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AUSTERITY POLICING: Responding to Crime During Economic Downturns



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I. Executive Summary

Governments at all levels are grappling with the challenges of increasing demands on police services at the same time that their budgets are threatened with cuts. Although Canada's economy has weathered the financial crisis that started in 2008 with fewer disruptions than in the United Kingdom or the United States, there are signs that global economic conditions, especially in the European Union, continue to be uncertain and those challenges could have a substantial impact upon economic conditions in Canada. Economic uncertainty can have an impact on all government services, including policing. Not only are police budgets under increasing scrutiny but economic disruption, such as high rates of unemployment or inflation, may contribute to an increased demand for police services. Public Safety Canada (2012) identified the following challenges associated with Canadian policing costs:

- Increasing demands on police combined with decreasing crime rates;
- Escalating policing costs that are increasingly unsustainable in the current fiscal environment;
- Limited clarity on how police funding is spent and its efficiency and effectiveness, and the;
- A need for coordination, focus and leadership.

The importance of containing policing costs while ensuring that core policing services (e.g., those related to emergency response, criminal investigations and enforcing laws) are not jeopardized was a key issue examined at the Economics of Policing Summit in January 2013.

In many respects, funding for Canadian policing is more stable than in other English speaking common-law nations. Police services throughout the United States have been experiencing funding cutbacks and some jurisdictions have disbanded their police services in favour of contract policing (U.S. Department of Justice, 2012). In the United Kingdom, policing budgets are projected to be cut by as much as one-third. Given these funding shortfalls, police services in those nations are being forced to rethink the manner in which services are delivered, who will deliver them, and how to best manage cuts to police budgets without threatening core policing services.

Canadian police services have the luxury of time to scan the environment for threats as well as opportunities for change, and learn what the police in other nations are doing in response

to budget cutbacks. It is possible that the lessons learned from our counterparts will enable Canadian police services to better leverage their resources. Former Public Safety Minister Toews, speaking at the Economics of Policing Summit in January 2013, observed that:

Police services face two options — they can do nothing and eventually be forced to cut drastically, as we have seen in some countries; or they can be proactive, get ahead of the curve, and have greater flexibility in designing and implementing both incremental and meaningful structural reforms. It is critical that all levels of government and the entire policing community be engaged in innovation and reform efforts, so that we can turn a fiscal challenge into an opportunity to sustain our police services and better serve Canadians.

As part of a proactive strategy that examines the economics of policing in the Canadian context a key goal of this study is to review the economics, management, and policing literatures to identify current trends in respect to the relationships between economics and policing, including how police services in other nations have managed austerity. The main findings from this review are that:

- There were 11 recessions between 1948 and 2011 and each one has a different set of causes, economic consequences, as well as recovery times and these three factors influence crime rates in an inconsistent manner.
- The global economic recovery has been slow and another downturn could have a significant impact upon the Canadian economy, and in turn, police funding.
- Police services in the United Kingdom and the United States have responded to the latest recession by cutting costs and attempting to reduce demand.
- While police services in other nations have been successful in preserving core functions there is some question as to whether these strategies are sustainable over the long-term.
- Long-term austerity policing may negatively influence citizen perceptions of the police and contribute to lower morale of police service staff.
- Cost-benefit analyses consistently reveal that investing in policing is a cost-effective public policy.
- The RAND cost of crime calculator shows that adding police officers in jurisdictions with high crime rates is a good investment in public safety.

- Crime reduction strategies must be developed at the local level, as an approach that is effective in one jurisdiction may be unsuccessful when exported to another community.
- The current recession has led to many scholars calling for a “reengineering” or “re-making” of police operations although there is little consensus on what those changes should entail or who should decide what changes should occur.
- The newly developed full-circle community safety model may be a useful framework for evaluating police performance.
- Most policing studies focus upon big city policing and there is almost no published research on best practices, cost effectiveness or measuring the performance of rural police services.

In terms of the structure of this report, the first section presents a short description of current global economic conditions and how police services in other nations have adapted to austerity. This section is followed by an examination of the costs and value of policing in Canada. Prior research that has examined the costs and benefits of policing is reported; including a description of the RAND cost of crime calculator and how it can be used to better understand the return on policing investments. The report ends with a discussion of measuring police performance and “reimagining” Canadian policing in light of current economic conditions.

The National Intelligence Council (2012) questioned whether governments and institutions are able to adapt fast enough to harness change instead of being overwhelmed by changing conditions. A key question in this review is whether police organizations in Canada will be able to successfully navigate a long-term economic downturn as well as confronting other social, political, legal, demographic and environmental changes at the same time.

II. Background

There has been a growing interest in recent years in applying business models and cost-benefit analyses to policing, especially in terms of holding police services more accountable for their performance as publically funded organizations. Consistent with that approach, there is an increased number of references to value for money in policing (Barton & Barton, 2011) and return on investment from dollars spent on policing (Boyd, Geoghegan & Gibbs, 2011; Her Majesty's Inspectorate of Constabulary [HMIC], 2013). This section addresses how economic conditions influence crime and policing and how police services are responding to funding cutbacks.

Global Economic Trends

The environmental scan conducted by the Royal Canadian Mounted Police (RCMP) in 2007 correctly identified the possibility of a hard economic landing due to a cooling in the U.S. housing market (RCMP, 2007) but few could have foreseen the global economic decline that has persisted years after the start of the recession. The financial crisis that started in 2008 had a significant impact upon the health of western economies. A key lesson from the global financial crisis is that all first-world economies are interconnected and a recession in one nation can have profound ripple effects in others. The impact of the recession varied between nations and Jovanovic (2013, p. 1) observed that countries that were more vulnerable (e.g., had the weakest economies) before the crisis were hardest hit. In many western nations the recovery from the financial crisis has been slow and there is little consensus on how much longer the financial crisis will continue. There is widespread agreement among academics and policymakers that the recovery would last about a decade, but there is less agreement on when that decade would actually start, or if it has started.

The National Intelligence Council (2012, p. vi) has identified the “crisis-prone global economy” as a game changer stating that, “The key question is whether the divergences and increased volatility will result in a global breakdown and collapse or whether the development of multiple growth centers will lead to resiliency.” Most of our attention in 2012 and 2013 has been on the economic well-being of the European Union; and whether nations in economic distress, such as Cyprus, Greece, Portugal, and Spain would remain in that union. The exit of those nations could have significant impacts upon global financial markets.

While western economies have struggled, a number of developing economies, such as the BRIC nations (Brazil, Russia, India and China) have maintained gross domestic product (GDP) growth although at slower rates than before the financial crisis (Barlow, 2013). While there is doubt whether these nations will continue to report high GDP growth over the short-term, the National Intelligence Council (2012, p. vi) observed that the “world’s economic prospects will increasingly depend on the fortunes of the East and South” and they forecast that China would have the world’s strongest economy by 2030. Consequently, there may be significant shifts in economic power in the next decade although the short- and long-term impacts of these shifts on North American economies are uncertain.

Eurostat (2013, pp.1-2) reported that in May 2013 the average unemployment rate in the 17-nation euro area was 12.2%, but for persons under 25 years the average unemployment rate was nearly twice as much (23.9%). The highest youth unemployment rates were in Greece (59.2%), Spain (56.5%) and Portugal (42.1%).

The economic health of the United States, our largest trading partner, is of special interest to Canadians. There appears to be an emerging sense of optimism as U.S. stock markets have surpassed 2009 levels, their housing market is recovering, and that nation has less reliance on foreign oil (Krauss & Lipton, 2012). Despite that optimism, rates of unemployment averaged 8.8% between January 1, 2009 and June 30, 2013 (U.S. Bureau of Labor Statistics, 2013) and inflation increased by 7.4% between December 2009 and May 2013 (U.S. Bureau of Labor Statistics, 2013a). Moreover, between 2008 and 2013, the number of Americans on food stamps has increased by 13% per year (Rolfe, 2013). The primary U.S. response to the financial crisis was to stimulate their economy through government spending using borrowed funds. These U.S. monetary policies place a financial burden on future generations and might also lead to long-term inflation. In response to the high debt levels, the U.S. lost its AAA credit rating in 2011 as global financial markets lost confidence in that nation’s ability to manage a deficit that has increased by more than one trillion dollars each year since 2009.

Altogether, there are a number of potential external threats to the health of the Canadian economy. There are few steps that federal or provincial governments can take to forestall or mitigate these global economic changes. Nevertheless, Canadian police services can use the lessons learned by law enforcement agencies in other nations to best manage financial adversity

while maintaining public safety. In the following paragraphs, a number of global policing trends are described, followed by an analysis of the economic context in Canada.

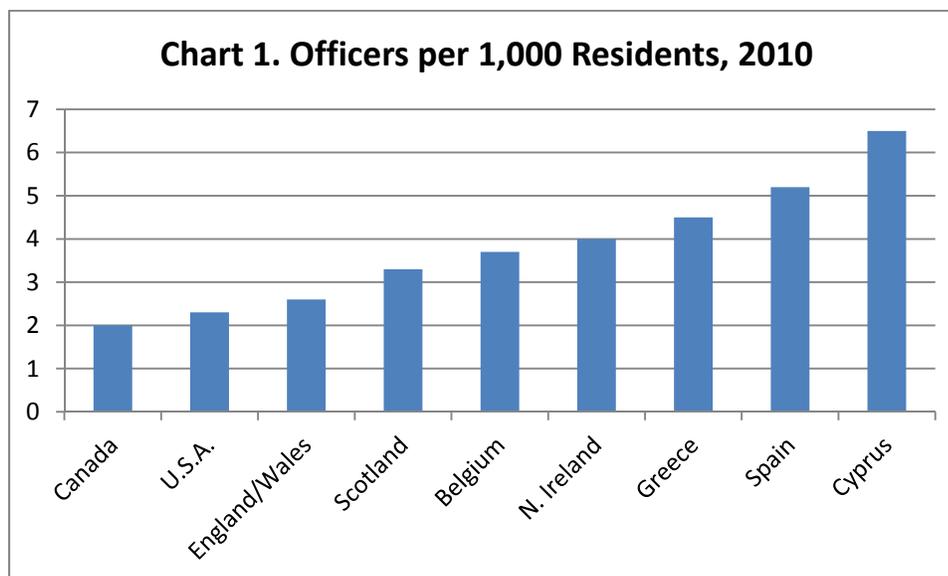
Global Policing Trends

Rogers and Gravelle (2013, p. 116) observed that, “The economic framework in which policing must operate is constantly changing and is becoming increasingly difficult to predict. This fluid and dynamic financial situation combined with societal and political pressures make the task of policing even more complex.” Police services have not been immune to funding reductions and this has resulted in significant decreases in capital investments, discretionary spending and the deployment of fewer officers. Perhaps one of the best indicators of these changes is the reduction in the number of officers deployed by police services. Eurostat (2013a) reported changes in the size of police services in the 27 European Union nations, and they found that the actual number of officers in these countries had *increased* by 2.7% between 2004 and 2009. Yet, once individual nations were considered, 15 of the 39 nations included in their report had *decreased* the number of officers per 1,000 residents in the same time period. It is possible that a greater number of these countries have reduced the size of their police services since 2009, as many nations did not implement austerity programs until recently.

In order to garner a better understanding of global trends in policing, a review of articles related to the economics of policing in English-speaking common law nations was conducted. This search revealed that police operations in some nations have been particularly hard-hit by cutbacks in funding. The HMIC (2012) reported that the planned reduction in workforce was 32,400 positions, including 15,000 officers and 17,400 civilian staff members by 2015. Johnson (2012) reported that in England and Wales 7,000 officer positions had already been cut. Reductions in the number of officers in Britain are part of a larger restructuring of policing that is increasingly based upon outsourcing activities traditionally done by police officers (Rogers & Gravelle, 2013). While these cuts result in short-term savings it is too soon to evaluate the long-term impacts of these changes.

Police service budgets in Australia and New Zealand have also been cut since the start of the economic downturn. Funding for the South Australia police will be cut by \$150 million over the next four years (Conlin, Rice & Hyde, 2013). The New Zealand Police Association (2013) reported that the number of non-sworn officers had decreased by 181 employees (about 6%)

between December 2011 and December 2012. A review of documents from the Northern Ireland Police Service (NIPS) shows that the number of officers decreased from 7,500 in 2008/9 (NIPS, 2009) to 6,979 on January 1, 2013 or approximately 7% (NIPS, 2013).



Despite the fact that many nations have implemented austerity programs that reduced police funding, many countries have higher levels of police strength (officers per 1,000 residents in the population) than Canada. Chart 1 shows police strength in nine nations for 2010 (the most recent that was available for the European nations – see Eurostat, 2013b) and in this group Canada had the lowest ratio of officers to residents, although many first-world nations deploy about two officers per 1,000 residents. These cross-national comparisons should be viewed with some caution as some nations classify police officers differently (e.g., whether border guards are considered as officers).

