
1. Report Summary: Cost of Crime in N.S.

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 (Table 1.1). 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. The distribution of these costs is demonstrated in Charts 1.1 and 1.2. Per capita crime costs in Canada are estimated to be 20% - 25% higher than crime costs in Nova Scotia.

These estimates do not include deaths, injuries and property damage due to impaired driving; non-hospital medical, drug and counseling costs; private spending on criminal lawyers; non-retail business spending on alarms, electronic surveillance and other crime prevention and detection equipment; most white collar crime; and a wide range of indirect crime costs. Also, monetary estimates clearly convey only a small part of the true costs of crime, which include the trauma of being violated, pain and suffering, fear and insecurity, and lost opportunities to undertake activities because of crime risks.

In our conventional economic accounts, most crime costs are perversely counted as contributions to economic prosperity and well being. The higher the crime rate and the more we spend on prisons, police, criminal trials, burglar alarms and security systems, the more our economy grows, which in turn is taken as the primary sign of progress.

The same is true for gambling addiction, toxic pollution, sickness, divorce, war, accidents, stress, drug use, overeating, and the depletion of our natural resources, all of which contribute to economic growth. Because a growing economy is regarded as a sign of progress and prosperity, incentives for action to remedy these ills are blunted.

The Gross Domestic Product (GDP) and related market statistics, which are our primary measures of progress, make no distinction between economic activities that cause benefit and those that cause harm. They are purely materialist measures which blindly regard “more” growth as “better”, a misuse of national income accounting against which its principal architect, Simon Kuznets, cautioned 60 years ago.

Thus, *The Wall Street Journal* reported that the O.J. Simpson trial alone added \$200 million to the U.S. Gross Domestic Product. The Oklahoma City explosion “benefited” the U.S. economy even more, because government offices and businesses throughout the U.S. responded with expensive investments in high-tech electronic surveillance equipment and additional security guards, producing a boom in the security industry.

By contrast, 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. Unlike 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 invested in more productive activities that build communities and enhance well being. Higher costs to maintain a given level of security indicate a decline in the quality of life.

Unlike current measures of progress based on the GDP, the GPI does not view all economic growth as an unqualified good. Crime, pollution 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.

Paradoxically, while the GDP counts crime costs as economic gain, it fails to measure genuine contributions to well being that are not exchanged for pay. Voluntary work and community service, worth nearly \$2 billion a year to the provincial economy, and unpaid household work and child care, worth \$8.5 billion a year, are not valued at all in the GDP, and thus count for nothing in our conventional measures of progress. Other contributions to the standard of living and quality of life, like environmental quality, natural resource health, social equity, health, and security, are also unvalued.

By contrast, the GPI measures and values unpaid voluntary and household work and other social and environmental assets that are the foundation of well being and prosperity. A peaceful, harmonious and secure society is therefore valued as a vital and profound social asset that directly benefits the economy and the quality of life of its citizens. Conversely, high crime rates signify a depreciation of that asset and an erosion of the social and economic value that derive from personal security and social stability. Similarly, a healthy citizenry is a human capital asset that requires less spending on hospitals and defensive health; and a clean environment is a natural capital asset that saves pollution clean-up expenses.

Because it values human, social and natural capital as well as produced capital, and because it distinguishes social assets from liabilities, the GPI can function as a more comprehensive measure of progress than the GDP, and can send more accurate signals to policy makers, economists, journalists and the general public. It is intended as a small step towards “full cost accounting.” From this perspective, economic activities that enhance the value of social, economic and environmental assets, and limit growth in areas that undermine these assets, signify social progress. By registering crime costs as an economic loss to society, the GPI demonstrates the inability of market statistics alone to provide adequate benchmarks of progress, and can signal the need for policy initiatives and investments to overcome the causes of crime.

In this case *limits* to growth in crime rates and crime costs are more indicative of progress than unlimited growth. This approach holds true for the fourth GPI data release next month on the cost of greenhouse gas emissions. Like crime, *lower* emissions are seen as a sign of progress. Other GPI components where reduced rates and costs signify progress are air and water pollution, sickness, road accidents, and natural resource depletion, all of

which currently contribute to the GDP and to economic growth statistics, and are thus mistakenly counted as contributions to economic prosperity and well being.

