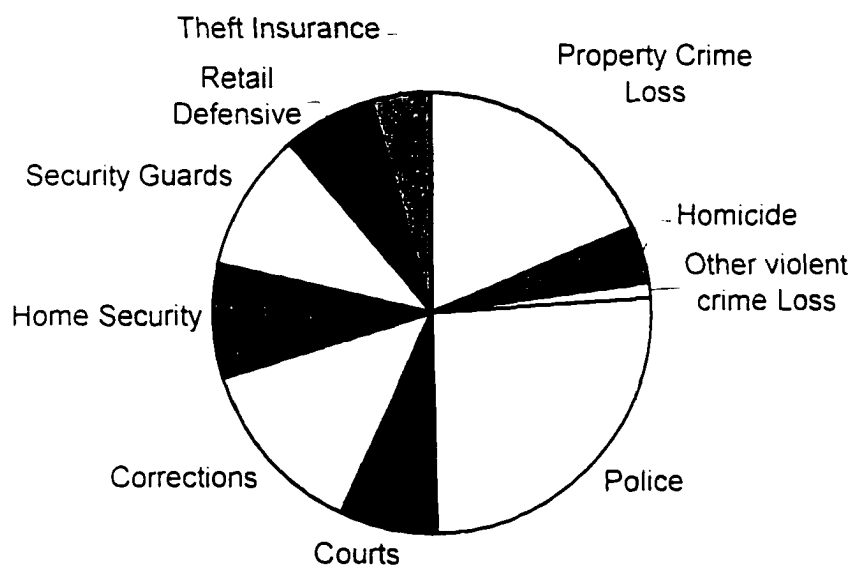
The following costs are not included:

- Deaths, injuries and property damage due to impaired driving;
- Criminally caused deaths of missing persons resulting in lost productive capacity;
- Health, lost production and other costs associated with drug offences, prostitution and other crimes not classified as property or violent crimes;
- Most white collar and corporate crime: fraudulent professional service claims; tax fraud; employment insurance fraud; etc. (except for cases reported and prosecuted);

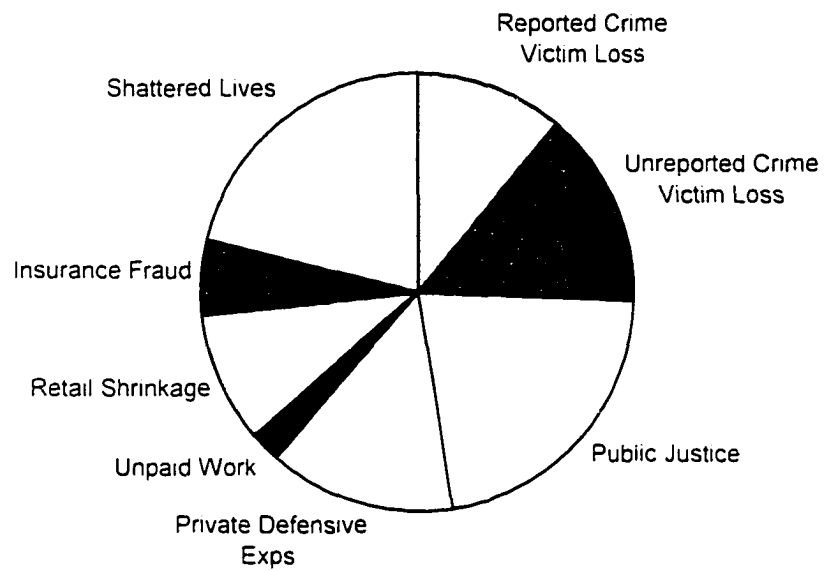
²²⁴ As noted in Chapters 5 and 6, average victim losses per crime category are derived from victim surveys, and therefore include both reported and unreported crimes. The same average loss per crime is applied to both reported and unreported crimes in this study, because separate estimates are not available. Because reported crimes are likely to be more serious, the reported crime victim losses are therefore likely to be underestimated and the unreported losses to be overestimated. As an aggregate, however, the two categories correspond to the victim survey results.

- Non-hospital medical costs, drugs and counselling due to violent crime;
- Non-retail business and government defensive expenditures including alarms, electronic surveillance, etc., and non-retail shrinkage due to employee theft;
- Private spending on criminal lawyers;
- Civil Justice costs, including courts, legal aid and litigation costs;
- Indirect and induced crime costs, such as property value losses, foregone economic activity due to fear of crime, etc.

**Chart 6.6: Conservative Crime Estimate: Distribution of Costs,
Nova Scotia, 1997**



**Chart 6.7 Comprehensive Crime Estimate: Distribution of Costs
Nova Scotia, 1997**



Chapter Seven

Summary and Conclusion

Calculating the cost of crime in financial terms has three advantages. First, it allows for the inclusion of factors that the Uniform Crime Reporting survey (UCR) does not. The UCR merely counts the number of crimes recorded by the police: counting the effect crime has in financial terms has the benefit of including more of the factors by which crime affects our quality of life. Second, using the philosophy of the Genuine Progress Index – economic growth is not necessarily economic progress – the impact crime has on the Gross Domestic Product can be measured. Finally, crime can be fought through the limitation of civil rights. The implementation of longer prison sentences may prevent crime by taking the offender out of circulation, but it is also expensive. The cost of incarcerating the offender for an extended period is a crude measurement of a reduction in his civil rights. The relationship between crime and civil rights can be severed through investment in social crime prevention. Calculating the cost-benefit of such programmes is possible through economic analysis.

Crime conservatively cost Nova Scotians more than half a billion dollars in economic losses to victims, public spending on police, courts and prisons, and private spending on crime prevention in 1997. This amounts to nearly \$600 for every man, woman and child in the Province, or \$1.650 per household. When losses due to unreported crimes, insurance fraud and shoplifting are added, as well as the costs of shattered lives due to crime, the loss is nearly \$1.2 billion a year or \$1.250 per person (\$3,500 per household). These crime costs amount to between 3% and 6.3% of the Provincial GDP.²²⁵

²²⁵ GDP figures are from Statistics Canada, Cansim database: www.statcan.ca, *Selected Economic Indicators – Nova Scotia*, M9222.

Hospitalisation costs due to crime have increased markedly since 1962 due in part to higher violent crime rates and in part to higher hospitalisation costs. Absenteeism due to crime cost the Provincial economy an estimated \$4.25 million in lost production in 1997, a three-fold increase since 1971. And 452 potential person-years of production were lost to the economy in 1997 due to past homicides, at a cost of \$23.4 million. Victim property losses have probably increased in direct proportion to the bloated property crime rate.

