

Original Article

Competition versus monopoly in the provision of police

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Abstract This article discusses the changing landscape of US crime, and both describes and evaluates the growth of private security in total security provided. Since the mid-1970s violent and basic property crimes have constantly declined while the number of economic crimes like identity theft, counterfeit goods and cyber misdeeds increased substantially. Monopolistic police have not addressed the changing landscape of crime and continue to deliver their traditional services. As market forces have limited influence on government, private security that is highly competitive and client oriented has been quicker to adopt technology and management innovations and address the new types of crime. Private police are estimated to be three times larger than public law enforcement. The article concludes that the increased penetration of private security is socially beneficial by improving efficiency, delivering client-oriented services and forcing police to improve their performance.

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Introduction

Public police in the United States have been losing market share in total security to private security companies and proprietary security. In the 1970s, there were five US private security officers for every seven law enforcement agents, while in the late 1990s there were three private security officers for every one public agent, and the relative private share continues to grow. This loss of monopoly power by the public police has also occurred in Great Britain, New Zealand and Canada (Bayley and Shearing, 1996; Bradley and Sedgwick, 2009). In this article, we describe, evaluate and predict private security's expansion. In particular, we examine why public police have shed private type services, contracted out public type services, and then analyze the social welfare implications. We hypothesize that the highly competitive private security industry and the rigidity of the monopoly public police have led to the shrinking market share of public police. This has occurred because of the entry of private security into both 'traditional' public police functions and the creation of new security services.



The background section discusses the changing level and pattern of crime and the nature of public and private police. In the next section, we outline the factors that have caused the growth in private security. We then investigate the market structure of the private security industry and the implications of its competitive nature. In the subsequent section, we evaluate the increased share of private security and its social welfare implications. We then discuss equity issues, and the last section summarizes the article, draws some implications, and makes public policy recommendations.

Background

Private security encompasses regular security guards with the power of citizen's arrest and other powers derived from that of the clients. A more advanced and expanding form of private security is that of sworn officers with power comparable to public police. Universities, hospitals, other non-profits and even some for-profit firms like FedEx have employed such private sworn officers.

The principle obligation for public police is combating the FBI Part I seven property and violent crimes. In fact, the level of property crimes peaked in 1976 and has continuously declined, reaching a 75 per cent lower per capita rate in 2008. Violent crime has declined since 1981, and in 2008 was 63 per cent lower per capita (Figure 1).

Economic crimes that include fraud, identity theft, cyber crime, copyright abuse over the Internet and counterfeiting of branded goods have increased substantially since 2000. Fraud complaints grew 471 per cent between 2000 and 2009. Identity theft over the same period grew 689 per cent. The total of such economic crime grew 416 per cent (Figure 2). These data are based on complaints to the Federal Trade Commission (FTC, 2009), which does not cover all occurrences. Another US government study found that 11.7 million individuals, 16 years or older, comprising 5 per cent of this population group in the United States, were victims over a 2-year period of identity theft, causing US\$17.3 billion financial cost (Bureau of Justice Statistics (BJS), 2010, p. 1). In fact, a large number of crimes like counterfeiting goods and cyber misdeeds are aimed at businesses. Survey-based data show

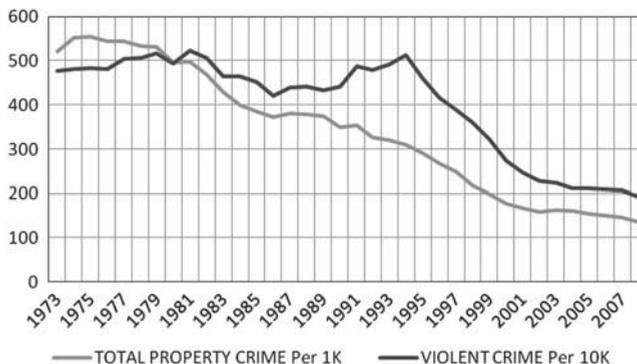


Figure 1: Crime rates over time.
Source: US Department of Justice, uniform crime reports.

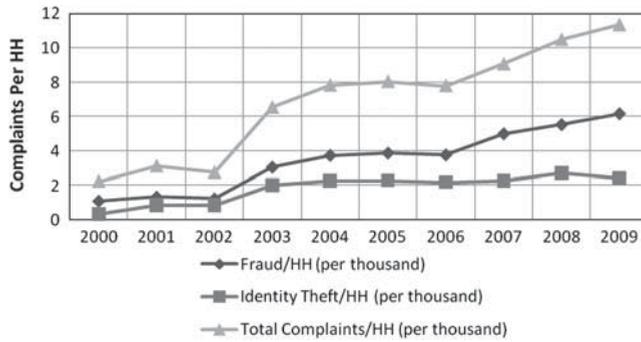


Figure 2: Economic crime complaints.

Source: Federal Trade Commission (2011), Consumer Sentinel Network Data Book for January–December 2009.

that in 2003, \$287 billion worth of counterfeiting goods were sold in the United States, growing by 29 per cent to \$370 billion in 2007 (NYC Controller’s Office). Government statistics show that 74.2 per cent of businesses were victims of cyber crimes in 2001 while a slightly lower 67 per cent were victimized in 2005 (BJS, 2004, 2008).

Even though both property and violent crimes have declined in both level and per capita, police officers and officers per capita have increased. State and local police officers in 1977 numbered 574 thousand or a rate of 2.657 per thousand people. In 2008, the number of officers increased 29 per cent to 831 thousand or 2.733 per thousand.

The share of public police officers in total security has declined. In the 1970s, the ratio of public law enforcement officers to private security officers was 1.4 to 1 while in 1990 the ratio reversed to 3 private to 1 public and is still growing (Joh, 2004, pp. 54–55). Also indicative of the US reliance on private security is the fact that in the late 1990s the United States had 582 private security guards per 100,000 people. The US private security rate was second in the world to the 900 in South Africa, and much higher than the 432 in Canada and the 160 in the entire European Union (EU). The corresponding rates for public police were 321 in the United States, 312 in South Africa, 260 in Canada and 375 in the EU (De Waard, 1999, p. 155). Finally, spending on private police has been 70 per cent greater than that on public police (Pastor, 2003).

