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Australian Institute of Criminology

Crimes against Business: A Review of Victimisation, Predictors and Prevention

Technical and Background Paper

No. 11

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Executive summary

Executive summary

The impact of crime on the business community can be substantial, with offences ranging from traditional business crimes such as burglary and shoplifting, through to internally perpetrated crimes such as employee fraud and theft. However, despite the vast extent of crime and its considerable costs, there has not always been a strong research focus on business crimes. This report attempts to address this issue by reviewing the literature pertaining to the scale of the problem, possible causal explanations, and strategies for prevention.

The review of literature examines studies conducted both in Australia and overseas. First, findings are presented on the nature and extent of business crime, with data relating to victimisation, reporting, and costs. This section includes findings for different types of business crime, as well as an overview of important findings from the AIC study of crimes against small business in Australia conducted in 1999. The report then goes on to consider possible predictors for business crime, from individual and situational perspectives. Finally, we focus on the preventative aspect of business crime, first presenting findings from various studies which have reported on business owners' own efforts to fight crime. The paper then details case studies of successful crime prevention strategies, along with guidelines for business.

In the conclusion, the literature review is summarised and a number of relevant recommendations are proposed. It is suggested that:

- further research should be conducted to investigate in greater depth the nature and extent of crime against particular types of businesses;
- there should be an increased focus in research on repeat victimisation;
- recording of crime should be improved and consistently administered;
- police should provide an improved response for business complainants and simplify reporting procedures to encourage increased reporting; and
- businesses should be encouraged to implement crime prevention measures.

Combined, these recommendations will hopefully function to improve the community response to business crime, increase our knowledge base, and most importantly, reduce and prevent the perpetration of crimes against business in Australia.

Part 1: The current environment

Past research

While substantial research has been conducted in relation to crimes against individuals, research into crimes against business has traditionally received less attention although this gap has started to close in recent years (see Mirrlees-Black & Ross 1995a, 1995b; Walker 1994; Felson & Clarke 1997; Gill 1998a; Burrows et al. 1999a; Hopkins 2002; Tilley & Hopkins 1998).

One possible reason for this lack of empirical attention is the pseudo-criminal status under which business offences often appear to labour. Among the general public a commonly held perception is that, as transgressions against inanimate objects, business crimes are obscure, 'victimless' events. Business victims consequently generally fail to arouse the sort of empathetic responses ordinarily reserved for 'real' victims – individuals – since they are seen as better able to manage the event and absorb the losses (Johnston et al. 1994). Hence, it may be this view that fosters a culture of permissiveness or tolerance that serves to decriminalise and therefore perpetuate some forms of victimisation such as shoplifting and credit card fraud (see Warr 1989; Masuda 1996; Farrington 1999). For instance, although vandalism is a perennial problem, many see it as 'no more than youthful high spirits or as an unconscious attempt on the part of children to exercise control over their environment by leaving some sign of their presence' (Barker & Bridgeman 1994: 4).

Alarmingly, studies have shown that even businesses themselves are somewhat resigned to the experience of crime. A recent British Chamber of Commerce (1997) survey discovered that 85 per cent of respondents were reconciled to accepting victimisation as a fact of entrepreneurial life – a natural cost of doing business. Allegations of a 'grudging acceptance [by retailers] that theft is a fact of [business] life' have also been noted here in Australia (Hagopian 1999–2000: 16). However, this is coupled with the finding that just under a quarter of respondents in the first national survey on business victimisation in Australia ranked crime as the most serious in a list of neighbourhood problems (Walker 1994).

Of particular relevance is the consistent finding that commercial premises face a greater risk of criminal victimisation and revictimisation than their residential counterparts (Bamfield 1994; Walker 1994; FBI 1996; van Dijk & Terlouw 1996; Bowers, Hirschfield & Johnson 1998; Naudé, Prinsloo & Martins 1999; Taylor 1999). This is especially true of small business enterprises, where multiple or *chronic victimisation* is common (Ekblom & Simon 1988; Fisher 1991; Tilley 1993; Ekblom 1988; Hibberd & Shapland 1993; Mirrlees-Black & Ross 1995a, 1995b; British Chamber of Commerce 1997; Ellingworth et al. 1997; Wood, Wheelwright & Burrows 1997; Gill 1998a, 1998b; Tilley & Hopkins 1998; Litton 2000; Perrone 2000). Other empirical research which has been conducted in the area of business crime provides support to the thesis that a substantial proportion of businesses suffer from crime. Often, surveys report that approximately half of businesses surveyed had experienced a crime (Burrows et al. 1999a; Gill 1998a; Perrone 2000). Sometimes this figure can be even larger (up to 76%) as was found in another study (Wood et al. 1997).

This report aims to further contribute to the knowledge base of crimes against business. This will be achieved by providing an overview of literature – both international and Australian – which has examined the nature and extent of crime against business, the reasons and causes underlying this crime, and attempted and successful prevention strategies employed by business. Moreover, the review should provide the reader with an overall sense of the significance of business crime and the need for further investigation into the nature, extent and effect of crimes against businesses.

Counting the costs

The costs of business crime are considerable and can affect a variety of parties in a number of different ways. When assessing costs, interested parties usually concentrate on how the organisational bottom line has been adversely affected. Often overlooked is the emotional cost borne by the victims of crimes against businesses (employers, employees and customers/clients subjected to, or spectators of, physical and/or psychological violence, such as occurs during an armed robbery or assault). More broadly, there is often little understanding of the enormous losses experienced by the business community generally, and the indirect impact on the community at large. The following discussion briefly examines the consequences of crimes against businesses.

Direct financial costs to victimised businesses

While it cannot be denied that exposure to crime adversely affects business profits, the magnitude of the financial erosion and associated repercussions is rarely appreciated. This is because loss assessments ordinarily fail to extend beyond the direct financial losses incurred by business; however, losses may occur due to:

- merchandise, cash or equipment being stolen or misappropriated. In the case of stock losses, both the original investment in stock (including pre-market associative costs, such as transportation) and the potential profits generated through sales are forfeited. Furthermore, replacement costs may well exceed the original 'rate book' value (that is, the items' cost price); and
- merchandise or property being deliberately, maliciously or incidentally damaged (for example, during a break and enter, robbery, physical altercation, or through vandalism or other forms of destructive criminal activity, such as sabotage).

Previous research indicates that these direct, personal costs are enormously burdensome. For example, Walker (1994) estimated that in 1992 the direct costs of crime to all Australian businesses in the industrial sectors examined (retail, manufacturing, primary industry and tourism/recreation) totalled about \$1.6 billion. The Australian Institute of Criminology (AIC) has released data pertaining to the losses incurred by six types of retailer as a result of crime (derived from the 1999 Small business crime survey), and the total cost to all retailers in these sectors was estimated at \$170 million (Taylor & Mayhew 2002b). Table 1 contains data from this study and demonstrates the direct and indirect costs of crime for six retail sectors.

Table 1: Mean direct and indirect costs of crime for victimised premises in 1998/1999, by retail sector and business size

Sector	% victimised (any crime)	Losses	Victims		
			Micro businesses mean (\$)	Small businesses mean (\$)	All businesses mean (\$)
Cafes/restaurants/ take-away food	38%	Direct	1,800	2,700	2,250
		Indirect	800	850	800
General stores	57%	Direct	3,250	6,950	5,050
		Indirect	650	1,800	1,200
Liquor outlets	72%	Direct	2,900	5,000	4,000
		Indirect	1,000	1,250	1,150
Service stations	50%	Direct	3,050	6,150	4,950
		Indirect	1,450	2,250	1,950
Newsagencies	57%	Direct	3,250	7,050	4,900
		Indirect	650	1,300	950
Pharmacies	61%	Direct	2,200	6,350	4,550
		Indirect	350	1,200	850
All businesses	49%	Direct	2,450	4,850	3,650
		Indirect	850	1,300	1,050

Note: Dollar figures are rounded up or down to the nearest \$50

These figures reflect weighted data and hence differ slightly from figures cited in Perrone (2000)

Source: Taylor & Mayhew 2002b

Although these costs are substantial, it should be acknowledged that many businesses may underestimate their losses due to their being unaware of crimes perpetrated against them (such as shoplifting). A recent South Australian investigation into crime in the retail sector (Crime Prevention Unit, Attorney-General's Department of South Australia 1998) discovered that the majority of retailers surveyed were oblivious to the crimes being perpetrated against them. As in the United Kingdom and the United States (see Bamfield & Hollinger 1996; British Retail Consortium 2000), only 2.5 per cent of respondents had directly witnessed instances of retail theft, the remaining vast proportion having been established by auditing procedures. The problems associated with relying on general stock audits to establish crime victimisation are however, clearly evident (see Hollinger 1997; Turbin 1998). Although audits are of highly variable quality, some aggregate all losses, thereby making it virtually impossible to determine with any degree of specificity the proportion of inventory 'leakage and shrinkage' directly attributable to customer or employee theft. The expression 'leakage and shrinkage' is not universally understood but generally refers to unexplained stock shortages; that is, missing merchandise that has not legitimately left the store. This form of retail loss arises through diverse avenues such as vendor or supplier fraud, administrative and vendor error, stock wastage through deterioration or breakage, poor stock control, thefts of stock while in transit, employee theft and customer theft (Seider 1996).

Despite the complexities in identifying losses attributable to non-administrative error, there is little doubt that shop theft affects retailers on a massive scale. Taylor and Mayhew (2002b) in their analysis of the Australian Institute of Criminology data from the Small business crime survey reported that shoplifting cost victimised retailers approximately \$2700 per business in direct costs, and \$250 in indirect costs per year. These figures, coupled with the fact that 21 per cent of retailers experienced shoplifting, results in a considerable projected loss for the retail sector. In the United States, retail merchants have estimated that shoplifting alone robs them of between US\$21 billion and US\$30 billion annually (Hollinger 1998; Budden 1999; Palmer 2000) as compared to the yearly losses to all commercial premises attributable to

credit card and cheque fraud (US\$1.1 billion), embezzlement and internal fraud (US\$7.0 billion) and computer fraud (US\$100 million) (US Small Business Administration 2000). Therefore, as is evident by this section, the direct losses suffered by businesses as a result of crime (particularly retailers) are considerable, but are likely to still be an underestimate of the true cost of crime, due to administrative difficulties, and the fundamentally 'hidden' nature of some crimes.

Indirect financial costs to victimised businesses

In addition to the immediately discernible costs of crime, businesses encounter a range of indirect negative financial consequences (as can be seen in Table 1). Data derived from the insurance industry suggests that these ancillary expenses average about ten times the initial expenses incurred (Stewart 1999). The range of indirect losses that might be encountered by business victims includes the following:

- Revenue losses sustained through business disruptions or closures accompanying a victimisation. For example, employees may experience 'down time' as stolen equipment or vehicles are repaired or replaced (Burrows 1991). The ensuing disturbances to production, goods availability and delivery produce consequential inconveniences to customers, often resulting in a loss of reputational capital, orders, clientele, earnings and so on (Nelson & Perrone 2000; Hughes 2001). These disturbances have been seen in recent years in the Panadol extortion case where profits have undoubtedly been compromised due to the disruption caused, and the continuing negative publicity surrounding the case.
- The damage or destruction of operational records may also devastate a business, especially if back-up copies are not stored off site (Schuller & Deane 2000).
- Legal expenses incurred through defending common law personal injury and/or occupational health and safety (OH&S) actions, which may occur as a result of a traumatic crime. Under Australian law, and more specifically, the respective State and Territory OH&S Acts, employers are primarily responsible for the provision (as far as is practicable) of a hazard-free working environment to all persons (whether employee or non-employee) present on a worksite under their control.
- Where an employee has sustained an injury during a crime – physical and/or psychological – successful litigation may find the employer totally or partially responsible for the affected employee's medical and related expenses.
- A proprietor is not only potentially liable for any crime-related injury sustained by a person under their employ or a member of the general public, but under certain circumstances, an individual apprehended for shoplifting may sue the proprietor for any damages sustained during their apprehension and detention.
- Higher operational costs. Following on from the above discussion, where an injured employee lodges a compensatory claim, the employer may face elevated workers' compensation premiums. Similarly, for those insured, lodgment of a claim accompanying a criminal episode will ordinarily trigger a rise in subsequent insurance premiums (Gallagher, Lung, Mallin, Zhou & Caruso 1989; McDevitt, Pattavina, Miliano & Pierce 1990; Fisher 1991; Gill & Turbin 1996). In some instances, repeat victims may be deemed uninsurable risks and hence be refused reinsurance on an existing policy (Goodman 1993).
- Costs of preventive efforts. Crime-related operational costs also accrue in the form of increased investment in loss-prevention endeavours and security measures designed to ward against future

crime recurrences. In their study of New York small businesses, Gallagher et al. (1989) discovered that, on average, annual spending on security countermeasures increased by \$7,341 per victimised business. Even in those instances where a premises has not directly fallen prey to crime, fear of victimisation may prompt the purchase of (additional) security measures.

Additional operational effects

While the after-effects of a criminal episode ordinarily entail monetary losses of some description, whether direct or indirect, in some instances additional operational effects may be experienced. Although these organisational changes may not necessarily involve financial loss, they are often serious, adversely affecting the interpersonal dynamics between employers and employees and, by extension, the efficiency and sustainability of business operations.

- Disgruntled employees may indulge in frequent bouts of absenteeism or create difficulty negotiating their return to work. Time off for physical and mental recovery has conservatively been estimated to cost about \$55 million per annum (cited in Hughes 2001).
- A victimised employee may experience subsequent problems interacting with customers/clients in a non-suspicious fashion; that is, in a manner that is conducive to sales and to good client relations.
- Employees may insist on timetable changes that result in the restriction of business operational hours (businesses may, for instance, opt to open later in the day and close earlier in the evenings – measures that may curtail revenue). In extreme instances, continued operation of a business at the location in which it was victimised may become so untenable as to prompt a complete cessation of operations or relocation.
- Following violent victimisation, fear and low morale among employees may stifle productivity or result in premature staff turnover (Beck & Willis 1990; 1991), resulting in costs associated with recruitment and retraining.

The psychological impact on victims

As considerable as the economic and operational costs thus far examined appear, the often unseen but devastating personal effects of crime are equally concerning. Aside from dealing with any physical injuries sustained during a criminal episode, and the associated tangible expenses incurred as a result of seeking medical attention and taking time off work, victims often experience a range of after-effects. People exposed to intrusive crimes (such as burglary or armed robbery) experience a range of problems (see Manseau and Normandeau 1981; NorthWestern National Life Insurance 1993; Hearnden 1994; VOCS 1994; Grainger 1995; Steinmetz 1995; Davis, Taylor & Lurgio, 1996; Leather, Beale & Lawrence 1997; Giuliano 1998; Cook, David & Grant 1999; Willis, Beck & Gill 1999; Beaton, Cook, Kavanagh & Herrington 2000).

The experience of victimisation also challenges an individual's fundamental sense of wellbeing. Fear of crime – one of the frequently observed corollaries of the subjection to violence – often affects an individual's quality of life. For example, in his study of crimes against small business enterprises in Leicester, Hopkins (1998) reported that 68.1 per cent of previous victims of abuse and violence feared physical attack, as compared to only 47.6 per cent of people who had not experienced abuse.

The forgotten victims: secondary and tertiary impacts

Up to this point, assessment of the costs of crime against businesses has been confined to the immediate victims of a criminal episode. It should be acknowledged, however, that every primary victimisation produces a whole host of secondary and tertiary victims.

At the micro level, an individual victimisation has a number of repercussions for local business and community environments. When a business has been victimised, though the absolute costs may not appear high, its ability to recover from the marginal expenses is linked to its solvency, which in turn, is often connected to its size. Alternatively, recovery is linked to the business's capacity to generate external funds (such as secured or unsecured loans) to finance the purchase of security measures, to restock, rebuild and generally keep the enterprise afloat. The issue of insurance coverage is crucial here. Where the indemnity safety net is absent, as commonly occurs in fraud cases (Ernst & Young 2000), and the necessary funds are not otherwise available, the enterprise's already precarious position may be aggravated, thereby casting a grim shadow over its very economic survivability (Tilley 1993; Marlow & Wells 1997). Smaller enterprises are particularly vulnerable to collapse, since they lack a competitive market edge and hence experience greater difficulty in absorbing the costs of victimisation (Snyder, Broome & Zimmerman 1989; Fisher & Looye 2000). The proprietor of a small business that falls victim to crime is often left to bear the cost personally (especially in the absence of appropriate insurance coverage).

It is easy to appreciate the significant threat to the longevity of a small business posed by just one incident of serious crime. Even where a business is technically capable of resuming regular operations after an attack, fear of a recurrence may prompt the affected business to curtail expansion plans, or to downsize its existing operations. In extreme instances, business operations may cease permanently (British Rail Consortium 1998), or the proprietor may relocate elsewhere (for anecdotal evidence see, for example, Bullivant 1999; Cullen 2001). In either scenario, the losses for immediate stakeholders and the general community are clear:

- Surrounding proprietors, or those in close proximity to a business that has closed due to its experience of crime, may feel compelled to fortify their premises, spending money on security installations or upgrades.
- As discussed previously, the fear of crime generated by an attack may discourage other proprietors from renewing their business leases. As the number of business closures increases, the amount of passing trade may decline because the area is perceived to be crime-prone (Heinzelmann 1981; Small Business Letter 1998), and this may set in a vicious cycle of deterioration, thereby making it difficult to attract new businesses to the neighbourhood (Powell 1993; Bowers, Hirschfield & Johnson 1998).