Public justice costs have also increased, necessitating higher taxes. The number of police needed to keep law and order and the cost per police officer has risen, dramatically increasing the police budget. Since 1979 the corrections budget has increased by 80 per cent. Spending on home security systems likely parallels the increase in break and enter incidents. Per capita spending on theft insurance has more than doubled in the Province since the early 1970s, an indicator of public perception of crime risk.

Business crime costs also translate directly into higher consumer prices. Spending on in-store crime prevention and detection equipment, business losses due to shoplifting and employee theft, and salaries of private security guards, are all passed on to the consumer. Based on Retail Council of Canada surveys, it is estimated that Nova Scotia households each pay about \$800 a year in higher prices due to crime, amounting to 2.6% of their annual consumption budget. Nationally, the figure is closer to \$900 a year. Insurance fraud costs Nova Scotia households an additional \$200 a year in higher premiums, amounting to about 15% of total insurance premiums, according to the Canadian Coalition Against Insurance Fraud.²²⁶

²²⁶ "Insurance Fraud Costs Canadians a Bundle, (Canadian Coalition Against Insurance Fraud)" *Canadian Press Newswire*, May 29, 1996.

If increases in the official crime rate are discounted by one-third to account for higher reporting rates, and if crime costs are roughly proportional to crime rates, then Nova Scotians would have saved \$350 million in 1997 if crime rates were still at 1962 levels, according to the conservative estimate. Using the more comprehensive estimate, the saving would have been \$740 million, money that would have been available for more productive and quality of life enhancing activities.

As can be seen from the breakdown of the costs of crime above, crime has a far greater impact on quality of life than the official crime statistics suggest. The Uniform Crime Reporting survey (UCR) only describes the level of criminal activity; or to be more accurate, the level of criminal activity recorded by the police. If the full impact of crime on quality of life is to be calculated, a more inclusive method of calculating its impact must be employed - the UCR is clearly inadequate. Calculating crime in economic terms is potentially the measurement tool that can illuminate the full impact crime has on the quality of life of the general public.

In order to make a valid comparison between the impact crime has on Nova Scotians and the effect it has in the rest of Canada, the economic cost of crime should be compared for all the provinces and for Canada as a whole. Unfortunately, such an exercise was beyond the scope of this thesis. In order to make a longitudinal inter-provincial comparison it was necessary to rely on UCR data. This at least allowed for the level of police recorded criminal activity to be compared spatially and longitudinally.

Nova Scotia today is a markedly less peaceful, harmonious and secure society than it was a generation ago. The average Nova Scotian is today four times as likely to be a victim of crime as his or her parents. In 1962, according to the official statistics, the

chances of being a victim of crime in Nova Scotia were one in 49. In 1997, they were one in 12.²²⁷ though a portion of this increase must clearly be discounted to account for higher reporting rates.

Homicides and robberies, because of their seriousness and the corresponding increased likelihood that they will be reported, are considered less susceptible to changes in reporting rates than minor crimes like common assaults, and thus may give a more accurate picture of actual changes in the provincial crime rate over time. There are 80% more homicides per capita in the 1990s than there were in the 1960s and 300% more robberies. The rate of break and enter incidents in the Province has increased by 330% since 1962, rising from two-thirds the national rate to 80% today.

In relation to the rest of Canada, Nova Scotia still has a lower overall crime rate. It has just 82% of the national property crime rate, requires fewer police per capita to keep the peace, imprisons a smaller percentage of its population, and spends proportionately less on locks, alarms, electronic surveillance and other crime prevention and detection devices. But the statistics show that the Province is gradually losing its advantage and converging rapidly towards the national average. Twenty-five years ago, Nova Scotia had just two-thirds the national crime rate and needed only 70% as many police per 100,000 as the rest of the country to keep the peace. From a lower base, the Provincial crime rate has increased faster than the national rate, so that Nova Scotia today has 98% of the national crime rate and needs 94% as many police to keep the peace as the rest of the country. The violent crime rate already exceeds the national average.

²²⁷ The figures are derived by dividing the number of reported criminal code incidents by the population. This does *not* mean that one in 12 *people* is a victim of reported crime, since some individuals are victimised more than once in a year. The author wishes to thank John Turner, Chief, Policing Services

The convergence with the crime rates at the national level is a disturbing one. That in itself should be of concern to Nova Scotia politicians. However, the problem runs deeper than relative increases in criminal activity. The impact crime has on quality of life extends beyond the criminal act, penetrating many aspects of social well being. Efforts by the public and private sector that attempt to prevent crime or ameliorate its consequences are costly. Such spending, while necessary because of the threat crime poses to personal security, is regrettable. Money spent because of crime is money that cannot be spent on projects and activities that improve and enhance quality of life.

Unfortunately, this is not the signal that the current national and provincial accounting systems send to policy-makers, economists, and to the general public. On the contrary, because they register increased spending on prisons, police, criminal trials, burglar alarms and security systems as GDP growth, they are taken as signs of social prosperity.

In traditional economic terms, the Atlantic region has lagged significantly behind central Canada and the West for the past century, and "convergence" is conventionally regarded as desirable when measured in GDP per capita. From a larger quality of life perspective, such economic convergence is more questionable.

In contrast to the Gross Domestic Product, the Genuine Progress Index (GPI) regards crime as a liability rather than an asset, and its costs as an economic loss rather than a gain. In direct contrast to the GDP, lower crime rates make the GPI go up, and higher crime rates make it go down. Reduced crime costs are seen as savings that can be

Programme, Canadian Centre for Justice Statistics, for his assistance in clarifying this issue (personal communication, 6 April, 1999).

invested in more productive private or public activities that enhance well being. Higher costs to maintain a given level of security indicate a decline in quality of life.

The GPI does not separate social factors from economic growth. Crime is part of economic growth but not of economic and social progress. Crime and other regrettable costs point to sectors of the economy where limits to growth may signify well being, prosperity and progress more accurately than continued growth.

From the GPI perspective, crime costs lower quality of life by diverting precious public funds from such social welfare enhancing investments as health, education and environmental protection, while also increasing the tax burden and thereby decreasing the quality of life of taxpayers through a reduction in personal spending power.

Nova Scotia and the Atlantic region today retain a significant comparative advantage, with lower crime rates than the rest of the country, particularly for serious violent crimes and property crimes. But the gap is narrowing and the advantage slimming. Even accounting for higher reporting rates, Nova Scotians are about three times as likely to be victims of crime as their parents, and the crime rates are converging rapidly towards the national average. The trend has led to higher taxes for public justice expenditures, higher shopping bills to pay for in-store theft and business crime prevention costs, higher insurance premiums, higher rates of personal spending on locks and alarms, and more victim losses.