Both public and private police combat crime but they have different objectives, which lead to different activities and behavior. Public police desire to maintain their budget and improve their image in the eyes of local politicians and their constituents. Therefore, police activities are aimed at arresting and convicting criminals including some for ‘crimes’ with modest, if any, negative externalities. This pursuit of victimless crimes like underage drinking, illicit drugs, prostitution and illegal gambling enables easy arrests and conviction, achieves wide publicity and improves their crime statistics (Benson, 1990, p. 136). Indeed, some have even argued that public police pushed to make drugs illegal. This clearly helps justify increasing police budgets (Benson *et al.*, 1995, p. 23). The primary objective of private security is to serve their client. Therefore, they deter and prevent criminal activities aimed at their client and largely avoid arrests, which could produce negative publicity for the client (Blackstone and Hakim, 2010a, p. 361). Private police have been described as pursuing safety through preventing crime, whereas public police seek justice through punishment and deterrence (Bayley and Shearing, 1996).



Public police are expected to maximize social welfare, which is ill-defined. Unfortunately, police activities are only well defined with respect to control of property and violent crimes and otherwise involve all sorts of activities, some of which are non-public goods. Examples of the latter activities include police athletic league or response to false burglar alarms. Monopolistic public police are not profit oriented and their objective is survival. Police can choose the activities they desire and their costs can be higher than under competitive conditions. Private police are a profit-seeking industry whose objectives are well defined by their clients, and they attain those objectives by minimizing their costs.

In spite of the increase in private security share in total supply of security, their wages remain far below public sworn officers. Generally speaking, private security officers earn 47 per cent of what sworn officers earn (Blackstone and Hakim, 2010a). The more sophisticated private guards that are former military or police earn about 30 per cent less than sworn officers (Interviews, 2008). The high price of sworn officers has prompted governments to replace them for their less skilled tasks with private guards (Thomas, 2009; White, 2009). Instead of public police officers, private armed officers guard the transit systems of Miami, Dade County Florida and St Louis, Missouri. Such transit system security officers typically earn \$25–\$28 per hour compared with \$38–\$40 per hour for sworn officers. Private armed guards who earn \$34 000 and Supervisors earning \$43 000 replaced Hernando County sheriff deputies earning \$66 000. Private guards in Loveland, Colorado replaced public officers escorting prisoners. Southfield Michigan Police shifted the guarding of the 72 hours lockup of suspects from the Sheriff's Department to Wackenhut Corporation, which yielded annual savings of approximately \$700 000 or 50 per cent. The company used primarily retired police officers and was also able to reduce the fingerprint error rate. For additional perspectives on contracting out police services, see Savas (1996).

Factors Explaining the Growth of Demand for Private Security

Demand for private security has been growing since the late 1970s (Strom, 2010, p. 44). Demand for the guard segment of private security was first to grow, followed by entry of private security into the more sophisticated areas of investigation. In part, the growth of private policing occurred because the social and commercial environment changed. More commercial and residential activities occur in a quasi public environment that is beyond the normal reach of public police. Enclosed shopping malls, gated communities and business districts are now common. From the supply side, police are not required routinely to secure such private properties, and from the demand side, the customers and therefore the owners desire a safe and pleasant environment. Police do patrol public business districts; however, merchants sometimes desire a higher level of security and thereby merchants' associations hire private police to augment public patrol (Pastor, 2003; Stringham, 2009).

A second factor relates to the positive and high income elasticity for security (Hakim, 1995). The rise in income yields a greater demand for security than public police provide. Therefore, developers of gated communities and business districts in affluent communities employ additional private security to augment the regular public police in order to sell/rent properties. A non-governmental monopoly would likely have offered differentiated services of lower quality and at lower prices than sworn officers to fulfill such patrol tasks. The bureaucratic police monopoly did not attempt to serve such buyers and allowed private security



to enter. Response to burglar alarms, escort of prisoners to court, guarding prisoners at hospitals and protecting crime scenes are similar services to routine patrol and do not require sworn officers but could be and often are provided at similar quality by lower paid security guards. Interestingly, such services have also been ceded to private security in such other countries as New Zealand (Bradley and Sedgwick, 2009).

On another level, the newly sophisticated crimes cannot be professionally handled well by sworn officers and have created a new demand for private security. Police are restricted in salary levels and by civil service regulations and limited budgets. Therefore, they encounter difficulties in hiring highly trained IT professionals, accountants and engineers that possess the knowledge to deal with such sophisticated economic crimes. Also, constituents are mostly concerned with violent crimes. Police also refrain from dealing with such economic crimes that often require substantial sophisticated investigative effort and affect a much larger jurisdiction than the locality (National Institute of Justice (NIJ), 2010). Solving such crimes benefits people beyond the local jurisdiction and does not incorporate the positive publicity that solving local violent crimes provides the police. Therefore, corporations that are affected by economic crimes must either build their own investigative unit or contract the investigation to private security companies. Often, the results of the investigation are provided to the district attorney to press charges and/or to the police to follow up with arrests (Steele, 2009).

Demand for private security has also grown because companies fearful of adverse publicity choose to utilize private security or their own internal investigators. Any publicly disseminated irregularities could harm the company.

Further, some federal laws and regulations mandate that financial institutions provide a reasonable level of security for financial transactions. Sarbanes-Oxley requires financial institutions subject to US Securities and Exchange Commission regulation to have some technological security (Babic, 2011, p. 30).

Since the 1990s, enhanced regulatory requirements for colleges and universities, hospitals, chemical and nuclear plants created greater demand for private security. The 1990 Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act requires colleges and universities to publish annually their crime statistics. This encourages colleges and universities to improve their security to compete for students, faculty and employees with other such institutions. For example, Temple University in 2011 had 121 sworn and armed officers and is one of the largest police departments in Pennsylvania. An increase in robberies in the surrounding neighborhood led the University in 2011 to begin the process to add 12 sworn officers. Drexel University, which is also in Philadelphia created its own sworn officer police department in March 2009 and has 27 armed officers. Seventy-four per cent of colleges and universities serving at least 2500 students in 2005 employed sworn private officers and/or contracted out security to private security firms. Further, these private departments became more like regular public police departments; between 1994–1995 and 2004–2005 the percentage of college and university departments with armed patrol officers increased from 66 to 72 per cent. There has been an increase in both the number of universities using sworn officers, and the use of private security companies in a variety of security/public service obligations (US Department of Justice, Bureau of Justice Statistics, 2008).

The Joint Commission on the Accreditation of Healthcare Organizations has promulgated rules for hospital security. Hospitals participating in Medicare and Medicaid must comply



with enhanced security of all patients, especially the protection of newborns and children, patients in emergency rooms and trauma centers, and the security of pharmacy drugs. For example, Massachusetts General Hospital's sworn officer police department has 350 officers and 4 investigators.