At a broad level, it should be recognised that the boundaries between the business and public domains are far from discrete and hence the effects of crime against businesses reverberate throughout society (Fisher 1991; Cromie 1993; Fisher & Looye 2000). The non-government commercial sector is an instrumental contributor to domestic capital investment, employment growth, gross domestic product and economic wellbeing. Any assault on the business sector is therefore an assault on business viability, economic stability and, in some cases social wellbeing.

Crimes against businesses can also produce negative consequences for others at a broader, aggregate level such as:

- Taxpayers and consumers will shoulder some of the burden, with funding a more expensive criminal justice system, and facing increased prices.
- In terms of the general business sector, excessive crime-related claims arising within a particular geographical zone or industry sector may result in that zone or sector being deemed 'at risk' by insurance companies. Consequently, insurance premiums (and workers compensation premiums) applicable to businesses located in risky areas or industrial sectors may be upwardly revised (Goodman 1993).

The significant negative consequences stemming from crimes against business, show the need for considered efforts to be targeted at business crime prevention. The continued discussion on the nature and extent of business crime, discussed in the next chapter, further highlight this matter. Now we briefly outline the types of crime faced by business, more specifically those which will be addressed in this paper.

What are we facing? Categories of business crime

This section is devoted to describing the types of crimes which are faced by business owners. Table 2 details the types of crime which will be examined in this report, however it should be noted that crimes may be classified as either (Felson 1996):

- *internally generated* – these offences are committed by employee(s); or
- *externally generated* – these offences are committed by parties other than immediate employee(s) and may be committed against the business and/or can transpire within a business premises, but be directed towards its employees, customers or clients.

Table 2: Catalogue of crimes against business

- Burglary: break and enter
- Malicious damage: vandalism/destruction of property/stock/vehicles, arson, graffiti
- Motor vehicle theft: theft of vehicles and theft of items from within a vehicle
- Theft: the wrongful taking of merchandise, without paying for the goods, or without paying the full price, or the theft of cash
- Employee theft: of money, merchandise or stationery supplies
- Fraud: dishonestly obtaining goods, services or cash advances either through the deceptive use of cheque/credit card facilities, false injury claims, or refund/return policies
- Employee fraud: misappropriation of assets, corruption, fraudulent financial statements and the use of company property (for example, telephones and computers) for personal benefit
- Robbery: the unlawful removal, or attempted removal, of property by force or threat of force against a person or persons, either by use of a weapon or otherwise
- Workplace violence – violence committed against an employee or owner/operator by an outsider
- Blackmail/extortion/corruption: activities (often associated with organised crime) to intimidate the individual into providing money or goods illegally, in return for a service (or possibly silence)

Source: Felson 1996

It should be acknowledged that the list given above is not a comprehensive inventory of all crimes facing businesses today. Rather, the report primarily concentrates on traditional forms of street crime extending into the business arena. Specifically excluded from this review is any examination of electronic crime. Moreover, public disorder activities with only an *indirect impact* on business operations are expressly excluded. While falling short of a comprehensive working definition, this approach extends to both crimes against property and violent crimes against the person, and it enables examination of both internally and externally generated crimes.

It has also been necessary to restrict the types of businesses examined by this report. To seek to provide a comprehensive review of the existing materials relevant to all industrial sectors is a formidable task. The review will therefore be restricted to the non-government sector, which invariably comprises the overwhelming majority of a nation's business operations. Also, since most systematic research into business crime appears to have been conducted in the retail sector, a large proportion of this report is concerned with this facet of business victimisation.

In concluding this chapter, it may be seen that the introduction has discussed the nature of business crime, and its effects upon not only the business owner and sector, but also the follow-on effects to society in general. It has also specified those crimes and businesses which will be included in the ensuing comprehensive review of literature. As was stated in the opening, the review is intended to provide an overview of literature – both international and Australian – which has examined the nature and extent of crime against business, the reasons and causes underlying this crime, and attempted and successful prevention strategies employed by business. Hence, with the framework of business crime now established, we seek to further understand the scale of the problem and address those issues specified above.

Part 2: Research in Australia and the world

The nature and extent of business crimes

Quantifying and appreciating the scale of the problem in relation to crimes against business is crucial if the issue is to be addressed appropriately. In this section we examine research – both in Australia and overseas – which can speak to the extent of the crimes of workplace violence, fraud (non-employee or unspecified), burglary, motor vehicle theft (theft of and from motor vehicles), bribery/extortion/ corruption, robbery (armed/unarmed or successful/attempted), malicious damage, theft (from premises as in shoplifting or leaving without payment), and employee theft/fraud.

Australian research: findings by type of crime

Apart from a few notable exceptions, there is relatively scant research on crimes against business which has been undertaken in Australia. Nonetheless, the research which has been produced highlights the extent of the crime problem which businesses face in this country. This section is devoted to Australian research, where we first look at findings in relation to specific categories of crime.

Fraud

- The 1993 Australian Institute of Criminology Crimes against businesses survey³⁰ revealed that 17.2 per cent of businesses had been victims of fraud, with non-food retailers and the tourism/ recreation industry the hardest hit. The total cost of fraud to business in 1992 was estimated at \$190 million (Walker 1994).
- Results from the 1997 Retail crime and safety survey³¹ demonstrated that just under one in ten businesses had suffered from fraud in the previous year. This offence was reported 29.7 per cent of the time (Crime Prevention Unit, Attorney-General's Department 1998).
- The SA 2000 Retail crime and safety survey³² highlighted underreporting in the business community, with respondents estimating that just over 70 per cent of credit card fraud is reported to police, and less than half (approximately 40%) of all cheque fraud incidents precipitate a complaint (West 2000).
- The 1998 Australian Chamber of Manufacturers survey³³ found that 92 per cent of companies perceived themselves to be at risk of false injury claims (Alexander 1998).

Workplace violence

- A 1998 published survey found that one in two Australian employees has been verbally abused by a member of the public, and one in 10 has been physically abused. Those employed in the hospitality industry are at particular risk (Dean 1998; Mayhew, Quinlan & Bennett 1996).
- The 1993 Australian Institute of Criminology Crimes against businesses survey³⁰ found 9.7 per cent of businesses had employees assaulted in 1992 (Walker 1994). Employees engaged in the retail of food were more frequently victimised (17.3%).
- The 1997 Retail crime and safety survey³¹ reported that 4.2 per cent of premises had experienced staff violence, with approximately half of these resulting in medical treatment (Crime Prevention Unit, Attorney-General's Department 1998).

Burglary

- The 1993 Australian Institute of Criminology Crimes against businesses survey³⁰ revealed that 27.4 per cent of businesses had been victims of burglary, with the tourism/recreation industry at greatest risk. There was also considerable repeat victimisation (60% of respondents had been re-victimised). The total cost of fraud to business in 1992 was estimated at \$435 million (Walker 1994).
- Results from the 1997 Retail crime and safety survey³¹ demonstrated that close to one in five businesses had been the victim of a break and enter/ram raid in the preceding 12 months. These crimes resulted in 82.3 per cent being reported to police (Crime Prevention Unit, Attorney-General's Department 1998).
- The SA 2000 Retail crime and safety survey³² showed that 27.3 per cent of businesses had been the victim of a break and enter/ram raid, with respondents estimating that most of these (90%) prompt a formal report (West 2000).

Vehicle theft

- The 1993 Australian Institute of Criminology Crimes against businesses survey³⁰ revealed that 2.6 per cent of businesses had had vehicles stolen, and 6.1 per cent had suffered a theft from a work vehicle. The total cost of this to business in 1992 was estimated at \$275 million, and the manufacturing industry was deemed to be at greatest risk for these vehicle-related crimes (Walker 1994).

Bribery/extortion/corruption

- The 1993 Australian Institute of Criminology Crimes against businesses survey³⁰ (Walker 1994) revealed that few businesses experienced bribery/extortion (0.6%).

Robbery

- The 1993 Australian Institute of Criminology Crimes against businesses survey³⁰ revealed that 1.6 per cent of businesses had been victims of robbery, with the retail-food and tourism/recreation industries at higher risk of attack. The total cost of fraud to business in 1992 was estimated at \$14 million (Walker 1994).
- Results from the 1997 Retail crime and safety survey³¹ demonstrated that 3.4 per cent of businesses had been the victim of armed robbery in the preceding 12 months. It was estimated that 74 per cent were officially reported (Crime Prevention Unit, Attorney-General's Department 1998).
- The SA 2000 Retail crime and safety survey³² showed that 59.5 per cent of businesses consider violent robberies to be of concern, with figures showing that 100 per cent of these crimes are reported to police (West 2000).

Malicious damage

- The 1993 Australian Institute of Criminology Crimes against businesses survey³⁰ revealed that 16.9 per cent of businesses had experienced vandalism, with the tourism/recreation industries at

greatest risk. The total cost of vandalism to business in 1992 was estimated at \$226 million (Walker 1994).

- Results from the 1997 Retail crime and safety survey³¹ demonstrated that 18.2 per cent of businesses had experienced criminal damage in the preceding 12 months (Crime Prevention Unit, Attorney-General's Department 1998).
- The SA 2000 Retail crime and safety survey³² showed that although a little over a quarter of businesses had been victims of criminal damage, few of these incidents (approximately 15%) were officially reported to police (West 2000).
- The 1998 Australian Chamber of Manufacturers survey³³ demonstrated that 83 per cent of companies often consider themselves at considerable risk of equipment sabotage (Alexander 1998).

Theft

- The 1993 Australian Institute of Criminology Crimes against businesses survey³⁰ found that proportions of businesses had experienced theft from premises, theft by customers, and other thefts (25.9%, 15.2%, and 6.2% respectively). The total cost of theft to business in 1992 was estimated at \$951 million (Walker 1994).
- Results from the 1997 Retail crime and safety survey³¹ demonstrated that 37 per cent of businesses had experienced theft of stock in the past 12 months (Crime Prevention Unit, Attorney-General's Department 1998).

Employee theft and fraud

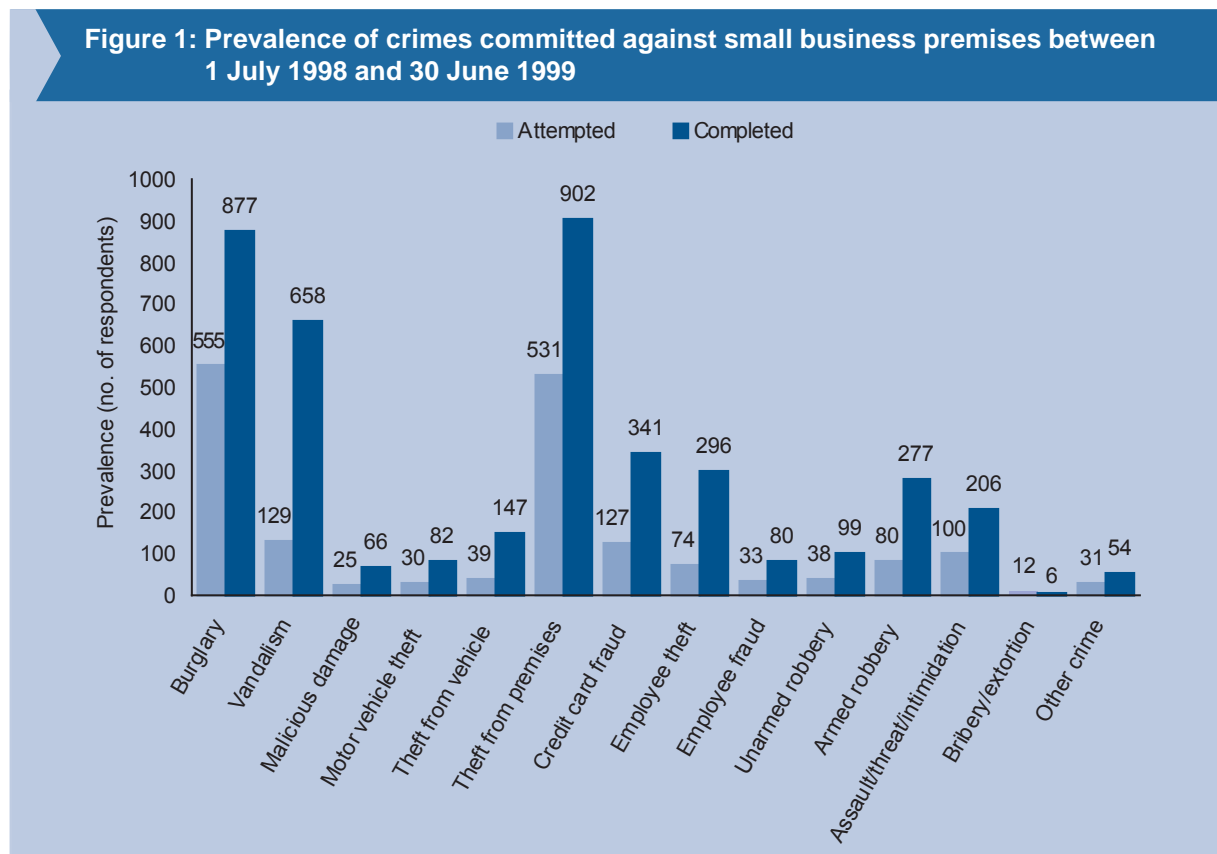
- The 1993 Australian Institute of Criminology Crimes against businesses survey³⁰ reported that 5.5 per cent of businesses had experienced employee theft, and 2.7 per cent had experienced employee fraud. However, despite these low prevalence rates, retail (food) business had experienced these crimes at approximately double such rates. The total cost of employee fraud and theft to business in 1992 was estimated at \$45 million and \$108 million respectively, and it was noted that these crimes were unlikely to be reported to police (Walker 1994).
- The SA 2000 Retail crime and safety survey³¹ showed that 7.4 per cent of businesses had been victims of staff stock theft, and few of these incidents (approximately 15%) were officially reported to police (Crime Prevention Unit, Attorney-General's Department 1998).

Australian research: AIC survey of crimes against small business

We now turn to a recent example of Australian research, and examine its results in detail (these results are based on Perrone 2000 and refer to unweighted data). In 1999 the AIC and the Council of Small Business Organisations of Australia (COSBOA) undertook the first nationwide survey of crimes against small business in Australia. The postal survey furnished 4,315 responses (16.2% response rate), and cohort selection was generally limited to a cross-section of retail sectors assumed to be at heightened risk of crime: retail food, retail liquor, newsagencies, pharmacies, service stations and general stores.

Numerous papers have been released by the Australian Institute of Criminology based on this study (Perrone 2000; Taylor 2002; Taylor & Mayhew 2002a, 2002b), and results based on Perrone 2000 from the unweighted data set follow:

- Between 1 July 1998 and 30 June 1999, a little more than half of all respondents (n=2,167 or 51.5%) reported having experienced crime (attempted and completed).
- Figure 1 provides a graphical representation of the number of businesses that experienced attempts or completed attempts of each of the specified categories of crime on at least one occasion.