By failing to identify and measure economic costs, and by counting them as gains, we lose sight of both the value and the potential deterioration of our social assets, and we fail to take action to remedy trends that undermine our quality of life and standard of living. In short, counting the aggregate output of the economy is the means by which

economic growth can be measured: it is not the means by which economic progress can be accurately measured.

The conclusion that must be drawn from this thesis is that the Uniform Crime Reporting survey and the Gross Domestic Product are inadequate measurement tools. The UCR does not paint an accurate picture of the devastating impact crime has on quality of life, and the GDP sends misleading signals to policy makers by not distinguishing between economic activity that enhances social well being and that which harms it. Measuring crime in economic terms is more inclusive and accurate; and distinguishing between activity that brings social prosperity and that which brings harm helps inform policy makers' decisions so that they can more easily measure the effect of their actions. In both cases the Genuine Progress Index is a more accurate and reliable measurement tool than the current means.

Measuring crime in comprehensive economic terms leads to a different mind set when tackling crime. The goal has become one of reducing the impact crime has on quality of life, rather than the more stunted goal of reducing crime. More police officers and more prisons may reduce crime, but also cost a considerable amount of money - money that could have been spent enhancing quality of life. If crime can be reduced while the number of police officers and prisons is also reduced, then quality of life has been improved. It makes sense in this new scenario to look for cost effective ways of reducing crime.

Crime is not separate from social, economic and demographic conditions: it cannot be tackled in an isolated way that deals only with symptoms after the fact. The fallacy of that approach is well illustrated by the rapid growth in incarceration rates in the

United States, which has resulted in the imprisonment of 1.8 million Americans without any concerted initiative to ameliorate the causes of crime in that country. The world's leading economic power is also on the way to becoming the world's leading jailer.

We are far from understanding the causes of crime, and from knowing whether specific actions and social factors like job lay-offs, larger school class sizes or teenage drug use will eventually increase crime rates. But we can at least note in passing that there are significant correlations between high crime rates and gender, employment status, educational attainment, substance abuse, recidivism, and age. It has also been noted that crime rates tend to follow the business cycle, with noticeable peaks during the two most recent recessions.

As noted in chapter four, Harvard University professor Harvey Brenner stated that a 14.3% increase in the U.S. unemployment rate, from 4.9% to 5.6% between 1973 and 1974, was associated with 403 additional homicides, 7,000 additional assaults, 270 more suicides, and 8,400 additional admissions to mental hospitals, with many of these effects spread out over a period of six years.²²⁸

Specific quantitative associations, such as Dr. Brenner's, are not attempted here. But the social and demographic correlations in chapter 4 at least begin to identify the areas in which policy initiatives and social programmes are the most likely to yield cost-effective investments that can reduce crime and improve living standards and quality of life at the same time. Three examples are given here to stimulate discussion. Hopefully

²²⁸ Brenner, Harvey, *Estimating the Effects of Economic Change on National and Social Well Being*, a study prepared for the Subcommittee on Economic Goals and Intergovernmental Policy of the Joint Economic Committee, Joint Committee Print 98-198, U.S. Government Printing Office, Washington D.C., 1984, cited in Cobb, Clifford, Ted Halstead and Jonathan Rowe, *The Genuine Progress Indicator: Summary of Data and Methodology*, Redefining Progress, San Francisco, September, 1995, page 23.

future studies will use full-cost accounting techniques to undertake more detailed cost-benefit analyses of alternative investment strategies that have an effective crime prevention function.

It was noted in chapter four that 50-75% of offenders have drugs in their urine at the time of arrest, that 30% were actually under the influence when charged, and that 30-50% of prison inmates have drug-dependency problems.²²⁹ On the positive side a residential drug treatment programme in Montreal found a direct correlation between successful treatment and reduced crime recidivism. In economic terms it estimated that every dollar invested in residential drug treatment programs yielded \$7 in savings from reduced crime costs. Note that the programme is theoretical – it has never been carried out in practice.²³⁰

It was also noted in chapter 4 that crime is positively correlated with poor educational attainment. While only 19% of the population have less than a grade 10 education, 36% of all inmates and 46% of federal prisoners, who are guilty of the most serious crimes, have less than a grade 10 education.

A long-term study in the United States measured the economic value of investment in high quality pre-school education (the Perry programme) in a low-income inner city area with high crime and unemployment rates against a control group in the same area in which no such educational investment was made. Since the programme was instituted in the early 1960s, the Perry experimental group has regularly out-performed the control group, and demonstrated consistently lower crime rates.

²²⁹ Brochu, Serge, *Estimating the Costs of Drug-Related Crime*, <http://www.ccsa.ca/brochu.htm>

²³⁰ Ibid.

A report by the Canadian Centre for Justice Statistics notes: "The Perry Pre School programme reduced crime among youth and adults, while improving success rates in school, higher rates of employment, higher earnings, and less reliance on social assistance. In this case, a \$5,000 investment in early childhood education yielded an estimated \$28,000 return in dividends to society."²³¹

Public opinion polls indicate that the public favours spending money on crime prevention rather than on building new prisons.²³² In contrast to the United States, Canadian custom and practice has seen incarceration as a last resort. Section 718.2 of the Criminal Code actually instructs judges to use alternatives to incarceration where possible, and recommends increased use of conditional release programs.

Hellman notes that the actual effectiveness in practice of each of the goals of imprisonment (deterrence, incapacitation, rehabilitation and retribution) must be evaluated in terms of benefit-cost analysis:

In choosing prison terms (for the purpose of deterrence), we should consider the marginal social costs of imprisonment (the cost of maintaining a prisoner) and compare these social costs with the social benefits of reducing the harm done by potential offenders. If the marginal costs of imprisonment exceed the marginal benefits, the prison term is too long.... Incapacitation is useful if the marginal costs of imprisonment are less than the marginal benefits of a reduction in the amount of crime committed by that offender.²³³

Using this criterion, it is probable that a 30-day sentence, costing the taxpayer \$3,570, for non-payment of a fine or for a theft of \$200, is not cost-effective. Hellman further concludes that retribution is not economically effective and that for minor

²³¹ Statistics Canada, Juristat, *Justice Spending in Canada*, Cat. No. 85-002, Vol. 17, No. 3, p.3.

²³² Julian Roberts, *Public Knowledge of crime and Justice: An Inventory of Canadian Findings*, A Report for the Department of Justice, Canada, p.7.

²³³ Hellman, Hellman, Daryl A. (Northeastern University), *The Economics of Crime*, New York: St. Martin's Press, 1980, p.70

offences in particular, it is clear that effective rehabilitation cannot occur in the space of a prison term of less than a month.²³⁴

By contrast, the evidence indicates that community supervision and parole are at least as effective in reducing recidivism rates as prison. Julian Roberts notes that only 12% of parolees in Canada committed new offences.²³⁵ Assessments of recidivism risks by correctional services indicate that 44% of the Nova Scotia prison population has a “high risk of re-offending.”²³⁶ Alternatives to incarceration for the remaining 56% of prisoners are particularly likely to produce significant cost savings to the public, according to Hellman’s criterion.

