



No. 229

# Financial and Psychological Costs of Crime for Small Retail Businesses

Natalie Taylor and Pat Mayhew

*The costs of crime against small businesses are potentially enormous but difficult to quantify. Police records offer little and, in any case, many crimes go unreported to the police. Estimating dollar costs is often difficult for victims, even for direct losses. It is considerably more difficult to estimate indirect losses and almost impossible to measure psychological effects. The costs of business crime also extend beyond the victimised business.*

*Based on a survey conducted in 1999, this paper provides an overview of the financial costs and psychological impact of crime experienced by a sample of Australian small retail businesses. Losses varied according to the type of retail sector, with liquor outlets experiencing the highest losses. Larger businesses (five to 19 employees) had higher crime costs than smaller businesses. The highest losses overall were from burglary and shoplifting. Psychological costs were substantial, with one in four victims of burglary, and one in two victims of robbery experiencing fear of crime; one in five victims of robbery experienced difficulty attending the premises where the crime occurred. Further research investigating the longer-term impacts of small business crime is recommended.*

**Adam Graycar**  
Director

Estimating the costs associated with crimes against small businesses is difficult. The police do not routinely collect information on costs, and many offences are not known to them anyway. Estimating dollar values is often hard, even for direct losses. More difficult still is estimating indirect losses (for example, business disruption or time spent assisting the police with their inquiries). Estimating psychological costs is almost impossible (for example, emotional stress, the long-term effects on employability, and relationship difficulties). Moreover, business crime impacts not only on victims. It incurs largely incalculable costs:

- for government, through lost revenue;
- for customers, through higher prices;
- for taxpayers, through having to fund a more expensive criminal justice system;
- for employees, through increased fear and possible job losses; and
- for all businesses, through higher insurance premiums and the potential effects that business closures due to crime could have on other local businesses.

The closure of a petrol station, for example, can have extremely detrimental effects on the viability of surrounding businesses—indeed, this situation occurred in the state of Victoria last year (Pallavicini 2001).

It is clear, then, that the financial consequences of crime against small businesses in Australia are potentially enormous, given that there are approximately one million such businesses employing 3.4 million people (ABS 1999a), and that the small business sector contributes strongly to national employment growth (ABS 1999b, 1999c). To date, though, there has been only one previous assessment of the costs of business crime in Australia. This was through a 1992 national survey by the Australian Institute of

AUSTRALIAN INSTITUTE  
OF CRIMINOLOGY

*trends*

&

*issues*

in crime and criminal justice

June 2002

ISSN 0817-8542

ISBN 0 642 24266 6



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Criminology (AIC) of nearly 1,000 businesses spread across primary industries, tourism/recreation, manufacturing and retail (the latter numbering about 400 businesses). Results were reported by Walker (1994, 1995 and 1997); his estimates are returned to later.

The cost estimates in this paper come from a second national survey of businesses: the Small Business Crime Survey conducted in 1999 by the AIC and the Council of Small Business Organisations of Australia with funding from the National Crime Prevention Program. The survey sampled just over 4,000 businesses across Australia, mainly in the retail sector. While some preliminary results were published in late 2000 (Perrone 2000), both this current paper and an earlier report outlining victimisation patterns (Taylor & Mayhew 2002) build substantially on the preliminary findings. This paper cannot quantify all the costs of business crime, but focuses rather on some of the financial and psychological costs as reported by owners/managers in the survey. The final analysis is based on 3,834 businesses, with results weighted according to Australian Bureau of Statistics (ABS) national figures for retail sector, business size and state/territory for better national representativeness. Details

of the survey are provided at the end of this paper.

The analysis is restricted to retailers only, in six business sectors:

- cafes/restaurants/takeaways;
- general stores/milk bars;
- liquor outlets;
- service stations;
- newsagencies; and
- pharmacies.

The businesses are divided roughly equally according to the ABS typology of *micro businesses* (fewer than five full-time employees) and *small businesses* (five to 19 full-time employees)—a useful distinction as size of business has been shown to relate to victimisation levels (Gill 1998). Micro businesses comprised 56 per cent of the weighted sample while small businesses comprised 44 per cent.

### Assessing Estimates of Cost

The businesses were asked about their experience of various types of crime over the financial year July 1998 to June 1999. The main crimes covered were burglary, vandalism, theft of and from vehicles, customer theft (shoplifting), cheque/credit card fraud, employee theft, employee fraud, and unarmed and armed robbery. The 49 per cent of respondents who reported experiencing crime were asked, in separate questions, to indicate for

each crime experienced:

- the total dollar losses incurred (direct costs) due to goods or property being stolen or damaged (attempts included); and
- the total value of indirect losses incurred due to business disruption or closure, such as lost customers or orders, compensation payouts, medical expenses and so on.