The US Department of Homeland Security (US DHS) in 2007 established security rules for the 15 000 chemical plants based on three tiers of vulnerability to terrorist attack. Depending on their tier, plants are required to have different degrees of protection against a terrorist attack. DHS is concerned with the release, theft or sabotage of chemicals. Lack of appropriate compliance risks imposition of fines and even closure of facilities (US DHS, 2007). Since 2001, these facilities have increased use of private security, including significant application of monitoring technology (Blackstone and Hakim, 2010a, pp. 366).

Following the 9/11 attack, the US Nuclear Regulatory Commission tightened security requirements, including mandating more and better-trained officers capable of repelling a heavily armed band of attackers. Wackenhut Corporation specializes in securing such facilities and guards 30 of the 104 US nuclear plants.

The courts have added to the demand for private police by broadening the scope of responsibility of owners on the basis of premises liability and negligent security. The courts have traditionally required establishments to provide security where individuals entrust themselves to the operators. These include hotels, schools, workplaces and public transit (Landwehr, 2002). The courts have extended the security responsibilities essentially to all businesses; jury awards have increased and more suits are brought.

Operators of stores can, on occasion, even be held liable for crimes against their customers in the immediate vicinity of their premises (Pastor, 2003, p. 60). The reason is simply that the business owner has greater knowledge of crime occurrences in the neighborhood than the patrons, a case of asymmetric information. Since the mid-1970s, the courts have further increased the liability of building owners for negligent security arising from actions of third parties. For example, a New York Supreme Court ruling held the owners of the World Trade Center liable for the injuries and deaths caused by the 1993 truck bombing (Lillien, 2006). In another third party case, a college senior was shot to death at a parking lot of his apartment building in Kendall, Florida. Two insurance companies for the apartment complex settled the claim and agreed to pay \$2 million for the security negligence (Jackson, 2007). Moreover, the courts consider the standard for the industry as a measurement rod in negligence cases. Thus, establishments need to raise their level of security as the level rises in comparable establishments if they want to reduce liability exposure ('Reasonable person', n.d.).

Competition for clients and workers is another significant factor increasing the demand for security. If competing businesses raise their visible security level, or if a crime has occurred at the business or its environment then the business in question risks loss of clientele by not improving its own security. Terrorism in greater risk cities may also lead to greater demand for private security.

The lower price and the flexibility to provide different levels of quality make private security both a complement and a substitute to public police. Private police complement public police when the former are contracted by brand name companies to investigate counterfeit goods sale and then submit the findings to the district attorneys or police for arrest and prosecution (Steele, 2009). Substitution is illustrated by cities hiring private security to guard detainees (Blackstone and Hakim, 2010a, p. 370). In the other direction,



La Salle and St Joseph's Universities, both in Philadelphia, contract the Philadelphia Police Department to provide each two officers (Key, 2008).

A noteworthy example of substitutability between private and public police is the Patrol Special Police in San Francisco. Private patrol units were authorized by the city charter and are funded by the local merchants at a set per hour fee. The private patrol officers provide the merchants the type of service and the number of hours desired. The Police Commission needs to approve all individual hires and oversees the private police activities. The fee for private officers in 2009 was \$48 per hour. At the same time, public police officers were allowed to work overtime through the Police Department at \$106 per hour, which includes a 22 per cent Department administrative fee (Stringham, 2009, p. 5). Both substitution and complementarity with police generally increase demand for private security.

The Structure of the Private Security Industry

The private security industry is highly competitive and as such is gaining work at the expense of the less flexible, monopolistic public police. Table 1 shows that both the investigative and patrol parts of the private industry are still competitive with four firm concentration ratios below 40, which is the boundary between competitive and the beginning of

Table 1: Security industry statistics (in current \$)

NAICS Code		1997	2002	2007
5616 (Investigation and Security Services)	Sales (in \$000) (percentage of change)	20444077	31164968 (52.4)	41597722 (33.5)
	Establishments (percentage of change)	21494	23068 (7.3)	24998 (8.4)
	Concentration Top 4	19.5	27.8	22.9
	Concentration Top 8	29.0	33.0	29.1
561611 (Investigation Services)	Sales (in \$000) (percentage of change)	1819015	2326220 (27.9)	4363668 (87.6)
	Establishments (percentage of change)	5077	4955 (-2.4)	5059 (2.1)
	Concentration Top 4 (percentage of change)	7.2	15.7	27.0
	Concentration Top 8 (percentage of change)	10.1	19.5	33.6
561612 (Security Guards and Patrol Services)	Sales (in \$000) (percentage of change)	9132633	14787704 (61.9)	19405389 (31.2)
	Establishments (percentage of change)	6644	7446 (12.1)	9091 (22.1)
	Concentration Top 4	28.3	32.7	30.6
	Concentration Top 8	35.7	39.8	38.7
All Services	Sales (in \$ billions)	3235.8	4347.2 (34.3%)	5822.8 (33.4%)

Source: US Census Bureau, Economic Census Industry Series Reports and Concentration by Largest Firms.



oligopolistic markets (Shepherd and Shepherd, 2004, p. 73). The patrol segment is more concentrated than the investigative segment. Further, concentration is not increasing in patrol but is increasing in investigations. Between 1997 and 2002, the growth was mainly in the patrol segment while the growth between 2002 and 2007 was greater in the investigative segment, reflective of the rising importance of the more sophisticated types of crime. It is important to note that the data are obtained just for the estimated 55 per cent contract – security companies. The remaining 45 per cent is produced internally by non-security companies themselves.¹

A US Congressional Research Service report used a slightly different definition of contract guard companies and found in 2003 that the top 4 had 50 per cent and the top 10 had 67 per cent of the industry revenues (Parfomak, 2004a, b). The remaining 33 per cent of industry revenues was produced by 5000 small regional and local companies (Parfomak, 2004a, b; Allied Security Holdings LLC, 2008). The HHI² for the industry in 2003 was at most 970, which means that the industry is equivalent to one with about 10 equal size firms and places it within the unconcentrated range. According to the current (2010) merger guidelines of the FTC and the Department of Justice, an HHI of 970 is well below the 1500 boundary where moderate concentration begins. In 2008, concentration remained moderate where the top seven had 56 per cent of the market (Securitas, 2008).

Entry into the patrol and guard services is easy; labor comprises 70 per cent of total cost and is drawn mainly from the large pool of low-skilled workers. No significant regulatory requirements and few economies of scale exist, again forcing prices close to cost. Further, reductions in prices for technology have reduced the capital costs for entry, making an already competitive industry even more competitive (Bradley and Sedgwick, 2009).