If these non-high-risk offenders were placed under community supervision rather than imprisoned, Nova Scotia taxpayers would save nearly \$6 million per year.²³⁷ This calculation assumes that offenders under community supervision are no more likely to re-offend than released short-term inmates. The issue illustrates the importance of reliable recidivism data.

Alternatives to imprisonment for minor offences are under consideration in other provinces. Orest Yereniuk, President of the Alberta Crown Attorneys Association noted major anomalies in sentencing and time served in Alberta prisons, and noted: “Maybe the solution is to reserve our jails for the most severe criminals.”²³⁸

In September, 1996, the federal government changed the Criminal Code to include “conditional sentences” as a direct alternative to incarceration for some crimes.

²³⁴ Ibid., page 72.

²³⁵ Roberts, op. cit., page 39.

²³⁶ Statistics Canada, *Juristat*, catalogue no. 85-002, volume 18, no. 8, page 9, figure 9.

²³⁷ Figure derived by subtracting annual community supervision cost (\$9,145) from annual prison incarceration cost (\$43,282), and multiplying by 56% of the adult inmate population in Nova Scotia.

²³⁸ “When Three Months Equals Eight Hours: Cost-Saving Non-Imprisonment of Petty Offenders Angers Judge and Prosecutors.” *Western Report*, Volume 9, No.28 (August 8, 1994), p.18 and 19.

At the judge's discretion, an offender sentenced to less than two years in prison can serve his time in the community instead, with conditions ranging from house arrest to a promise to keep the peace. For example, an offender might serve his sentence in his own home, with strict conditions attached that confine his freedom of movement. He might be permitted to go to work and return, or to exercise in prescribed areas, but not to leave his house for any other purpose.

The Province's "adult diversion" programme goes a step further by circumventing the whole court process for non-serious offenders and in keeping public justice costs down even more by avoiding a criminal trial altogether. Whereas conditional sentencing first requires a trial and conviction, adult diversion creates alternative options for minor offences that allow an offender to be diverted from the court system at the pre-charge stage. Similar to programmes that previously existed for minor youth offences, adult diversion gives police officers alternative options to laying charges for minor offences that would have required a court appearance.

Among the possible alternatives to trial are community service work, restitution, an apology or personal service to the victim, a written essay taking responsibility for the offence, or charitable donation and work. Authorised by the federal government in 1995 in Bill C-41, the Province experimented with the programme in Dartmouth and North Sydney for more than a year before adopting it on a Province-wide basis in 1997. It has been judged as highly successful to date, although hard and fast data are lacking.²³⁹

The Nova Scotia Justice Department is in the process of instituting a restorative justice programme, which could become a model for the country. This programme

²³⁹ Information from Dr. Don Clairmont, Department of Sociology, Dalhousie University, personal communication, 1 April, 1999.

intends to bring together the offender, the victim and justice officials to determine appropriate forms of restitution to the victim and to the larger community for harm done by the offender. Restorative justice may divert an offender from the normal judicial system at any point in the process – from the time of arrest through the prosecution and court process to the Corrections stage.

The programme is a radical alternative to the existing adversarial system and “the general fixation on punishment as the principal tool for correcting behaviour,” which, according to the Justice Department, “drives offender responsibility underground. If the only option available for offenders is a potentially harmful period of incarceration, non-acceptance of responsibility will be the standard response.”²⁴⁰ The new programme is also driven by the recognition that imprisonment has not succeeded in reducing recidivism rates among offenders and that these rates are still too high.

“Restorative justice is only available when offenders are prepared to accept responsibility for their actions,” says the Justice Department. “Restorative justice places a high value on a face-to-face meeting between the victim, offender and community. During the course of that meeting, each party is given an opportunity to tell the story of the crime from their own perspective, and talk about their concerns and feelings.”²⁴¹

For serious offences, the offender may still be required to serve a prison term after participating in a restorative justice forum, and the restorative justice mechanisms may be employed even after an offender has already served part of a prison term.²⁴²

²⁴⁰ Nova Scotia Department of Justice, *Restorative Justice: A Programme for Nova Scotia*, Halifax, June, 1998, page 3.

²⁴¹ Ibid.

²⁴² Ibid.

The scope of restorative justice models is far broader than that of the conventional adversarial system, since it emphasises direct offender accountability, victim healing, offender re-integration, and repairing the harm caused by the offence. It is intended to reduce recidivism, increase victim satisfaction, strengthen communities, and increase public confidence in the justice system.

Instead of dealing with crime only as a symptom, restorative justice has the capacity to delve into underlying causal factors and social problems. In this way, it “enhances a community’s sense of safety by identifying circumstances in the community which contributed to the offence, and determining what can be done to avoid a similar situation in the future.”²⁴³

The first phase of the restorative justice initiative will target youth between the ages of 12 and 17 in the Halifax Regional Municipality and the Cape Breton Regional Municipality, and in rural areas of the Annapolis Valley and Cumberland County. Efforts are currently under way to create an effective monitoring and evaluation system to measure the initiative’s success in achieving its goals of reducing recidivism, increasing victim satisfaction and improving the cost effectiveness of the public justice system.²⁴⁴

According to the Nova Scotia Justice Department,

An important evaluation component of the initiative will involve an assessment of whether restorative justice programs lead to direct and indirect financial savings. An evaluation of the broader financial issues associated with restorative justice is essential for the continued growth of the initiative.²⁴⁵

²⁴³ Nova Scotia Department of Justice, *Restorative Justice: A Programme for Nova Scotia*, Halifax, June, 1998

²⁴⁴ Ibid.

²⁴⁵ Ibid.

Restorative justice holds the promise of reducing crime and its associated costs by linking the causes and effects of crime, and accords well with the GPI's quality of life approach that favours linking social and economic variables in a more complete accounting process.

The examples in this section illustrate the types of social investment that might be also be cost-effective crime reduction strategies when evaluated in terms of full economic and social costs and benefits. Similarly, social programmes geared to the well being of Aboriginal communities, to youth employment, and to other high-risk groups may help reduce crime and save significant social costs, while improving the quality of life and raising the standard of living.