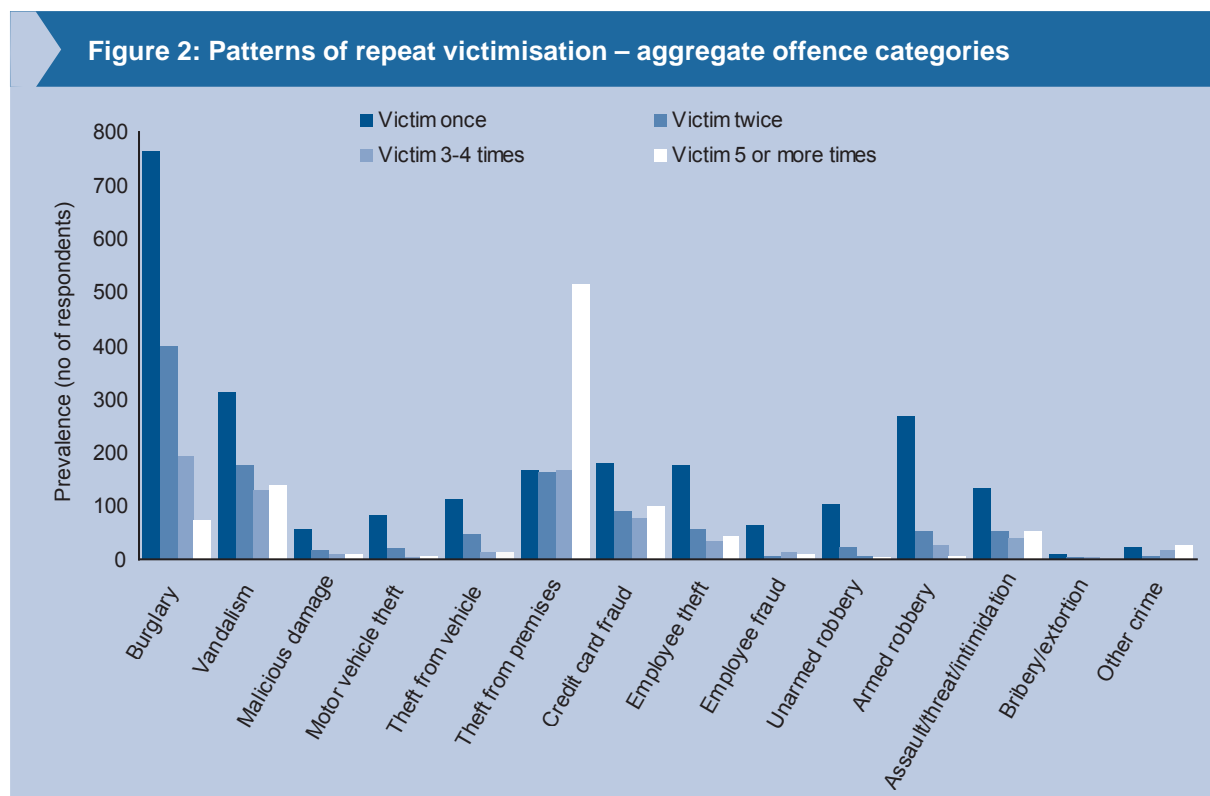


Source: Perrone 2000

- When prevalence rates of the subset of victimised respondents are analysed, it becomes apparent that theft from premises (shoplifting) and burglary clearly comprise the largest overall offence categories, both with respect to attempts (experienced by 25% and 26% respectively) and completions (experienced by 42% and 40% respectively). At the other extreme of the offence continuum, less than 0.5% of the sample had suffered incidents of bribery or extortion.
- A total of 82,034 offences were perpetrated against the cohort. Though most premises reported either a single (n=411 or 19%) or couple of crimes (n=328 or 15.1%), 11 businesses recorded crimes ranging in the thousands, with one the object of 12,000 separate known offences. Even this tally understates the true extent of business harm, for in 101 cases (or 4.7%) respondents indicated having been on the receiving end of frequent victimisation but could not quantify this. On average, businesses subjected to crime had suffered 38 incidents (of any type) in the 12-month

period preceding the survey. The median number of offences experienced was four. Of the total volume of crimes experienced by businesses, most (n=53,333 or 65%) were completed as opposed to those that were attempted only (n=28,701 or 35%).

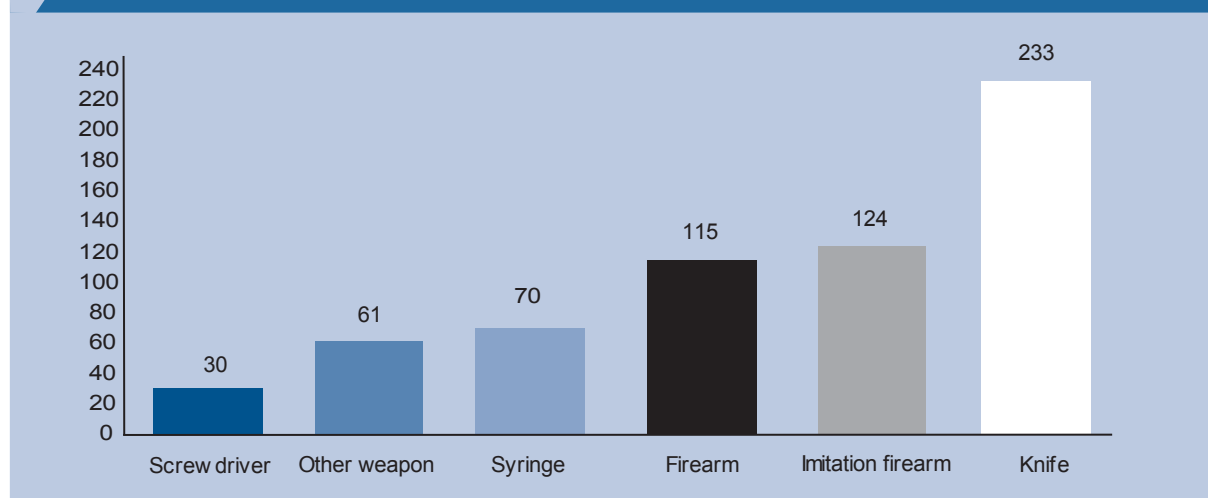
- Multiple victimisation was an important issue. Crime was observed to be highly concentrated, with 1 per cent of businesses accounting for 66 per cent of all incidents. Figure 2 shows the propensity for businesses to suffer repeat attacks of different types of crimes (that is, offence heterogeneity). Premises exposed to shoplifting are overwhelmingly more likely to experience multiple incidents (89%).



Source: Perrone 2000

- In relation to armed robbery, knives were the weapon of choice (as indicated by Figure 3), brandished in 35.8 per cent of all cases (n=233 occasions). This is consistent with broader national trends on armed robbery, which demonstrate knives to increasingly be the preferred weapon (Ogilvie 2000). Included in the 'other weapon' category (9.4%) were instruments such as axes, bricks, hammers, machetes, swords, steel bars, pieces of wood and even a metal fork.

Figure 3: Weapons usage in the commission of armed robbery



Source: Small Business Crime Survey [data file]

- A number of business characteristics were observed to have been associated with heightened victimisation, in particular business tenure. Of those businesses in operation for up to six months ($n=153$), 35.3 per cent ($n=54$) had been a victim of crime. Furthermore, it would appear that within the first four years of operation, a business's chances of being victimised increased over time. Those businesses in operation for greater than two years but no longer than four recorded the highest relative levels of victimisation (16.1%), while the lowest levels of victimisation were recorded by those businesses in operation for between 20 and 25 years (4%).
- One also cannot overlook the importance that operational variables such as trading hours contribute towards criminal vulnerability. For example, while only 148 businesses reported operating on a 24-hour basis, just over 70 per cent of these reported victimisation. The vast majority of the affirmative responses consisted of service station operators ($n=79$ or 76%), while hotels and motels with gaming facilities contribute a further 6 per cent. Also, on average, 53 per cent of businesses that conducted operations beyond 9 pm reported at least one criminal episode.
- These findings must also be considered in the light of the number of staff on duty. Those premises subjected to either an armed or unarmed robbery reported, on average, two staff members on duty at the time, though both the median and modal responses were one. By contrast the vast majority of burglaries occurred during the am hours (78%), with over three-quarters of these perpetrated between 12 am and 3 am, when one would least expect the presence of capable guardians.
- Attempts to quantify the losses arising through crime victimisation proved extremely difficult, especially for certain categories of crime such as shoplifting, and employee theft, where stock shrinkage might be attributable to one of a number of factors (including vendor fraud or clerical error). In a substantial number of cases the respondent was, in fact, unable to put a dollar sum value on the losses suffered. The resultant figures consequently provide an estimate which, albeit staggering, is thought to considerably undervalue the true extent of business losses.

Overall, respondents who had experienced some form of crime in the sample estimated aggregate losses of \$14,322,174. Losses ranged from \$3 to \$372,000. On average, businesses experienced a loss

of \$7,818, with the median recorded at \$1,500. While these losses generally relate to forgone financial capital, the indirect losses flowing from business closure are inestimable, not to mention the psychological impact of violent crime. For the present, it is instructive to confine our examination of crime impact to business closure. Of those businesses offended against, just over four per cent (n=91) were forced to close for half a day (n=38 or 42%) or more. In one instance involving an arson attack, the business was forced to close for a year pending insurance investigations and rebuilding. Obviously the reputational capital, loss of clientele and earnings arising from that solitary incident were devastating. For a more in-depth discussion of the financial and psychological consequences of crime upon small retail businesses see Taylor and Mayhew (2002b).

International research: findings by type of crime

Having examined the research undertaken in Australia, we now look to present findings from overseas research, specifically from the United Kingdom, United States, Canada, New Zealand, the Netherlands, and a small number of multi-national studies. These findings (presented by type of crime) serve to highlight how the phenomenon of crime against business is global, and that there are similarities as well as differences.

Fraud

- The International crimes against business survey³ reported the following results in relation to fraud (van Dijk & Terlouw 1996): the country with the highest incidence of fraud perpetrated by outsiders was France, with 42.3% of businesses reporting that they had experienced fraud of this nature. France was followed by Germany (27.6% of businesses had experienced external fraud), Italy (24.7%), the Czech Republic (21.2%), the United Kingdom (21%), Australia (19.7%), Switzerland (13.6%), and finally the Netherlands (12.6%).
- The 1993 international KPMG fraud study⁴ demonstrated that over a year, 76 per cent of American businesses had experienced fraud, followed by Canada (56%) and Australia (44%). Over two years, 52 per cent of Bermuda businesses had experienced fraud, and over three years, 40 per cent of Irish businesses had been victims of fraud, followed by Holland (22%). A 1999 Australian study reported that 57 per cent of the cohort had experienced fraud during the preceding two years. The majority of respondents (69%) reported two or more victimisations, and aggregate losses were estimated at \$239 million. The study also found that the insurance, communications, retail, and wholesale/distribution industries were at greatest risk, with the financial services, insurance and government sectors suffering the greatest losses (see Rozenkrans 1995).
- The 2000 Ernst & Young international survey⁵ revealed that two thirds of respondents had experienced fraud in the preceding 12 months. Levels of repeat victimisation were also quite high. The study indicated that 65 per cent of Australian respondents had suffered some form of fraud in the previous 12 months (Ernst & Young 2000).
- The 1997 Small business crime initiative study⁹ conducted in the UK reported that 31.4 per cent of respondents indicated they had experienced fraud (undefined) in a 12 month period (Wood et al. 1997).
- The British forum of private business survey¹⁰ conducted in 1996 demonstrated that 8.6 per cent of their sample had been victims of fraud perpetrated by customers in the 12 months preceding the study. The results also indicated that the retail sector was more vulnerable to this type of crime (Gill 1998a).

- The 1994 Commercial victimisation study¹², conducted in the UK, found that 21 per cent of businesses had been the victims of outsider fraud in that period. The study also reported considerable repeat victimisation (Mirrlees-Black & Ross 1995b, 1995c).
- The 1998 British Oil Security Syndicate survey on petrol station crime¹⁵ demonstrated that 1.3 per cent of businesses have experienced fraud (undefined), and 12.2 per cent have been victims of credit card fraud (BOSS 2000a, 2000b).
- The 1992 UK study of Crime against small holiday accommodation units¹⁷ found that 28.2 per cent of businesses have experienced cheque, cash or credit card fraud (Gill, Salmon & Hill 1993).
- The US National retail security survey²³ (conducted in 1997) provided annual incidence rates for vendor fraud/theft (2.6 per \$100 million sales), refund/return fraud (43 per \$100 million sales), cheque fraud (1,214 per \$100 million sales), credit card fraud (48.3 per \$100 million sales), counterfeit currency (14.2 per \$100 million sales), and insurance fraud/false injury (0.09 per \$100 million sales) (Hollinger 1998).
- The 1998 South African national commercial crime survey²⁸ revealed that 31.2 per cent of non-food retailers have been victims of outsider fraud, as have food retailers (12.2%), and manufacturers (26%) (Naudé et al. 1999).

Workplace violence

- The 1996 International crime victims survey¹ found that 10 per cent of women and 13 per cent of men have experienced victimisation at work (extracted from Chappell & Di Martino 1998; ILO 1998). The French reported the highest level of workplace victimisation (11.2% of males and 8.9% of females), followed by Argentinians (6.1% of males and 11.8% of females), Romanians (8.7% of males and 4.1% of females), Canadians (3.9% of males and 5% of females) and the English and Welsh (3.2% of males and 6.3% of females).
- The European Union survey on living and working conditions² (undertaken in 1996) showed that few respondents had experienced physical violence or sexual harassment in the past year (4% and 2% respectively), with those in the services sector, and females, most at risk (European Foundation for the Improvement of Living and Working Conditions 1997).
- The 1996 International crimes against business survey³ reported the following results in relation to assault (van Dijk & Terlouw 1996): the highest percentage of businesses which had been victims of assault were within Hungary (22.6%), the United Kingdom (17.6%), Australia (13.6%), the Netherlands (11%), the Czech Republic (10.3%), France (7.3%), Germany (5.7%), Switzerland (3.4%), and finally Italy (1%).
- The 1997 British crime survey⁶ found 2.8 per cent of respondents had experienced violence in 1997. Full-time employees with managerial responsibilities, those working in small organisations or self-employed are most at risk, as are those working in the security, protective service, or nursing professions (BCS, cited in Budd 1999).
- A 1993 study of Violent victimisation of staff in the retail sector⁷ reported that employees had been victims of physical assault (11%), threatening behaviour (20%), and verbal abuse (48%) at work (Beck, Gill, Sampson & Willis 1993).
- The 1997 UK Small business crime initiative⁹ found that staff had experienced violence (6.6%) and abuse (19.1%) at work. Repeat victimisation was considerable (Wood et al. 1997).

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- The Forum of private business study¹⁰ demonstrated that 5.8 per cent of businesses had been subjected to physical abuse in the 12 months prior to the survey (Gill 1998a).
 - The Scottish business crime centre survey¹¹ stated that of all business crimes in 1998, 20 per cent were 'threatened or actual violence', and three per cent were violent assaults (Burrows et al. 1999a, 1999b). The survey also reported that employees in the hotel/restaurant sector were most vulnerable to workplace violence (particularly those serving alcohol).
 - The 1994 UK Commercial victimisation survey¹² demonstrated that few business owners had been victims of assaults which resulted in injury (2%), but more had been assaulted but not injured (16%). The study also found that retailers were more likely to become victims of workplace violence than were manufacturers (Mirrlees-Black & Ross 1995b, 1995c).
 - The 1990 UK study on Crime on industrial estates¹³ reported that workplace violence was rare, with only three per cent experiencing such crimes, however unlike some other business crime, most of these were reported (Johnston et al. 1994).
 - The British Oil Security Syndicate survey on petrol station crime¹⁵, conducted in 1998, found that assaults cost petrol station owners £3.5 million per year (BOSS 2000a, 2000b).
 - The 1992 UK Crime against small holiday accommodation units¹⁷ study reported that few such businesses experienced violent crime (2.1%). Most were verbal abuse, with very few employees being victims of physical attacks and/or injury (Gill et al. 1993).
 - The 1998 UK National pharmaceutical association/sensormatic crime survey¹⁸ found that attacks and threatened attacks on staff were frequently experienced, with almost a quarter having witnessed up to three incidents in a one-year period (NPA 2000).
 - Results from the US National crime victimisation survey¹⁹ (1992–6), indicate that approximately 2 million employees were affected by workplace violence during that period. Types of violence experienced varied from simple assault (which was most common) to aggravated assault, rape and robbery (Warchol 1998).
 - The 1996 US Crime against small businesses in the Midwest survey²⁰ found that only one per cent of employees had suffered assault in the workplace (Fisher & Looye 2000).
 - The 1999 US Crime against small businesses in Boston survey²² found that of those businesses victimised (close to half of the sample), 18 per cent had suffered personal victimisation. The study also found repeat victimisation to be prevalent (McDevitt et al. 1991).
 - The 1998 US National retail security survey²³ reported that violent crime had an incident rate of .082 per store, and bomb threats a rate of .088 per store. Also, armed robberies incurred injury sometimes (22%), but rarely fatalities (1%) (Hollinger 1998).
 - A variety of studies undertaken in the Netherlands (cited in Steinmetz 1995) in 1990 and 1992 found that threats comprised eight per cent of business crimes, and that the hotel/catering industry, and the car business and commercial services sectors were most at risk.
 - The 1989 Dutch Commercial crime survey²⁶ reported that one in 13 corporations had been victims of threats, and that multiple victimisation was likely (Eijken & Mijer 1995).
 - The 1998 South African National commercial crime survey²⁸ found that non-food retailers (30%) experienced assaults more often than their counterparts (11.7%) (Naudé et al. 1999).