1. Crime in Comparative Perspective

From the perspective of conventional market statistics, the Atlantic provinces are generally seen as economically disadvantaged by comparison to the rest of the country. But the reliance on market statistics nationally and internationally produces faulty and misleading comparisons. If a peaceful and secure society is viewed as an important social asset making a vital contribution to the quality of life, and if crime costs are seen as an economic drain eroding the standard of living, then Nova Scotia and its neighbouring provinces have a significant comparative advantage.

The Nova Scotia crime rate for serious violent crimes is just 63% of the Canadian rate; it is 82% of the national property crime rate, and less than half the rate for robberies and motor vehicle thefts. Nova Scotians therefore require less police per capita to keep the peace, they imprison fewer of their citizens than any other province, and they spend significantly less on locks, alarms, electronic surveillance and other crime prevention and detection devices. These hidden savings actually show up as a *disadvantage* in comparative GDP measures, which see more spending of any kind as a contribution to economic growth.

While crime costs have not been separately calculated here for Canada and the other provinces, it is possible to extrapolate from comparative crime rates, incarceration rates, police to population ratios, and victimization surveys to estimate that average overall crime costs are probably 20% to 25% higher for most Canadians than the figures given here, and about 30% higher in the western provinces.

This would produce an annual overall crime bill of more than \$20 billion for the country as a whole by conservative estimations, and nearly \$45 billion according to the more inclusive “comprehensive” method. This translates into a per capita cost of between \$730 and \$1500; or \$2,000 to \$4,300 per household in Canada. The extra \$400 to \$700 Canadian households pay annually for crime over Nova Scotians, amounts to an additional hidden “crime tax” for a correspondingly less peaceful and secure society.

Again, it must be emphasized that these Canadian estimates are simply extrapolations derived from the Nova Scotia results and from comparative crime statistics. It would certainly be possible to use the methods and data sources in this report to calculate the Canadian crime bill more precisely, and to construct a comparative estimation of crime costs across the provinces. It would also be desirable for such comparative studies and future updates of this report to include major crime costs currently omitted from the estimations, such as the costs of impaired driving; non-hospital medical, drug and counselling expenses due to crime; private spending on criminal lawyers; non-retail business defensive expenditures; health costs of drug offences; and other excluded costs.

The contrast is even more marked by comparison with the United States, which has nearly six times the crime rate for serious violent crimes as Nova Scotia, including 3.5 times as many homicides per capita, five times as many robberies and ten times as many forcible rapes. The U.S. also jails more people than any other country in the world except for Russia, and imprisons more than 10 times as many of its citizens per capita as Nova Scotia. One out of every 150 Americans is behind bars, compared to one out of every 900 Canadians, and just one out of every 1,600 Nova Scotians. A black male in the U.S. has a 28.5% chance of landing in a federal or state prison in his lifetime, and an even higher chance if local and county jails are included.

It costs more than \$44,000 a year to keep an inmate behind bars in Nova Scotia. Every person kept out of prison due to lower crime rates therefore represents a significant economic saving that can be used to hire an extra teacher or to send a student to university for three years, including full-time tuition, accommodation and meals. Nova Scotians spend only a quarter as much per capita on corrections as Americans, but the cost saving does not show up in the conventional market statistics, which record every extra prison, court case, security guard, police officer and burglar alarm as a contribution to the economy and a sign of progress.

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 U.S. spends \$U.S.50 billion 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” U.S. economy.

From the GPI perspective, crime costs lower the standard of living by diverting precious resources from health, education, environmental protection, and other activities that enhance human and social welfare. Though the “dynamism” of the U.S. economy is frequently held up as a model to Canadians, the GPI also records the social costs of that growth and the fact that it is driven in part by factors that signify a serious decline in the quality of life.