Finally, this thesis shows that crime has an impact far beyond the criminal act itself. As was mentioned in the introduction, criminal activity has resulted in the building of a new prison in the Burnside industrial park in Dartmouth. The cost of this new facility must be borne by the taxpayer. The money spent on incarcerating offenders could have been spent on welfare advancing activities had there not been a need for the prison. The fact that the Uniform Crime Reporting survey ignores such expenditures demonstrates that it is an inadequate measure of the impact crime has on quality of life. The fault is one of omission. But because the Gross Domestic Product does not distinguish between positive and negative economic activity it is guilty of counting the cost of crime as an addition to economic well being. The Genuine Progress Index is a full cost accounting system that includes the knock-on impact of crime, while also distinguishing between economic activity that improves quality of life and that which does not. Thus we are able

to come to the rather depressing but accurate conclusion that crime negatively affected quality of life in the Province of Nova Scotia to the sum of \$1.1 billion in 1997.

Appendix: Methodology and Data Sources

One of the major goals of this thesis is to develop an accounting framework for estimating crime costs, and it is therefore essential to make the methodologies as transparent as possible. Many of the dollar amounts quoted as crime costs have been extrapolated and derived from a variety of sources, and are not direct measurements. It is hoped that over time new data sources will allow the gradual substitution of direct measurements for many of the derived results in this study, and that methodologies will be gradually improved.

Whenever possible Statistics Canada data have been used so that the thesis is consistent, and so others can replicate this report for other jurisdictions. Thus, 1962 has been taken as the starting date for timelines in this report, simply because the Uniform Crime Reporting (UCR) statistics date from that year, allowing provincial comparisons of relative changes in the crime rate over time. Statistics Canada Cansim database has been used so that provincial data are comparable spatially and longitudinally.

It was noted throughout that serious limitations exist in using official crime statistics, since they cannot account for major changes in reporting rates. There is evidence that reporting rates for assault and sexual assault have gone up significantly, and that domestic violence is far more often the subject of police intervention than 30 years ago. Nevertheless, since these are cultural changes not likely to vary significantly across the country, the official crime statistics are still useful to assess comparative rates of change between the provinces, even if they must be qualified in terms of actual numbers of reported incidents.

To simplify replication by other provinces, therefore, data sources that are readily available across Canada have been used wherever possible. The starting point for every section has been Statistics Canada Canadian Centre for Justice Statistics (CCJS) publications. Free CCJS data are available at all regional offices of Statistics Canada, at a number of universities across the country, and electronically via the Internet. Until good annual standard victimisation survey data are readily available, it is recommended that the CCJS data be used as the basis for other provincial crime cost estimates to ensure comparability.

If, after an exhaustive search of CCJS data, sufficient data were not attained to construct a particular table, chart or time series, alternative Statistics Canada publications were consulted, as described in the text, footnotes and bibliography.

These two sets of Statistics Canada sources provide most of the data in this study. In several cases, however, provincial justice departments have important additional data, either in published or unpublished form, not accessible in Statistics Canada publications. Many vital missing data pieces were provided through personal contact with Paul Smith and Robert Roe of the Nova Scotia Department of Justice. It is strongly recommended that efforts to replicate this study in other provinces be undertaken in co-operation with provincial justice departments.

It should be noted that provincial justice departments are in fact the source for much of the data published by Statistics Canada, and may frequently be able to provide more detailed, accurate and reliable data reflecting the particular legal and organisational norms that are peculiar to the province under investigation. This is particularly true in areas like sentencing, where the provinces have widely differing policies. Court

structures also vary, and policy considerations affect police discretion and thus reporting rates. Nevertheless, in the interests of comparability among provinces, and for ease of replication by other jurisdictions, the standard CCJS data have been the data source of first priority in this study.

Reference has also been made to other government publications, as described in the footnotes and bibliography. Private sources of data, such as statistics from insurance companies and from surveys conducted by the Retail Council of Canada, have also been used, especially for some victim loss data, for estimates of business defensive expenditures, for data on theft insurance premiums, and for estimates of inventory “shrinkage” due to shoplifting and employee theft.

In addition, data presented both in academic articles and news reports, and in some cases, as noted, have extrapolated provincial data for Nova Scotia from earlier national studies of crime costs. In particular the published reports on crime costs, as noted in the references, by the Fraser Institute and by the National Crime Prevention Council, and by Welsh and Waller of the University of Ottawa’s Criminology Department are recommended.

Sources have been utilised in the order described for the purposes of data collection. However, the framework for collecting the particular data published in this thesis and the subsequent interpretation of data relied on an extensive literature review, based primarily on academic articles and consultations with criminologists. These academic sources, which were the first step for the author in undertaking this study, are listed in the bibliography.

In sum, to encourage comparability of results, it is recommended that provincial crime cost analyses in other jurisdictions collect data in the following priority sequence:

1. Canadian Centre for Justice Statistics
2. Other Statistics Canada data
3. Federal Justice Department
4. Provincial Justice Department
5. Other federal and provincial government data
6. Non-government and private sector organisations, including insurance and retail industry sources
7. Academic and independent research articles
8. News reports

This thesis is certainly not intended as a definitive method for calculating the cost of crime, nor is calculating crime in economic terms the only means of assessing the extent to which crime effects quality of life. Many obvious improvements in methodology and data sources are necessary, and it is hoped that this study will stimulate attempts to revise and refine the measurement techniques and sources over time.

Selected detailed examples of methodologies and sources used in this thesis follow:

Page 17. *Nova Scotia Income Per Quintile and Per Capita GDP, 1981-97 (1998\$).*

The income data by quintile are from a custom tabulation supplied by Statistics Canada, Survey of Consumer Finances, Income Statistics Division. The Gross Domestic Product per person data are from Statistics Canada, Cansim database, *Selected Economic Indicators: Gross Domestic Product per Person*, matrix 9219 and 6967. For both sets of data Statistics Canada, *Consumer Price Index*, Cansim matrix 9943, was used to translate current dollars into constant 1997 dollars.

Page 33, Table 3.1: The number of criminal code incidents for Canada and Nova Scotia are from *Statistics Canada: Cansim Disc, 1998-2, Cat. No.10F0007XCB*, matrix 2200.