Burglary

- The 1996 International crimes against business survey³ reported the following results in relation to burglary (van Dijk & Terlouw 1996): the highest percentage of businesses which had been victims of burglary were within the Czech Republic (40%), followed by the United Kingdom (36.9%), Hungary (35.9%), the Netherlands (34.7%), France (31.6%), Australia (29.4%), Germany (28.7%), Switzerland (24.9%) and finally Italy (14.4%).
- The UK Safer cities small business crime surveys⁸ undertaken in 1990–2, found that large numbers of businesses had experienced burglary (figures ranging from 30% to 50%) during the preceding year. The surveys also discovered that there were high rates of re-victimisation amongst businesses targeted for burglary (Tilley 1993).
- The Small business crime initiative⁹, conducted in the UK in 1995–6 reported that 30.8 per cent of businesses in the sample had been victims of a burglary where entry was successful, and 12.5 per cent had been targeted for an attempted burglary (during a 12 month period). The sector most vulnerable to burglary was manufacturing, and many incidents were concentrated around a few victims (Wood et al. 1997).
- The 1996 Forum of private business survey¹⁰ conducted in the UK revealed that 25.6 per cent of respondents had been victims of burglary in the previous year. It was also found that 12.4 per cent of these businesses accounted for 75.5 per cent of all incidents, representing high repeat victimisation (Gill 1998a).
- The Scottish Business Crime Centre survey¹¹ (1999) identified businesses who had been victims of successful and attempted break-ins in 1998 (17.5%; three-quarters of these were ‘completed’ and the remainder attempts only). A risk factor was identified namely, businesses not being adjacent to other buildings (Burrows et al. 1999a, 1999b).
- The UK Commercial victimisation survey of retail and manufacturing¹² of business crimes in 1993, found that 24 per cent of businesses had suffered a burglary during that time, and almost a third were small retailers selling alcohol and/or cigarettes. Reportage was high, with almost 80 per cent of businesses reporting to police (Mirrlees-Black & Ross 1995b, 1995c).
- The 1990 UK study of Crime on industrial estates¹³ demonstrated that 37 per cent of businesses had experienced at least one incident of burglary or attempted burglary during the previous two years (Johnston et al. 1994). Most incidents were reported to police (over 90%).
- The British Retail Consortium survey¹⁴, undertaken annually, has produced results which demonstrate that since 1993–4, incidents of burglary have declined substantially, and in turn, so have the resultant costs on businesses (Centre for Retail Research 2000).
- The 1998 British Oil Security Syndicate survey¹⁵ on petrol station crime found that burglary cost retail petrol stations 4.9 million pounds per year (BOSS 2000a, 2000b).
- In contrast to findings from other studies, the National pharmaceutical association/sensormatic crime survey¹⁸ found that most of the pharmacies surveyed had never experienced an after-hours break-in (NPA 2000).
- A study into Crimes against small businesses in the Midwest US²⁰ (2000), reported that amongst all crimes committed between April 1995, and April 1996, burglary was the most prevalent (experienced by 32% of the sample) (Fisher & Looye 2000).

- Conversely, a study into Crimes against small businesses in the Midwestern and Southeastern regions of the US²¹ (2000) found that burglary was one of the least prevalent crimes, with the mean number of incidents experienced across the sample being 1.7. However, burglary was found to be one of the more costly crimes when it was committed, costing the business approximately \$1,811 (Kuratko et al. 2000).
- The Crime against small businesses in Boston study²², conducted in the US in 1999, provided results indicating that of those businesses victimised, 18 per cent had experienced burglary (McDevitt et al. 1991).
- The 1998 American National retail security survey²³ produced incidence rates both for burglary (.01 per \$100 million in annual sales), and vehicle ram-raids (0.001 per store location), (Hollinger 1998).
- Various studies in the Netherlands (cited in Steinmetz 1995) indicated that 21 per cent of all business-related crimes were described as actual or attempted burglary of buildings and commercial vehicles.
- The 1989 Dutch Commercial crime survey²⁶ demonstrated that one in five establishments had been victims of burglary, and that there was a strong likelihood of repeat victimisation (Eijken & Mijer 1995).
- The 1998 South African National commercial crime survey²⁸ found that 56.4 per cent of businesses had been victims of burglary (Naudé et al. 1999).
- In New Zealand, the 1999 Retail Theft and Security Survey²⁹ demonstrated that burglary remains the most common form of theft perpetrated outside operational hours. High levels of non-reporting were also noted (cited in *Grocers' review* 2000).

Vehicle theft

- The 1996 International crimes against business survey³ reported the following results in relation to the thefts of vehicles (van Dijk & Terlouw 1996): the highest percentage of businesses which had been victims of vehicle theft were in the United Kingdom (10%), followed by France (9.4%), Italy (9.1%), the Czech Republic (4.7%), Australia (3.2%), Germany (3.1%), the Netherlands (3%), and finally Switzerland and Hungary (both 1.5%). The survey also reported the following results in relation to thefts from vehicles: Businesses suffered most in the United Kingdom (23.2%), the Czech Republic (19.4%), Hungary (18.3%), the Netherlands (17.7%), France (14.3%), Germany (12.7%), Switzerland (9.1%), Italy (8%), and lastly Australia (6.1%).
- The UK Forum of private business survey¹⁰, conducted in 1996, reported that just over one-tenth (11.8%) of all respondents had suffered vehicle theft. High repeat victimisation was again observed, with 4.7 per cent of the cohort suffering 68.3 per cent of vehicle thefts (Gill 1998a).
- The Commercial victimisation survey¹², undertaken in 1994 in the UK, demonstrated that retailers had been reasonably frequent victims of theft of items from vehicles owned by the business (23%), and relatively infrequent victims of theft of the actual business vehicle (5%). There was substantial concentration of theft from vehicles, with 3 per cent of all respondents accounting for half of the incidents. Also, it should be noted that although vehicle theft was relatively infrequent, the authors stated that it is the most expensive crime for a business to suffer, as average losses are £3,940 per incident for retailers and £3,980 for manufacturers (Mirrlees-Black & Ross 1995b, 1995c).

- A 1990 UK study on Crime on industrial estates¹³ found that nine per cent of respondents had suffered theft of and from a vehicle (categories were combined), and that the large majority of these incidents were reported to police (85% for vehicle theft, and 60% for theft of items from a vehicle) (Johnston et al. 1994).
- Various studies conducted in the Netherlands (cited in Steinmetz 1995) in 1990 and 1992 produced results showing that theft of and from commercial vehicles was not overly common (these incidents comprised 13% of all crimes).
- The 1998 South African National commercial crime survey²⁸ reported that theft from motor vehicles was quite prevalent, with 43 per cent of businesses reporting victimisation in this area (Naudé et al. 1999). Motor vehicle theft was also reasonably common amongst manufacturers (43.3%) and wholesalers/distributors (22.7%).

Bribery/extortion/corruption

- The 1996 International crimes against business survey³ reported the following results in relation to corruption (van Dijk & Terlouw 1996): the highest percentage of businesses which had been victims of corruption were in France (4.8%), followed by the Czech Republic (4.7%), Switzerland (3.6%), Germany (3.2%), Hungary (3%), the Netherlands (2.4%), the United Kingdom (1.8%), Italy (1.5%), and finally Australia (1%).
- The 1994 UK Commercial victimisation survey¹² reported that bribery and extortion (combined) were one of the least most common crimes committed against businesses (2% of respondents had been victims), (Mirrlees-Black & Ross 1995b, 1995c).
- The US National retail security survey²³ (undertaken in 1997) found that the average incidence rate for gang related incidents was 0.051 per store, throughout the calendar year. The market sectors identified as most affected were department stores, and recorded music and video stores (Hollinger 1998).

Robbery

- The 1996 International crimes against business survey³ reported the following results in relation to robbery (undefined), (van Dijk & Terlouw 1996): the highest percentage of businesses which had been victims of robbery were in the Czech Republic (5.6%), followed by France (5.2%), Germany (4.6%), the Netherlands (4.4%), Hungary (4.2%), the United Kingdom (4%), Australia (2.2%), Switzerland (1.5%), and lastly Italy (1.4%).
- The Safer cities small business crime surveys⁸ (undertaken in the UK in 1990 and 1992), demonstrated that 12 per cent of the sample in Lewisham had been the victim of robbery (undefined), (Tilley 1993).
- The 1997 UK Small business crime initiative⁹ found 3.3 per cent of respondents had been the victim of a successful robbery, and 4.5 per cent had experienced an attempted robbery, with the majority of businesses affected being retailers (Wood et al. 1997).
- The Forum of private business survey¹⁰ (conducted in the UK in 1996) showed that a low number of businesses had experienced robbery (1.7%), however there was high repeat victimisation with 0.03 per cent of businesses suffering 38.9 per cent of robberies (Gill 1998a).

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- The Scottish Business Crime Centre survey¹¹ revealed that of the 58 per cent of businesses who experienced crime during 1998, less than one per cent of these incidents were robberies (attempted or successful), with 953 incidents reported by the 2,500 businesses surveyed. It was also stated that businesses involved in the manufacture and/or storage of jewellery or other precious metals were most at risk of robberies (Burrows et al. 1999a, 1999b).
 - The UK 1994 Commercial victimisation survey¹² reported that only three per cent of businesses had experienced robbery (a small 0.07% of businesses reported armed robbery). Those businesses deemed at greatest risk were those retailing alcohol or cigarettes, larger businesses, and those located away from the main shopping precinct (Mirrlees-Black & Ross 1995b, 1995c). Small businesses were more likely to report robberies to the police (80% had done so).
 - The annual British Retail Consortium survey¹⁴ has shown that robbery has declined substantially between 1993–4 and 1999, and that costs associated with robbery have reduced 70 per cent to £15 million overall (Centre for Retail Research 2000).
 - The 1998 British Oil Security Syndicate survey¹⁵ on petrol station crime revealed that robberies cost petrol stations £3.4 million per year, and that petrol retailers have the third highest number of robberies in the retail industry (BOSS 2000a, 2000b).
 - The US National crime victimisation survey¹⁹ (conducted between 1992 and 1996) demonstrated that 84,000 employees were robbed during this period, with males more likely to suffer victimisation (Warchol 1998).
 - The US 1997 study on Crime against small business owners in the Midwestern and Southeastern regions²¹ found that robbery was experienced on average 1.7 times per month. Robbery was also found to be a particularly costly crime, with annual losses estimated at \$1,811 (Kuratko et al. 2000).
 - A US study of Crime against small businesses in Boston²² (conducted in 1999) reported that robberies had been experienced by 10 per cent of the sample, with little appearance of repeat victimisation (McDevitt et al. 1991).
 - The 1998 US National retail security survey²³ revealed that the incidence rate for armed robbery was 0.03 per \$100 million in annual sales, and that the average armed robbery cost a business \$8,020 (US dollars) (Hollinger 1998).
 - The 1992–3 study in the US of Employee injuries and convenience store robberies²⁴ found that 2,073 incidents had occurred during the relevant one-year period, with the vast majority not resulting in injury to staff or customers (Amandus et al. 1996).
 - The Dutch National robbery registration system²⁷ demonstrates that between 1990 and 1993, robberies increased by 70 per cent, and that 75 per cent of all robberies are successful. It was also noted that over one-third of robberies occur between 6 pm and midnight (Eijken & Mijer 1995).

Malicious damage

- The 1996 International crimes against business survey³ reported the following results in relation to vandalism (van Dijk & Terlouw 1996): the highest percentage of businesses which had been victims of vandalism were in the Czech Republic (23.1%), followed by Australia (23%), the United Kingdom (22%), the Netherlands (18.1%), Hungary (17.6%), Germany (9.6%), France (8.9%), Switzerland (7.6%) and Italy (2.5%).

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- The 1997 UK Small business crime initiative⁹ found 23.1 per cent of respondents had suffered criminal damage, the second most common crime experienced (van Dijk & Terlouw 1996).
 - The Forum of private business survey¹⁰ (conducted in the UK in 1996) demonstrated a high 21.5 per cent of businesses had experienced vandalism, whereas only 1.2 per cent had been a victim of arson. Similar to what was revealed in other studies, there was considerable concentration of these crimes amongst a small number of businesses (Gill 1998a).
 - The Scottish Business Crime Centre survey¹¹ revealed that of the incidences of crime during 1998, 22 per cent of these were vandalism (of buildings, equipment or vehicles). The hotel/restaurant sector was identified as being most at risk of vandalism, also those businesses with a large staff, or those involved in the storage and/or manufacture of cigarettes or drugs. The survey also acknowledged that incidents of vandalism were likely to be perpetrated against repeat victims, often within short periods of time (Burrows et al. 1999a, 1999b).
 - The UK 1994 Commercial victimisation survey¹² reported that 22 per cent of businesses had been the victim of criminal damage, and that 63 per cent of small businesses had reported vandalism to police (Mirrlees-Black & Ross 1995b, 1995c).
 - A study of Crime on industrial estates¹³ (undertaken in 1990 in the UK) found that 26 per cent of respondents had suffered vandalism, with few incidents reported (Johnston et al. 1994).
 - The annual British Retail Consortium survey¹⁴ has shown that arson has declined substantially between 1993–4 and 1999 (Centre for Retail Research 2000).
 - The 1998 British Oil Security Syndicate survey¹⁵ on petrol station crime revealed that criminal damage costs petrol stations £8.2 million per year (BOSS 2000a, 2000b).
 - A 1992 UK study on Crime against small holiday accommodation units¹⁷ reported that 62.6 per cent of respondents had suffered deliberate damage to their premises (Gill et al. 1993).
 - In the 1998 UK National pharmaceutical association/sensormatic crime survey¹⁸, criminal damage was perceived to be a steadily increasing problem, with over one-quarter of interviewees specifying one or more incidents for the previous year (NPA 2000).
 - A 1996 study investigating Crime against small businesses in the Midwest²⁰ of the US found that vandalism had been experienced by 14 per cent of the sample, however 33 per cent of incidents went unreported to police, with businesses stating that they reported to police mainly for insurance purposes (Fisher & Looye 2000).
 - A US study of Crime against small businesses in Boston²² (conducted in 1999) reported that vandalism had been experienced by 18 per cent of the sample, with considerable repeat victimisation (33% of businesses reported three or more incidents), (McDevitt et al. 1991).
 - The 1998 US National Retail Security survey²³ revealed that the incidence rate for vandalism was 0.28 per \$100 million in annual sales, and that the incidence rate for arson was 0.002 per store (Hollinger 1998).
 - Various studies undertaken in the Netherlands (cited in Steinmetz 1995) in 1990 and 1992 demonstrated that 23 per cent of all business related crimes could be described as deliberate destruction.

- The 1989, 1992 and 1993 Dutch Commercial crime surveys²⁶ highlight that one in four establishments experience vandalism at least once a year, and that there is a strong likelihood for multiple victimisation (Eijken & Mijer 1995).
- The 1999 New Zealand Survey of retail theft and security²⁹ demonstrated that criminal damage was considered a common problem amongst retailers (cited in *Grocers' review* 2000).

Theft

- The 1996 International crimes against business survey³ reported the following results in relation to total theft by persons (both customers and personnel), (van Dijk & Terlouw 1996): the highest percentage of businesses which had been victims of this crime were in Hungary (83%), followed by the Czech Republic (72.3%), the Netherlands (66.4%), Germany (63.5%), the United Kingdom (61.7%), France (61.3%), Switzerland (60.5%), and finally Italy (44.5%).
- The Safer cities small business crime surveys⁸ (undertaken in the UK in 1990 and 1992), found a high number of businesses had experienced shoplifting, with figures ranging from 33 per cent in Birkenhead to 58 per cent in Lewisham (Tilley 1993).
- The 1997 UK Small business crime initiative⁹ found 19.1 per cent of businesses had experienced customer theft, with retailers suffering this crime to the greatest degree of all sectors examined. However, although this crime was quite common, the costs involved were not as great as other crimes, with the average cost per year being £76 per business (Wood et al. 1997).
- The Forum of private business survey¹⁰ (conducted in the UK in 1996) revealed that 21.6 per cent of businesses surveyed had experienced theft (both customer and staff), with 92.1 per cent of these incidents perpetrated against 12.4 per cent of the sample. The retail sector was identified as being most at risk (Gill 1998a).
- The Scottish Business Crime Centre survey¹¹ showed that 23 per cent of crimes experienced by the cohort were outsider thefts of cash and equipment. Considerable repeat victimisation was observed, and wholesalers and retailers were the most frequent victims of this type of theft, particularly those with few staff (Burrows et al. 1999a, 1999b). Theft by outsiders was also seen to be a low cost crime (£892 per year).
- The UK 1994 Commercial victimisation survey¹² reported that theft was the crime experienced most frequently (47% of businesses had been victims). Those businesses deemed at greatest risk were those retailing alcohol or cigarettes, and there was high concentration of victimisation (with 3% of retailers accounting for 69% of all incidents). Police reporting varied from 14 per cent of smaller establishments, to 36 per cent of larger ones (Mirrlees-Black & Ross 1995b, 1995c).
- A study of Crime on industrial estates¹³ (undertaken in 1990 in the UK) found that theft was experienced quite frequently (26% of businesses identified an incident), (Johnston et al. 1994).
- The annual British Retail Consortium survey¹⁴ has shown that customer theft rose by 23 per cent between 1993–4 and 1999, and that costs associated with theft have increased by 22 per cent to £740 million overall (Centre for Retail Research 2000).
- The 1998 British Oil Security Syndicate survey¹⁵ on petrol station crime revealed that theft/shoplifting costs petrol stations £1.4 million per year (BOSS 2000a, 2000b).