In the United States, austerity programs have resulted in a loss of officer positions although the impact of budget cuts has been moderated in the past two years. The Police Executive Research Forum (PERF, 2013, p. 1) compared survey results of police departments conducted in 2010 and 2012 and found that 78% of agencies had experienced budget cuts in 2010 although that proportion decreased to 51% in 2012. Of the responding agencies (including over 700 in 2012), almost one-quarter (23%) had reduced officer positions. Furthermore, while 61% of these agencies were anticipating budget cuts in 2010, that total had decreased to 40% in the 2012 survey. PERF (2013) also reported that 17% of the departments who responded to their

2012 survey had fewer officers compared to the previous year. Some of these staffing cuts have been severe: the city of Camden, New Jersey decreased the number of sworn officers from 310 positions in 2010 to 162 in 2011 (PERF, 2013, p. 15). Budget cuts in Camden ultimately led to the disbanding of their 142-year old department on May 1, 2013 and that city is now policed by a newly formed county-wide police service. While police services have been engaging in regionalization for decades (where smaller agencies amalgamate into larger ones) the current financial crisis might result in more of this consolidation in order to benefit from economies of scale.

Altogether, a review of the current policing literature shows that there have been significant reductions in the size of many police services in English speaking common-law nations. The statistics from the European Union also demonstrate that while the overall number of officers had increased somewhat between 2004 and 2009, 15 of the 39 agencies actually decreased the number of officers (Eurostat, 2013a). Law enforcement organizations have also cut civilian positions and reduced spending not associated with core policing functions. The following section provides an overview of the impacts of these financial cuts.

Adapting to Austerity

Police services have implemented a number of cost-saving measures. Because the greatest proportion of police spending is on personnel, most agencies have focused on reducing staffing costs. Tables 1 through 3 in the following pages reveal the results from a 2012 PERF survey with over 700 U.S. participating law enforcement agencies. These results built on an earlier study that PERF conducted in 2010. Table 1 shows that more than one-half of responding agencies cut overtime hours, eliminated pay raises or reduced training while 45% of respondents implemented hiring freezes or discontinued or reduced speciality units.

Table 1. Change in Department Structure/Personnel in 700 U.S. Agencies, 2012

• Reducing overtime spending	68%
• Eliminate officer pay raises	57%
• Reduction in training programs	55%
• Hiring freezes	45%
• Discontinue/significantly reduce speciality units	45%
• Delayed or reduced the size of recruit classes	29%
• Consolidating units	25%
• Layoffs	23%
• Consolidating services with other departments	22%
• Reducing public access hours at district stations	18%
• Recruiting (discontinued)	15%
• Closing/consolidating district services	8%
• Contracting out for services	7%
• Demoting staff in certain ranks	4%
• Privatizing some police services	3%
Source: Police Executive Research Forum (2013)	

A number of scholars have observed that the size of police agencies has increased due to a growing number of civilian employees. While some of these positions have been allocated to administrative tasks, there are a greater number of civilian employees doing tasks previously undertaken by sworn officers (Gascon & Foglesong, 2011). The 2012 PERF survey showed that almost one-third of agencies had placed civilians in duties formerly done by officers while one-quarter of respondents placed more civilian staff members in dispatch or crime analyst roles. Of greater concern is the increased use of volunteers to fill either non-enforcement roles (39% of agencies) or sworn officer functions (24%).

Table 2. Civilianization in 700 U.S. Agencies, 2012	
Civilianization	
• Greater reliance on civilian staff members for desk work	32%
• Greater reliance on civilian staff members for dispatch	25%
• Greater reliance on civilian staff members for crime analysis	18%
• Use of civilian staff members to “free up” officer time	8%
Volunteers	
• Use of volunteers to fill non-enforcement functions	39%
• Use of volunteers to fill some sworn officer functions	24%
Source: Police Executive Research Forum (2013)	

The PERF (2013) survey results shown in Table 3 reveal that slightly less than one-half of agencies had altered shift times (44%) or reduced police services (44%). Approximately one-third of agencies had reduced patrol (34%) or redeployed patrol officers to process crime scenes (32%). Other service cutbacks included changing the ways to handle calls for service (e.g., not sending investigators to some non-violent offences) or getting property crime victims to file reports over the phone or on the internet.

Table 3. Officer Redeployment in 700 U.S. Agencies, 2012	
• Altering shift times/patterns	44%
• Reductions in police services	44%
• Changing patrol levels in defined areas	34%
• Handling crime scene processing with patrol officers	32%
• No longer sending investigators immediately for certain crimes	30%
• Alternative call handling strategies (phone or internet)	25%
• Changing investigative priorities	24%
• Changing response policies for calls for service	19%
Source: Police Executive Research Forum (2013)	

Responses to funding cutbacks in Britain have been similar to what has occurred in the United States; and as noted above, over 15,000 officer positions are expected to be cut (HMIC, 2013). Altogether the HMIC (2012, p. 5) review of austerity policing found that, “on average, forces plan to reduce frontline workforce numbers by 6% and non-front numbers by 33%

between March 2010 and March 2015. In addition, the HMIC (2012, p. 4) report observes that forces throughout Britain are planning to cut 24% of their non-pay costs although that amount varied by police service as some had already implemented austerity programs prior to 2011 (the range of projected cuts was from 8% to 50%).

One of the most significant gaps in our knowledge is the lack of published research identifying the impacts of funding cutbacks on police services and how those policies impact crime, fear of crime, officer morale or perceptions of the police. HMIC (2012, p. 3) reported some broad findings from their reviews of policing in Britain:

- Forces are balancing their books by cutting the workforce and reducing their spending on goods and services;
- The front line is being protected, although not preserved;
- The nature of the front line is changing;
- Service to the public has largely been maintained, but;
- There are some concerns around sustainability.

British police services, like their American counterparts, have focused on protecting front line policing in recent years by redeploying staff and restructuring services. While the overall number of officers will be lower, a greater proportion of the remaining officers are being reassigned to front-line roles (from approximately two-thirds to three-quarters of officers). The results, so far, appear to be positive and the HMIC (2012) reported that crime has remained relatively stable (dropping 3% between 2010 and 2011, although there were variations as crime in some jurisdictions increased). Furthermore, persons who had contact with the police and crime victims reported positive levels of satisfaction. Respondents to surveys reported that they did not notice a change in the number of times in which they saw the police on a day-to-day basis nor did they perceive that police response times were longer (HMIC, 2012).

The present financial conditions of the nation are acute, and substantially all parts of the economy – the public and private sectors – must make savings. Many of these reforms have been devised or designed in that light, to facilitate the improvement in the efficiency and effectiveness of police, to ensure that the safety of the public is not compromised.

Thomas P. Winsor, Her Majesty's Chief Inspector of Constabulary, Speech on April 29, 2013

Police visibility is important to the public. In their study of perceptions of the police in England, Sindall and Sturgis (2013, p. 148) found that “substantial cuts in police numbers are likely to reduce public confidence in policing.” By placing administrative and plainclothes officers in uniform, some services have attempted to maintain visibility but we don’t know whether there are long-term consequences when re-deploying these officers (e.g., administrative tasks go undone or fewer specialized investigations conducted).

Economic Recessions and Crime

One issue of special interest to police services is the relationship between economic crises and crime. Economic disruptions are recurring events. Bordo and Haubrich (2012) reported that between 1948 and 2011 there were 11 recessions and each of these events had slightly different causes or combination of factors leading to the recession (e.g., banking crises, credit crunches and housing busts). As a result, these recessions had different economic consequences and recovery times that ranged from months to years. Despite the frequency of those events, we have very little evidence about the relationships between economic downturns and crime. It is possible that the diverse circumstances of these economic crises exert a differential impact upon crime and that the type of recession and recovery times will influence whether crime increases or decreases.

There is a common-sense appeal to the notion that economic conditions and crime are related. As unemployment and inflation increase or salaries fall, the economic stressors on at-risk or vulnerable populations such as the poor or working poor intensifies and their motivation to commit property crimes such as thefts or break and enters may also increase. In addition, the financial stress that is created for many families during a downturn might also result in higher rates of domestic violence (PERF, 2013). Yet, a review of the literature suggests that no two recessions are the same when it comes to their impact upon crime. The relationships between economic stress and crime might also vary within and between nations as some countries may be more resilient to the effects of recessions.

Malby and Davis (2012) examined the impact of the economic downturn in crime in 15 nations. They found a relationship between indicators of economic distress (such as lower share prices, Treasury bill rates or income, or higher male and youth unemployment) and crime. The results were not consistent across this group of nations and other factors (e.g., the population

structure and existence of social programs) also interact with economic conditions to influence crime. In Canada, for instance, the current recession was reported to have no significant impact upon crime rates, while in Brazil, El Salvador and Jamaica homicide rates increased. Brazil, Italy, Jamaica and Mexico all experienced increased rates of robbery, and motor vehicle theft increased in Brazil, Italy, Mexico and Thailand. Thus, there is some cross-national variation in the effects of economic crises. Baker (2012) observed that some populations, such as the urban poor, may be particularly at risk when confronted with increases in the costs of food and fuel, especially in developing nations.

Scheider, Spence and Mansourian (2012) examined the research literature on the relationships between economic crises and crime dating back to the 1960s. These investigators reported that there was seldom a straight-forward relationship between economic conditions and crime (e.g., an increase in unemployment will result in a direct increase in crime). They found that it was more likely that when two economic hardships occurred at the same time, the effects on crime were intensified. Scheider and colleagues noted that increased unemployment is associated with higher levels of property crime, but only when accompanied with high inflation. Phillips and Land (2012) found high unemployment rates were associated with property offences such as break and enter, larceny and vehicle thefts. Moreover, these investigators found that sustained unemployment had a stronger effect upon crime.

Most of the researchers examining the unemployment-crime relationship have used U.S. data. Andresen (2012), by contrast, examined the relationships between unemployment and crimes reported to the police in Vancouver, B.C. neighbourhoods using data from 1991, 1996 and 2001. Consistent with the Phillips and Land (2012) study, Andresen found that unemployment does not have a short-term impact upon property crime, although there is a consistent relationship between these variables when high unemployment rates are sustained. Andresen (2012, p. 1626) summarized the research by noting that, "In the long-run, neighborhoods with relatively higher rates of unemployment have higher rates of crime." Andresen (2013) conducted a follow-up study that examined crime changes in all ten provinces from 1981 to 2009 and he found that unemployment was a consistent predictor of violent crime and that the proportion of low-income residents was associated with property crime. Like other studies, Andresen found that multiple indicators (e.g., considering the effects of inflation and

unemployment at the same time) might result in researchers better understanding the relationships between economic conditions and crime.

Foreclosures and Crime

Between January 2007 and December 2011 there were more than four million foreclosures in the U.S. and about twice that many homeowners were at-risk of foreclosure (Blomquist, 2012). The unprecedented number of foreclosures led to a number of researchers examining how those conditions influenced crime. Baumer, Wolff and Arnio (2012) found that cities with more foreclosures also had more robberies, but only in places that already had high rates of poverty. These investigators also found that break and enters increased along with home foreclosures, but only in communities with declining police services and decreased new home construction. Ellen, Lacoé and Sharygin (2013, p. 59) reported that more foreclosures in a neighbourhood “lead to additional total crimes, violent crimes and public order crimes” and that the effects increased in places with high crime rates. Williams, Galster and Verma (2013) also found that an increased number of foreclosures contributed to higher levels of property crime. While all of these researchers found relationships between foreclosures and crime, the negative impacts of foreclosures were stronger when neighbourhoods or cities were already experiencing distress.

Wallace, Hedberg and Katz (2012, p. 631) studied the relationships between physical disorder (e.g., abandoned vehicles, graffiti, loose animals, down stop signs and traffic hazards) and acts of social disorder, which they defined as, “animal disturbing, drunk individuals, fights, incorrigible or disturbing juveniles, unknown trouble, disturbing or harassing individuals, loud music, soliciting, speeding or racing, unwanted guests, and drug paraphernalia” reported to the police. These investigators found that there were increased calls for service to the police for the indicators of social disorder and overall disorder (physical and social disorder combined) in the months preceding home foreclosures.

In some places, rates of crime have not increased since the start of the recession. A number of criminologists have speculated that unemployed people, who are more likely to be at home during the day, act as a deterrent to property crimes such as residential break and enter offences as they are watching over the neighbourhood. Andresen’s (2012, p. 1626) study of crime in Vancouver found that a one percent increase in unemployment had a modest although short-term reduction in property crimes such as break and enters (3.82%), auto theft (4.01%) and

theft (5.06%). It is also possible that the individuals affected by the recent recession (e.g., a higher proportion of middle-class employees losing their jobs) and extending unemployment insurance benefits up to 99 weeks in the U.S. have moderated the effects of the unemployment-crime relationship.

Recessions and Domestic Violence

The PERF (2013) survey of U.S. police departments revealed that over one-half (56%) had reported that they were responding to more domestic violence incidents since the onset of the 2008 recession. These observations are consistent with the findings from survey research conducted with domestic violence shelters and information from the National Domestic Violence Hotline that showed a significantly higher number of calls for assistance (Buzawa & Buzawa, 2013). Weissman (2013, p. 24) also reported that while some cities had decreased rates of violence, domestic violence homicides in those places increased and she attributed this to “families fraying at the seams as a result of strained relationships brought about by economic uncertainty and hardship.”

It is difficult to summarize the relationships between economic conditions and crime because a different set of circumstances led to each of the 11 recessions since 1948, and the consequences have been different. The length of the recovery as well as the economic stressors and groups most impacted by these economic conditions (e.g., the urban poor or those living on the economic margins of society) also influence the rates of crime, as do social supports for these populations, such as increasing the length of time individuals could receive unemployment benefits. In an influential statement, Rosenfeld and Messner (2013, p. 115) noted that the economy-crime relationship:

Varies by the type of crime (e.g., street crime, white-collar crime) and the aspect of the economy (e.g., unemployment, economic growth, inflation) under consideration; mediating and moderating conditions (e.g., social disorganization, criminal subcultures, underground markets); state regulatory schemes (e.g., drug prohibition, deregulation or financial markets); and the degree to which the market economy is embedded in the broader institutional environment.