Crimes by Actual Offences, Canada, Provinces and Territories, by Year. Canada, D9501, Nova Scotia D9567. The population data for 1996 and 1997 are from Statistics Canada publication *The Daily*, September 24, 1998. Population data from 1962 to 1995 are from *Statistics Canada: Cansim disc, 1998-2*, Cat. No.10F0007XCB, matrix 599. Cansim data are also available at the Statistics Canada Website www.statecan.ca

- The crime rate in this table is derived by dividing the number of criminal code incidents by the population and then multiplying by 100,000 to get the number of criminal code offences per 100,000 population.
- The columns *Canada 1962=100* and *Nova Scotia 1962=100* are the respective crime rates in relation to the base year 1962, which is given as 100. The 1962 Nova Scotia crime rate was 2036 incidents per 100,000 population. $100 \div 2036 = 0.049116$. Therefore, $(2036 \text{ multiplied by } 0.049116 = 100)$ expresses the 1962 crime rate as 100. For the years 1963 to 1997 the crime rate has been multiplied by 0.049116 so that the crime rate for the period is expressed in relation to the base year of 1962, which has the base figure of 100. The same process has been used for the Canadian data.
- Measuring the Nova Scotia and the Canada crime rates against a base year of 100 is useful in that it makes a comparison between the two jurisdictions easier to comprehend, while also showing the rate of increase for each of the jurisdictions in simple terms.
- The column *NS as a % of Can. Crime Rate* is the Nova Scotia crime rate as a percentage of the Canada crime rate. The Nova Scotia crime rate has been divided by the Canada crime rate and then multiplied by 100 to get a percentage figure. From the perspective of quality of life, the results demonstrate a decline in comparative advantage for Nova Scotia in relation to the rest of Canada over the last four decades.

Page 34, Chart 3.1: The data are from the same source as Table 3.1. The chart derives from the columns “Canada, 1962=100” and “Nova Scotia, 1962=100” in Table 3.1.

Page 34, Chart 3.2: The data are from the same source as Table 3.1. The percentage chance of being a victim of crime is calculated by dividing the number of criminal incidents in a given year by the population in the same year and multiplying by 100.

Page 35, Chart 3.3: The data are from the same source as Table 3.1. This chart is the final column of Table 5.1. In chart form the undesirable convergence with the national average can be seen even more graphically than in the table.

Page 39, Table 3.2: The methodology and sources, unless indicated otherwise, are the same as Table 3.1 and are applied to the number of violent crime incidents for both jurisdictions. The columns headed “Yearly % increase, NS” and “% Increase in Comparison to 1962, NS” track the rise in the violent crime rate on a year by year basis, in the case of the former, and the cumulative increase in the violent crime rate, in the case of the latter. Both columns use data from the column headed “Violent Crime Rate, NS”. The yearly % increase is derived by dividing the violent crime rate in any given year by the violent crime rate in the previous year, multiplying by 100, and subtracting 100. The percentage increase in comparison to 1962 is calculated by dividing the violent crime rate in any given year by the violent crime rate in 1962, multiplying by 100, and subtracting 100. For Canada the source for violent crime incidents is *Cansim Disc 1998-2*, 10F0007XCB, Matrix 2200, D9508; for Nova Scotia: *Cansim Disc 1998-2*, 10F0007XCB, Matrix 2200, D9574.

Page 40, Chart 3.4: The data are from the same source as Table 3.2. This chart graphically shows the increase in violent crime in the Province and the Country since 1962. While this chart makes no allowance for increased reporting rates, neither does the UCR on which it is based. The same holds true for all the charts and tables in this section.

Page 40, Chart 3.5: The data are from the same source as Table 3.2. The percentage chance of being a victim of violent crime is calculated by dividing the number of violent criminal incidents in a given year by the population in the same year and multiplying by 100.

Page 41, Chart 3.6: The data are from the same source as Table 3.2. This chart tracks the lost comparative advantage the Province has witnessed in the last dozen years. It should be noted that comparative advantage could be lost even if the crime rate has gone down.

Page 41, Chart 3.7: The data are from the same source as Table 3.2.

Page 42, Chart 3.8: Data supplied by the Nova Scotia Department of Economic Development and Tourism.

Page 43, Table 3.3: The number of homicides is from Statistics Canada, Cansim matrix 2200. The average number of homicides for the two periods, 1962-67 and 1992-97 was calculated by adding the number of homicides for each period and dividing by the number of years in each period. The change in the homicide rates between the two periods was calculated by dividing the most recent figure, 1992-97, by the historical figure, 1962-67, multiplying by 100, and subtracting 100.

Page 43, Chart 3.9: The robbery rate for the provinces and Canada is derived from Statistics Canada, Cansim matrix 2200 (Robbery) and Cansim matrix 1 (Population). The

number of robberies was divided by the population, then multiplied by 100,000 to get the number of homicides per 100,000 members of the population.

Page 43, Chart 3.10: The methodology and sources are the same as those described in Table 3.9. This chart demonstrates the quality of life advantage the Province has in regard to a serious crime in relation to the Canadian average.

Page 47, Table 3.4: The data are from the same sources as Table 3.1 unless otherwise stated. The number of property crime incidents for Canada and Nova Scotia are from *Statistics Canada: Cansim Disc, 1998-2, Cat. No.10F0007XCB, matrix 2200, Crimes by Actual Offences, Canada, Provinces and Territories, by Year, Canada, D9501, Nova Scotia D9567*. The population data for 1996 and 1997 are from Statistics Canada publication *The Daily*, September 24, 1998. Population data from 1962 to 1995 are from *Statistics Canada: Cansim disc, 1998-2, Cat. No.10F0007XCB, matrix 599*. Cansim data is also available at the Statistics Canada Website www.statcan.ca

Page 48, Chart 3.11: The data are from the same source as Table 3.4. This is the final column of Table 3.4 in graph form. For each year the property crime rate in Nova Scotia has been divided by the property crime rate at the national level and multiplied by 100 to get a percentage. The property crime rate is calculated by dividing the number of property crimes per year (Cansim matrix 2200) by the population (Cansim matrix 1) and multiplying by 100,000.

Page 48, Chart 3.12: The data are from the same source as Table 3.4. The percentage chance of being a victim of property crime is calculated by dividing the number of property crime incidents in a given year by the population in the same year and multiplying by 100.

Page 49, Chart 3.13: The property crime rate for the provinces and Canada is derived from Statistics Canada. Cansim matrix 2200 (Property Crime) and Cansim matrix 1 (Population). The number of property crimes was divided by the population, then multiplied by 100,000 to get the number of homicides per 100,000 members of the population.

Page 49-51, Chart 3.14: The crime rates for various types of property crime have been compared longitudinally and against the national average to demonstrate the comparative advantage the Province enjoys. For the *Theft* chart, the number of thefts has been divided by the population and multiplied by 100,000 to get the theft rate per 100,000. The number of thefts is from Statistics Canada, Cansim matrix 2200, and the population from matrix 1. The same methodology was employed for the charts headed *Fraud*, *Robbery*, *Motor Vehicle Theft*, and *Break and Enter*.

Page 56, Chart 4.1: The age and sex data are from Statistics Canada, Cansim matrix 6370, www.statcan.ca and the crime trends from Tables 3.2 and 3.4.