- The British Home Office construction plant theft study¹⁶, conducted in 1997 found that respondents faced a theft risk rate for equipment of 26 per 1,000 items, with very little recovered, and an even smaller percentage of recovered equipment found intact (Smith & Walmsley 1999).
- A 1992 UK study on Crime against small holiday accommodation units¹⁷ reported that 79.2 per cent of respondents had been victims of theft from both the establishment and property of staff. In addition, 37.7 per cent had experienced attempts to leave the premises without payment (Gill et al. 1993).
- A study of Crime against small businesses in Boston²², US (conducted in 1999) reported that 21 per cent of businesses had experienced customer theft (the most common crime), with considerable repeat victimisation (66% of businesses reported three or more incidents), (McDevitt et al. 1991).
- The 1998 US National retail security survey²³ revealed that the incidence rate for 'discarded empty packaging' (often considered an indirect measure of undetected shoplifting and other theft) was 976.08 per \$100 million in annual sales, and that the average shoplifting incident cost a business \$213 (US dollars) (Hollinger 1998).
- The 2000 Canadian Retail security report²⁵ has reported that of the 1.47 per cent of total retail sales which has suffered inventory shrinkage in 1999, 40 per cent of this is attributable to shoplifting. Estimated losses were \$116 per shoplifting incident (RCC 1999–2000).
- Various studies undertaken in the Netherlands (cited in Steinmetz 1995) in 1990 and 1992 demonstrated that shoplifting comprised 43 per cent of all business related crimes.
- The 1989, 1992 and 1993 Dutch Commercial crime surveys²⁶ highlight that one in eight establishments experience at least one incident of shoplifting per year, and that there is a strong likelihood for multiple victimisation. It was also noted that retailers suffered the most, with 60 per cent of these businesses having been a victim of shoplifting (Eijken & Mijer 1995).
- The 1998 South African Commercial crime survey²⁸ found that 67.7 per cent of respondents had been the victim of theft of either money or other goods from their premises, with the hardest hit being retailers. Just over 50 per cent of shoplifting incidents had been reported to police, who were described as overworked and operating within an ineffective justice system, ill-equipped to deal with minor crimes (Naudé et al. 1999).
- The 1999 New Zealand survey of retail theft and security²⁹ demonstrated that customer theft comprises 59.5 per cent of known retail crimes (cited in *Grocers' review* 2000).

Employee theft and fraud

- The 1996 International crimes against business survey³ reported the following results in relation to fraud by personnel (van Dijk & Terlouw 1996): the highest percentage of businesses which had been victims of this crime were in the Czech Republic (6%), followed by Germany (3.1%), the Netherlands (3%), Hungary (2.9%), the United Kingdom (2.5%), Australia (1.7%), Italy (1.6%), and lastly Switzerland and France (both 1.3%).
- The 1997 UK Small business crime initiative⁹ found that 4.7 per cent of the sample reported having experienced staff theft, one of the least identified offences (Wood et al. 1997).

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- The Forum of private business survey¹⁰ (conducted in the UK in 1996) reported that few respondents had been a victim of employee fraud (4.2 %), with considerable concentration of such incidents amongst a small one per cent of the businesses surveyed (Gill 1998a).
 - The Scottish Business Crime Centre survey¹¹ found that 13 per cent of all crimes experienced were identified as employee thefts. The hotel/restaurants sector was seen to be at greatest risk of this crime (Burrows et al. 1999a, 1999b).
 - The UK 1994 Commercial victimisation survey¹² reported that only six per cent of businesses had experienced employee theft, however repeat episodes were likely (Mirrlees-Black & Ross 1995b, 1995c).
 - The annual British Retail Consortium survey¹⁴ has shown that employee theft rose by 43 per cent between 1993–4 and 1999, and that costs associated with theft have increased by 41.3 per cent to £519 million overall (Centre for Retail Research 2000).
 - A 1996 study investigating Crime against small businesses in the Midwest²⁰ of the US found that eight per cent of the sample had experienced employee theft, however none of these incidents were reported to police (Fisher & Looye 2000).
 - The US 1997 study on Crime against small business owners in the Midwestern and Southeastern regions²¹ found that employee theft was experienced on average eight times per month. Embezzlement and trade secrets were uncommon, each with a mean of less than one incident per month (Kuratko et al. 2000).
 - The 2000 Canadian Retail security report²⁵ has reported that of the 1.47 per cent of total retail sales which has suffered inventory shrinkage in 1999, 31 per cent of this is attributable to employee theft. Estimated losses were \$450 per incident (RCC 1999–2000).
 - The 1998 South African Commercial crime survey²⁸ found that a high 52.1 per cent of respondents had been the victim of employee theft, and wholesalers/distributors and manufacturers reported considerable figures for employee fraud (19.9% and 40.4% respectively). Twenty-three per cent of employee theft and 29.6 per cent of employee fraud had been reported to police (Naudé et al. 1999).
 - The 1999 New Zealand survey of retail theft and security²⁹ found that employee theft comprises 40.5 per cent of retail crimes (cited in *Grocers review* 2000).

This section has provided data from numerous studies from Australia and international sources in order to demonstrate the extent of different types of crime perpetrated against businesses. It is obvious from this review that many businesses suffer crime, in particular burglary, customer theft and different forms of malicious damage (especially general vandalism). In the next section, we draw attention to the possible causes for business crime, and then follow this with targeted solutions for prevention.

Predictors of business crime

Predictors of business crime can be divided into those which involve individual factors, and those which place responsibility on the situation or environment in which the crime occurs. In this section the individually-focused explanations are addressed first, followed by those which centre on the situation.

Individually focused explanations

(a) Offenders

Table 3 outlines identified risk factors which are seen to be individualistic correlates of criminality. The existing research also indicates a high percentage of unemployed or low-income persons among offenders, indicating strong economic imperatives for shoplifting (McCarthy 1995; Salmelainen 1995; Lamontage et al. 1996; Sarasalo, Bergman & Toth 1997; Tonglet 2000). Krasnovsky and Lane (1998) identified depression and social alienation as contributory factors leading to this crime, with a small percentage (less than 5%) classified as kleptomaniacs. Other motives for shoplifting include being too embarrassed to purchase an item (e.g., condoms), impatience at queuing for service, being prohibited from legally purchasing items (e.g., alcohol), (Hayes 1997a) and thrill-seeking (Forney, Crustsinger & Arnold 1996).

Table 3: Individualistic correlates of criminality

Identified risk factors

- Documented evidence of prior involvement with the criminal justice system and/or a prior history of violent behaviour
- Being an adolescent, or situated in the early stages of adulthood
- Being male
- Economic dislocation; that is, being unemployed and/or poverty-stricken
- 'Dysfunctional' developmental incidents and experiences that might contribute towards antisocial sentiments, a lack of respect for the law, authority or sanctions. Individuals may have been exposed to adverse rearing practices, abusive relationships, low academic achievement or aggressive or crime-prone peers or reference groups
- A history of drug and alcohol abuse, or of being heavily medicated
- Acute mental instability
- Accessing facilitators of violence, such as owning or having access to firearms

Source: Adapted from Sutton & Hazlehurst 1996; McDonald & Brown 1997; Chappell & Di Martino 1998; Prenzler & Townsley 1998

(b) Victims

Certain personal attributes and characteristics are also regarded as indicative of an individual's heightened vulnerability to victimisation. Table 4 gives variables cited as significant indicators of risk by Chappell and Di Martino (1998: 65).

Table 4: Victim characteristics which influence crime

Identified risk factors

- Clothing can serve to deter criminals or invite attack. In particular uniforms may be seen as representing authority and thus deter criminals, but they may also be seen as a target as they serve the establishment, and also, they are a worthy adversary
- Gender may also affect the likelihood of crime, as women (due to their believed weaker physical stature) may be seen to be a 'soft target'. On the other hand, men (by exerting masculine control and appearing aggressive) may escalate a situation
- Age and experience is an important variable, as those of an older age and greater experience may be a less likely target for attack
- Personal characteristics, and interpersonal skills can affect the emotionality of a situation and thus have an effect on its outcome

Source: Chappell & Di Martino 1998

Situationally focused explanations

A second approach to theorising about crime and violence repudiates those forms of analysis that fail to move beyond the individual dimension. While the offender and victim are considered relevant, attention is predominantly focused on the situational production of risk. According to this account, organisations systematically induce crime through the creation and sustenance of circumstances and environments that invite or aggravate risk.

When taken to its logical conclusion, the central contention of this approach is that criminal victimisation is not a random event. Individuals are said to be differentially exposed to risks by virtue of the different lifestyles they elect to pursue (Meier & Miethe 1993). In the context of the present investigation, the most pertinent daily lifestyle factor is that of occupation and, the exposures to people and situations created by that livelihood. Greater risk attaches to occupations/professions involving public settings or interactions.

A second victimisation approach, and one of the most influential in terms of advancing the situational crime perspective, is known as the routine activities theory (originally proposed by Cohen & Felson 1979; see also Crow & Bull 1975; Cornish & Clarke 1986). All predatory crimes necessarily begin with a motivated offender (whether that motivation is instrumentally or expressively grounded), who logically plans their intended course of action. Whether the offender's proposed actions come to fruition, however, depends upon other individuals' daily social behaviour, which presents ample opportunity structures for crime. This view argues that crime is essentially a product of the non-random convergence of three prerequisite elements in time and space: motivated offenders, suitable targets and the absence of capable guardians who exercise surveillance and control functions.

Perpetrators may be connected to their business-related victims in one of three ways. They will be either a colleague or co-worker of the victim, a client of the organisation or a complete stranger. The circumstances facilitating the drawing together of the victim and offender will therefore obviously be a primary determinant in the character and consequences of their interaction. In keeping with the routine activities perspective, the following section examines how organisations contribute to the creation of each of the hypothesised requisite conditions for crime.

(a) Environmental factors

Aside from attitudes and beliefs that influence a potential offender towards an illegal course of action, it has been discovered that crime is also partly traceable to the environmental features of the target. That environment comprises a multitude of parts, including physical layout, structure, managerial arrangements and prevailing organisational culture (Chappell & Di Martino 1998).

At a basic level, the very design of business premises may function to either neutralise or amplify a potentially volatile situation. Taking the restaurant and fast-food industries as an example, it is easy to appreciate how improperly designed work spaces that are incapable of accommodating increased activity may produce overcrowding. The consequent discomfort may generate stress, hostility and friction among staff, as well as causing irritating interactions between staff and patrons. Overcrowding, inadequate ventilation, alcohol consumption, excessive noise and other poorly conceived atmospheric, architectural and control features have also been found to influence the incidence of aggressive and destructive behaviour in and around licensed premises (for example, Homel, Tomsen & Thommeny 1992; Homel & Clarke 1994; Leather & Lawrence 1995; Beale et al. 1998). Where the layout of the premises fails to provide a physical barrier between staff and patrons, that aggression may be transformed into physical violence (Hopkins 1998).

Moving away from aggressive behaviour, the manner in which shopkeepers display their merchandise has often been cited as a keen invitation for offenders desirous of those goods (both employees and external parties) to take them illegally (Cameron 1964; Ekblom 1986; Klemke 1992; Hayes 1997a). Though highly visible, self-service displays and strategically placed lighting are designed to induce purchases, and in particular impulse buying, they simultaneously act as crime promoters, since the merchandise is accessible (Burrows 1988; Sennewald & Christman 1992; Hayes 1997a, 1997b; Ekblom & Tilley 2000).

Organisational behaviour theorists also offer numerous insights into how organisational attributes and structures influence the actions of its constituent members, and how they may produce, or serve to enhance workplace stress, aggression and crime. For instance, Hackman and Oldham (1976) link employees' motivational levels and their organisational commitment, to a model of job characteristics comprising five dimensions: skill, variety, task identity, task significance, autonomy and feedback. They contend that a perceived imbalance in or disappointment with one or more of these elements may produce job dissatisfaction. In the worst case scenario, aggrieved individuals may try to lash out at the source of their discontentment (Salancik & Pfeffer 1973; Porter et al. 1974; Klein, Leong & Silva 1996).

(b) Situations of heightened risk

Evidently, numerous factors in the business environment serve either to promote or to discourage crime. In endeavouring to understand and confront crime and violence, we must therefore acknowledge the inducements to crime created within the external environment. Of vital importance here is the manner in which organisations create the prerequisite opportunity structures for crime, aggression and violence.

Industry sector affiliation and occupational status have consistently been demonstrated to be potential risk factors for violent victimisation. Identifying these correlates of crime is a useful starting point, but of particular relevance are the factors peculiar to certain occupations and sectors that render them especially vulnerable. Herein we outline a number of situational factors which ultimately can create a greater risk of crime for businesses.

Working with the public

As previously demonstrated, the threat of violence looms large in many client/customer-dependent occupations where face-to-face contact is common. Among those occupations dealing with the public, retail sector workers and service organisations (for example, leisure-based organisations) have repeatedly been identified as particularly at risk (Kinney 1993; Boyd 1995; Grainger 1995; Jenkins 1996; Hopkins 1998), as have those occupying supervisory or management positions (Budd 1999). There are many reasons for enhanced risk, but of fundamental importance is the virtually unrestricted exposure to a wide cross-section of individuals. Though most individuals gaining conventional entry to a premises are genuine seekers of goods or services, opportunistic criminals are unwittingly permitted entry on the same grounds – the pretext that they are legitimate clients/customers. Once inside, they can at leisure peruse the items stocked and the floor plan, thereby facilitating future illegal schemes.

Working in isolation, in mobile workplaces and/or late evenings

Accompanying the rapid automotive revolution, collective modes of employment have increasingly given way to individualistic pursuits. Society has, accordingly, witnessed an explosion in the growth of non-traditional employment forms such as subcontracting, outsourcing, telemarketing and other forms of mobile and/or self-employment which often involve people working in isolated circumstances (Chappell & Di Martino 1998).

While in itself not necessarily inviting greater risk, there are conditions under which working alone may expose people to additional vulnerability. Working in isolation has consistently been found to elevate the risks for those performing their duties in the late evening or early hours of the morning. Firstly, the prospect of little resistance from a solo operator increases the attractiveness of a target. Solo staff must leave the counter to perform other occupationally-related tasks and this substantially reduces their capacity to monitor incoming customers (Baron 1998). Furthermore, since there are fewer natural means of surveillance in the evening due to the reduced number of people out on the streets, the prospects of detection are further reduced (Bellamy 1996).

The dangers confronted by lone workers, especially those who are mobile, have been found to differ according to the geographical location of the business or the assigned route. Premises cited as the most attractive to potential offenders are those offering their employees the least protection, namely those situated in high crime areas, sheltered from passing observation, and those situated close to easy access and exit routes (along major highways or adjacent to freeway entrances) (Heskett 1996; OSHA 1998).

The exchange of money and/or the guardianship of valuable and/or desirable property

The presence of cash on hand and other desirable property such as drugs, alcohol or jewellery, often act as beacons for crime, especially robbery. The risks are further heightened for late-night employees operating in environments where daily takings may not have been cleared, such as convenience stores, mini-supermarkets, milkbars and fast food outlets with drive-in or drive-through facilities. Remote locations further exacerbate the risks, since they have low external visibility and intervention, as do locations offering ease of mobility, that is, access to transportation and arterial thoroughfares (see Brantingham, Brantingham & Wong 1991; Jammers 1995; Bellamy 1996; Hakim & Shachmurove 1996).

Many, including police and businesspeople themselves, have argued that in recent times there has been a trend towards robbers targeting smaller commercial establishments involved in the exchange of money, even though the spoils are meagre (NACS 1991; Bellamy 1996; Bastian 2000). In order to explain this alleged pattern, it has been proposed that traditional and more lucrative targets of robbery, such as

betting agencies and other gambling venues, jewellery stores, post offices, banks and other financial institutions, have tightened their security arrangements. Cash-based businesses that are less capable of implementing complex and costly robbery countermeasures (most commonly small businesses; see Sparrow & Goodman 2000) have consequently become 'soft targets'. This suspected displacement effect is reported to have had most impact on high cash flow enterprises operating beyond regular trading hours, namely pharmacies, service stations, video stores, convenience stores, newsagencies and cash couriers (Hume 1996, 1997a, 1997b; Anderson 1999; Crystal 1999; Foley 1999; *Newcastle Herald* 1999; Toal 1999; Commander McDevitt, cited in Hosie 2000). Also attracting peril are security guards, especially of the mobile variety; that is, those charged with the safety of cash in transit, who are most vulnerable during the transportation of money to and from their vehicle.

Prior victimisation

A long-acknowledged concept in criminological circles is that of repeat victimisation. What is less clearly understood is the extent to which past victimisation serves as a predictor of subsequent risk, though recent research has demonstrated that the risk of subsequent victimisation escalates after each attack (Ellingworth et al. 1995; Chenery et al. 1996; Chenery, Holt & Pease 1997; Ellingworth et al. 1997; Ashton et al. 1998). Moreover, the greatest risk is in the period immediately after an initial episode (Bowers et al. 1998; Ratcliffe & McCullagh 1999; Litton 2000; Townsley, Homel & Chaseling 2000).

Debate continues, however, on whether an acquisitive crime episode actually increases the victim's probability of suffering a subsequent victimisation (referred to as event dependency), or whether the event merely serves as an indicator of a victim's high pre-existing risk (referred to as risk heterogeneity), (Sparks 1981). Event dependency might follow from an offender who, having successfully penetrated a target and having determined that it was an effortless and/or gratifying exercise, decides to strike the same target. Not only is the offender familiar with the target (that is, its entry and exit points and floor layout), but they may have decided to avail themselves of, or inform others of, crime opportunities neglected in the first mission (uncertainty about the likely reward would have diminished, since the offender has had an opportunity to appraise the remaining contents and their likely worth), or they may anticipate the replacement of stolen goods with newer, more valuable goods. Innovative research (Everson & Pease 1995; Ashton et al. 1998) lends support to this thesis, indicating that the initial offenders perpetrate the majority of repeat crimes.