The structure of the private security industry is conducive for competitive pricing, technological and managerial innovations, differentiated products, and ultimately growth at the expense of public police. Shifting market shares indicate the competitiveness of an industry. Indeed, Akal Security that began operations in 1980 saw its market share rise to the fourth largest guard company with 5 per cent of the market in 2003. The leader in the industry, Securitas, experienced a reduction in market share from 24 per cent in 2003 to 18 per cent in 2009 (Parfomak, 2004a, b; Securitas, 2009). Another indicator of the competitiveness is the fact that prices have risen less than cost, squeezing the profit margin of the companies. Between December 2004 and December 2008, overall security industry cost increased at least 9.2 per cent while the Security Guard and Patrol Services Price Index increased just 5.2 per cent. Further, all services in the Producer Price Index (PPI) rose 18.5 per cent over the same 4-year period. Finally, between December 2006 and September 2010 the security PPI increased 5.1 per cent while all traditional services PPI rose 5.6 per cent. This indicates both a decline in real security prices and the competitiveness of the security industry. In addition, companies in the security industry often lose contracts for small differences in price, again suggesting the competitiveness of the industry (Page, 2005). There is also substantial entry and exit in the industry. For example, almost 20 per cent of the establishments in the industry did not operate for the entire year in 1997. Further, proprietary operation of security is a significant alternative that keeps prices competitive. Also contributing to competitive behavior is the individual negotiation and tailoring of services to the desires of the client.

The competitive security companies have exploited niche security markets where they enjoy greater control of their prices. Indeed, Securitas that lost 6 per cent in market share in



the short period between 2003 and 2007 stresses investigations, security consulting, mobile patrol, and specialized guarding of telecommunications, high-technology and banking facilities (Securitas, 2008, p. 20). Wackenhut Security, a patrol and guard company, entered the niche market of securing nuclear facilities in the United States, and in 2009 was guarding 30 of the 104 nuclear installations (Blackstone and Hakim, 2010a, p. 366). Differentiated services have allowed even the lower level guarding services to evolve into more sophisticated versions like executive protection and investigations for hospitals and universities.

In the growing security area of investigations and sophisticated protective services, between 2002 and 2007 sales rose 87.6 per cent while the number of establishments rose only 2.1 per cent. Demand for investigations rose for the new and sophisticated, mainly technological, types of crime like intellectual property and brand protection, identity theft, credit card fraud, Internet fraud, due diligence investigation and computer forensics (for example, Securitas, 2008, p. 20). On the supply side, in addition to the growth of contract security companies, firms from such other industries as accounting, business consulting, computer services and even engineering consulting enter the investigation field.

Private policing operates much like public policing in terms of everyday responsibilities for security. In hospitals, universities, corporations, malls, amusement parks and gated communities they are the police. For example, security departments of banks investigate allegations of employee theft. As long as the theft is under \$20 000, a bank will typically handle it internally. The security department of a university works to reduce sexual harassment complaints. The security department of a large industrial company investigates workplace violence complaints and allegations of drug selling. One large retailer with its own central station monitors its thousands of stores with an interactive closed circuit video and audio system and can immediately respond to events.

Brand protection is an emerging case of a Public Private Partnership between police and private security companies. The FBI estimates that US companies lose as much as \$250 billion a year to counterfeiters. The typical Fortune 500 Company spends between \$2 million and \$4 million a year on combating fake goods (Knight, 2004). Illustrative of the security activities, Louis Vuitton, Coach and Chanel contracted Stumar Investigations to conduct undercover investigation of merchants selling counterfeit goods in Philadelphia, PA. After 2 months of investigation and collection of evidence, Stumar secured the cooperation of the Philadelphia police in raiding four stores and arresting their owners who face trademark counterfeiting and deceptive business practices charges, and at least half a million dollars worth of merchandise was confiscated (Steele, 2009, B2). Police refrain from such initial investigation because of the high cost involved. This type of crime also does not generate much public interest. Arresting criminals involved in the traditional property crimes benefits the local residents while controlling the sale of counterfeit goods mainly benefits the brand name companies that are often located elsewhere and, may even annoy local consumers of the counterfeit products. Such investigations are often costly and shift resources from investigations of local crimes. These are reasons for the limited interest of public police in investigating such crime. However, once the evidence has been obtained, the cost of arrest is low, and there is some positive publicity for the police generated by the arrest(s). Incidentally, most of the actual legal cost is incurred by the District Attorney. Police clearly have to follow the orders of the district attorney while their costs are minimal. Noteworthy, one security firm executive stated that it is desirable that police focus on street crime instead of this type of economic crime. He noted that citizens are more concerned



with their personal safety so that the police are addressing what people expect of them. However, some social benefits result since profits from counterfeit goods sometimes provide financing for terrorist activities (Newall, 2010, A4).

In the era of globalization, many branded products including food, drugs and toys from China, India or other countries incorporate ingredients, which could be inactive or even unsafe. Producers of the final product on occasion may encounter difficulties in maintaining quality control of their inputs. Sometimes an entire food product or drug is counterfeited, jeopardizing the brand name and threatening consumer safety. For example, GlaxoSmithKline determined through laboratory tests that counterfeit versions of its Alli 60mg capsules were being marketed. The counterfeit version sold over the Internet did not contain orlistat but instead contained a potentially dangerous controlled substance, sibutramine (FDA, 2010). The company that markets the product has the incentive to assure quality in order to avoid negative publicity, law suits and lost sales. Accordingly, guarding against counterfeiting is precisely an activity that is appropriate for private security with a limited role for public law enforcement agencies. Public law enforcement, in addition, is reluctant to devote its limited resources to investigate counterfeit cases. Thus, the lack of government intervention means that companies will turn to private security investigators or establish their own investigation division. Our interviews and Table 1 confirm that such private investigations have grown more rapidly than other security, and the trend is expected to continue as globalization expands.

Companies have additional incentives to use private rather than public police investigation. A company is typically interested in solving the problem as inexpensively as possible rather than punishing the perpetrator. For example, a large hospital in Pennsylvania prefers to use its own investigators even for misappropriation incidents to avoid the high cost involved when the judicial system is used. Our interview revealed that physicians are called to court to testify as many as 12 times, a significant cost that can be avoided when private security is involved and the perpetrator is simply fired.

A large part of identity theft involves fraud against individuals using bank accounts or credit cards. Identity theft is often investigated by the bank that is victimized. In fact, 68 per cent of victims report directly to banks and credit card companies and only 17 per cent report to any law enforcement agency (BJS, 2010, pp. 5, 6). Police, the FBI, and many US attorneys' policy is to prosecute such fraud cases only if the theft exceeds \$100,000 (Goldstein, 2007). Banks typically must absorb the losses. Such a shedding policy leaves the investigation of most identity theft to the victimized banks. However, when the private investigation reveals substantial criminal activity, police or FBI involvement is then requested. For example, Bank of America's own 3-year investigation helped local and federal law enforcement solve an identity theft ring involving 800 bank victims and \$11 million in damages. The movement of top FBI and police investigators to private security companies enhances cooperation between the public and private sectors. Interestingly, we witness a lack of investigative cooperation, including information sharing, among victimized banks that could potentially decipher common threads and clues, enhancing the likelihood of capturing criminal rings.