Page 57, Chart 4.2: Statistics Canada, *StatCan: CANSIM Disc, 1998-2*, Cat. No. 10F0007XCB, Matrix 8901: *Cases Heard by Youth Courts, by Age of the Accused for*

Canada and the Provinces, Annual. Matrix 6370: Population by Single Years of Age, Age Groups and Sex, for Nova Scotia, July 1. Matrix 6367: Population by Single Years of Age, Age Groups and Sex, for Canada, July 1.

Page 70, Table 5.1: This table refers to the economic loss suffered by victims of property crime at the time of the incident – the value of goods stolen by a criminal from a victim. Unfortunately, other than the number of thefts above and below \$5000, there are no specific annual financial victim loss data either for Nova Scotia or for Canada. Because of the dearth of relevant data on average losses for selected property violations as estimated by the Solicitor General of Canada has had to be relied upon.²⁴⁶ The dollar totals in this table are calculated by multiplying the number of criminal incidents per crime category (Statistics Canada, Cansim matrix 2200, www.statecan.ca) by the Solicitor General's estimate of the value of property and money lost per type of criminal incident (Canadian Urban Victimization Survey (CUVS) part 5). The Solicitor General's estimates have been converted to 1997 dollars by using Statistics Canada, Consumer Price Index.

- Theft: \$2,188;
- Mischief: \$655;
- Break and Enter \$2,370;
- Motor Vehicle Theft: \$3,728;
- Robbery \$2,934;
- Fraud \$3,625.

In order to arrive at an approximation for the total direct financial losses per property crime category in Nova Scotia the average financial loss per incident has been multiplied by the number of incidents. For example:

²⁴⁶ Brantingham and Easton, op. cit., *The Fraser Forum*, also use these estimates which are from Solicitor General of Canada, *Canadian Urban Victimization Survey, Bulletin 5: Cost of Crime to Victims*, 1985.

In 1962 there were 5,201 reported thefts in Nova Scotia. By 1997 the annual number of reported thefts in the province had risen to 21,568. Therefore, the direct victim losses in 1962 as opposed to 1997 are:

1962 - 5,201 multiplied by \$2,188 = \$11.4 million

1997 - 21,568 multiplied by \$2,188 = \$47.2 million.

The same procedure is used for all named crime categories and all intervening years. The total direct victim losses per year are the total losses for each crime category combined.

The *Potential Savings* columns show the money that could be saved if the number of criminal incidents in the Province were reduced to 1962 or 1975 levels. While the ultimate goal must be to eradicate crime altogether, interim targets that demonstrate the economic benefit of reducing crime are also useful. The methodology used is simply to subtract the 1962 and 1975 annual total from the subsequent annual total, the result being the potential saving.

Page 72, Table 5.2: The mean net dollar losses for sexual assault and assault are from the Canadian Urban Victimization Survey (CUVS), No. 5, p.3, table 4. Difficulty was experienced constructing a time line for assault and sexual assault due to changes in definition. Because of these problems recent data for the two categories have been extrapolated back to 1962 using the ratio to violent crime. The CUVS survey found that a monetary loss occurred in 32% of sexual assault incidents, 56% of robberies, and 18% of assaults.

No distinction is made between reported and unreported crime in the CUVS report. If criminal incidents of a more serious nature are the ones more likely to be

reported to the police, then the official crime statistics represent incidents where a financial loss is more likely to occur than in unreported incidents. It is therefore also to be expected that reported crimes are more likely to incur a larger financial loss. Therefore, because this report uses the CUVS data, which reflect the average loss for reported and unreported crime combined, it probably underestimates the average loss for reported crimes alone.

The Solicitor General estimated that the mean net loss (after recovery of lost property) in 1981 for incidents where an economic loss occurred, was \$266 in cases of sexual assault, and \$224 in cases of assault. Translated into 1997 dollars using the Consumer Price Index, the average losses are \$372 for sexual assault and \$314 for assault.²⁴⁷

However the same report also indicates that an economic loss took place in 32% of sexual assault incidents and in 18% of assaults. Therefore the dollar loss per incident has been estimated at $\$372 \times 32\% = \119 per sexual assault and $\$314 \times 18\% = \56 per assault.

Because definitions and reporting rates have changed over time for the crimes of sexual assault and assault, the two crime categories have been combined here so that aggregate losses for both categories of violent crime can be estimated back to 1962 using the above formula. Because of the changing definitions and reporting rates, it would be misleading to assume that the *relative* losses for each category reflected the same reality in 1962, 1975 and 1997. The composite total for both categories at least avoids the definitional problem.

²⁴⁷ Solicitor-General of Canada, *Canadian Urban Victimization Survey, Bulletin 5: Cost of Crime to Victims*, 1985, page 3.

Page 74, Table 5.3: The cost of hospitalisation due to crime is derived from the Solicitor General's estimate in *Canadian Urban Victimization Survey: Cost of Crime to Victims, Bulletin No. 5*, 1985, p. 2& 3. The Survey found that "1.6 million victimisation incidents resulted in 50,500 nights in hospital." This translates into 3.15% of incidents resulting in an overnight stay at a hospital. To calculate the number of hospital nights stay due to crime the number of criminal incidents was multiplied by 3.15%. That number was then multiplied by the cost per day for hospital treatment to get the total cost of hospital treatment due to crime. The number of criminal code incidents is from Statistics Canada, Cansim CD Rom, Cat. No. 10F0007XCB, matrix 2200, and the cost of hospitalisation is from Statistics Canada, *Hospital Indicators*, Catalogue No. 83-246, Table 117 and *Hospital Statistics*, Catalogue No. 83-217, Table 12. Current dollar figures were translated into constant 1997 dollars by using the Consumer Price Index.

Page 78, Chart 5.2: The cost of absenteeism due to crime is derived from the Solicitor General's estimate in *Canadian Urban Victimization Survey: Cost of Crime to Victims, Bulletin No. 5*, 1985, p. 2& 3. "1.6 million victimisation incidents resulted in...405,000 days lost due to absenteeism." This translates into 25.3% of criminal incidents resulting in absence from work. It has been assumed that workers produce more than the value of their salaries. The economic value of a workers production is his share of the GDP. It must also be noted that in the case of absenteeism, co-workers may well fill the temporary void or the incapacitated worker will catch up on her return to work. Nevertheless, there is still a loss of productive capacity: potential forward momentum is

lost. The calculation to find the lost productive capacity due to crime related absenteeism is as follows:

- Number of incidents multiplied by 25.3% = number of work days lost due to crime victimisation;
- GDP divided by the number of workers = GDP per worker;
- Work days per worker are 48 work weeks multiplied by 5 work days per week;
- GDP per worker divided by work days = GDP per worker day;
- GDP per worker day multiplied by days lost = lost productive capacity due to absenteeism caused by crime.