Thus, not only are a broad range of factors involved in the economy-crime relationship, but it is also possible that there is a time lag between economic distress and when rates of crime increase, making it more difficult to study those relationships.

The evidence from cross-national studies as well as research conducted within U.S. cities and counties suggests that some communities are more vulnerable to crime than others. A number of scholars have observed that crime is a local event and that local conditions play a powerful role in determining how much crime will occur (Scheider et al., 2012). We have less knowledge, however, of why some communities are more resilient or resistant to crime. Lee and Thomas (2010) found that smaller communities with a stronger social fabric can resist crime, although we don't know whether that relationship also applies to cities or whether such factors operate at the neighbourhood level in cities. Altogether, these findings make it difficult to provide any definitive statements about the relationships between economic conditions and crime.

Organized Crime and Economic Downturn

Organized crime offenders are increasingly engaging in offences that transcend national borders. The *Financial Times* reported there are currently 3,600 criminal networks throughout Europe and that these networks have expanded in response to the economic crisis (Warrell, 2013). These criminal organizations are involved in a broad range of illegal activities. Police agencies reported that the number of counterfeit or sub-standard items seized (including foods, medications and aircraft parts) had doubled (Warrell, 2013). Kego, Leijonmarck and Molcean (2011) found that the black market expands in response to downturns in the legitimate economy. Warrell (2013) noted that tolerance for the underground economy might increase in response to declining spending power. As these criminal networks prosper, it is unlikely that they will contract when the economy improves and they may become involved in the legitimate economy. While European economies have been harder hit by the current recession, one question is whether Canada will experience a similar growth in organized crime and how can Canadian police services anticipate these trends?

The Impact of Policing on Crime

One negative consequence to an economic crisis is that if crime rates do increase, they do so at the same time that police budgets are cut, which reduces public safety. Previously, there had been much pessimism about the ability of the police to control crime. David Bayley (1994) started his book on the futures of police with the provocative and pessimistic statement that:

The police do not prevent crime. This is one of the best kept secrets of modern life. Experts know it, the police know it, but the public does not know it. Yet the police pretend that they are society's best defense against crime and continually argue that if they are given enough resources, particularly personnel, they will be able to protect communities against crime. This is a myth. (p. 3)

Two decades later, the evidence on the police-crime relationship shows that Bayley was mistaken. At the time when Bayley made this observation there was little to be optimistic about as the U.S. was experiencing the peak of a murder and violent crime epidemic that had started in the mid-1980s with the introduction and spread of crack cocaine (violent crime in Canada also peaked at about the same time). Moreover, the traditional policing models of the 1980s, based almost entirely on reactive patrol, were not always the most effective use of resources. Since that time, police services have taken steps to work more closely with communities, changing tactics from a reactive to proactive approach and incorporating evidence-based interventions—which are strategies that research has shown to be effective in reducing or controlling crime—to target places with the highest rates of crime (e.g., 'hot spots') or the highest risk persons (e.g., focused deterrence).

A number of scholars have found that a significant component of the U.S. crime decline since 1994 was the result of increases in police strength (Chalfin & McCrary, 2012; Levitt, 2004, Lin, 2009) in combination with changing police strategies (Lum, Koper & Telep 2011; Telep & Weisburd 2012; Zimring 2012). It is difficult to make generalizations about these studies because reductions in crime occurred as a result of other factors (e.g., high incarceration rates and favourable economic conditions). Policing strategies also differed from city to city: while Los Angeles was known for a *laissez-faire* approach to policing, New York had a much more aggressive policing style, yet levels of reported crime decreased in both places (see Zimring's 2012 study of the crime drop in New York).

Studies of increased police activity in South America and Europe have also shown the crime control benefits of adding additional officers. Di Tella and Schargrotsky (2004) found that an increased police presence after a terrorist attack in Argentina resulted in a 75% reduction in motor vehicle thefts. These scholars applied cost-benefit analyses (examining only auto theft and no other crimes) to the police-auto theft relationship and found that it was not a cost effective strategy. Yet, Di Tella and Schargrotsky (2004) also attributed an increased police visibility to less social disorder, fewer burglaries and enhanced public confidence. Draca, Machin and Witt (2010) also examined the relationship between increased police presence and crime after the July 2005 terrorist attacks in London. These investigators found that rates of reported crime dropped by 13% in neighbourhoods with an increased police presence, compared to neighbourhoods in which police deployment stayed the same. Perhaps more importantly, Draca and colleagues did not find a displacement effect in surrounding neighbourhoods: in other words, offenders did not commit crimes in neighbourhoods with fewer officers.

Weighing the economic costs and benefits of different policy choices is not without challenges as it is relatively easy to calculate the costs of an intervention (e.g., adding an officer for a year) but difficult to accurately estimate the crime control benefit of adding that officer. A number of scholars have examined the relationships between police and crime and their findings are summarized in Table 4.

Donohue and Ludwig (2007, p. 6) estimated that for every \$1 invested in hiring additional officers through the U.S. Community Oriented Policing grants resulted in \$4.28 to \$8.57 in reduced victimization costs. Three cost-benefit analyses of the police-crime relationship were also reported in the Scheider, Spence and Mansourian (2012, p. 9) review and they are reported as follows: Zhao, Scheider and Thurman (2002) found that each additional dollar spent on policing resulted in 5.26 fewer violent and 21.63 fewer property crimes per 100,000 residents in the population. A U.S. government study also found that a one percent increase in the size of a police service resulted in a .25 percent reduction in property crime and one percent decrease in violent crime (U.S. Government Accountability Office, 2005). Evans and Owens (2007) research also showed that jurisdictions that received grant funding to add additional officer positions resulted in reductions in auto theft, break and enters, robbery, homicide and aggravated assault. Levitt (2004) estimated that a 10% increase in police expenditures will result in a reduction in violent and property crimes by 4% and 5% respectively.

Table 4. Policing Cost-Benefit Analyses	
For every dollar spent on policing, there is a return of:	
Dollar values:	
Donahue and Ludwig (2007)	\$4.28-\$8.57
Keefe (2011)	\$3.30-\$12.80
Chalfin and McCrary (2012)	\$0.20 to \$14.00 (Ave. = \$1.63)
Crime Reduction Benefits:	
Zhao, Scheider and Thurman (2002)	\$1 on policing resulted in 5.26 fewer violent and 12.63 fewer property offences per 100,000 residents.
Levitt (2004)	10% increase in police expenditures result in a 4% reduction in violent and a 5% reduction in property crimes
U.S. Govt. Accountability Office (2005)	1% increase in police strength resulted in a 0.25% reduction in property crime and a 1% reduction in violent crime.

Keefe (2011) examined the costs of cutting officer positions in five New Jersey cities and projected crime increases. Layoff in these cities ranged from 13% to 36% and saved \$28.5 million. Keefe projected that the crimes that occurred as a result of these layoffs would result in \$94.5 million in tangible costs, which are direct costs to individuals, businesses and governments—such as hospitalization expenses when someone is shot. If intangible costs, such as the psychological effects of being harmed, or the lost opportunities were considered then that cost increased to \$364.4 million. As a result, for every additional dollar invested in law enforcement spending the savings to the community ranged from \$3.3 to \$12.8, depending on how the costs of crime are calculated.

Chalfin and McCrary (2012) investigated the impact of policing in medium and large U.S. cities between 1960 and 2010. They examined costs of crime and the officers per 100,000 residents in the population, and found that every additional dollar spent on policing would return a crime reduction benefit of \$1.63 (p. 37). That average did not apply equally across police departments and in the 30 cities with lower crime rates (and fewer serious offences) the economic benefit of adding an officer was \$0.20 to \$0.60 for every additional \$1 spent on additional officers. Yet, in the 30 cities with the most crime, every additional dollar resulted in

benefits ranging from \$2.80 to \$14.00. By adding police officers to high-crime communities larger returns on investment are realized.

Are Canadian Cities Under-Policed?

Chalfin and McCrary (2013) found that many U.S. cities were under-policed, contributing to higher levels of crime and victimization. Chalfin and McCrary (2013, p. 36) observed that, “From 2008 to 2011, nearly three quarters of our sample of 242 cities saw a shrinking number of officers per capita. Half saw reductions of 5 percent or more, a third saw reductions of 10 percent or more, and a tenth saw reductions of 20 percent or more. Our analyses suggest that while these staffing reductions certainly save money in a budgetary sense, they are more costly than they seem.” Since Canada has fewer officers per capita than in the U.S., does that suggest that Canadian cities are similarly under-policed?

One of the challenges of interpreting these cost-benefit analyses is that they are almost exclusively based on policing in large urban areas and we have less knowledge about what occurs in smaller cities or in rural areas. While not directly examining the costs and benefits of policing, a study conducted by Nelligan and Bourns (2011) examined contract policing in California. These investigators noted that there has been greater interest in contracting since the start of the recession and some smaller towns and cities are questioning whether they can afford their own municipal police services. A key finding in their study was that, on average, cities receiving contract policing services had significantly higher clearance rates for violent crimes than similar sized cities policed by municipal agencies and that clearance rates for property crime were about the same when looking at the statewide results.

Nelligan and Bourns also found that contract policing was cheaper than maintaining municipal police services. Of the California cities they studied, the average per capita policing cost for contract cities was \$144.60 compared to \$235.44 for communities with police departments (Nelligan & Bourns, 2011, p. 84). As a result, the communities that received contracted services not only had a lower per capita cost but the clearance rates were generally the same or better than cities with their own departments. Similar research might inform contract policing in Canada. Lunney (2012, p. 436) identified a number of benefits of RCMP contract policing including their flexibility to respond to investigations and emergencies that transcend

provincial borders, the seamless sharing of intelligence as well as ensuring that national standards and policies are upheld in the provinces and territories they serve.

Summary

Altogether, the research reviewed in this section suggests that investing in policing is a cost-effective public policy that shows a substantial crime control benefit for every additional dollar spent. The greatest benefits of additional police spending occur in cities that have the highest volume of serious and violent crimes. There is a gap in our knowledge of cost-benefit analyses of policing in rural or remote communities, which is of interest to services responsible for regional, provincial or territorial policing, as well as self-administered Aboriginal police services.

III. Canadian Economic Trends and Policing

Current Economic Conditions

A number of Canadian police organizations have conducted environmental scans to better understand how demographic, legal, social, economic, and political trends will impact their operations. At least 22 provincial, regional and municipal police organizations have conducted such research (Malatest & Associates, 2009). A number of police-related environmental scans have been published, including ones conducted by the RCMP (2004; 2007) and for the Police Sector Council (Malatest & Associates, 2009). All of these reports included analyses of economic conditions and their influence on policing. The 2007 RCMP environmental scan, for example, predated the 2008 economic crisis and the authors observed that Canada had strong economic prospects compared with the other G8 nations. Moreover the RCMP (2007, pp. 46-53) researchers correctly identified potential trouble spots in terms of the national economy, including; (a) the repercussions of a slowdown in the U.S., (b) a tight labour market, (c) uneven growth between the provinces (e.g., a slowdown in Ontario and rapid growth in Alberta's economy), (d) declines in the manufacturing sector, (e) an overreliance upon U.S. markets for trade, and; (f) the dominance of the resource and energy sectors in the Canadian economy.

In terms of economic conditions, the environmental scan conducted for the Police Sector Council occurred while Canada was experiencing the lowest levels of GDP growth since 1991, increased unemployment and government debt (Malatest & Associates, 2009). The recession had different impacts across the nation, and while Alberta had high rates of economic growth in 2006 and 2007, the recession had a severe impact on their economy and their budget deficit will be almost \$2 billion in 2013 (von Loon, 2013). Malatest & Associates (2009, pp. 17-18) predicted that the economic downturn would result in decreased tax revenues placing stress on police budgets. The authors of that report also speculated that cuts in health and social spending might have an indirect impact upon the police through higher rates of crime.

Canada's Future Economic Performance

The Royal Bank of Canada (2013) observed that GDP growth was modest throughout 2012, unemployment was down, and retail sales had improved, although their outlook for the housing market was guarded. A long-term forecast conducted by the Toronto Dominion Bank (2013, p. 1) predicted that GDP growth would be 2.2% for the next five years, that consumer debt was very high in relation to other nations (e.g., the average Canadian debt-to-income ratio was 165%) and that the Canadian housing market was slowing. Scotiabank (2013, p. 1) was more pessimistic in their predictions of future economic conditions and noted that, "The persistent softening in export volumes, as well as the fall-off in earnings largely attributable to the deep oil price discount on Western Canadian select heavy oil, are dragging on growth with imports still running at a faster rate. Moreover, domestic spending has also decelerated alongside the softening in house sales and residential construction, ongoing public sector restraint, and reduced consumer purchases as households increasingly focus on lowering their high debt levels." Canadian governments have increased public debt in order to moderate the effects of the financial crisis and the Canadian Imperial Bank of Commerce (2013, p. 6) observed that, "Since mid-2008, Canadian governments have... racked up nearly twice as many financial liabilities as the household sector."