High-level executives and other wealthy people are often at risk of being kidnapped for ransom or threatened for terrorism purposes. Investigative firms usually include executive protection or bodyguard services. As both the globalization and terrorism risk rise, the demand for such services increases. Indicative of the high and growing demand for



executive protection personnel is their median income of \$55 000 a year, with some earning in excess of \$180 000. Demand is expected to increase by 17 per cent by 2016 with 175 000 new positions available (Bodyguard job description).

Evaluating Private Security Growth

In this section, we evaluate whether it is socially beneficial for private security companies to compete with monopolistic public police.

Economic theory and practice show that lack of competition makes monopolies both allocationally inefficient and inefficient in the usual business sense (x-inefficient), rigid to changes in their activities, thus slow to innovate, and their officers often share the monopolist's profit.

Private monopolists often do not fully exercise their pricing power because they establish prices that are low enough to discourage competitive entry. In the case of a bureaucratic government monopoly like police the fear of potential competition is lacking; police are funded through public budgets and not by their consumers like private monopolies. Therefore, police are less concerned than a private monopoly about rising cost (wages) of their officers, the major input in production, and have less incentive to innovate. Therefore, in the competitive private security industry it is common that wages reflect guards' productivity (or wages equal the value of marginal product). In the public sector it is not unusual that officers perform tasks where their productivity (or value of marginal product) is lower than officers' wages. Police are resistant to changes in their behavior and maintain the same services over the long run. The fact that the police share is only 3.14 per cent of total municipal operating costs has provided some power for police to maintain their budgets when municipal revenues decrease (US Census Bureau, 2005–2006). Police derive their revenues largely from real estate taxes, which in general are relatively inflexible to business cycles.

Accordingly, the costs of monopolistic public police are higher than what they would have been under competitive conditions. The reason is wages exceed competitive rates so that in effect above normal 'profits' have been shared with the officers. Public police have been losing market share since their high cost has led municipalities to contract out police functions. In fact, police have not cut cost, effectively wages, to prevent entry of private security. After all, their own jobs are usually secure and the outsourcing means simply that the department will not expand. For example, the Syracuse NY airport used public police officers at an overtime pay rate and charged airlines for these costs. These costs were partially shifted by the airlines to the travelers, thereby preventing low-cost airlines flying from Syracuse. This reduced the airport's competitiveness with nearby airports, and in 2011 the City was considering a shift to private security (Knauss, 2011). Interestingly, an argument against contracting out is the lower satisfaction of constituents compared with self-provision (Mohr *et al.*, 2010).

Private monopolies employ workers as long as wages are below the contribution of the workers to the value of the output or revenues. They can hire/fire workers more easily than the public sector. Once a police officer completes the probation period (usually 6 months) termination becomes difficult. Strict civil service rules and union power restrict terminating unneeded public police officers. Therefore, police, unlike private monopolies, utilize officers on low productivity tasks for short or even long-term basis. For example, sworn officers are



utilized in clerical roles, writing parking tickets, investigating minor property damage traffic accidents or even unlocking vehicles, animal control and escorting funerals. Further, studies show that 80 per cent of police activities are non-security and private in nature (Blackstone *et al.*, 2007, p. 316).

Private sector firms, whether monopolies or not, employ workers of different skills and pay them according to specific tasks. Police officers are all graduates of the police academy with some completing limited continuing education courses. Thus, even though police tasks vary, they are all dealt with by officers with fundamentally similar education and training. The result is that sworn officers sometime work at tasks below their ability and at an unjustified cost (wages above their social marginal benefits). Other times, police officers are engaged in tasks above their ability, education and training where wages are below their marginal social benefits.

Police provide a standard service of sworn officers while private security is able to differentiate officers according to clients' demands. Sworn officers' wages within any given community vary primarily by seniority and not by productivity. Private security wages within any community vary according to qualifications and the specific local demands of each industry. National data reveal that private guard wages vary almost 30 per cent depending upon guards' qualifications. In May 2008, guards in acute care hospitals earned \$29 020, in schools \$27 980, in hotels \$25 660 and in security companies \$22 170 (Bureau of Labor Statistics (BLS) 2011).

Public police have been slow to respond to changes in the demand for security. Economic crimes are difficult to investigate, require much time and such personnel with sophisticated and specific knowledge as accountants, and provide little positive publicity. In fact, the failure of police to devote sufficient investigative resources for economic crimes led companies to provide such services and develop a whole new field of forensic accounting. Police are constrained by salary limits and are unable to pay the necessary market wages for personnel with sophisticated education and training. The average wage for all police officers was \$54 000 in 2007 (Blackstone and Hakim, 2010a), whereas forensic accountants often earn between \$125 000 and \$150 000 (Forensic Accounting Career Information, 2009). Police officers can only be trained to a limited extent to handle complicated matters. For example, the FTC and related federal agencies have trained approximately 5400 police officers, or less than 1 per cent of all public police officers, to investigate economic crimes like identity thefts (FTC, 2011). The forensic accounting and corporate investigations industry has also grown because corporations prefer private companies to investigate such cases and not involve the public police. This reliance on private police avoids both bad publicity and possibly uncovering other irregularities or criminal activities like tax fraud or kickbacks that could harm the corporation and its executives (Williams, 2005, pp. 327–330). Revealing negative information could also harm a company's stock price and make the company susceptible to a takeover. Management could then lose their positions and thus has a strong interest in using private security.

Public police like other monopolies have also been slow to innovate in either management or technology. Public police were slow to adopt practices like community policing where police work with the residents to solve crime-related problems. For example, merchants in San Francisco pay for private patrol to disperse loitering crowds in front of stores in order to prevent crime while public police simply react to crime that has already occurred. The adoption of community policing by public police has been attributed



to competition from private police (Bayley and Shearing, 1996, p. 588). Public police were also slow to return to beat patrol, which has been successfully used in the private security industry. Indeed, when public police have employed beat patrol, it has usually been successful. For example in Philadelphia, beat patrol by public police reduced violent crime by 22 per cent in 60 of the most violent locations during the summer of 2009 compared with what it would have been in the absence of beat patrol (Study recommends fighting crime the old-fashioned way, 2010). In fact, increased police patrols have been shown for some time to reduce crime and disorder (Sherman and Weisburd, 1995).