On the other hand, risk heterogeneity postulates that the two episodes are unconnected (the same offender or their acquaintances are not responsible) and hence a victim's risk of subsequent victimisation has not been altered by the event. It may be, for instance, that following the initial attack, a victim is unable to take appropriate preventive measures to address their crime-prone circumstances and so their initial vulnerability remains unchanged. Alternatively, the target may be especially appealing, and the two incidents are connected only in respect of this condition; that is, the seductiveness of the target (see generally Polvi et al. 1990; Farrell, Phillips & Pease 1995; Ellingworth et al. 1997).

To date, research has arrived at the following conclusions (Pease 1998):

- victimisation is the best single predictor of repeat victimisation;
- when victimisation recurs, it tends to do so quickly;
- high crime rates and hot spots are identified as such in large part because of high rates of repeat victimisation;

- a significant factor leading to repetition is the fact that offenders decide to act on subsequent opportunistic advantages unveiled by the first offence; and
- those inclined to repeatedly victimise the same target tend to be more firmly established career criminals compared with those who prefer victim heterogeneity.

Now that we have discussed the nature and extent of crime and predictors, we turn to prevention. In the next section, numerous guidelines for crime prevention are presented, along with case studies to illustrate these guidelines, and survey data on how businesses really prevent crime (or don't, as the case may be).

Crime prevention strategies for businesses

We conclude the literature review with a discussion on business crime prevention, by presenting a number of guidelines (derived from empirical study) and some successful case studies to illustrate these guidelines. These will be discussed with reference to three categories of crime (internal crime, customer theft, and burglary) and then in relation to general crime prevention. However, prior to this it will be useful to present findings from business crime studies which have analysed respondents' own ventures and expenditure in relation to crime prevention. This will, hopefully, provide an overall understanding of the actual activities undertaken by the majority of businesses, which can be compared with the successful strategies detailed in the case studies.

- The 1999 Australian Institute of Criminology/COSBOA study of small businesses found that the average amount spent on crime prevention in a year (by both victims and non-victims) was highest for liquor outlets, followed by pharmacies, service stations, newsagencies, general stores and finally retail food outlets (cafes/restaurants/takeaways). All amounts spent were less than \$5000, with the three retailers which spent the least spending less than \$2000 (Taylor & Mayhew 2002b).
- The Australian Institute of Criminology Crimes against business survey³⁰ found that 52.8 per cent of small businesses had not spent any revenue on crime prevention (Walker 1994). However, across all businesses, the average amount spent was \$2000 p.a. Measures which had been implemented (by those who had spent revenue) were special lighting (46.7%), after-hours security (43.4%), window protection (40.8%), and alarm systems (36%).
- The SA 2000 Retail crime and safety survey³² reported that the majority of businesses had used alarm systems (57.9%), panic buttons (27.3%) and the remaining quarter had used no crime prevention measures (West 2000).
- The Australian Chamber of Manufacturers survey³³ found that some businesses had conducted random audits (31%), some had contracted independent auditors (29%), and 18 per cent had used various security procedures and hardware (e.g., surveillance, security guards, cameras, alarms, etc), (Alexander 1998).
- The UK study of Crime on industrial estates¹³ found that 92 per cent of businesses had employed no added security measures. However, two-thirds of the sample did have existing security measures already on their premises; items such as alarm systems, security lighting, bars and grilles, and reinforced glass and doors. Only six per cent had taken some effort in the realm of crime prevention, in particular using security hardware, or developing crime prevention policies for employees and management (Johnston et al. 1994).

- A minority of respondents in the UK Home Office Construction plant theft study¹⁶ reported that they had employed or installed: chains and padlocks (22%); security property marking (5%); locked gates (23%); closed-circuit TV (23%); and security guards (18%) (Smith & Walmsley 1999).
- The US National Pharmaceutical Association/sensormatic crime survey¹⁸ found that 54 per cent of pharmacists used CCTV, and others mentioned the use of mirrors and/or panic buttons (NPA 2000).
- Although many participants in the Crime against small businesses in the Midwest study²⁰ (undertaken in the US) stated that they used no crime prevention procedures (48.3%), others had used additional outdoor lighting (31%), special or additional window locks (15%), alarm systems (11%), a gun (1.5%), cameras (5.5%), mirrors (4.8%), or a security guard (3.5%) (Fisher & Looye 2000).
- The US study of Crime against small business owners in the Midwestern and Southeastern regions²¹, demonstrated that numerous businesses actively prevented crime by minimising the cash on the premises (79%), increasing lighting (76%), controlling key access (75%), identifying employees (72%), installing alarms (62%), and hiring fitting room attendants (4%) (Kuratko et al. 2000).
- The Canadian Retail security report's²⁵ respondents mentioned that they maintained a loss prevention department, which implemented such measures as integrity screening checks, loss prevention awareness programs, parcel checks, merchandise controls, and barcoding and scanning (RCC 1999–2000). Alternative measures were employed by numerous businesses, including alarm systems (78%), security tags (40%), and radio-frequency/ink-dye security tags (20%).
- Approximately half of the businesses that participated The Netherlands' Commercial crime survey²⁶ used no security measures whatsoever, and the others had installed security locks, extra lighting, and alarm systems (Eijken & Mijer 1995).
- Ninety-two per cent of respondents in South Africa's National commercial crime survey²⁸ had spent money on crime prevention, with the majority of businesses mentioning the use of alarm systems (74.4%), gatekeepers or receptionists (66.7%), or security guards (55.4%), (Naudé et al. 1999).

As is evident from the above summary, few businesses spend money on crime prevention, particularly in Australia, the United Kingdom and the United States, with the notable exception of South Africa. In the following discussion, we will detail individual case studies which have successfully reduced crime in particular areas, and these efforts can be easily contrasted with the obviously low priority which crime prevention is with the majority of businesses around the world and in Australia. We begin with a discussion of internally perpetrated crime, that committed by employees.

Internally perpetrated crime: fraud and theft

As we have seen from the previous review of the nature and extent of crime, internally-perpetrated crime is quite common and should be a source of considerable concern for businesses. It is well established that traditional security measures have limited effect in terms of deterring insider crime and that effective risk management requires organisations to adopt a multidimensional approach that takes into account both pre- and post-incident management policies and pragmatic strategies.

Pre-incident management strategies

At the genuinely preventive stage (that is, before a crime incident occurs), there are a number of strategies that could be employed by management to discourage the likelihood of victimisation and reduce its impact.

(a) A commitment to crime prevention

One of the most concrete indications of a commitment to the prevention of crime, and the least costly, is the adoption of a written policy that articulates the establishment's intolerance of irregularities. Such a policy would outline to employees a number of measures designed to create an organisational climate that is supportive of values such as honesty, integrity and equality (Snyder et al. 1989). Several demonstrations of organisational commitment might be proclaimed in such an organisational code of ethics:

- A zero-tolerance philosophy should be adopted and publicised, indicating that all infractions, no matter how minor, will be dealt with officially and that employees may not only be dismissed but formally charged or sued.
- For the purposes of transparency and equity, management needs to convey to staff what is unacceptable conduct and, in the present context, its specific conceptions of 'theft' and 'fraud'.
- All individuals, irrespective of their placement within the hierarchy, should be encouraged to report all incidents of fraud and theft coming to their attention to a specifically designated authority or colleague(s).
- Inducements should be offered as a means of enhancing internal reporting mechanisms. In particular, whistleblowers must be provided with assurances of confidentiality, anonymity and protection against reprisals (Gifford 2000).
- There should be a commitment to the provision of appropriate levels of resourcing geared towards the identification and prevention of internal theft and fraud.
- Effective lines of communication should be established and maintained between management and employees.
- Commitment to the provision of a worker-supportive environment is needed, including the creation of grievance-reporting procedures.

If this document is to be valued as something more than simple organisational rhetoric, then the policies and philosophies outlined therein must be given effect by senior management, who must themselves be seen to be abiding by ethical practices (Gifford 2000).

(b) Company identity checks, pre-employment hiring and termination procedures

A review of the relevant crime prevention literature reveals a common recognition of the importance played by entry controls as a line of defence against theft and fraud.

Employees

Some of the vetting techniques suggested for use at the recruitment stage include:

- Psychological testing to determine if the individual meets the criteria for deviousness, violence and 'unsound character'. It should be noted that such tests are not always thoroughly reliable, and thus should not be used exclusively.
- Background checks designed to ascertain the veracity of an applicant's résumé, personal references and their previous criminal and credit record. Of primary importance is whether an applicant has been dismissed from a previous position or disciplined for theft, fraud or related offences involving dishonesty or violence.
- Integrity interviewing and other interrogation techniques that seek to identify characteristics indicative of a propensity to aggressive or dishonest conduct (see, for example, Trumfio 1995).
- Written performance tests, questionnaires or surveys.

Considered similarly important in the management of internal risks is the establishment of effective termination procedures. Heskett (1996: 86) outlines a number of 'good termination practices' designed to protect the organisation and its employees against the violent retaliatory behaviour that might be displayed by terminated individuals.

Business customers

In order to prevent fraud committed by other businesses, preliminary steps should be taken by a business to ensure that their interests are protected. These strategies are rather peripheral to the aims of this report, therefore the reader is referred to ASIC (2000).

(c) Worksite vulnerability assessment

An organisation must acknowledge the possibility of victimisation and prepare accordingly, possibly through a step-by-step audit of the workplace that seeks out existing and potential sources of crime. Some of the steps that may facilitate the assessment process include:

- Being constantly alert to behavioural changes in employee attitude, demeanour and work styles, since these might offer early warning signals to employee crime;
- Auditing premises to identify design features that are likely to enhance the probability of theft and fraud, such as the physical layout of the business and its surrounding environment (lighting, communication and computing systems);
- Evaluating the effectiveness of existing physical security measures and devices (including computer systems) to determine their effectiveness and whether they are being appropriately used and maintained;
- Fraud assessment questioning, a technique that identifies internal control problems through interviewing organisational personnel; and
- Contacting local businesses engaged in similar activities and trade associations in an effort to pool knowledge on the issue of industry susceptibility, including identification of common problems, patterns and best-practice solutions.

(d) Tailoring prevention and control mechanisms

Once the worksite analysis process has been worked through and existing and potential risks exposed, the next step is to engineer internal controls to remove or minimise those security threats. Snyder et al. (1989) provide an extensive list of control measures designed to minimise employee theft (e.g., use of pre-numbered documents, restriction of authority signatures, clear definition of responsibility, separation of record-keeping, custody and authority, use of independent verification and double checking mechanisms, and periodic inventory and book-keeping audits). For a comprehensive list of these measures, see Snyder et al. (1989).

Some further general measures recommended in the prevention of employee theft and fraud include (North Carolina Department of Crime Control and Public Safety 1994; Traub 1996; Scottish Office Crime Prevention Unit 1997):

- employment of contract security personnel;
- institution of physical controls as a means of restricting or supervising access to goods or facilities;
- installation of technological surveillance;
- disclosing sensitive security information to staff on a 'need to know' basis only; and
- having staff share duties to ensure one person is not left 'to their own devices'.

Customer theft (shoplifting)

Customer theft is one of the most prevalent crimes suffered by businesses, most obviously in the retail sector. The following section details strategies and successful case studies for combating this common affliction.

Pre-incident management and exclusion strategies

(a) Offender apprehension policies

Within the business community, there appears to be a general reluctance to report identified instances of shoplifting to police. Offenders caught 'red handed' are commonly asked to return the stolen property, cautioned and then allowed to leave the premises without any further action. Miles (1999) cautions that this implicit 'no prosecution' policy is likely to attract repeat offending, as the store develops a reputation for being a soft target. Consequently, as in the case of employee theft, organisations have been implored to convey clearly the message that shoplifting is a serious crime and that it will not be tolerated. To that end, retailers are advised to display signs in prominent positions in the store (particularly high-risk areas such as fitting rooms) indicating that management reserve the right to inspect bags and that shoplifters will be prosecuted.

(b) Early warning and exclusion systems

As indicated by the Home Office (2000a), although businesses extend an implied invitation to the public to enter their premises, a commercial establishment is also private property. Hence a shopkeeper is fully entitled to exclude from their premises any individual whose presence is considered detrimental, such

as those suspected of shoplifting or previously apprehended for that offence. Two successful case studies which have incorporated this principle are detailed in the following.

The retail theft exclusion order scheme (RTEOS)

The RTEOS is a joint venture between local police and centre management in Burton (a Staffordshire town), alongside the Crown Prosecution Service and the courts. Essentially, habitual thieves who have become known for their criminal activity (either theft or other retail-related crimes) are being served with notices banning them from the stores in which their crimes were committed. The targeted individuals are, furthermore, excluded from entering the stores of all other participants in the scheme, which in 1999 totalled 45 (Crime Prevention News 1999a).

Retailers against crime in York (RACY)

In November 1998 over 100 retailers, in conjunction with local police and the city council, devised the RACY scheme (Crime Prevention News 1999b). Under this program, retailers forward information regarding known criminal activity to a centralised Retail Intelligence Officer, who enters the details into a specially devised computer package known as the Repeat Offenders Database. The accumulated information is then used to construct detailed profiles of known 'professional' offenders and their activities (for example, shoplifting gangs). Similar schemes using this database system are also in effect in London, Romford, Manchester and Wolverhampton (see Hillier 2000), and in Aberdeen, Glasgow and Edinburgh.

The Wolverhampton scheme also makes use of exclusion orders banning prolific offenders, who are referred to as 'targets'. If individuals commit a second offence while an order served upon them is in effect, they are liable to incur a prison sentence. The first re-offender convicted under this arrangement was apprehended for the theft of meat worth slightly over £14 and was imprisoned for two months. It is claimed that over the past three years, retailers have witnessed a 30 per cent reduction in stock losses attributable to shop theft (Hillier 2000).

The British Home Office in 1999 included exclusion order schemes in their 'strategies for the prevention of business crime', which are detailed in the following:

- A local audit of crime and disorder problems must be conducted.
- An audit-based strategy must be devised which establishes the program's objectives and priorities, and short- and long-term performance targets, and nominates the agencies responsible for their delivery.
- The installation of closed-circuit television.
- Radio links establish an instant means of communication between retailers, CCTV schemes and police.

- Photograph and information-sharing schemes involve distributing photographs or other information pertaining to known criminals among participant retailers.
- Exclusion order schemes, as outlined above, involve serving orders on known offenders that expressly prohibit them from entering the premises of participant retailers.

Although extensive partnership schemes, such as those outlined above, have not been implemented in Australia, each state has legislation enabling retailers to prohibit entry to their stores of ‘undesirable’ individuals. Such persons include persistent thieves as well as those who have demonstrated violence or behaviour considered offensive to other customers and staff. The South Australian police currently routinely use banning notices against shop thieves detected in retail stores in Hindley Street Mall, and such moves could be repeated elsewhere for similar success to that achieved in the UK.

(c) Other initiatives for the prevention of shoplifting

There have been other approaches taken for the prevention of customer theft which have incorporated a number of principles. The Southport Police Beat Shopfront is one such approach, and is described here.

The Southport police beat shopfront

In an effort to stimulate retailer adherence to a report and prosecute policy, the Beat Crime and Win initiative was developed by the Australia Fair Shopping Centre in Southport in October 1994. As part of that project, centre management offered the inducement of a monthly \$250 shopping voucher each time a business reports an offence or any suspicious activity (Miles 1999).

One of the objectives of this promotional initiative was to nurture relationships between retailers, police and security providers so that crime prevention and detection become a trilateral effort. Among the activities supported were:

- providing ongoing education to retailers in the area of crime prevention;
- encouraging the implementation of CPTED guidelines;
- fostering a community spirit in the shopping precinct; and
- establishing a high-profile police presence and a system of ‘telephone trees’ throughout the centre, which facilitated the rapid dissemination of information between retailers regarding the movements of suspected individuals.

The program was initially designed to run on a three-month trial period over the busy Christmas and New Year holiday season. Following this period, an evaluation was conducted and it was decided to continue the initiative indefinitely. According to the information available, in the first six months of operation, a total of 95 people were arrested or summonsed, 183 charges were laid and over \$7,000 worth of property was recovered. The incidence of shoplifting and retail-related offences (credit card and other types of retail fraud) have declined since the inception of the project.

(d) Employee training and education

An essential element in any loss prevention program is the provision of regular and up-to-date staff training and education. In particular, staff should be instructed on surveillance, detaining offenders legally, bag-checking, and conflict resolution (Hayes 1997b; 2000; Home Office 2000a).

Worksite risk analysis

To reiterate an earlier point, data collection and analysis form the cornerstone of any well-developed loss prevention program. Relying upon identified instances of shoplifting is clearly inadequate due to the extent of underreporting. To achieve a comprehensive understanding, specific and ongoing investigations need to be conducted into stock shrinkage, preferably through the creation and maintenance of a computerised database. The vulnerability of businesses can be reduced considerably by identifying the environmental circumstances that give rise to the offending and by giving descriptive details of targets that are persistently at risk. See Burrows (1988: 16) for a list of questions that should guide retailers in their efforts to ascertain the scope, nature and characteristics of their shrinkage problems.