2. A Depreciating Asset

While Nova Scotia maintains a significant comparative advantage in crime costs relative to Canada as a whole, the advantage cannot be taken for granted. It is in fact eroding markedly as the province’s crime rate converges rapidly towards the national average. Twenty-five years ago, Nova Scotia’s overall crime rate for *all* reported criminal code violations was less than two-thirds the national average. Today it stands at 98% of the national average. In 1972, Nova Scotia’s property crime rate was 60% of the Canadian rate; by 1982 it had climbed to 72%; and by 1997 to 82%.

While serious violent crimes are still less than two-thirds the national average, a substantial increase in common assaults has raised the official violent crime rate in the province above the national average. A substantial portion of the increase in the official

crime rate is due to higher reporting rates for assaults, sexual assaults, domestic violence and other crimes, a positive sign signifying reduced social tolerance for violent behaviour once considered socially “acceptable.”

But there is also no doubt that Nova Scotia today is a markedly less peaceful, harmonious and secure society than it was a generation ago. Considering only police-reported crimes, the average Nova Scotian is today four times as likely to be a victim of crime as his 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 12,¹ though a portion of this increase must clearly be discounted to account for higher reporting rates. The long-term rise in crime has also been ameliorated by a 16% drop in the provincial crime rate since its 1991 peak.

Homicides and robberies, because of their seriousness, 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.

Higher crime rates translate into higher economic costs. Hospitalization costs due to crime have increased markedly since 1962, due in part to higher violent crime rates and in part to much higher hospitalization 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 property crime rate.

Public justice costs have also increased, necessitating higher taxes. We now need nearly 50% more police per capita than we did 30 years ago. Compared to Canada as a whole, Nova Scotia had 94% the number of police officers per 100,000 as the rest of the country, up from 74% 20 years earlier. 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 perceptions 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 Scotian households

¹ 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 victimized more than once in a year. The authors wish to thank John Turner, Chief, Policing Services Program, Canadian Centre for Justice Statistics, for his assistance in clarifying this issue (personal communication, 6 April, 1999). Risk is also not equally distributed in the population, with young males (18-29) most at risk, and females over 65 least at risk.

each pay about \$800 a year in higher prices due to crime, amounting to 2.6% of their annual consumption budget. Nationwide, the figure is closer to \$900 a year. Insurance fraud costs Nova Scotian 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.

While all this extra spending makes the GDP grow and is taken as a sign of growing prosperity, the GPI counts these expenditures just as the average householder does – as costs rather than increases in welfare. 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 welfare-enhancing activities.

Returning to the comparative perspective, it is clear that the crime rate in all three Maritime provinces has increased faster than the national rate. Because all three provinces started from a considerably lower base, they are all still below the national crime rate average, but they are catching up rapidly. Explicit recognition of this eroding advantage can prompt policy changes designed to arrest the decline and restore the value of a vital social asset.

3. Policy Considerations

In this study we have hypothesized that a growing divergence between crime rates and crime costs may signify an erosion of civil liberties. As police states have demonstrated, it is possible to keep crime rates down by spending more on police, prisons and other repressive measures. In the United States, for example, the gap between crime rates and crime costs has been growing throughout the 1990s, as an ever larger percentage of the population is imprisoned. If civil liberties were to remain constant, crime costs should rise and fall in rough proportion to crime rates.

Because civil liberties are recognized as an important social asset, because the GPI is concerned to reduce rather than increase crime costs, and because a full cost accounting framework naturally points to social, economic and demographic linkages, this study clearly favours policy options that deal with the social *causes* of crime rather than its symptoms. The GPI approach supports the National Crime Prevention Council's contention that crime prevention rather than incarceration is the key to reducing crime, and is not only "the right thing to do and the effective thing to do, but the cost-effective thing to do."

To this end, chapter six notes that crime is not an independent variable but is highly correlated with gender, age, marital status, drug addiction, employment status, educational level, a history of abuse, and prior convictions. These correlations point to

potentially cost effective investment strategies that can improve the standard of living and quality of life while yielding additional dividends in crime reduction.

One recent study, for example, found that every dollar invested in residential drug treatment programs yielded a seven-dollar dividend in savings from reduced crime costs, incarceration, property damage, production losses and health costs. And a long-term longitudinal study in the United States found that every \$5,000 invested in high quality pre-school education in high crime inner city areas yielded an estimated \$28,000 return to society, including lower crime rates.