Public police are slower to adopt technology than the private police probably because of their bureaucratic nature and their reduced access to financial markets, especially for immediate funding. Federal, state and local police in total spend less than half of the more than \$100 billion spent annually by private security companies (COPS, 2008). Private security uses technology as a force multiplier and is also less encumbered by issues of privacy (interview with a security executive). For example, even in 2010, many police detectives in Philadelphia lacked voice mail. Private security pioneered the use of analog and later digital camera technology to replace or complement patrol in buildings, malls, hospitals and other large facilities where one attendant can monitor many cameras. Illustrative of the private sector's early adoption of surveillance technology is the 2005 statement by the then Mayor Daley of Chicago that in wealthy suburban communities high rise buildings have utilized guards, technology and cameras long before the police (Theodore *et al*, 2006, p. 96). Bellwood Illinois as late as 2007 was one of the first communities to install and monitor public cameras covering much of its entire public thoroughfares. Temple University security in 2009 utilized 632 cameras which is more than police used for the entire City of Philadelphia. Moreover, private security has used smart camera technology since 1995. The technology enables digital identification of photos of both known criminals, and those in possession of guns, alerting the attendant in the control room. University of Pennsylvania police as early as in 1995 were using such smart digital cameras to identify weapons and criminals. East Orange, NJ sometime after 2007 was the first city to use this Australian developed technology (Australian Trade Commission, Australian Government, 2008).

Corporations have used card readers or access control for many years. Only recently have governments begun to use such technology. In 2011, police were beginning to use license plate readers, a technology that has long been used by the private sector in parking garages. Public police are beginning to utilize other sophisticated technology. For example, 4000 New York City police officers in 2011 were carrying sophisticated radiation detectors.

A security director of a private university in Pennsylvania revealed that he has the requisite budgetary authority to acquire technology. His counterpart, the precinct commander has to surmount difficult bureaucratic obstacles before acquiring the same technology. Indeed, the University has installed 70 cameras while the precinct in which the University is located has none. In the case of a crime, the precinct commander often requests the footage from the University cameras.

The monopolistic public police have been largely unaccountable, especially in large cities where the individual is quite disconnected from the police and the political representatives that are supposed to reflect, among other things, constituents' preferences on police obligations and performance. Unlike the private sector where accountability is common, police accountability for persistent crime trends was not common until *CompStat*



was adopted by the then Mayor Rudolph Giuliani of New York City in the late 1990s followed by the then Mayor Martin O'Malley of Baltimore. *CompStat* provides daily electronic mapping of crime and police activities in each precinct, allowing precinct commanders to be held accountable. The senior commanders of the NYPD regularly viewed the daily crime patterns and patrol activities, checking whether practices were altered to address obvious problems (Blackstone *et al*, 2005, pp. 36–38, 47–50).

Personal rewards are usually important to improve accountability. Unfortunately, in the short run, civil service rules preclude using bonuses and increments to salaries to reward performance. In the long run, police can use promotions to reward performance, but they are easier to use as rewards for low-ranking officers. There are after all limits to the number of highly ranked officer positions on the force. If many officers excel, widespread promotions are impossible. Similarly, civil service rules make it difficult to terminate officers for poor performance.

A government monopoly like police can underperform and still exist. With a non-governmental monopoly or a dominant firm, lack of performance ultimately leads to elimination of market power and possibly even extinction. Pan Am Airlines, Kodak and Polaroid are examples of companies that did not adjust to either changing demand or new technology. Further, performance measures and their relative weights as utilized by police commanders do not necessarily reflect societal objectives. Police are judged by such measures as number of arrests, crime rate, response time and clearance rate. As a result, police activities are geared toward achieving these objectives even though social benefits could be negligible. For example, police often pursue easy arrests of prostitutes, underage drinkers, illegal gamblers and minor drug abusers. On the other hand, private police are judged by how well they satisfy their specific client's desires. Accordingly, private police are normally not interested in arresting criminals but rather in preventing or deterring criminals from operating in their area of responsibility. Publicity of criminal activity may yield undesirable business consequences. Further, arrests themselves impose costs on the client, since they require an officer to appear in court.

Public police are bound by the Fifth and the Fourteenth Amendments when potentially arresting or investigating a suspect. They must provide all the constitutional protections including the 'Miranda' warning against self-incrimination. Private police are not required to do so. However, private police have the power of 'citizen's arrest' and lack the protection afforded by sovereign immunity. Also public police are required to obtain a search warrant in most cases while the private police can normally search desks and lockers in their clients' premises.

Private police are sometimes accused of abusing individuals. The perception is that the less educated and trained private guards are less concerned with public welfare than public sworn officers. Unfortunately, there are no aggregate data to support or refute this allegation. However, since the private security industry is highly competitive and the guards lack employment security, incentives for abuse are expected to be lower than for the monopolistic government protected police. Further, it is easier to sue private security for abuses. For example, a security guard used his gun to strike a customer whom he mistakenly thought to be a thief. Later the victim, who initially complained of a headache, suffered a disabling stroke. A jury awarded the victim \$1.2 million (Fleischman, 1983).

We discussed above the fact that public police budget is a constant 3.14 per cent of total municipal operating costs. Thus, it is highly unlikely that bureaucratic police just happen to



provide the level of security that is optimal from society's viewpoint. Now, at least the security is optimally provided in the sense that the last dollar spent on security provides the client one dollar worth of benefits, or marginal cost equals marginal benefit for the clients. Since the segment of security served by public police is smaller and relatively declining, the overall security level is likely to be more efficiently provided.

Public perception of security is strongly determined by the level of violent crime in the community. When private security firms fulfill a greater share of security tasks, public police can shift their activities to preventing and deterring violent crime. This shift improves public perception of security and thus increases social welfare.

In fact, violent and property crimes have declined since the 1970s. The growth in total security officers, largely the result of the far greater growth of private security than that of public police, may account at least partially for the decline in these crimes (Bayley and Shearing, 2001, p. 30). Specifically, private security in the late 1990s numbered at least 5.82 per 1000 population and possibly as high as 8.19 compared with 3.72 in the 1970s. Public police increased over the same period from 2.66 to 2.78 per 1000 population. Thus, the total security officers increased from 6.38 to between 8.6 and 11 per 1000 population.

We previously suggested that public and private police are substitutes. Thus, when the 'price' of public police rises as a result of increased police salaries, there is a greater demand for private security. Further, hiring of police officers by private institutions or contracting out police functions to private security firms increases both short- and long-term effective utilization of public and private police and therefore increases social welfare. In the short run, such hiring solves fluctuations in demand where an officer that is only temporarily needed is 'rented'. In the long run, such a practice enhances competition between the public and the private sectors.