Loss prevention control mechanisms

A variety of loss prevention systems and devices have been developed over the years, ranging from the very simple and inexpensive to the costly and sophisticated. The following overview provides an indication of the range of loss prevention mechanisms currently available to retailers (Felson 1996; Seider 1996; Weinstein 1998; Gill, Bilby & Turbin 1999), and following that is a case study of a successful loss prevention control scheme.

Increasing the effort:

- placing highly valuable items, such as watches and jewellery, behind locked, fixed-glass display cabinets;
- using peg fixtures with a bar placed in front of the product, which limits the number of items that can be grabbed by thieves at once;
- avoid providing areas that enable shoplifters to stash goods, remove or hide tags; and
- alternating positioning of hangers so that clothing cannot be removed en masse.

Increasing the risks:

- simple display practices that would enhance surveillance;
- use of pages on a store's public address system asking security personnel to proceed to a particular aisle or request that a camera be focused on that aisle;
- arranging layout so that customers are visible and channelled to the checkout;
- use of mirrors to observe areas otherwise out of sight;
- use of cabling or display 'loop alarms', whereby highly valued goods such as leather wear is protected by an alarmed wire that loops through the item;

- use of uniformed and plain-clothes store detectives. The evidence on the effectiveness of this deterrent mechanism is inconclusive, though it appears that, cost-effectively, they are likely to have only a limited impact (see Burrows 1988);
- Electronic article surveillance systems; and
- closed-circuit television.

Reducing the rewards (also known as benefit denial):

- placing stickers on packaging. This renders stolen items difficult to return to other stores or sell, as removing the stickers damages packaging (Weinstein 1998);
- securing attractive targets such as CDs or other small valuable items by displaying dummy or disabled goods (e.g., empty packaging or equipment with parts removed); and
- using ink tags: if the device is incorrectly removed, clothing is ink-damaged.

Tesco's Totally integrated security system (TISS)

In the 1980s a number of Tesco stores in the UK were fitted with the TISS, a package that incorporates a number of store design and procedural changes (Burrows 1991). Central to the package was the installation of CCTV for monitoring of vulnerable areas within the store and in its immediate surrounds in three main areas:

- central cash-handling;
- checkout lanes; and
- staff entrances, rear doors, waste disposal areas and some petrol forecourts.

Implementing this surveillance system was at first costly, at approximately £150,000 per store. In assessing the effectiveness of the system, it was discovered that losses fell from approximately £12,000 a week to £5,000 a week. In short, the organisation recouped the expenditure on the TISS within six months. Moreover, cash losses dropped from £500 per week to only £20 per week and violent incidents within the store virtually disappeared.

Commercial burglary

Firstly, it should be noted that burglary may be effected either through 'smash and grab' (use of violent means to gain entry), opportunistic (unplanned burglaries in which offenders gain entry through vulnerable points), or sophisticated (where security devices are targeted and disabled) (Home Office 2000b). Hence to tackle burglary effectively, allowances must be made for various contingencies, and measures must also be tailored to the degree of susceptibility of the business in question.

Pre-incident management

(a) Staff training and education

Any business that employs staff must, as part of their overall crime prevention program, enlist their full cooperation and support. By virtue of their ground level activities, these people are ideally placed to function as a natural form of surveillance. To ensure that this function is carried out to its fullest potential however, it is important that staff are appropriately trained to be alert and to correctly use any burglary prevention measures that have been implemented. In particular, staff must be encouraged to (Home Office 2000b):

- bring to management's attention any suspicious circumstance, person or vehicle;
- develop a culture of crime prevention by soliciting staff advice on security; and
- exercise their security responsibilities; only designated staff should be permitted access to certain keys or locks and they must be trained to not leave keys and to securely fasten doors, windows, cabinets and offices and other high-risk areas.

Worksite risk analysis

As already discussed in some detail, the next elementary aspect of any crime prevention program involves instituting a system of risk analysis. The results of this process are crucial to identifying problem areas and to devising solutions that are practicable to the business. Cost-effectiveness is a fundamental concern, particularly in relation to justifying the implementation or continued recourse to, expensive burglary prevention measures. Properly conducted site analyses will furnish information and evidence that will assist business operators to arrive at sound judgments.

Clearly there are some general matters that must be addressed by any risk analysis. Data must be gathered, for instance, in relation to offence time and place, the extent of any loss or damage incurred, and details of suspects. Offence-specific data must also be extracted. In the case of burglary, Burrows (1988) suggests that the following questions be posed:

- *When do incidents occur?*

Establishments under consistent attack should ascertain whether there are temporal patterns indicating the need for time-specific measures. For instance, if burglaries regularly occur during certain hours, then the provision of guards during those peak risk periods might be appropriate.

- *What was the method of entry?*

Since an establishment's principal barrier lies in the strength of its exterior, it makes logical sense to direct preventive efforts to identifiable weak spots.

- *Where already in existence, how effective was the security hardware?*

Where available security measures were circumvented, it is essential that a failure evaluation be conducted. One needs to determine whether the security measure itself was defective or unsuitable (easily forced, inappropriately sized device) or whether operator error rendered it vulnerable (for example, if doors or windows were left unlocked). The latter scenario indicates the need for staff retraining, while the former suggests the need for improved hardware.

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- *Where alarm systems were in existence, did they function correctly?*

It is imperative that false alarms be investigated thoroughly, for if these occur with any degree of frequency, it is likely that police will not respond promptly when the alarm system is genuinely activated.

- *What style of burglary was effected: opportunistic or well planned?*

Determining the style of attack to which one is subjected aids judgment in the purchase of any additional security measures. For instance, opportunistic attacks may indicate that elaborate countermeasures are unnecessary, and that simple environmental measures, such as improved lighting, may suffice.

Loss prevention controls

As in the case of shop theft, a range of measures are available to businesses seeking to protect their properties against burglary (North Carolina Department of Crime and Public Safety 1994; Townsley 1998; City of Boulder Police Department 1999; Home Office 2000b). These are detailed in the following, as is a case study which largely followed these principles.

Increasing the effort:

- remove portable, highly valuable items, such as jewellery or cameras, from window displays overnight. These goods should be securely stored in a locked area;
- stock areas should be hidden from view so that the contents are not discernible;
- remove debris, tools or other items that might be used to effect a break-in from the areas immediately surrounding the premises;
- strengthen all potential entrances and internal security doors;
- secure all cash and valuables in a good-quality burglar-resistant and fireproof safe overnight (discreetly);
- use secure cages to store highly valuable stock in secured rooms;
- ensure telephone lines are hidden;
- perform pre-closing checks to ensure that no-one is concealed within the store; and
- fix vehicle traps, such as bollards, into the ground surrounding your premises to protect against ram raids.

Increasing the risks:

- ensure that both the interior and exterior of your premises are optimally visible (well-lit, possibly with sensor lights, and clear of shrubbery or other items);
- perimeter fencing should be adequate enough to deny intruders entry while still allowing natural surveillance of the area;

- fit an intruder alarm system (the level of security system should be tailored to the business's needs and the dimensions of the premises) and advertise its existence. Data derived from Hakim and Shachmurove's (1996) study of commercial burglary in Philadelphia demonstrate that premises which advertised the existence of an alarm through the use of a clearly visible sign faced a 2.3 per cent probability of being burgled, while those not posting such notices faced a 4.5 per cent probability. Overall, the strategy of advertising one's alarm was associated with a 50 per cent reduction in the probability of burglary for alarmed premises;
- introduce video surveillance such as CCTV, which monitors either the internal and/or external environment; and
- lock escape routes. Ensure that windows and doors (both internal and external) are well locked and isolate the power supply for loading bay shutters.

Reducing the rewards:

- leave the cash register open, empty and visible to external persons – that way potential burglars are made aware that their efforts to obtain cash will be futile;
- reduce the quantity of stock housed on the premises and advertise that fact;
- remove all cash from the premises overnight or ensure that it is securely stored; and
- mark all valuable property so that it is traceable in the event of a burglary. Of course the deterrent value of this measure is inextricably connected with its widespread communication, for example, through the use of stickers (for an evaluation of a residential program using this strategy, see Laycock 1992).

The Kirkholt burglary prevention project

In 1985, domestic burglaries on the Kirkholt local authority estate were assessed as equivalent to an annual rate of 24.6 per cent. Examination of the crime situation revealed a high incidence of repeat victimisation (Litton 2000).

In response to this situation, a range of situational crime prevention techniques were developed. The first phase (Farrell 1995) consisted of four strategies:

- *Target removal*: electricity and gas prepayment meters situated in burgled homes were removed. These were regarded as beacons for burglars (believed to contribute to 49 per cent of burglaries), since the money contained within these devices was infrequently removed, thus resulting in the accumulation of large amounts of accessible cash.
- *Target-hardening*: it was determined that burglars were able to effect their crimes with relative ease, so burgled homes were provided with security upgrades as a means of reducing vulnerable points of entry. Additionally, valuables were marked by postcoding.
- *Natural surveillance*: a cocoon-style Neighbourhood Watch scheme was developed, where small groups of neighbours were asked to keep a lookout for burglars returning to victimised households, and rewarded with a security upgrade for doing so.

The Kirkholt burglary prevention project (cont'd)

- *Guidance:* burglary victims were provided with contact information pertaining to the relevant agencies in their local area.

The second phase introduced four key community initiatives (Pease 1992):

- a school-based crime prevention program;
- group intervention programs for apprehended burglary offenders;
- a low-cost savings and loan scheme for residents; and
- better informed probation officers.

Results

The program ran for three years and produced some dramatic results. In the first five months, burglary on the estate dropped to 40 per cent of its previous level and revictimisation fell to zero. Overall, a reduction in burglary of 74.9 per cent was recorded annually over the course of the scheme (n fell from 526 to 132). It was estimated that the interventionary measures had served to prevent 1,056 burglaries over the three years. From a cost–benefit perspective, the Kirkholt scheme was found to be favourable.

In 1988, following on from the success of the Kirkholt demonstration project, a number of Safer cities schemes were implemented in crime-prone areas throughout the United Kingdom (see Tilley & Webb 1994).

General business crime reduction initiatives: case studies

There have been numerous other initiatives which have attempted to reduce crime in general and have not targeted one crime in particular, but a variety of them. Two case studies which fit this description are given:

Small business and crime initiative (SBCI)

On the basis of the SBCI findings, measures were designed to address the following:

- Chronically victimised businesses (defined as those suffering ten or more incidents per annum, excluding shop theft and fraud) were subjected to targeted visits by crime prevention officers and SBCI staff for the purposes of conducting risk assessments, security reviews and the identification of risky management practices.
- Businesses suffering repeat burglaries (three or more in a year) were assisted through the development of a system of rapid referral from the police to the SBCI. Identified premises were graded in terms of the risk of revictimisation and provided advice on measures tailored to reducing repeat attacks. Moreover, proactive aids to enhancing detection were installed in those situations where repeat attacks appeared likely. Three options were trialled: placement of portable silent

alarms in those premises without an existing alarm; installation of covert CCTV systems in businesses with alarms; and proactive detection, through use of 'proximity alarms', devices that were located within premises but sensed movement through the building fabric, thus guarding the immediate external area. These latter devices were placed in the direction from which burglars had previously approached.

- Those experiencing severe problems with customer theft and fraud were supplied with advice packs, and where clusters of frequently victimised businesses were identified, they were encouraged to develop cooperative, problem-oriented groups.

Evaluation

An independent evaluation of the scheme produced the following findings:

- Overall, commercial crime was substantially reduced across all categories except for customer theft. When all offences are combined (excluding shop theft), incidence rates were seen to drop by one-third, resulting from falls in prevalence and concentration.
- The overall patterns of chronic victimisation did not change markedly, with only small improvements noted among those suffering high victimisation rates.
- Businesses receiving considerable input from SBCI did not experience greater reductions in crime than those experiencing relatively limited contact. In relation to burglary victims, however, full implementation may have arrived too late to have had any measurable impact.
- The vast proportion of heavily victimised businesses in the first sweep of the program were not highly victimised in the second sweep and most of those heavily victimised in the second sweep had not been heavily victimised in the first sweep.
- There appeared to be some displacement from chronically victimised businesses in the first sweep to similar businesses in close proximity.

The Enschede-Haven project

The Enschede-Haven area is an industrial site with 410 companies operating on the site. In June 1989, a project commenced on the site. The objectives of the project were to achieve a minimum reduction in crime of 50 per cent and to foster cooperative security partnerships between the business community and the police. The project comprised the following elements:

- *Increased involvement of the business community in security.* A number of information sessions were held by police including the presence of a former site manager turned uniformed security guard who individually visited each of the entrepreneurs and presented them with registration forms.
- *Increasing preventive nature of the area.* In an effort to discourage potential perpetrators, signs displaying the project logo and advertising the adoption of increased security measures were erected along all the main access roads. This information was also displayed on stickers that were distributed among members.
- *Technical security.* Participant members had alarm systems linked to the incident room of the private alarm centre.

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- *Establishing effective surveillance.* A job-experience project was established to perform the function of preventive surveillance. Surveillance vehicle patrols were conducted on site between 5 pm and 7 am and on a 24-hour basis on weekends and holidays.

Evaluation

During the course of the project (1 June 1989 to 1 December 1990) the crime rate fell considerably, from an average of 90 incidents per month to 25. The project was judged to be a success because it had achieved its objectives, which included the establishment of good communications between the business community and the police.

This section has described numerous interventions which have been successful in preventing business crime. However implementing crime prevention initiatives can be difficult, time-consuming and costly, and businesses are likely to weigh up the costs and benefits to them to install such initiatives. In the case of shoplifting, businesses may decide to wear the losses rather than implement costly measures (resistance to adopting shoplifting prevention strategies was evident in the SBCI ⁹). Nevertheless it may be seen that should businesses have the time and resources for prevention, the fight against crime could possibly yield better outcomes. This concludes the literature review of the nature and extent of crime against business, predictors, and crime prevention strategies. The next chapter summarises the report and provides a number of recommendations.

Part 3: The past, present and future

As this report has clearly demonstrated, crimes perpetrated against business involve a variety of offences, perpetrators, and victims. It is evident that there are substantial costs which are incurred as a result of business crime (which span individual, local and national dimensions), and that due to the fact that victimisation is so prevalent, criminal activity poses a significant risk to all business owners. Our analysis of crime prevention strategies is a step in the right direction in that it focuses on preventing and reducing business crime, rather than simply attempting to resolve the problem after the fact. In the final chapter of our discussion on crimes against business, we summarise the paper and also present some future directions for business crime research and prevention.

Summary

Having investigated in some detail the available research on business crime and violence, what is immediately apparent is that, notwithstanding the disparate and incomplete nature of much of the existing analysis, some regular and almost universal findings emerge. First and foremost, the recurrent message is that businesses face substantial risks of crime, with prevalence rates far surpassing those reported by non-corporate entities such as individuals and households (see also Hopkins 2002).

Another important discovery relates to the high rates of business revictimisation noted. Business crime is not uniformly spread but highly concentrated, with a fraction of establishments (markedly those situated within the retailing and manufacturing industries) disproportionately shouldering the majority of crimes. Also, while businesses at large generally confront a 50 per cent or greater chance of victimisation, industry sectors appear to be differentially vulnerable to crime in general and, indeed, to different sorts of crime. What is required now is more in-depth analysis of the nature and risk of crime to particular types of business *within* business sectors.

Although general conclusions on issues of vulnerability are difficult to arrive at, what is demonstrably clear is that preventive policies must be guided by accumulated wisdom. A combination of factors other than sectoral identification were observed to affect an establishment's susceptibility to various categories of crime. In particular, the nature of the activities a premises is engaged in, its hours of operation and staffing practices and its geographical location and/or the nature of the goods/services it provides play significant roles.

A complex phenomenon requiring multifaceted solutions

Business crime is neither a simple nor a consistent phenomenon. Crime scenarios vary according to the nature of the business at hand, the nature of the operational activities involved and the nature of the crime perpetrated. This is not to suggest that the solutions are so complex as to be beyond the capacities of individual business enterprises to effect. On the contrary, this review strongly recommends that businesses assume responsibility for reducing their vulnerability rather than relying exclusively on external criminal justice instruments such as the police, courts and prisons. In particular, irrespective of the crime being considered, a comprehensive and committed crime prevention policy is one that gives due consideration to pre-incident management strategies, worksite risk analysis, post-incident management and analysis, and control maintenance.

Also, though it appears that most businesses are security-conscious, it would appear that very little effort is being made to address the problem of crime other than by means of traditional security hardware. Smaller businesses in particular encounter difficulties in their efforts to manage crime. Therefore,

business operators require informed guidance in the selection and implementation of cost-effective security precautions.

Finally there has, in recent times, been an increasing recognition of the relationship between ‘safe’ communities and thriving business precincts (Burrows 1991; British Chambers of Commerce 1998; National Exclusion Unit 1998; Schuller & Deane 2000). Businesses flourish in safe community contexts, but paradoxically, healthy businesses are themselves integral to the creation and maintenance of safer communities. This has prompted many international crime prevention bodies to concentrate their efforts on schemes designed to foster a crime prevention partnership approach between business, police, local authorities and other key community agencies. Despite the variability in methodological rigour, the evaluations of multi-agency crime prevention schemes conducted to date offer substantial hope of tackling commercial crime, and reducing the risks of revictimisation.