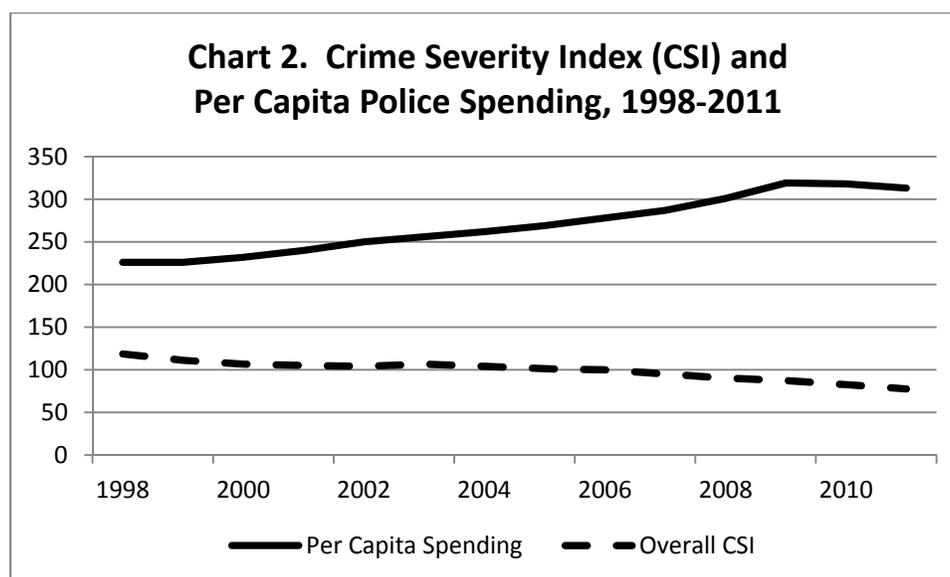
Canada has weathered the financial crisis with fewer negative consequences than our counterparts in the United States or Europe. Yet, the global recovery has been slow which has implications for a nation that relies upon global trade. There are a number of additional economic conditions that deserve attention. First, inflation in the first months of 2013 increased substantially, although that growth had slowed by mid-year (Statistics Canada, 2013). Moreover, the Canadian stock market has been underperforming compared with U.S. markets since 2012. Part of this decline has been a result of softening commodities prices, and the Bank of Canada's (2013, p. s106) Commodity Price Index showed a decrease from 703 in May 2011 to 652.3 on June 15, 2013.

Altogether, the economic analyses and forecasts reported above show that Canada's recovery from the crisis has been modest and few economists are predicting a quick return to pre-2008 conditions. Police expenditures, as well as funding for other health, educational and social services are tied to the health of the national and provincial economies. One of the

challenges, identified in a number of studies, is that government austerity programs that reduce social spending may contribute to increased levels of antisocial behaviour, disorder and crime (Gascon & Foglesong, 2011) although the magnitude of the crime change often depends on specific conditions (e.g., the type of economic stress, such as unemployment, lower salaries, or both combined), the duration of the downturn and recovery, and the resiliency of a community to respond to these conditions. These inconsistent results may have implications for police organizations engaging in contract policing as in some jurisdictions crime will increase, while others may remain stable or decrease. Because these changes are difficult to predict, the police in some jurisdictions may find themselves with fewer resources and increased demand for services—especially if the length of the recovery persists.

Contemporary Canadian Policing

One of the challenges confronting Canadian police leaders is that while their services have had a role in decreasing crime, their costs have increased substantially. Statistics Canada (2013a) reported that between 1998 and 2011 the national volume and severity of crime, as measured by the Crime Severity Index (CSI), decreased from 118.8 to 77.62. During that time frame, the per capita cost of policing increased from \$226 to \$313 in constant 2002 dollars, although if calculated using current dollars, that range changes from \$206 to \$375 (Buczynka, 2013, p. 29). Chart 2 shows this relationship using the national average CSI using constant 2002 dollars.



It is important to note that the national CSI masks variation both *between* and *within* different provinces and territories in respect to the severity and volume of crime, as well as the per capita costs of policing. Increases in the volume and severity of crime will result in a higher demand for policing services and costs. Chart 3 reveals that Saskatchewan had the highest provincial CSI although rates in the Northwest Territories, Nunavut and Yukon were all higher. Yet, there is also considerable variation within provinces, and Chart 4 shows the CSI for the nation as well as selected municipalities and First Nations in Saskatchewan. It must be noted that in locations with small populations, the CSI may lack precision (Babyak, Alavi, Collins, Halladay & Tapper, 2009).

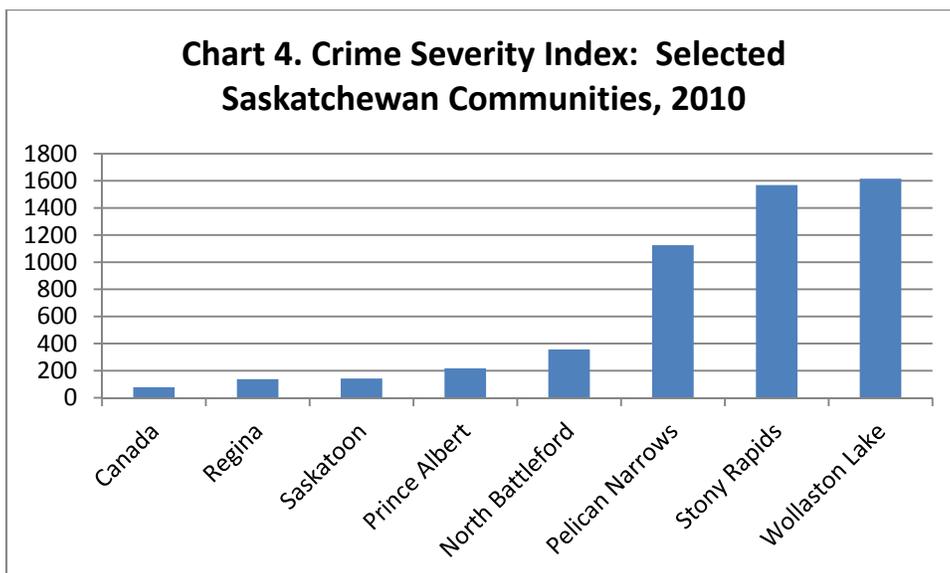
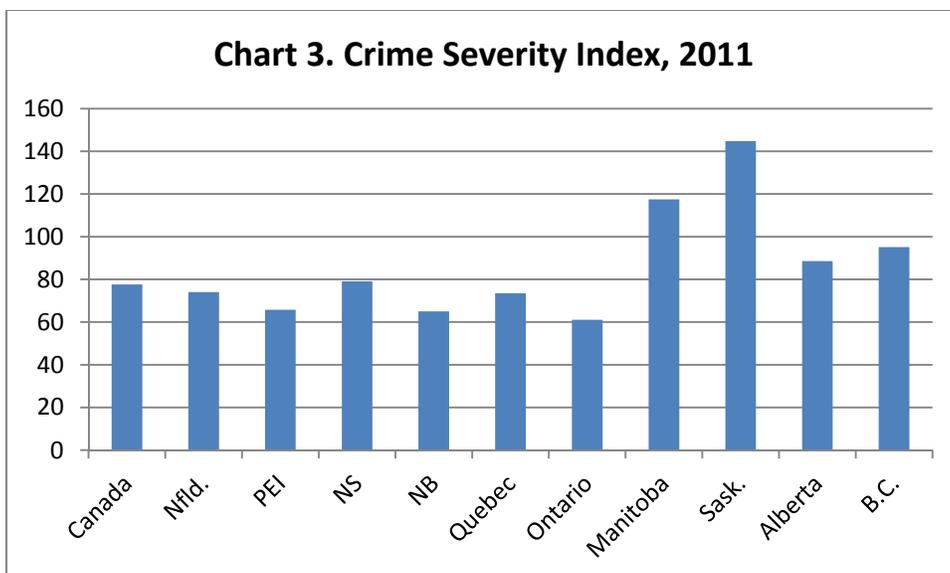


Chart 5 shows the interprovincial differences in per capita police spending for 2011 (Burczycka, 2013, p. 30). Like the differences in the CSI, the per capita police spending shows considerable variation and this Chart did not include the three territories, where the per capita costs of policing are several times the national average (\$741 in Yukon; \$1,151 in the Northwest Territories, and \$1,270 in Nunavut). Costs of policing rural and remote areas are higher due to economies of scale (e.g., it is more cost efficient to police large urban areas) as well as staffing expenditures (e.g., allowances for staff working in remote locations) as well as the high costs of goods, services, and travel in rural and remote communities.

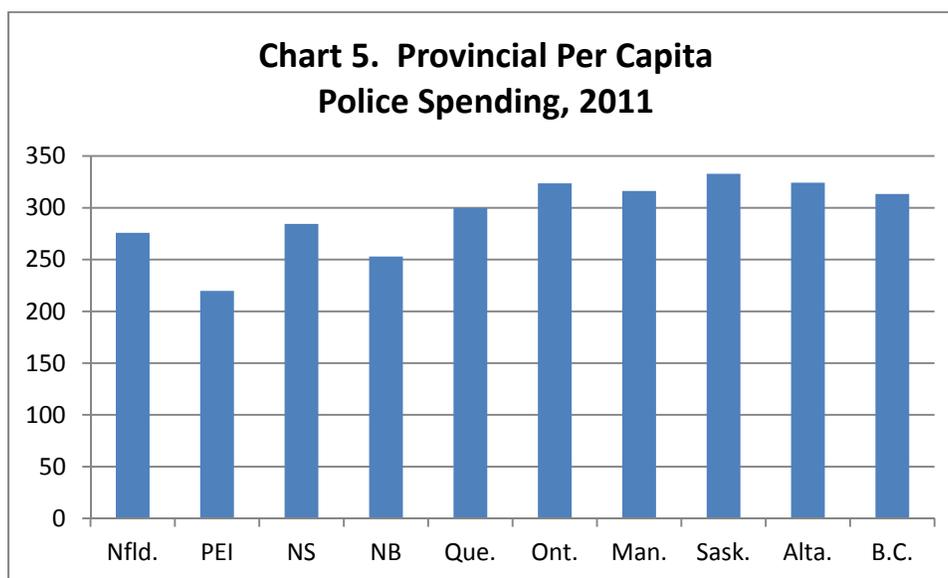
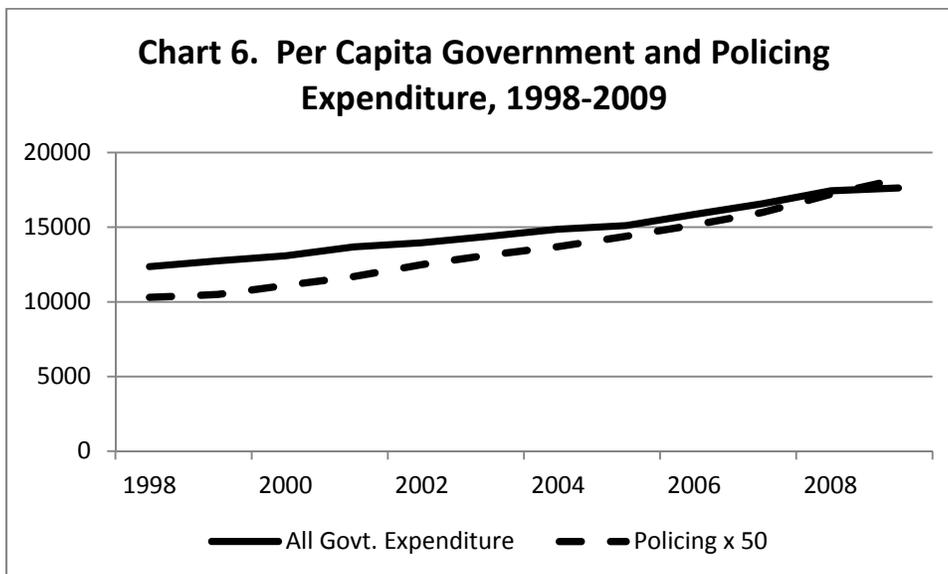
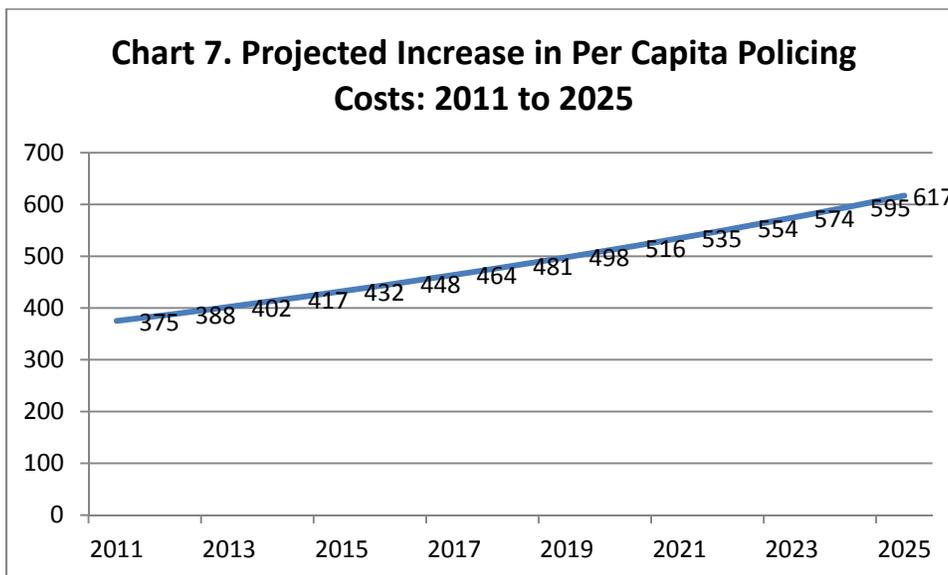


Chart 2 showed that police spending has increased over time, but it is important to note that per capita expenditures for all governments also grew. Chart 6 shows both the policing and the consolidated government expenditures from 1998 to 2009 (the most recent year for which data was available at mid-year 2013). Consolidated government spending includes all three levels of government (federal, provincial and municipal) in current dollars and this increased by 43% from \$12,359 in 1998 to \$ 17,629 in 2009. Police per capita spending, by contrast, increased by almost three quarters during the same era, from \$206 to \$365, outpacing total government per capita expenditures by a significant margin during that era (In order to better show the trends, policing expenditures were multiplied by 50).