An argument against the spread of private security is that its quality is lower than the quality provided by public police. This is partially true since some private security companies offer basic guard services of lower quality than police. However, because of competition with both other security companies and with public police, private security prices are substantially lower. This monopolistically competitive industry also serves diverse preferences of consumers and therefore it is desirable to offer a wide range of service quality, raising social welfare. Allowing private security to compete enables government agencies to shift from public to private security and make more efficient use of their budgets. Another more fundamental criticism involves lack of information about quality (Bayley and Shearing, 2001, pp. 31–32). Competition does not work well when buyers cannot judge quality. However, buyers of security services are generally sophisticated and knowledgeable, which lessens the significance of this problem.

An argument against the existence of many private security companies operating in a region is that it may create confusion with the public, and criminal elements will take advantage of such confusion. In general, such a diverse market could reduce the respect and obedience toward security forces that existed when the public police fulfilled most security obligations. A move from an organized monopolistic police provider to the 'unchartered waters of monopolistic competition' may sound worrisome. From the demand side, such a shift could raise social welfare since groups' specific preferences are better addressed. From the supply side, similar changes in other industries (like the AT&T breakup) brought about by antitrust caused similar fears but yielded improved technology, new products and more efficient production.



Equity Considerations

Concerns have been raised that private security is largely employed by the rich while the poor depend only on public police (Bayley and Shearing, 1996; Bradley and Sedgwick, 2009). Thus, the disparity in security between the rich and the poor widens and could create additional social tensions. The widening protection disparity between the groups is not a real cost to be attributed to private police. However, if social tensions indeed rise and lead to crime against the rich or other harmful activities then these are costs attributable to private security. This is a valid concern that requires academic attention.

The better protection of wealthier neighborhoods is claimed to displace crime to less wealthy neighborhoods unprotected by private police (Bradley and Sedgwick, 2009). Reppetto (1976) has identified the various forms of displacements. However, most empirical studies could not identify significant magnitudes of crime displacement (Hakim and Rengert, 1981). Critics of private security further claim that an increased usage of private security in the wealthy neighborhoods of the city could motivate the wealthy to reduce public police budgets and this will lower security for the poor. Moreover, it is argued that in poor neighborhoods, police are reluctant to adopt community policing, which prevents crime and enhances safety (Bayley and Shearing, 1996). These are concerns that also merit consideration.

On the other hand, Welfare Economics suggests that if even one person is made more secure while no one else is made less secure then private security is beneficial. Enhanced security of the wealthy neighborhoods can shift police attention to the poor neighborhoods where crime is often generated. Indeed, it is possible that the overall decline in FBI Part I crimes can be partially attributed to the growth of private police. Other evidence also shows that increased reliance on private security can benefit the entire community. For example, since private response to burglar alarms was instituted in Salt Lake City, public police response time to high priority calls declined from 5 to 3 min (Blackstone *et al*, 2002). The faster response time benefits all residents, rich and poor. Further, private security does not exclusively protect the wealthy. Private security is often used by merchants in business districts where all residents benefit.

Summary, Conclusions and Policy Implications

This article discussed the changing landscape of crime and both described and evaluated the growth of private security in total security provided. Since the mid-1970s violent and property crimes (FBI type I crimes) have constantly declined while the number of economic crimes like identity theft, counterfeit goods and cyber misdeeds increased substantially. The far greater growth of private security than that of the public police could well have contributed to the decline in crime. In any event, monopolistic police have not addressed the changing landscape of crime and mainly continue to deliver their traditional services. Market forces have limited influence on the police department that has been resistant to changes. On the other hand, private security is highly competitive and client oriented and as such has been quicker to adopt technology and management innovations and address the new types of crime. Private police have increasingly provided both security services that do not require the training and education of sworn officers, and those more

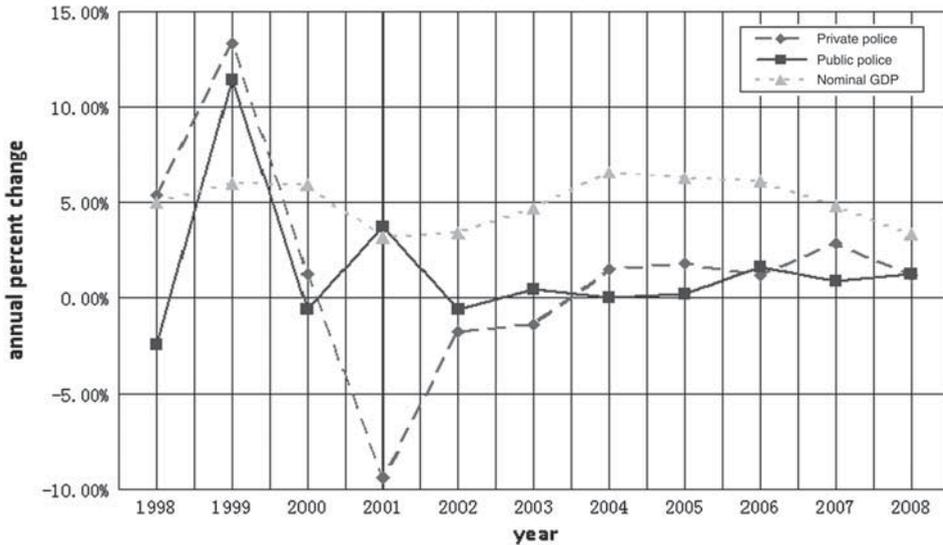


Figure 3: Annual per cent change in the number of public and private police versus nominal GDP.

sophisticated security services that are beyond the ability of sworn officers. Shrinking state and local budgets led to some shedding of private services like response to burglar alarms and contracting out public services like guarding prisoners and other mundane guarding functions to private security companies. Since police have limited interest or ability in addressing economic crimes, accounting, engineering, IT and law firms expanded in the provision of such sophisticated client-oriented security services. Finally, the equity consequences of increased reliance on private police merit further study.

Private security employment unlike public police is positively related to GDP (Figure 3). When the economy improves, businesses expand the use of security while in a declining economy, demand for security declines. Police employment and wages, on the other hand are relatively inflexible to economic conditions. Police budgets are a constant 3.14 per cent of total state and local spending, mostly unrelated to changes in either value of police productivity or market conditions. Private security wages are more sensitive to productivity and market conditions than are public officers' wages. Private security firms offer a variety of security services using appropriately skilled and paid employees.