Nova Scotia's restorative justice initiative could be an important and powerful model of cost-effective intervention that deals far more effectively with the causes of crime than the conventional adversarial system that focuses on punishment, is plagued by high rates of recidivism, and deals only with symptoms.

By contrast, it would be a serious misuse of the data in this report to ignore the social correlations with crime and to argue that more costly, punitive and repressive measures are the answer to high crime rates. The very purpose of the GPI is to elucidate social, economic and environmental linkages to encourage a deeper understanding of the fundamental roots of progress and decline. Short-term symptomatic treatments cannot provide long-term solutions to social problems like crime.

For this reason, the GPI approach is very much in line with the goals of the restorative justice initiative. Similarly, social investments in education and job creation may have a crime reduction function, and lower crime levels in turn produce savings that become available for further investments in education and job creation, a positive feedback loop that produces social benefit in several areas. The cost of incarcerating one inmate for one year can produce a \$34,000 a year job and an additional \$10,000 educational investment.

While detailed cost-benefit analyses of alternative investment strategies are beyond the scope of this study, the 35-year time series do indicate a remarkable correlation between crime rates and the business cycle nationwide. Across the country, crime rates rose dramatically during the recession of the early 1980s and then declined during the economic recovery, peaking at record high rates during the early 1990s recession and easing off again during the recovery.

After each recession in the last four decades, unemployment rates have not fallen back to their pre-recession levels, and crime rates have also remained correspondingly higher. From 1962 to 1997, each decade saw higher average unemployment rates and higher average crime rates throughout Canada. When discounted for higher reporting rates, the chances of being a victim of crime and the chances of being unemployed in Nova Scotia were both about three times greater in 1997 than in 1962.

The correlation between crime and employment status is confirmed by profiles of prison inmates. In Nova Scotia 58% of inmates were unemployed at the time of admission, and only 22% had full-time jobs. When these statistics are further correlated with the high

proportion of young males convicted of offences, the data strongly suggest that investments to reduce high rates of youth unemployment may be a cost-effective crime prevention strategy.

The gender dimension of crime is also important in that women, who are charged with only one-fifth the number of offences as men and who account for only 5% of prison admissions, are effectively subsidizing the costs of male crime from an economic point of view. Though women earn just 66 cents to the male dollar for full-time work in Nova Scotia, female tax dollars pay for prisons and police, and women bear substantial costs of victim losses, theft insurance, higher prices, and home security expenditures, - costs mostly incurred because of male crime. From the GPI perspective, women would have a case for arguing for a public justice tax rebate in proportion to their lower crime rates.

These examples are simply illustrative of the broad range of potential policy applications of the GPI approach, and are not intended as definitive recommendations. Detailed benefit-cost analyses of alternative crime reduction strategies are necessary to determine the most cost effective policy options.

4. Conclusion

A peaceful and secure society has been a powerful social asset in Nova Scotia and the Maritimes, that has traditionally signified a high quality of life. As the GPI demonstrates, it has also produced substantial economic cost savings that have perversely appeared as a disadvantage in the conventional economic accounts. 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, with higher crime rates apparently correlated with higher unemployment rates. 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.

If the province is to retain its important advantage, personal security and a peaceful and harmonious society must first be reaffirmed as core values in our measures of progress, a commitment that is lacking in our current reliance on market statistics. With such a commitment, the Genuine Progress Index can then monitor progress towards these and other important non-material goals that are vital for our well being and prosperity. Those measures in turn will stimulate cost effective policy actions designed to attain these goals, a stimulus that is lacking when market statistics and related measures of progress mistakenly count costs as gains.

At a deeper level, the GPI inevitably calls into question the current fascination with the “robust” and “dynamic” American economic model, driven in part by high crime costs

and extraordinarily high levels of incarceration. With its substantially lower levels of serious crime, Nova Scotia retains a powerful, currently unvalued, advantage over the U.S. model that can only be protected and developed by limiting growth in this sector of the economy.