While police services in other nations have struggled with cutbacks, the per capita expenditures for policing in Canada were \$375 in 2011 (current dollars) which represented a slight (0.70%) decrease from the previous year (Burczycka, 2013, p. 16). In the five years between 2007 and 2011 the average per capita expenditure (in constant 2002 dollars) grew by 3.62%. Using that average we projected per capita police spending from 2011 to 2025 and found that costs would increase by over 61% (Chart 7).



It is doubtful that increases of that magnitude are sustainable given the projected GDP growth of approximately two percent for the next five years (Royal Bank of Canada, 2013). In

fact, the federal government reduced police funding through the elimination of the Police Officer Recruitment Fund in March, 2013. This fund was established to support the hiring of 2,500 additional officers. Police services used these positions to aide in gang suppression, target drug trafficking and investigate cases of child exploitation (Canadian Broadcasting Corporation, 2013). As that funding has been eliminated, the burden of paying for these services falls upon the shoulders of provincial, regional and municipal police services.

Based on these economic trends, we can make a number of statements about funding for Canadian policing. First, there is considerable variation within the nation and between police services that deliver municipal and rural or contract policing. Communities in the far North are very expensive to police, while larger municipalities can take advantage of economies of scale. Second, levels of economic distress vary throughout the nation and economic prosperity can change rapidly: Alberta had a strong economy in 2007 but had a \$2 billion deficit in 2013. Third, there is a strong possibility that economic distress over the long term will result in more crime, and in turn, an increased demand for police services.

Our analyses revealed that the per capita costs of policing have outpaced total government expenditures from 1998 to 2009. The change in the costs of policing is not a function of more officers per capita on the streets. Burczycka (2013, p. 29) reported that there were 2.01 officers for every 1,000 residents in 1982 and 1.99 officers in 2012. As a result, the number of officers has generally kept pace with population growth over the past three decades. One of the most important drivers in these increased costs was that police salaries increased by 40% between 2000 and 2011 (in agencies with more than 50 officers) while the average for all Canadians in non-policing occupations increased by only 11% (Public Safety Canada, 2012). Public Safety Canada (2012) identified the following causes of increased policing costs:

- Increased overtime expenditures;
- Health services costs and occupational health and safety costs (e.g., health care, benefits, dental plans and pensions) have risen;
- Travel and transportation are more costly (the complexity of investigations has increased the need for officer travel);
- Fewer schedulable hours are available due to increased leave and training requirements, and;

- Corporate functions have expanded due to increased reporting requirements, as well as greater expectations from governments, the courts, and the public.

Many of these salary-related costs are difficult to contain as they are associated with collective agreements or legal requirements (see Malm et al., 2005). A number of U.S. jurisdictions have managed to control overtime costs (see PERF, 2013) although it is too early to tell whether those practices are sustainable over the long-term.

Mission Creep and Policing

Many of the duties that the police undertake are not related to enforcement and officers are expected to carry out a number of social service roles. Gradually adding additional duties, especially ones not originally envisioned, is called mission creep, or what Millie (2013) called “wide policing.” Research has shown that only a very small percentage of an officer’s time—approximately one-fifth to one-quarter—is devoted to actual crime fighting (Marnoch, Boyd & Topping, 2010). Most calls for service are in response to social or neighbourhood problems, as well as about people with mental illnesses or other special needs. Robertson (2012, p. 351) called the police a social service agency that “responds to a variety of emergencies and all manner of personal crises, including crimes in progress, domestic disputes, disturbances, motor vehicle collisions, injuries from accidents, sudden deaths (including suicides), psychotic episodes of mental illness, and locating lost children and vulnerable adults.” Millie (2013) argues that while the police currently carry out these service-oriented duties, other organizations, professions and volunteers may be better able to undertake these tasks and free the police to focus on their crime-fighting expertise. Police scholarship is now focusing on identifying the core policing duties and placing operational priorities on those tasks. If the police relinquish those service-oriented duties, an important question is, who will do them? Because the police are working “24/7” they are often the only government agency available to respond to social problems outside regular working hours.

Demonstrating Value for Money

Interest in evaluating the impacts of government spending has led to cost-benefit analyses that help agencies make informed decisions about the services they deliver. Health, education and social service agencies have extensively used these analyses. The Washington State Institute

for Public Policy has been at the forefront of researching the returns on investment for different criminal justice policies. While most of their analyses have focused on corrections, juvenile justice, and offender rehabilitation, the RAND Corporation, a U.S. think-tank, developed an instrument—the cost of crime indicator—to help funding agencies make objective decisions about the allocation of police resources.

The cost of crime calculator is a research-based tool that produces an estimate of the financial benefits of adding an additional officer to a police service given that jurisdiction's rates of crimes and existing complement of officers. The calculator has a number of strengths:

- It focuses on the value of a police officer (rather than just the cost) enabling users to demonstrate the return on policing investments to stakeholders.
- It can be used by laypersons with no statistical training.
- It is based on empirical research.
- It is able to account for different crime rates and police services of different sizes.

The calculator is available free of cost online (at: <http://www.rand.org/jie/centers/quality-policing/cost-of-crime.html>) and has been used by U.S. police services to explain the relationships between cutting officers and changing levels of crime (Heaton & Jackson, 2012).

Components of the RAND Cost of Crime Calculator

The calculator considers three factors; (a) levels of police-reported crimes, (b) the costs of these offences to society, and; (c) the effectiveness of the police in reducing crime.

Crimes Reported to the Police

In order to develop the calculator, Heaton (2010) included the seven index crimes reported by the Federal Bureau of Investigation (murder, sexual assaults, robbery, aggravated assault, break and enter offences, theft, and vehicle theft). One strength of using only index offences is that they are reported for nearly every U.S. jurisdiction, whereas crimes that are not as serious (e.g., wilful damage, disorderly conduct or trespassing) are less likely to be reported. The drawback to using only a limited number of offences, by contrast, is that the police produce a crime reduction benefit in other offences that are not considered. Another limitation is that most officers (e.g., about two-thirds in most agencies) are assigned to patrol, and reductions in traffic accidents (and the social costs associated with them) are not considered in these estimates.

Finally, the numbers of unreported offences are not considered in the calculator (nor are these included in the Canadian CSI).

The Dark Figure of Crime: Are Police-Reported Crime Statistics Accurate?

Researchers have long known that there is a gap between the number of crimes that occur and those actually reported to the police: what criminologists call the “dark figure of crime.” Crime victims have a number of reasons for not reporting their victimization, including fear of retribution, the belief that the police are unable to do anything about the offence, embarrassment about their role in an incident, such as a person who is assaulted when they are soliciting a prostitute, or their engagement in crimes themselves, such as a drug dealer who is robbed.

Justice systems and data collection agencies also play a role in how crimes are reported. Newark (2013, p. 1) notes that the CSI only counts the most serious offence and observed that, “in a case involving drug dealing, weapons, assault and flight from police by an offender on bail and probation, only what was deemed to be the ‘most serious’ offence would be reported.”

Moreover, some agencies may be guilty of “massaging” their crime statistics (e.g., by making it difficult for a victim to report a minor crime: see Moulton, 2013). Interestingly, police services that have higher levels of public trust and confidence may actually receive more reports of crime because the public believes that these crimes will be taken more seriously.

Costs of Crime

The costs of crime to society are assigned to each of the seven offences included in the calculator. These estimates were developed using prior empirical research and Heaton (2010) averaged these costs based on three previous studies (Cohen & Piquero, 2009; Cohen, Rust, Steen & Tidd; 2004; French, McCollister & Reznik, 2004). As mentioned above, it is very difficult to estimate the true costs of a crime to the individual and society. Using homicide as an example, all investigators have assessed the actual or tangible costs of providing transportation and medical care to a victim (prior to their death and costs afterward) as well as criminal justice processing (e.g., investigations, court costs and imprisonment if a suspect is convicted). The intangible costs of crime, by contrast, are more difficult to quantify. Most researchers have considered lost productivity of the victim as well as the offender (since they would be imprisoned if convicted and not contributing to the economy) as well as the costs to society. A

homicide will reduce the quality of life in a community and increase fear, and murders prompt residents to move elsewhere (Chalfin & McCrary, 2013). As a result, the costs of a murder are substantial and the average of the three studies cited in Heaton (2010) was \$8.649 million dollars.

Even the fear of being the victim of a minor crime can have a substantial impact upon a citizen's quality of life. Decisions such as whether to go for a walk after dark or say "hi" to a stranger on that walk may be influenced by fears. Business owners also make decisions based on crime rates: the Canadian Broadcasting Corporation (2011) reported that Air Canada would no longer lodge employees in inner-city Winnipeg hotels because of high rates of antisocial behaviour in that district.

Crime Reduction Benefits of the Police

The third component of the calculator is the crime reduction effect of adding additional officers. Heaton (2010) averaged the results from five studies that examined the impact of a one percent increase in police personnel on crime (Corman & Mocan, 2000; Di Tella & Schargrotsky, 2004; Evans & Owens, 2007; Levitt, 2004). Using those estimates, Heaton (2010) found that increasing the size of a police force by one percent would reduce homicides by slightly less than one percent (-0.927%) and vehicle thefts by less than one-half percent (-0.440%). The studies Heaton used in the development of the calculator were peer-reviewed, are well-regarded and cited, and are consistent with our current knowledge of the crime control benefits of a police officer.

Applying the RAND Calculator to Canadian Policing

Despite the fact that the RAND Calculator was developed for U.S. jurisdictions, this tool can be used to estimate the value of Canadian policing. Adding one officer to the Regina Police Service, for example, would result in a crime reduction benefit of \$273,577. By contrast, adding one officer to the entire province of Saskatchewan (including municipal and provincial policing) results in a crime reduction benefit of \$235,141. These results are shown in Table 5. The data to calculate these estimates were obtained from the Regina Police Service and the Province of Saskatchewan for crimes reported to the police. These estimates must be interpreted with some caution as the offences are reported in a slightly different manner in Canada than in the United States (e.g., definitions of aggravated or sexual assaults differ somewhat). There may also be

differences between police services that might influence the number of crimes that are formally reported. Furthermore, the number of thefts for the Province of Saskatchewan was based on an estimate (five times the annual number of auto thefts, which was consistent with the Regina crime statistics).

Table 5. Applying the RAND Cost of Crime Calculator to Saskatchewan Policing, 2011 Crime Rates and Officer Staffing

Regina Police Service		Saskatchewan Provincial Policing	
Officers:	337	Officers:	2,306
Value of adding an additional officer		Value of adding an additional officer	
	\$273,577		\$235,141

The calculator produces a higher benefit of an additional officer in locations with a greater number of serious offences. That observation is consistent with the findings of recent research showing a higher return on policing investment after placing additional officers in high-crime cities (Chalfin & McCrary, 2012). While the calculator has a number of strengths, it also suffers from a number of limitations when applied to Canadian policing including:

- Estimates are based on crimes that are officially reported to the police, which reflect only a small proportion of all offences.
- The model includes only seven serious crimes and does not include less serious violent offences (e.g., common assault).
- It does not account for non-enforcement calls for service, which represent over two-thirds of all calls.
- The costs of crime in the U.S. might not be valid in Canada (e.g., there may be differences in the direct as well as intangible costs of crime in Canada, such as fear of crime and how the fear of crime prevents citizens from engaging in activities).
- Officer effectiveness was based on a relatively small number of studies, and newer data has been published since the calculator was introduced in 2010.
- The calculator does not account for the economic loss that is prevented from traffic enforcement (e.g., fewer accidents).

Given those limitations, the calculator might actually *undervalue* the benefits of adding additional officers. The following paragraphs highlight some additional benefits that might be considered.

First, in terms of officer effectiveness, a number of peer-reviewed studies have been published since Heaton (2010) developed the calculator. Both Lin (2009) and Chalfin & McCrary (2012) identified the contributions of adding officers to crime reduction and these estimates could be incorporated into an updated calculator. These newer estimates should be included when considering the return on investment by adding additional officers.

Second, a number of researchers have produced estimates of the costs of crime to society since the RAND calculator was developed in 2010 (see Andresen, 2012; McCollister, French & Fang, 2010). Using these newer findings would make the calculator more accurate. More importantly, a number of Canadian government studies on the costs of crime have been published that would inform the development of a Canadian calculator (Zhang, 2011; Zhang, Hoddenbagh, McDonald & Scrim, 2013).