State governments have established modest training requirements and background checks for private security personnel. However, the highly competitive private security industry has increased the extent and quality of security officers to address clients' preferences. Unlike public police, competition assures that the education and training of private security personnel varies with the expected output. In the case of public police, sworn officers provide a standardized service with limited variation in education and training of officers assigned to any of the tasks. Private security firms tailor the services and the officers assigned to the demands of the client. Thus, market forces, including knowledgeable buyers, assure the appropriate quality of private security services, and public regulation, even though modest now, is essentially irrelevant. Also, because of the increasing competition between



public and private police, regulation and oversight of private security activities should not be under the aegis of public police. The danger, of course, is that the public police will restrict their competition.

Public regulation of security requirements for nuclear and chemical plants is necessary because of the expected high degree of negative externalities to the community in case of an incident, which may be of limited or no concern to managers of the plants. The private costs of providing a high level of security are significantly lower than the potential social costs, and therefore private owners of such facilities may not expend sufficient funds for the necessary security.

Public police officers are able to work overtime. However, the availability of less expensive competing private security guards may lead to fewer opportunities for public officers to work overtime. The prospect of contracting out public police functions will constrain police wages and other departmental costs. On the other hand, competition with the often better trained and educated public police will force private security companies to further improve the quality of their officers. Constrained public police budgets will encourage public police to compete with private security for business that could be provided by either public or private security. Expanding private security is likely to make public police more efficient and lower their costs as happened with public and private prisons (Blumstein *et al.*, 2007).

The intense competition among private security companies lowers their prices and yields attractive replacement of public police for many municipal services. In the other direction, businesses like universities compete for students, and shopping malls compete for customers. As part of such competition, an image of a safe environment often relies on a visible public police presence. Thus, we witness an increase in contracting out by government of services previously provided by public police to private security and also in the other direction the hiring of police officers by private profit and not-for-profit entities. This increased competition to public police is likely to improve services of public police and have a restraining effect on officers' wages. Quality of private security services will improve, better private security guards will be hired for some tasks, and wages will rise for private officers performing those tasks. Thus, we should expect some narrowing of differences between public and private police. The primary factor that will keep prices of public police and wages of its officers higher is the image and prestige public police enjoy. Private police will still dominate both the lower quality security and the more sophisticated security than the level provided by sworn officers. If public police were a private enterprise, we would expect them to compete with private security not only at the sworn officers' level but also on the lower and higher levels of security. However, the rigidity of public police inhibits enhanced competition with the private security industry. Thus, over the long run we may expect a continuing decline in the public police share in overall security.

There is little incentive for the public sector to deviate from its traditional services. Officers, however, presumably want additional income. Police could establish a profit-oriented subsidiary that competes on security tasks, which require less than sworn officers' qualifications. The conditions for such a separate for-profit arm are that its budget is separated from the regular police budget and that there is no cross subsidization. From a social welfare viewpoint, additional competition by public police with private security companies is desired.



It is noteworthy that public police are adapting, although reluctantly, to the increasing competition. Mergers have occurred between city and county departments to increase efficiency. Police and fire departments have integrated to become public safety organizations. Police officers have also been trained to provide emergency medical services.

A negative aspect of private security's increasing role in overall security is its alleged predilection for abuse, which the media often highlights. However, there are also many examples of public police abuse. The highly competitive nature of private security firms that can be dismissed easily by their clients and their lack of sovereign immunity, which increases their legal liability makes private security careful and less likely to abuse their power.

The growth of private security has not caused significant resentment among public police. Cooperation occurs between the two sectors even in traditional police services like patrol, response to burglar alarms, and in investigations of counterfeit goods. Resentment by public police will rise appreciably when officers' jobs are threatened. Then, the cooperation by police officers with private security could be jeopardized. Short-term labor unrest is likely to result from breaking up the monopolistic power of police. The public decision whether such a trend should be reversed depends upon the long-term results. Competition among security companies and between public and private entities will result in greater efficiency, more security products and further innovations in technology and management that will improve welfare of constituents. Past experience from the breakup of AT&T (1984), the oil companies (1911), the movie industry (1948) and shoe machinery (1967) evidences increased social welfare. It is likely that similar positive results will occur when private security further invades the territory of public police.

The question is what will be the future portrait of security and whether any public policy instruments could advance socially desired trends. We might consider the experiences of privatization/deregulation of telephone services in most overseas countries and in the United States to predict the future direction of the security industry. Market exposure has yielded significant technological and managerial innovations along with integration with such other industries as computers, information technology and utilities. New companies captured market share while old established entities have on occasion ceased to exist, and social welfare has almost certainly risen. Thus, the expected trend of greater competition within the private security industry and between public police and private security could yield new security products. The increased competition could introduce new managerial and technological innovations. Increased competition will yield new packaging of services that enjoy economies of scope, and may even elevate security managers to the main stream of the corporate and government hierarchy.

If no government barriers impede the expansion of private security then its share in total security will continue to rise. The relatively easy entry to this mostly labor intensive industry will increase competition and maintain low prices in the lower skilled part of the industry. Increasingly, patrol will be the shared responsibility of public and private police. Private services like response to burglar alarms and animal control will continue to be shed. Private police competition will lead public police to greater adoption of technology, which will reduce the labor portion in favor of technology and fewer officers with highly sophisticated skills. New generations of monitors, wise cameras and other devices interconnected with actively secured databases will even replace some patrol activities.

We may even see private security providing all police functions for local governments. The trend could start with entire police departments of small cities being contracted out.



In larger cities entire defined police services like parking enforcement or prisoner transport are already contracted out. Indeed, even the investigation function could be contracted out. In view of the financial difficulties of local governments and the probable existence of economies of scale in policing, it is also likely that larger departments will manage the police functions of contiguous smaller cities.

It is even possible that auctioning among qualified companies could be employed to obtain security services. Transparent government has already led to obtaining proposals and even auctioning services over the web (Wyld, 2011). Such open access increases competition and allows small providers to enter the market and in turn increases efficiency and innovations. Auctioning has been most successful when the outcomes are measurable. However, for-profit corporations and governments already contract out non-measurable security services like patrol and infrastructure guarding. Future research could examine whether it is feasible to auction an entire small police department or specific functions of police like investigations to qualified providers.

In any event, public police are likely to be largely employed to combat serious violent crime even though segments of even that service could be contracted out. The end result will be a relatively smaller public police force that may well need to reinvent itself in order to thrive in this highly competitive security environment.

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Notes

- 1 Although small firms do not necessarily compete in all regional markets, the largest companies do. Accordingly, regional concentration is not likely to differ much from national concentration.
- 2 Herfindahl-Hirschman Index (HHI) is the sum of the squared individual market shares expressed in percentage. HHI ranges between 0 and 10000.

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Interviews

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