The explicit recognition that *limits* to growth in certain economic sectors may signify progress more accurately than unlimited growth provides a stark contrast to the current reliance on market statistics that confuses quantitative expansion with qualitative improvements in well being. From a full cost accounting perspective, it is highly questionable whether growth in crime, lawsuits, pollution, sickness, war, divorce, gambling, road accidents, drug use, overeating, stress, and natural resource depletion enhances social welfare. Building on social and environmental liabilities in the name of growth will likely produce an accumulation of long-term economic costs that overwhelm apparent short-term gains and undermine genuine prosperity.

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. No blame attaches to this failure, because our economic accounting system has been sending misleading messages to policy makers and the general public alike. We have all been trapped in the materialist illusion that more output and spending produces greater well being.

Conversely, the measurement and valuation of non-material human, social and environmental assets not only draws attention to the true sources of genuine prosperity, but can allow us to focus clearly and unambiguously on the legacy we are leaving our children and on the society we want to create and inhabit in the new millennium.

This understanding has led 400 leading economists, including Nobel Laureates, to sign the following joint declaration:

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. Policy-makers, economists, the media and international agencies should cease using the GDP as a measure of progress and publicly acknowledge its shortcomings.

New indicators of progress are urgently needed to guide our society: ones that include the presently unpriced value of natural and social capital in addition to the value of conventionally measured economic production. The GPI is an important step in this direction.

It is the hope of the authors that this case study of the costs of crime will encourage the adoption of a more comprehensive index of progress that integrates economic, social and environmental realities. It is also our conviction that Nova Scotia is well placed to take the lead in this important development and thereby to help create the accounting basis for the new economy of the 21st century.

Table 1.1: Costs of Crime in Nova Scotia, 1997
(1997\$ millions)

Conservative Estimate	
<i>Victim Losses: Reported Crimes²</i>	
Direct Victim Losses due to Property Crime	102.4
Direct Victim Monetary Losses in Assaults and Sexual Assaults	0.6
Cost of Hospitalization 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. N.S. share of RCMP expenditures	143.3
Courts, Legal Aid, and Prosecutions	39.5
Corrections: Provincial, N.S. 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, Hospitalization, Absenteeism: Unreported Violent Crime	5.2
Unpaid Household Work Losses	8.2
Unpaid Voluntary Work Losses	1.4
Voluntary Work: Crime Prevention, Legal Aid, w/Victims, Offenders	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

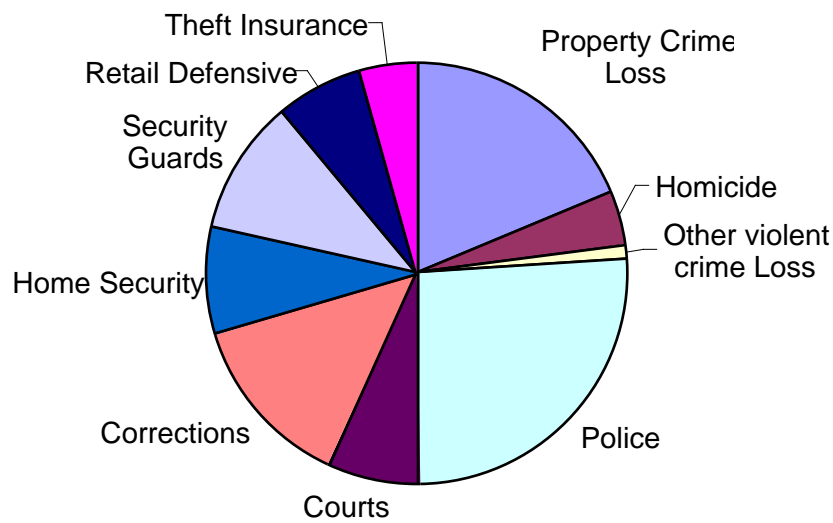
The following costs are not included:

- Deaths, injuries and property damage due to impaired driving;
- 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);

² As noted in Chapters 7,8 and 11, 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 counseling 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 1.1: Conservative Crime Estimate: Distribution of Costs, Nova Scotia, 1997



**Chart 1.2: Comprehensive Crime Estimate: Distribution of Costs
Nova Scotia, 1997**