Third, a number of scholars have found that traffic enforcement reduces the number of serious traffic accidents (Bates, Spole & Watson, 2012; Makowsky & Stratmann, 2011; Tay, 2009). The number of traffic accidents and resulting deaths in Canada is not trivial. Transport Canada (2012, pp. 3-4) reported that there were 123,141 collisions in 2010 that resulted in personal injuries, 11,226 persons required hospitalization and 2,227 individuals were killed. Western provinces had the highest rates and Saskatchewan led the provinces in casualties per 100,000 residents in the population and per 100,000 licensed drivers. Vodden, Smith, Eaton and Mayhew (2007, p. iii) estimated that the social cost of motor vehicle collisions in Ontario alone was \$18 billion in 2004 and that the average social cost of a collision was \$77,000 (Social costs include direct losses as well as pain, suffering and lost productivity). Given those findings, the cost-savings from traffic enforcement should be considered in any accounting of the benefits of policing.

Fourth, it may be useful to consider developing estimates based on crimes not officially reported to the police. Earlier we cited information from Newark's (2013) analysis of police reported crime statistics reported by the Canadian Centre for Justice Statistics, and he maintained that the CSI did not accurately capture the true level of crime (see also Moulton, 2013). In Canada, interviews of crime victims show that many crimes are not reported. Perreault and

Brennan (2010, p. 9) reported that according to the “2009 General Social Survey 69% of violent victimizations, 62% of household victimizations and 71% of personal property thefts were not reported to the police.” Thus, these unreported offences are not considered when estimating the benefits of police investments. Only seven crimes are considered in the calculator’s estimates: in order to reflect the true costs of crime, additional offences, such as common assaults, could be added to the calculator.

The Economics of Rural Policing

According to Statistics Canada (2013b) 6.3 million Canadians (19% of the total population) live in rural areas. Most Canadian policing research overlooks what is happening in the countryside in favour of big city research. This focus on urban policing has led to significant gaps in our knowledge. Costs of policing rural areas are typically higher than in cities but there has been very little research conducted on “what works” or how to contain the costs of rural and remote policing. We do know that the conditions in rural Canada are changing: the population is aging in some places, but younger in others; traditional rural values are challenged by the influences of the big city and shifting economic conditions; some regions are booming while others are in decline. These challenges are often increased in policing Aboriginal communities and some First Nations have the highest rates of crime in Canada (Brzozowski, Taylor-Butts & Johnson, 2006).

Of special interest to law enforcement agencies serving rural areas are the crime patterns associated with resource-based boom communities. The rapid population and economic growth in these communities contributes to a number of social ills that have been called boomtown effects (Government of New Brunswick, 2012). Prior research has demonstrated that calls for service, arrests, officer workload and traffic accidents increased in Canadian and U.S. boomtowns (Archbold, 2013; Ortiz, Ruddell, & Thomas, 2012; Ruddell, 2011). Police officers and sheriff’s deputies in boom counties revealed that they are overworked and stretched thin (Archbold, 2013), which is similar to the findings reported in Canadian research (Ruddell, 2011). Given that resource exploration and extraction will continue for the foreseeable future, policing in boom communities will be an ongoing challenge for rural police services.

Summary

The global recession that started in 2008 has forced police leaders to re-evaluate their missions, operational practices and develop responses to funding cutbacks. In order to respond to short-term economic austerity, police leaders have reduced agency costs and attempted to manage demand. While police services have adapted to these changes over the short-term, it might be difficult to sustain these adaptations over the long-term without reducing public confidence and staff morale. Crises are often times when policymakers can evaluate agency priorities and there are a growing number of politicians, practitioners and scholars who demand that policing be re-evaluated, reengineered or reinvented (Gascon & Foglesong, 2011; Rogers & Gravelle, 2013; Toews, 2013).

While the funding of police operations in the next decade is unlikely to be stable, it is possible that partnerships with community organizations (e.g., the community mobilization initiative introduced in Prince Albert, Saskatchewan) may play a larger role as these relationships enable police services to leverage scarce community resources. Perhaps more importantly, these initiatives also undertake a proactive approach to reducing disorder and crime. There is, however, a lack of research, or the results of evaluations, that support the development of the community mobilization model, although anecdotal accounts suggest that the approach is promising (Public Safety Canada, 2012).

Altogether, the policing-related research reviewed in this report has laid a foundation for better understanding the relationships between economics and policing, the costs of crime, and the value of a police officer in reducing crime. Similar studies are occurring abroad and these efforts have been sponsored by different levels of government, policing organizations as well as within the academic community. This scholarship will help the Canadian policing community develop the capacity to coordinate research, assess different approaches, allocate resources more effectively, and catalogue best practices.

IV. Reimagining Canadian Policing

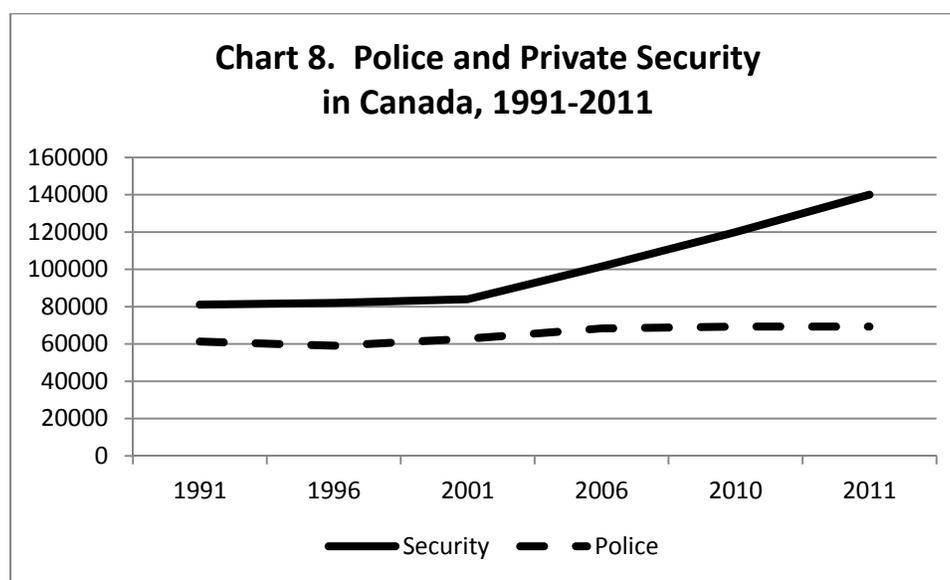
Crank, Kadleck and Koski (2010) argue that the U.S. policing industry is searching for a new guiding philosophy; what they call the “next big thing.” There are similar forces at work in Canada, and throughout this review a key concern is to better understand how economic forces will drive changes in policing. A number of scholars from the U.K. and the U.S. have advocated for the redesign or re-engineering of policing and observed that austerity has motivated policymakers to consider these changes (Gascon & Foglesong, 2011; Rogers & Gravelle, 2013). While a number of Canadian officials, including former Public Safety Minister Toews (2013) have echoed these thoughts about reforming policing, although there is less consensus about the future of policing arrangements and what changes (if any) should occur.

Bayley and Nixon (2010) observed that the public police are losing their traditional monopoly on policing. Duties formerly carried out by sworn officers are now undertaken by civilian employees, volunteers and private security agencies. This is part of a larger global trend and for the most part these changes in Canada have been gradual and not forced by economic crises. The following pages describe how the activities of non-sworn officials may shape the future of Canadian policing. Moreover, there has been an increasing interest in police-community partnerships that are intended to move policing away from the traditional reactive model, and a short description of these crime reduction strategies is provided. This is followed by a brief review of methods of evaluating police performance, which will become increasingly important given the changing nature of Canadian policing and the inability of traditional measures to accurately evaluate what the police actually do.

The Expanding Role of Private Security

There has been comparatively little Canadian research conducted on the operations of private security firms. This oversight is especially serious given the fact that there are at least 109,625 security officers in Canada (Statistics Canada, 2013d), and the CBC (2013a) has estimated that this number is closer to 140,000 personnel which means that they outnumber the public police by almost 2:1. This pattern exists in most first-world nations and some security firms are large: the Canadian Corps of Commissionaires employs more personnel than any police service in Canada with the exception of the RCMP. Some of these firms span the globe and at yearend 2011, the G4S security corporation had 657,200 employees including almost 60,000

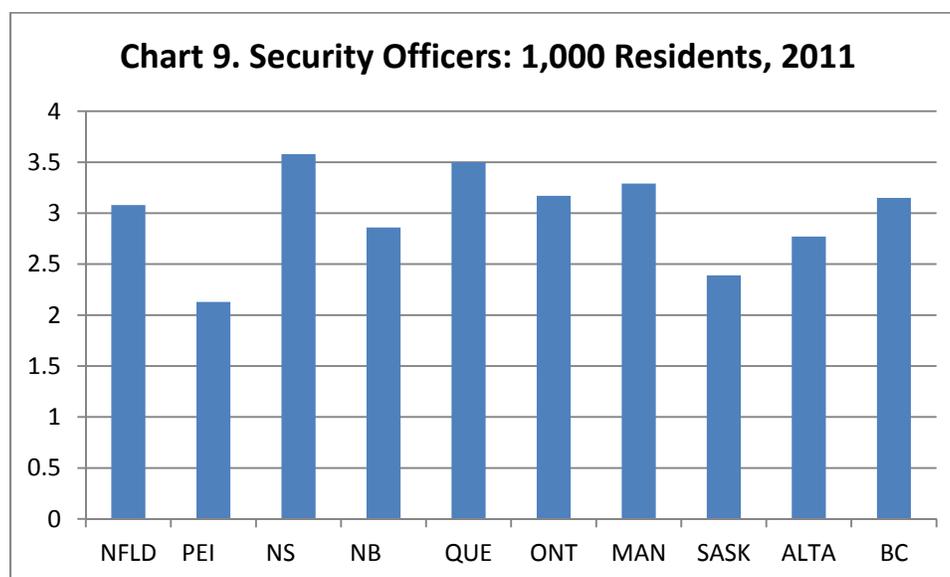
staff members in North America (G4S, 2013). Bayley and Nixon (2010) noted that Canada and the United States had the highest per capita employment of security personnel in the developed world. Private security is growing at a faster pace than the public police, from around 80,000 positions in 1991 to an estimated 140,000 personnel in 2013 (Canadian Broadcasting Corporation, 2013a; Hovbrender, 2011; Li, 2008).



The roles of private security and the police are often complementary, as employees of both sectors work toward preventing and responding to antisocial behavior and crime. Ruddell, Thomas and Patten (2011) found that private security officers augmented the public police in their study of 300 U.S. counties and that more security officers were deployed in counties with the highest rates of property and violent crime. There is consensus in the security literature that the boundaries between the public police and private security are becoming increasingly blurred (Roberts, 2012). In some cases, police services have hired private security firms to support their operations and in the U.K. and the U.S., the police are outsourcing policing, enforcement, and security-related duties to private firms (Gascon & Foglesong, 2011; HMIC, 2012). In Saskatchewan, members of the Corps of Commissionaires are now operating photo radar in highway construction zones (McEachern, 2013).

In their examination of private security in Canada, Winterdyk and Ruddell (2012) found that there was considerable variation of security officer strength in the largest 65 cities. Unlike the public police agencies that deploy about 2 officers per 1,000 residents, the number of security

officers in the 65 cities ranged from 1.1 to 6.7 officers per 1,000 residents. Winterdyk and Ruddell did not find a consistent relationship between levels of community crime and the number of security officers deployed. Instead, richer communities tended to have more security officers. This may be an indication of two-tiered policing where those who can afford a higher degree of safety or security are able to purchase those services, a practice that is occurring more often in U.S. cities experiencing police cutbacks (Blackstone, 2013). Analyses of the Statistics Canada (2013c) data showed that there were 3.18 security officers for every 1,000 Canadians in 2011. Chart 9 shows the variation of security officer strength at the provincial level in 2011, and this ranged from a low of 2.13 in Prince Edward Island to a high of 3.58 in Nova Scotia. Although the three territories are not shown in Chart 9, the rate per 1,000 residents in the Yukon and Nunavut were similar to the national average (2.54 and 3.13 officers respectively) while the rate in the Northwest Territories was higher (3.96).



The expansion of private security has been opposed. Security officers, in most cases, are less carefully screened than their public counterparts, and receive less training (Lippert, Walby & Steckle, 2013). Salaries in this industry are also less than their public counterparts and turnover is high (Li, 2008). As a result there are important questions about what duties carried out by the public police could (or should) be undertaken by private organizations. The Police Association of Ontario (2012, p. 2) opposes the outsourcing of police duties to private firms and raises the issue

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that corporations are not subject to civilian governance or oversight and operate with less transparency than the police.

As funding for public policing shrinks there will be a greater number of partnerships between the public and private police, what the Law Commission of Canada called a hybrid approach. Hutchinson and O'Connor (2005, p. 131) wrote that, "We stand on the brink of a more complex future in which alliances of (public, parochial and private) agencies and interests are drawn together in intricate networks of policing." Examples of a hybrid approach are the Canadian Pacific Railway and the Canadian National Railway Police Services who have secured railway properties for over a century. While accounting for less than several hundred officers in the nation, the sworn officers employed by these railways have the same training requirements and police powers as their municipal or provincial counterparts. We can only speculate whether they will serve as a model for other policing agencies operated by corporations.

The provision of services to police forces by private sector organisations, and agencies and organisations in the public sector (such as fire, health and local authorities), is likely to increase markedly, as efficiencies and economies have to be found. That development is likely to have the greatest success for both partners if these joint ventures are well-designed at the outset, and made sufficiently flexible and adaptable to deal with changed circumstances.