Future preventive efforts

Previous studies have consistently demonstrated the enormous potential to manage and prevent business crime through targeted interventions. The prevention of repeat victimisation, specifically that pertaining to burglary, has proved to be successful and from a cost–benefit perspective is a far more efficient strategy than indiscriminately distributed funding, prevention advice and target hardening efforts. Since revictimisation tends to occur disproportionately in the first few months of the initial strike, the key to breaking the revictimisation cycle lies in early identification of high-risk victims and prompt interventions directed at eliminating risks.

The provision of generalist crime prevention advice to the business community (as against specialist or ‘offence-specific’ advice) has some merit. In particular, packages oriented towards encouraging target hardening have proved successful in those contexts where small areas have been targeted, where high dosage assisted interventions have been offered, and where the measures introduced have been widely publicised. It must be emphasised that prevention schemes cannot be blueprinted but must be tailored carefully to the circumstances prevailing in each local community and industry sector.

Recommendations

Further research

One of the primary objectives of any future research agenda should be to encourage projects that generate systematic information on business crime. It is only on the basis of such information that awareness of the nature and extent of this phenomenon can be raised, both among the business and broader community and among crime prevention practitioners.

Future research should be directed to exploring the following:

- a greater understanding of the relative risks attached to different business sectors;
- the mechanisms that trigger high levels of business victimisation and those that serve to reduce vulnerability;
- factors predisposing businesses to repeat victimisation;
- offender motivations and the development of effective crime prevention strategies; and

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- provision of properly constructed, cost–benefit evaluations of existing and proposed schemes, to ensure that crime prevention dollars are being appropriately spent and to justify the implementation of large-scale national projects.

Focus on repeat victims

Since past victimisation is an excellent predictor of future victimisation, crime prevention efforts concentrated on the prevention of repeat victimisation offer considerable potential for the reduction of a large volume of crime. Serious consideration should therefore be given to the development of a strategy geared towards targeting repeat victims.

Improved recording of crime

Accurate crime-recording systems are essential for the prompt identification of victimisation predictors, repeat victimisation and repeat offenders. It is therefore essential that recording systems be developed that are capable of measuring and monitoring victimisation patterns and offender methodologies. Specifically, reported crimes should be coded to permit unambiguous differentiation between commercial and non-commercial entities. Records should additionally be coded to permit industry and postcode classification. Information on these latter variables assists in developing our understanding of the specific risks confronted by particular industry sectors and is of benefit to those involved in mapping crime patterns and trends across time and place.

Improved police response for business

Procedures must be developed to ensure that a prompt response (preferably within 24 hours) is given to repeat victims. Strategies found to be effective include provision of temporary locks, alarms and surveillance. Given the resource implications of such a strategy, it is worthwhile considering the development of a graded response system based on prior instances of victimisation (see Anderson, Chenery & Pease 1995; Wood et al. 1997).

Simplification of reporting procedures

Of course the effectiveness of any data collection mechanism is intimately connected with the preparedness of victims to report the crimes to which they have been subjected. It is suggested that businesses might be encouraged to divulge those crimes they have been traditionally disinclined to report, through a simplification of reporting procedures. The need for simplified reporting procedures is attested to in a recent survey which found that 61 per cent of respondents would be more willing to report crime if easier reporting methods were available (West 2000).

Funding directed towards prevention

Funding should be directed towards developing high-quality crime prevention training and prevention packages, especially for disseminating in the small business area. This segment of the business community is crying out for guidance specially tailored to meet its financial and time constraints. The involvement of larger, more adequately resourced companies, along with other relevant bodies, such as the police and the insurance industry, in the dissemination of such information should not be overlooked.

Incentives for business

Target hardening measures can be costly and it is often difficult to convince smaller businesses of the cost-effectiveness of the initial expenditure and ongoing maintenance. Incentives should be devised to encourage smaller businesses to undertake risk assessments and overcome their identified weak spots. Subsidising target hardening endeavours is one possibility. The insurance industry offers an ideal opportunity to assist in this respect through the offer of reduced insurance premiums. A program of discounted premiums might be developed that is correlated to the extent of the measures introduced.

Conclusion

This paper has demonstrated that a number of prevention initiatives are possible, and likely to have a significant effect upon the level of business crime in Australia. It also goes without saying that continued, methodologically sound research is essential if we are to continue to learn about the nature and extent of business crime in this country, and if we are to develop appropriate interventions to reduce the incidence of crime. Victims of crime in the business domain are real and many, and should be considered a high priority for crime prevention in Australia, if our economy and well-being is to continue to thrive.

Appendix: Overview of survey methodologies

Overview of survey methodologies

¹ *International crime victims survey*

The 1996 survey of 130,000 randomly selected employees, aged 16 years and over, situated in 32 countries around the globe. The cohort was drawn from Western Europe, countries in transition (for example, Albania, Czech Republic and Hungary), North America, Latin America, Asia and Africa (extracted from Chappell & Di Martino 1998; ILO 1998).

² *European Union survey on living and working conditions*

In 1996, the European Foundation for the Improvement of Living and Working Conditions distributed its second survey designed to elicit information on the state of conditions of life and work in the European Union (EU). The survey cohort comprised 15,800 employees located across its 15 member states (European Foundation for the Improvement of Living and Working Conditions 1997).

³ *International crimes against businesses survey*

The first ICBS survey of commercial businesses' experiences of fraud, corruption and other crimes was generally confined to the retail sector (68.6%). Responses were sought on several dimensions of crime, including levels of victimisation, damages incurred and preventive measures employed. The sample of businesses examined was randomly generated and stratified according to industry and size dimensions for each nation. Apart from Hungary (Budapest) and the Czech Republic, where interviews were done face-to-face, most interviews were conducted by telephone. The above sampling procedure resulted in a total complement of 8,758 businesses, 1,000 of which were drawn from Australia. Dutch, Australian and Swiss cohorts of business also extended to the manufacturing industry and the catering sector (specifically hotels, restaurants and pubs). Businesses were either classified as small, comprising up to ten employees, or large, comprising more than 11 employees (van Dijk & Terlouw 1996).

⁴ *KPMG survey*

Towards the end of 1993, the accounting and consultancy firm KPMG carried out an international fraud survey of 5,550 large and medium-sized firms located in six countries: Australia (n=850 or 15.3% of the sample), Bermuda (n=300 or 5.5%), Canada (n=1,000 or 18%), Ireland (n=500 or 9%), the Netherlands (n=900 or 16.2%) and the United States (n=2,000 or 36%) (see Rozenkrans 1995).

⁵ *Ernst and Young survey*

Every two years, Ernst & Young's Fraud Investigation Group conduct an international survey on the incidence of fraud among large corporations, and organisational attitudes towards this crime. In its seventh such investigation, 739 surveys were returned by senior executives in 15 countries (Ernst & Young 2000).

⁶ *British crime survey*

The BCS is a nationally representative household survey conducted approximately every two years (BCS, cited in Budd 1999).

⁷ *Violent victimisation of staff: retail sector*

In 1993, a survey was undertaken of 448 employees drawn randomly from 300 national clothes retailing corporations. The respondents were asked to report on their experiences of violent workplace victimisation during the previous 12 months (Beck et al. 1993).

⁸ *Safer cities small business crime survey*

Under the Safer cities program a series of local crime surveys were conducted in an effort to establish the vulnerability of small businesses to crime (Tilley 1993).

⁹ *Small business and crime initiative*

The SBCI involved face-to-face interviews with 894 small businesses situated in the north and south-east of Leicester, England (Wood et al. 1997). The cohort was drawn from all industry sectors but these could be grouped under four principal sectors:

- manufacturing (mostly the production of textiles, footwear and clothing, but also paper printing and publishing);
- wholesale (including distribution and repair businesses);
- retail; and
- other services (transport, entertainment and other types of service businesses, such as beauty and health businesses).

¹⁰ *Forum of private business survey*

In 1996, 2,618 members of the FPB situated throughout mainland Britain responded to a questionnaire on business victimisation. The cohort was comprised of commercial operations drawn from all sectors and of various sizes, though relative to the national business profile there was an under-representation of the smallest operations, those without employees and with a turnover below £100,000 (Gill 1998a).

¹¹ *Scottish business crime centre survey*

This landmark national survey inquired into the extent, nature and costs of crime affecting Scottish businesses during 1998. A number of methods were used: an in-depth 'premises' phone survey that elicited responses from some 2,500 businesses; a postal 'head office' survey that elicited responses from 148 large businesses; and focus interviews with 20 businesses selected on the basis of their exceptionally high (generally ten or more incidents over the survey recall period) or low/no rate of victimisation (Burrows et al. 1999a, 1999b). The five principal business sectors surveyed which accounted for £24 billion turnover (or just short of half of all GDP in Scotland), were:

- manufacturing (metals, engineering, food, beverages etc);
- construction (home repairs, road works and new property);
- wholesale and retail (motor distribution companies, vehicle repairers and petrol sales);
- hotels and restaurants (pubs, clubs, takeaways, catering contractors, holiday camps); and

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- transport and communications (postal services and distribution, air transport and freight, telecommunications, railways, buses and taxis, docks, harbours and water transport, travel and ticket agencies, and motoring organisations).

¹² *Commercial victimisation survey: retail and manufacturing premises*

The first national victimisation survey of retail (n=1,666) and manufacturing premises (n=1,259) was conducted by the Home Office in 1994. Respondents were asked to report on their experiences of victimisation during the 1993 calendar year (Mirrlees-Black & Ross 1995b, 1995c).

¹³ *Crime on industrial estates*

Between April and July 1990, a detailed study was conducted of industrial estates throughout northern England. Interviews were held with 585 tenants who either owned or managed a unit on the subject estates. The main activity engaged in on the estates varied, but most were involved in the manufacturing of goods and secondary activities such as warehousing (42%) or retailing of the goods produced (27%), (Johnston et al. 1994).

¹⁴ *British Retail Consortium retail crime survey*

The BRC has, since 1993–4, conducted annual surveys of retail businesses' head offices in relation to the extent and costs of crime. The regular and ongoing nature of this database ensures that it makes a unique contribution to furthering our knowledge of crime patterns against retailers in Britain (Centre for Retail Research 2000).

¹⁵ *British Oil Security Syndicate (BOSS) survey on petrol station crime*

In the first ever comprehensive study of its kind, BOSS conducted a survey in 1998 of retail service stations situated in forecourts throughout four UK locations: part of Leeds, most of Birmingham, part of Bristol and part of Portsmouth. Approximately 300 sites took part in the survey, detailing the criminal activity to which they had been exposed in the previous 12 months, and the associated losses (BOSS 2000a, 2000b).

¹⁶ *Home Office construction plant theft study*

This research, commissioned by the Plant Theft Action Group (a Home Office advisory group), is an empirical examination of the risk, costs and methods of plant theft in five industrial sectors across the United Kingdom:

- agriculture (crops, forestry, animals);
- extraction (mining, and quarrying);
- utilities (electricity, gas and water);
- construction (civil engineering, general construction, special projects, drilling and demolition); and
- local authority (cargo handling, storage and warehousing, telecommunications and work departments).

Responses to a postal questionnaire were received from 1,190 enterprises engaged in the use of just under one million items of construction equipment (914,608) in 1997 (Smith & Walmsley 1999).

¹⁷ *Crime against small holiday accommodation units*

In 1992 a questionnaire on crime was distributed to small holiday accommodation units. The respondents (n=337) were drawn from two popular seaside resorts (Blackpool and Bournemouth), two cities renowned for their tourist-attracting capacities (Edinburgh and York) and two country areas (North Wales and Cornwall) (Gill et al. 1993).

¹⁸ *National Pharmaceutical Association (NPA)/sensormatic crime survey*

This survey was conducted in 1998, in the United States by the National Pharmaceutical Association (NPA 2000).

¹⁹ *The national crime victimisation survey*

This United States survey (conducted between 1992 and 1996) represents the most reliable source of nationwide information on workplace violence (Warchol 1998).

²⁰ *Crime against small businesses in the Midwest*

A study was conducted into the extent and nature of crimes committed in and against small businesses (including their employees and customers/clients) in Illinois, Indiana, Michigan, Minnesota, Ohio and Wisconsin. Four hundred businesses were surveyed in the manufacturing, wholesale trade, service and retail sectors (Fisher & Looye 2000).

²¹ *Crime against small business owners in the Midwestern and Southeastern regions*

In 1997 data was collected from 422 small business proprietors whose retail, service or manufacturing businesses were situated in the Midwestern and Southeastern regions of the United States (Kuratko et al. 2000).

²² *Crime against small businesses in Boston*

In 1999, McDevitt et al. (1991) conducted a victimisation survey of over 1,200 small businesses in Boston, using a variety of methodologies including postal and phone interviews. Businesses were grouped into retail establishments, food/drink establishments, financial establishments and service businesses.

²³ *The national retail security survey (NRSS)*

The NRSS is an annual nationwide empirical study focusing, as the name suggests, on retail loss, prevention and security activities. The eighth edition of this ongoing research study reported on the findings from 200 separate retail companies throughout the United States for the 1997 calendar year (Hollinger 1998).

²⁴ *Employee injuries and convenience store robberies*

A large-scale study of robbery-related injuries to employees in convenience stores in selected metropolitan areas in the United States during a one-year period in either 1992 or 1993 uncovered 2,073 relevant incidents (Amandus et al. 1996).

²⁵ *Canadian retail security report, Retail Council of Canada (RCC)*

The 2000 Canadian retail security report estimates the level of inventory shrinkage suffered in 1999 by retailers of various size and activity and evaluates the extent of the losses imposed. It is based on the data made available from two studies of companies with a relatively high level of loss prevention activity: the Chain and department stores survey and the Independent stores survey (RCC 1999–2000).

²⁶ *Commercial crime survey*

In 1989 an unprecedented commercial crime survey of over 1,250 establishments was conducted in the Netherlands by the Department of Crime prevention of the Ministry of Justice. This was followed in 1992 by a sector-oriented survey of 1,000 retailers and in 1993 by the Dutch chapter of the ICBS survey outlined earlier (Eijken & Mijer 1995).

²⁷ *Commercial robbery: the National robbery registration system (NRRS)*

Since only a small percentage of robberies (between 10% and 20%) go unreported, the NRRS represents a reliable source of information on the scale of, and trends in, commercial robbery. In this analysis, Jammers (1995) reports on crime patterns between 1990 and 1993.

²⁸ *South African National commercial crime survey*

In 1998, as part of a broader international commercial crime project, an unprecedented national commercial crime survey was conducted in South Africa. The sample of 691 establishments was drawn mainly from the wholesale/distributor (n=120 or 17.4%) retail non-food (n=173 or 25%), retail food (n=59 or 8.5%) and manufacturing (n=241 or 35%) sectors situated in four geographical zones (Naudé et al. 1999).

²⁹ *New Zealand survey of retail theft and security report*

This survey of 84 retailers (said to represent 458 stores) situated principally in the grocery (38%) and service station (18%) sectors, was carried out in 1999 by Otago University (cited in *Grocers' review* 2000).

³⁰ *Australian Institute of Criminology (AIC) Crimes against businesses survey*

The first national survey of Australian businesses' experience of crime was initiated and undertaken by the AIC in 1993 (Walker 1994). The cohort of 966 businesses was drawn from five key industry sectors (retail, wholesale, manufacturing, primary industry and tourism/recreation) and three size dimensions (small, medium and large).

³¹ *1997 Retail crime and safety survey (South Australia)*

This research was commissioned by the South Australian Attorney-General's Department on behalf of the Retail Industry Crime Prevention Advisory Committee. Sample selection proceeded by way of a three-pronged process:

- a random selection of 445 businesses covering 32 aspects of retail activity (for example, new and used motor vehicles, takeaway food, clothing, domestic hardware/houseware, newspapers and stationery, automotive fuel, liquor, recorded music, pharmaceuticals, cosmetics and toiletries, and jewellery/watches);
- 22 supermarkets with a turnover of \$20 million or higher; and
- 21 major department stores and discount department stores.

On the basis of the information furnished by the respondents, weighted figures were arrived at, which allowed projection of the survey findings statewide. Given the small sample size, doubts are necessarily cast over the findings' representativeness (Crime Prevention Unit, Attorney-General's Department 1998).

³² *2000 Retail crime and safety survey (cities of Unley and Mitcham)*

A more recent South Australian snapshot of retail crime was commissioned by the cities of Unley and Mitcham. Two hundred and forty-two businesses were selected for inclusion in this survey of retailers situated in the two specified municipal regions (West 2000). The respondents were representative of a broad range of retail groups, with the most frequently represented groups comprising:

- takeaway food outlets (7.9%);
- clothing retailers (7.4%);
- antique and used goods premises (5%); and
- pharmaceutical, cosmetic and toiletry businesses (4.1%).

³³ *Australian Chamber of Manufacturers (ACM) survey into crimes against industry*

In 1998 the ACM conducted a postal survey of its members designed to elicit information on the perceptions of, extent and cost of criminal activity committed against the manufacturing industry (Alexander 1998).

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