GDP data from Statistics Canada, Cansim matrix 2625 and 9017, www.statecan.ca. Employment figures are from Statistics Canada, Cansim matrix D985740, www.statecan.ca.

Page 89, Table 5.6: The average daily inmate cost was calculated by dividing the *Institutional Operating Costs* by the *Total days Stay*. The average daily inmate cost is translated to 1997 constant dollars by using the Consumer Price Index.

Page 89, Chart 5.6: The average offender count on probation in Nova Scotia in 1995-96 was 4339. The total cost of probation for Nova Scotia was \$5,832,000.

The cost per participant is the total cost divided by the number of participants: therefore, \$5,832,000 divided by 4339 = \$1,344.

Page 97, Chart 5.13: Cost of Corrections in Nova Scotia. For the period 1962-1983 the total cost of corrections for Nova Scotia is derived from the expenditures of the three levels of government in the Province. Municipal costs for the same period are for courts and corrections. From 1962-70 municipal data for police, courts and corrections are only available under the composite heading *Justice*.

Federal expenditures for corrections for the period 1962-83 are only available at the national level and are not broken down by province. Since federal corrections expenditures come from general taxpayers' revenues, the share of federal corrections expenditures attributable to Nova Scotia is proportional to the province's share of the national population. Therefore, if three per cent of the Canadian population resides in Nova Scotia, Nova Scotia is responsible for three per cent of federal Corrections expenditures in these estimates.

Ideally the Nova Scotia share of federal Corrections costs should be based on the percentage of penitentiary inmates who were sentenced in the Province. Unfortunately, the home province of penitentiary inmates is unavailable, so the Nova Scotia share of penitentiary inmates cannot be calculated.

The problem this raises is that Nova Scotia may have a disproportionate share of inmates in federal corrections programmes. If, for instance, ten per cent of penitentiary inmates were sentenced in Nova Scotia, and the Nova Scotia share of the general population were three per cent, the methodology used would only apportion three per cent of penitentiary expenditures to the Province when in fact ten per cent of costs should be the responsibility of Nova Scotia. Conversely, if Nova Scotia had a lower share of federal corrections inmates than its share of the general population, then the share of federal costs would be overstated.

Despite these methodological difficulties, the Nova Scotia portion of federal corrections cannot be omitted. It may save the Nova Scotia government money when it sentences offenders to a federal penitentiary term, but provincial taxpayers still pay the bill in their federal taxes. Even when the federal government pays for federal corrections,

such expenditures are still a cost of crime for Nova Scotians, as are all expenditures incurred because of crime in Nova Scotia.

For this study the Nova Scotia share is derived as follows: In 1997 the Nova Scotia population was 3.13 per cent of the Canadian population.²⁴⁸ With no adjustments for income disparities, it is simply assumed that Nova Scotia taxpayers paid 3.13 per cent of the \$967,864,000 total federal operating expenditures for federal corrections in 1997.²⁴⁹ 3.13 per cent of \$967,867,000 equals \$30,294,237.

Page 99, Footnote 164:

- The latest expenditure data on corrections in the US are for 1992.²⁵⁰
- Inmate counts for federal and state prisons are for 1997, though the text refers to some recently released 1998 data.²⁵¹
- The number of inmates in local jails in 1997 has been estimated by updating the latest available data, from 1995²⁵², by multiplying by the rate of increase in federal and state inmate populations for the same period.
- Because the total cost of corrections and the average number of inmates are known for 1992 we can calculate the cost per inmate for that year.
- The number of inmates in state, federal and local corrections in 1997 is then multiplied by the cost per inmate to get the total cost of incarceration in 1997 in 1992 dollars.
- The cost of corrections in 1997 dollars is then estimated using the US Consumer Price Index²⁵³.

Page 109, Table 5.8: Data on the number of people employed in either profession are from the Census and also from the Solicitor General's Department, which licenses private security guards and investigators. Approximations for years between national censuses

²⁴⁸ Statistics Canada. Cansim CD Rom Matrix 1.

²⁴⁹ Statistics Canada. March 1997. *Adult Correctional Services in Canada, 1995-96*. Cat. No. 85-211, p.76.

²⁵⁰ U.S. Department of Commerce. *Statistical Abstract of the United States, 1997*, 17th edition, p. 213.

²⁵¹ U.S. Department of Justice Website: <http://www.ojp.usdoj.gov> On June 30, 1997 1,218,256 prisoners were under federal or state jurisdiction.

²⁵² U.S. Department of Commerce. *Statistical Abstract of the United States, 1997*, 17th edition, p. 213.

have been derived by extrapolating forward from each census point to the next, and dividing the difference in census totals by the number of years in between.

Page 112, Table 5.9: Retail sales are not readily available for the period 1962-71. It has therefore been assumed that the rate of increase in retail sales for 1962-71 was similar to that of the following ten years for which figures are available. The average yearly rate of increase in retail sales for the ten years following 1962-71 was 11.7%. Consequently we have discounted the 1972 retail sales figures by 11.7% to get an approximation for 1971 retail sales. The approximated 1971 value was then discounted by 11.7% to get a proxy figure for 1970. This process was repeated back to 1962.

No separate provincial data on business defensive expenditures for electronic article surveillance and other forms of “target hardening” and crime loss prevention are available for Nova Scotia. The percentage of retail sales due to defensive expenditures is therefore derived from national data provided by the Retail Council of Canada.

It has further been assumed that the defensive expenditure rate of 0.51% of retail sales in 1997 is not constant on an annual basis, but varies in direct proportion to the incidence of shoplifting. This is in accord with the basic definition of defensive spending as a response to a decline in welfare, whether in the form of compensation for harm done or attempt to prevent further decline. Since shoplifting is not separately reported in the official crime statistics, it is also assumed that shoplifting incidents have changed in direct proportion to incidents of theft.

The rate of defensive spending, therefore, has been extrapolated back to 1962 on the basis of two variables – changes in retail sales, and changes in the number of thefts as reported in the official crime statistics. For example, the 1990 expenditures are calculated

^{***} Statistics Canada, StatCan: Cansim Disc 1998-2, Cat. No. 10F0007XCB, Cansim Matrix 348.

in this way: the number of thefts in 1990 = 27087, the number of thefts in 1997 = 21568. 27087 divided by 21568 equals 1.26. The 1997 rate of business defensive expenditures (0.51%) as a proportion of retail sales is then multiplied by 1.26 to get the 1990 estimated rate of expenditures (0.64% of retail sales for that year). The total retail sales for 1990 (\$6.2 billion) are then multiplied by 0.64% to derive an estimate for the total sum spent on defensive expenditures in 1990, namely \$45.8 million.

Page 115, Chart 5.17: Data are from the Insurance Bureau of Canada.

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