Thomas P. Winsor, Her Majesty's Chief Inspector of Constabulary, Speech from April 29, 2013

The market-driven private security industry is also reinventing itself given the contemporary political and economic conditions and the increasing focus on value for money and return on investment (White & Gill, 2013). While the police are guided by the public good, staff members of private security firms answer to the individuals, organizations or corporations that hired them. As a result, employees of these firms may be more concerned with meeting the expectations of their employers rather than just and fair outcomes. The counter argument, however, is that security guards play a role in deterring crime and their actions in resolving minor incidents free the police to focus on more serious offences and offenders.

The Civilianization of the Police

There are an increasing number of civilians working within Canadian police organizations and Burczycka (2013) noted that:

In 2012, police services reported employing 2.5 officers for every one civilian worker, a ratio that has held steady since 2007. The ratio of officers to civilians has decreased substantially since the 1960s, when reported ratios were between 4.6 and 4.1 officers for every civilian staff member. (p. 9)

For the most part, these employees work in supportive roles such as administrative support, crime analysis, information technology, crime prevention, forensic analysis, human resources and media relations (e.g., public information officers). That total does, however, include special constables, security officers, and by-law enforcement officers. Some of those tasks had been carried out by sworn officers but many argue that it is more cost-effective to use civilians in those roles.

Throughout the U.S. and the U.K., there are an increasing number of non-sworn uniformed (and unarmed) officials employed by police organizations. These officials have limited police powers (e.g., can issue some tickets) and are often called community service officers (CSO) in U.S. jurisdictions and police community support officers (PCSO) in the U.K. In England these positions were first authorized in 2002 and Johnston (2007, p. 128) found that most officers and civilians working within police organizations agreed that PCSOs reduced police workloads (thus releasing officers to work on other duties) and their presence was reassuring to the public. In March 2013 there were 15, 613 PCSOs in England and Wales or about one PCSO for every nine regular officers (HMIC, 2013a) although thousands of those positions are projected to be cut (Barrett, 2012).

Uniformed by-law enforcement officers have been employed in Canadian municipalities for decades and more jurisdictions are using these officials in crime prevention roles or in responding to antisocial behaviour. Other police services employ special constables and like the PCSO, these unarmed but uniformed officials have limited police powers. In some provinces these special constables provide court security, prisoner transportation or other security services that had once been done by sworn officers. Special constables are also employed by educational

institutions, health care facilities and housing or transit authorities. The Ontario Chiefs of Police (2010, p. 4) reported that there were more than 3,000 special constables in that province.

A number of provinces also employ sheriffs, who have limited police powers, to provide court security and prisoner transport. As these sheriff positions are paid less salary than sworn officers, municipalities and provinces can reduce staffing expenditures. The province of Alberta has greatly expanded the role of their Sheriffs and these 700 armed officers carry out a number of non-investigative duties formerly done by sworn officers although they work closely with municipal officers and RCMP members (Henton, 2012). These officials started as court and prisoner transportation workers but their roles expanded to traffic enforcement, fugitive apprehension and the protection of government property and personnel. Their expanded role is a relatively new undertaking and it is likely that other governments might copy this approach if Sheriffs are proven to be a long-term and cost-effective alternative to sworn officers.

Our review demonstrated that investing in additional officers is typically a good investment in public funds, but only if those officers are deployed in a manner consistent with evidence-based practices, such as targeting hot spots. In some cases, police services might get a better “bang for their buck” if they hire civilian employees. Robertson (2012) noted that:

Excessive deployment of police to frontline positions, putting more “boots on the streets” is expensive and often not the most effective use of police resources. Indeed, police and the public might be better served by using the same funding to employ two records clerks in order to improve police response to Crown disclosure requests, rather than adding a single patrol officer or internet child pornography investigator. But it is hard to get political mileage out of mundane, but important, administrative positions. (p. 358)

Robertson’s observations reinforce the importance of tailoring policing to the unique needs of the community. One of the challenges of policing in a nation as geographically and culturally diverse as Canada is that a strategy that works well in one part of the country might be less effective elsewhere.

The Police Association of Ontario (2012a) observed that, “Policing has changed, along with the world, especially in the last decade since 9-11. There is a need to examine what we do and how we do it, and ensure we’re delivering the best service to our communities. Time is needed to examine how legislation, court decisions and submissions, reporting, regulations, and major international terrorist and crime issues, social services and medical supports, have affected front-line policing.”

Police-Community Partnerships

Graziano, Rosenbaum and Schuck (2013) note that, “the capacity of police organizations to respond to public safety issues has improved significantly (with better access to real-time data, better analytic capacity, and increased accountability for crime) yet little has been done to also strengthen community capacity to respond.” There is more interest today in engaging in partnerships between the police and organizations that provide health, education, social and welfare services to at-risk populations. These approaches move away from the traditional reactive model of policing and instead take a proactive crime reduction approach. One such model is the Building Partnerships to Reduce Crime Strategy (BPRC) which is a holistic risk-driven and collaborative approach to community safety that advocates engaging the whole of government in crime reduction strategies (Province of Saskatchewan, 2011).

The BPRC approach acknowledges that many at-risk individuals and families are receiving services from a number of different community-based agencies and there is often a lack of coordination between those services. This results in duplication of services or cases where clients fall through the cracks in the system as agency staff believe that some other organization is taking care of their client’s needs. As a result, better coordination of government services may reduce crime.

Some police services are taking the lead in coordinating inter-agency meetings in a community mobilization approach. Community mobilization programs intervene with high-risk individuals or families before they become involved in crime or after an individual comes to the attention of law enforcement for anti-social or risky behaviour. The police, in partnership with representatives from addictions services, public health and mental health agencies, First Nations, social services and schools are brought together to identify potential solutions to an individual’s unmet needs. While the police have always participated in these types of community-based

interventions they were often informal and their activities had a short-term orientation (e.g., interagency groups would meet to discuss a single case and then disband afterwards).

Community mobilization formalized this approach and takes a long-term orientation.

One community mobilization program was developed by the Prince Albert Police Service (PAPS) in response to increasing community crime rates. While this program was pioneered by the police, it is an intervention that is based on collaborating with a broad range of community organizations. The police and their partners are brought together to identify potential solutions for at-risk individuals. A manageable number of cases—perhaps only two or three per week—are addressed, but the small number enables more resources to be directed to help these individuals address their problems.

Initial results of the PAPS community mobilization programs are promising. The program was first introduced in 2010 and from 2011 to 2012 violent crimes decreased by 31.9% and property offences by 9.4% (Prince Albert Police Service, 2013). Not only are the number of crimes dropping, but anecdotal information suggests that other forms of dysfunction have also decreased: fewer assault victims admitted to hospitals, less children apprehended by social service agencies, and school attendance is up. Altogether, this model draws our attention to the interconnectedness of social problems and shows us that progress in resolving one problem can benefit several different systems. While this collaborative model has yet to be formally evaluated, it represents a step toward crime reduction by solving problems in the community one person or family at a time.

One of the challenges with developing criminal justice interventions is that it takes a while before the success of these efforts can be demonstrated and the strengths and weaknesses of the intervention formally evaluated. Lacking this information, it may be premature to expand these types of programs until the developers of these approaches have a full understanding of “what works,” as well as what community conditions affected its implementation and potential success. Policing tactics are seldom formally evaluated and it is possible that some interventions can fall short of anticipated results or have unforeseen negative outcomes. As a result, it is important that police practitioners and academic researchers collaborate on program evaluation and research that examines the effectiveness of public safety interventions. Few police organizations make those investments in research: Rojek, Smith and Alpert (2012) found that only about one-third of the U.S. agencies they surveyed had engaged in research partnerships in

the previous five years. Such findings suggest that law enforcement agencies are missing opportunities to better understand their service delivery models.

Successful police-community collaborations are also built on foundations of trust, goodwill, and agreement on shared goals (e.g., a common ‘vision’ on outcomes). Brewer (2013, p. 20) found that policing partnerships that resulted in a “convergence of goals, values, and mandates between agencies” resulted in “attitudinal and cultural changes” that contributed to successful and productive relationships. These changes required high levels of commitment amongst the stakeholders. Moreover, successful partnerships must take a long-term outlook that is bolstered by “small victories” and this perspective can be frustrating to politicians who often have a short-term orientation.

An additional challenge of police-community partnerships is that interventions that are successful in one place might fail elsewhere and there are a number of reasons for those failures. Some community and agency stakeholders might be more willing to participate in these arrangements. In other cases, successful programs are exported to new locations, but are not faithful to the original approach and this leads to poor outcomes. Many successful programs are championed by charismatic leaders and if those leaders are absent in new locations the intervention might not flourish. Altogether, there are many potential barriers but they are outweighed by crime reduction and increased community safety.

Measuring Police Performance

Most of our discussion about policing thus far has focused on how economic conditions have influenced policing in Canada and abroad. During tough economic times, allocating scarce resources takes on a greater priority as funding agencies want the best return on their policing investment. Policing is one of the biggest municipal expenditures and most cities spend between one-fifth and one-quarter of their budget on policing and public safety. Given those expenditures, Campbell, Brann and Williams (2003, p. 3) ask, “What will it take for us, in this community, to achieve our public safety goals?” As noted above, each municipality, First Nation or rural area has a different crime problem and responses to crime must be crafted by the police and community. One part of that process is to develop indicators that evaluate police performance.

There are four traditional measures of police performance and they are all crime-related: changes in police-reported crime rates; the number of arrests; response times; and clearance rates

(the number of offences that are ‘solved’). Since less than one-third of police calls for service are of a criminal nature these traditional performance measures don’t really reflect what the police are actually doing. If most of the interactions between the police and the public are in response to social service activities, then it is important that those factors be considered when evaluating their performance (Davis, 2012). Moreover, traditional indicators of performance do not typically consider the interactions between the police and community members (Mastrofski, 1999; Moore & Braga, 2003). For instance, are the police perceived as being easy to approach and talk to? Are citizens satisfied with the interactions that they have with the police?

Deliberation is needed regarding the number of important functions that the police fulfill but are not considered in the traditional measures. Officers engaged in traffic enforcement, for example, play a key role in ensuring public safety (Bates et al., 2012; Makowsky & Stratmann, 2011; Tay, 2009).

As a result of the limitations of the four standard performance measures, a number of police scholars have suggested that other indicators be considered that reflect the social service nature of policing and how the police interact with the public (Davis, 2012; Mastrofski, 1999; Moore & Braga, 2003). While these scholars don’t always agree on what should be measured, a common theme is that we must look beyond indicators of crime if we are going to accurately account for police performance and properly evaluate the costs and benefits of policing. Despite the fact that performance evaluation is critical to police improvement, there is often resistance to formal evaluations and that reluctance to participate hinders the ability of police leaders to make sound decisions about the allocation of resources (Cordner & Scarborough, 2010).

The Police Organisational Performance Index (POPI)

There is growing interest in developing measures that better account for police activities beyond their roles in crime control. Coleman (2012) developed the Police Organisational Performance Index (POPI) to evaluate police accountability, expenditures and outcomes. Coleman included seven Critical Strategic Success Factors (CSSFs) in the index:

1. Legitimacy of the local police agency (outcome - focused);
2. Leadership and management of the local police agency (intermediate outcome-focused);
3. Enforcement by the local police agency (output-focused);
4. The community's feeling of safety (outcome - focused);
5. Crime and social disorder in the community (output-focused);
6. Misconduct of local police personnel (intermediate outcome-focused), and;
7. Mutually beneficial police/community relationships (intermediate outcome-focused).

Coleman (2012, p. 165) argues that, "The establishment of POPI as a foundation to aid the contemporary measurement of the organisational performance of police agencies is an important step forward in the management of organisational performance and, thus, continuous improvement and accountability." This model provides police services with performance benchmarks, establishment and/or validation of strategic directions, as well as education of policing stakeholders (including the public) about established policing performance factors (Coleman, 2012, p. 167).

Measuring performance also fits in with the wider goal of reimagining policing. Public Safety Canada (2013, p. 1) reported that there are three reasons for measuring police performance:

1. Rethink what services are of highest priority;
2. Generate improved outcomes, and;
3. Better control service delivery costs.

The Institute for Strategic International Studies ([ISIS] 2012), an initiative of the Canadian Association of Chiefs of Police, developed a model for evaluating police performance that

features inner and outer circles that surround the core goal of community safety. The inner circle, shown in Figure 1, identifies five dimensions of a proactive and integrated approach to public safety (rather than focusing strictly on crime reduction) that involves community and government stakeholders who help establish police priorities and make funding decisions. The outer circle, shown in Figure 2, depicts different methods of evaluating the success of the police (and police-community partnerships) in meeting the core goal of community safety.

Figure 1. Full Circle Approach to Community Safety: Inner Circle (ISIS, 2012, pp. 4-9).



In respect to the inner circle, the following five dimensions are considered:

- **Broader Shared Responsibility:** Recognizes that the police cannot take sole responsibility for public safety and must involve other community partners. Indicators of participation and the contributions of those partners are measured.
- **Risk-Driven Victimization Focused:** Requires a shift from traditional reactive models of policing in favour of proactive approaches that target at-risk individuals, families and communities. Indicators of victimization are considered rather than a strict focus on rates of offending.
- **Community Engagement:** Favors a collaborative grassroots or “bottom up” model of community involvement that eliminates “top down” bureaucratic barriers (‘silos’). Indicators of meaningful community involvement (e.g., representation from all stakeholders) are measured.
- **Local Needs and Priorities:** Recognizes that community safety challenges differ by location and the police and their partners must consider these locale-specific risk factors when crafting community safety plans. Indicators of local perceptions of crime, fear of crime and efficacy of the police are considered.
- **High-Level Directives and Imperatives:** Acknowledges that governments have a key role in supporting a holistic (or ‘whole of government’) approach to community safety. Indicators of whether different levels of government have mandated agency participation are considered.

Altogether, the five dimensions of the inner circle are somewhat more difficult to measure than the numbers-based quantitative approach of indicators such as crime and clearance rates. Yet, adding a qualitative approach to measuring police performance increases our understanding of the effectiveness of police-community partnerships in their pursuit of community safety.

Figure 2. Full Circle Approach to Community Safety: Outer Circle (ISIS, 2012).



The outer circle is comprised of five dimensions that enable stakeholders to evaluate returns on investments:

- **Community Safety Outcomes:** Are based on indicators of quality of life, of which crime and victimization are only one dimension, and include fear of crime, higher employment, reduced school drop-out rates or numbers of apprehended children.
- **Rich Qualitative Assessments and Analysis:** Perspectives of the general public about the operations of justice systems and community safety are regularly collected and disseminated in a timely manner.
- **Independent Multi-Disciplinary Evaluation:** Police and community safety services willingly participate in evaluations using a variety of methods.

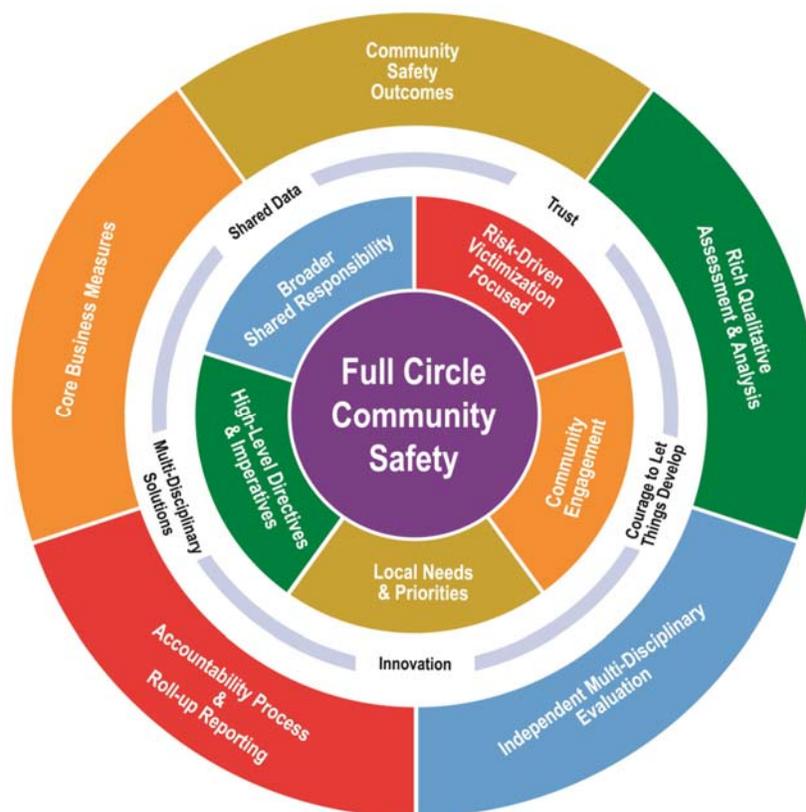
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- **Accountability Process and Roll-Up Reportings:** Trust and confidence in the police increases when their performance on achieving outcomes is measured and reported, and structures exist that hold underperforming agencies accountable.
- **Core Business Measures:** Are conventional measures of police performance such as crimes reported to the police, calls for service, recidivism rates and emergency room visits (e.g., for assaults or overdoses) that are measured in an accurate and consistent manner.

Combining the inner and outer circles enables police services to measure their performance on community safety using ten different dimensions in the full model.

Evaluation is often a painful process for public service agencies as these exercises open the organization to criticism. As a result, agency leaders and staff are often reluctant to participate in evaluations despite the fact that the knowledge gained from a properly conducted evaluation can inform agency operations and increase effectiveness (Mears, 2010). In addition to the ten dimensions that form the inner and outer circles, ISIS (2012, p. 12) identified a number of foundational principles that support the collection and reporting of outcome measures: shared data; trust; the courage to let things develop; innovation; and reliance on multi-disciplinary solutions. These principles acknowledge the risks that organizational leaders take when they consent to an evaluation. The intent of the model is to use the information revealed in an evaluation to focus on improving performance.

Figure 3. Full Circle Approach to Community Safety (ISIS, 2012)



While the ISIS full circle model has yet to be extensively tested “in the field” its development represents a step toward evaluating areas of police activities that had previously gone unacknowledged.

Summary

While there is growing consensus amongst senior government officials and police scholars that policing should be transformed, there is less agreement when rank and file officers or the public are consulted. The police are often skeptical when persons external to their industry advocate for sweeping organizational or operational changes. Millie and Bullock (2013, p. 135) observed that, “If there is a case for reimagining the roles and functions of the police service, then the question becomes *who* should decide what they are, and *how*?” Developing crime reduction and community safety strategies will depend upon negotiations between police services, community members, service providers and political stakeholders, and changes must be

supported by appropriate levels of funding: a significant obstacle to overcome during times of austerity and uncertainty.

Shearing and Marks (2011, p. 216) speculated that police services have been forced to reinvent themselves since the start of the economic crisis and they predicted that the short-term future will be a time of “fluidity, pluralism and uncertainty.” While it is difficult to predict the futures of policing in Canada it is clear that economic factors will play an important role in driving operational priorities.

While there is consensus that police should focus on their core duties, there may be less agreement on who will carry out the social service duties that currently account for much of their time. In the U.K., for instance, the government greatly expanded the number of uniformed civilian employees a decade ago. In the past few years, however, they are cutting these positions as part of their austerity programs, which suggests that these employees did not live up to the expectations of the funding agencies.

It is possible that police organizations will outsource some of their duties to private security firms and this will be opposed by police unions. While contracted services might be cheaper, there is some question about whether those staff members will be as professional as the public police and the corporations that employ them are less accountable to the public and their operations less transparent.

There is some optimism that community-police partnerships will enable both parties to leverage their resources in responding to at-risk populations. These proactive approaches represent a very promising approach, although many of these programs are in their infancy and will need to demonstrate their efficacy over time. It is also important to acknowledge that while some police services have invested heavily in partnerships with community organizations, these models might not work in all places: Crime reduction strategies that work in The Pas, Manitoba might not be as effective in Atlantic Canada.

Public Safety Canada (2012) identified a number of potential obstacles to reforming police organizations:

- Lack of awareness, information and analysis of efficiency/effectiveness;
- Inadequacy of performance measures;
- Absence of police centers of expertise to coordinate research, assess approaches and catalogue best practices;

- Absence of modern management skills and practices in some police services, and;
- Resistance to change from the public, as well as police leaders and police unions.

The policing and academic communities are making progress in overcoming these barriers including the development of performance measures such as the full circle model (ISIS, 2012). Moreover, the creation of the Canadian Centre for Public Safety and First Responders at the University of Regina is intended to facilitate policing research. Such research centres supplement research activities already conducted by municipal, regional, and provincial police services and the RCMP. Public Safety Canada and the Police Sector Council also conduct and disseminate policing research. Noteworthy is the recent introduction of an online Index of Policing Initiatives by Public Safety Canada (2013a) which is intended to disseminate information about innovative policing approaches and best practices.

It is possible that the ideas that will drive changes in the policing industry will come from outside that field. As a result, police practitioners and scholars might find it fruitful to scan the environment in order to identify strategies that could be applied to policing. The field of corrections, for example, is increasingly advocating for justice reinvestment (JR). According to Fox, Albertson and Warburton (2011, p. 122) “JR proposes moving funds spent on punishment of offenders to programs designed to tackle the underlying problems which gave rise to the criminal behavior.” Thus, their approach is similar to police-based interventions such as community mobilization involving community agencies that target and respond to the conditions that contribute to crime.

The JR approach is based on using innovative approaches to respond to recidivism combined with research and evaluation to measure the effectiveness of those interventions. Dwyer, Neusteter and Lachman (2012, p. 2) note that JR involves a process where agencies:

1. Collect and analyze criminal justice data;
2. Identify cost-saving public safety strategies;
3. Implement cost-saving public safety strategies;
4. Document savings and public safety impact, and;
5. Implement and assess justice reinvestment strategies.

While we noted earlier that police-researcher partnerships are still very much in their infancy in many places, in order for JR and similar initiatives to be successful, researchers must provide

information to their police partners in a timely fashion in order for that information to be relevant.

One of the challenges of reforming the police is that the front line officers who are tasked with implementing crime reduction strategies are often directed to engage in practices that are seldom evaluated, and interest in the intervention sometimes disappears with the next funding cycle, after the next election, or after the current Commissioner or Chief leaves the service. As a result, police officers tend to be cynical about reforms and they often adopt a “wait and see” approach until they know whether a reform will persevere. While this is often seen as resistance to change by outsiders, it is a survival technique for the people working within these organizations.

It is clear that policing is poised for a transformation, but there is little agreement on the direction of those changes. Some see the growing reliance on research and promotion of proactive policing strategies as fundamentally changing the way that officers will carry out their jobs. Others see a larger reliance on police-community partnerships intended to respond to addressing unmet needs and reducing risk. The changes that occur, however, will be shaped by a number of internal and external forces and sometimes our best laid plans to improve service delivery fail. When new innovations are introduced, or practices are reformed, there are sometimes unanticipated or unpredictable consequences (Willis & Mastrofski, 2011). As a result, reimagining policing may be much easier than actually reengineering or reforming the policing industry.

V. Conclusions

Per capita costs of policing in Canada were higher than total per capita government expenditures between 1998 and 2009 and the rising costs of policing are not sustainable for the long-term (Public Safety Canada, 2012). Given those financial realities, police leaders, in consultation with community and government stakeholders must re-evaluate their missions and core functions, as well as their operational practices in order to produce the best return on the taxpayer's investments in public safety. This review showed that Canadian police services deliver a good return on investments. Reviews of the ratio of officers to residents consistently show that Canada has fewer officers on the streets per capita than other first-world nations (Burczycka, 2013; Eurostat, 2013a; 2013b). Reductions in the volume and seriousness of crime, as reported by the Canadian Centre for Justice Statistics, show a consistent reduction since 1998, suggesting that police leaders have managed their resources carefully. There is, however, consensus that crimes reported to the police do not accurately reflect the true number of offences that occur (Moulton, 2013; Newark, 2013; Perreault & Brennan, 2010).

Police research in recent years has revealed that there is much to be optimistic about in examining the crime reduction capabilities of police: a growing number of studies have shown that investing in policing produces significant cost benefits for each additional dollar spent, although that crime control benefit decreases in low-crime communities (Chalfin & McCrary, 2012; Donahue & Ludwig, 2007; Keefe, 2011). It is difficult to make sweeping generalizations about crime control strategies in Canada as there is considerable variation within the nation in terms of levels of crime, the characteristics of communities, as well as the resources available to police services. Some communities have very high rates of crime and the strategies that appear promising in urban areas, such as focused deterrence and hot spots policing, might not be successful in rural areas. Moreover, some communities may be more resilient to crime, even during tough economic times.

There have been 11 major recessions since the end of World War II and each has different economic causes and consequences in terms of impact upon crime. As a result, researchers have reported mixed results in terms of the economics-crime relationship and some investigators found that crime increases during economic downturns while others have observed that crime stays stable during other recessions. The challenge is that some recessions have produced more crime and this increased demand on policing services has occurred at the same

time as funding cutbacks. The impact of economic conditions in Canada may be different than in the United States or other countries as our “social safety net” may mitigate the harm created by job loss, lower salaries, foreclosures or inflation.

While economic conditions in Canada have been more stable than in other English speaking common law nations, there is considerable uncertainty in the global economy and this will have short- and long-term implications for policing. Economic conditions could drive both the demands on policing and the resources allocated to police services. Other nations have had to confront these challenges and this review showed that police services throughout the European Community, United Kingdom and the United States have had to manage significant funding cutbacks since the start of the global recession in 2008. Many of the cost-containment strategies attempt to balance reducing operational costs and managing demand by reducing non-emergency services (PERF, 2013). The Chicago Police, for example, will no longer send officers to “reports of a vehicle theft, garage burglary, or crime where the victim is safe, secure and not in need of medical attention” (Spielman, 2013, p. 1). While these may be effective short-term strategies, they might not be sustainable for the long-term (HMIC, 2012). Moreover, there may be other consequences attached to austerity policing, including reductions in staff morale and public satisfaction with police services as programs and services are cut, and those consequences might not be apparent in the short-term.

One advantage that Canadian police services enjoy is that police leaders and policymakers have the opportunity to learn from the successes and failures from law enforcement agencies in other nations. An important step in this enterprise is to build the capacity, within the academic and practitioner communities, to better understand the relationships between economics and policing, managing adversity and austerity, establishing the value of police operations using cost-benefit analyses, as well as developing inventories of evidence-based practices for both urban and rural police services.

VI. References

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