A number of points must be borne in mind in assessing the cost estimates. First, it is not clear how accurately business owners would have been able to judge costs. As mentioned, indirect losses may have been particularly difficult to estimate. Second, there is large variability in the dollar costs reported, and even though extreme values have been omitted in analysis, there is still wide deviation around the average annual losses reported. Third, as only a sample of businesses was taken, there is inevitable sampling error attached to the results, and it cannot be ruled out that survey estimates are affected by biases remaining in the sample even after re-weighting. For example, businesses with particularly high crime costs may have been more likely to respond to the survey. Finally, the sample does not stand as a sample of all small retail businesses. The six sectors covered comprise about 40 per cent of all small business retailers (ABS 1999a), and these were biased somewhat towards sectors assumed to be at higher risk of crime. This may again mean that, even after re-weighting, cost estimates for the small retail sectors considered here are rather higher than those for small retail businesses as a whole.

### The Financial Costs of Crime for Small Businesses

The financial burden of crime on different retail sectors will reflect two basic factors:

- how many businesses are victimised; and
- what types of crimes they are most prone to—since some crimes have higher average losses than others, as will be seen.

Table 1 provides the mean direct and indirect dollar losses reported

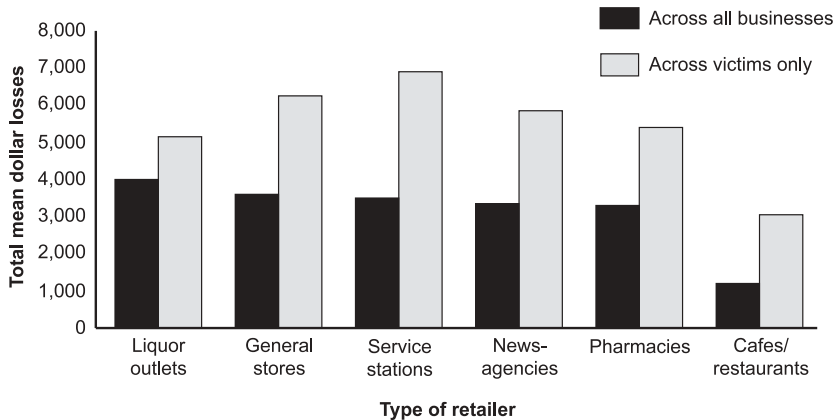
**Table 1: Mean direct and indirect costs of crime for victimised premises in 1998–99, by retail sector and business size**

Sector	Per cent victimised (any crime)	Losses	Victims		
			Micro businesses Mean (\$)	Small businesses Mean (\$)	All businesses Mean (\$)
Cafes/restaurants/ takeaway 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 fifty dollars.

Source: AIC Small Business Crime Survey, 1999 [computer file]

**Figure 1:** Total mean (direct and indirect) dollar losses spread across all businesses within each retail sector in 1998–99, and for victimised businesses only within each sector.



Note: Dollar figures are rounded up or down to the nearest fifty dollars.  
 Source: AIC Small Business Crime Survey, 1999 [computer file]

by victimised businesses for the previous financial year (July 1998 to June 1999). The results are shown according to the type of retail sector and business size. The direct and indirect dollar losses for each victimised business were aggregated across all the crimes asked about (for example, burglary, vandalism and so on).

Dollar costs for victims in each retail sector were higher for “small” businesses (five to 19 employees) than for “micro” businesses. The larger businesses face higher costs because they are victimised more often, especially with regard to more costly crimes. The five most costly crimes for victimised businesses in the Small Business Crime Survey were theft of vehicles, employee fraud, employee theft, burglary and armed robbery (see Figure 2). Thus, 40 per cent of small businesses fell victim at least once in 1998–99 to one of these five crimes, compared to 30 per cent of micro businesses. This finding is in line with other research (for example, Gill 1998; Mirrlees-Black & Ross 1995). It may well indicate that larger businesses attract higher risks because, for instance, they offer a wider range of goods for potential thieves to choose from, may have more cash on the premises, and employ more staff who themselves can defraud or steal from business owners.

Two further questions are raised by these results. The first is, *in which retail sector do victims bear the highest costs?* The answer is that, financially-speaking, service

stations suffered most when victimised, with an average total loss for each victim of \$6,900 over the year (see Table 1 and Figure 1). This high average mainly reflected costs associated with burglary, shoplifting and robbery. Losses were lowest for victims owning cafes/restaurants/takeaway food outlets, with an average total loss for each victim of \$3,050.

The second question is, *which sector has the highest average losses for businesses as a whole* (that is, with losses spread across victims and non-victims). This is useful in highlighting the relative potential losses within different sectors—bearing in mind that a business not victimised in 1998–99 may have been in other years. Figure 1 shows these results. Retail liquor outlets had the highest average loss of about \$4,000 a year averaged

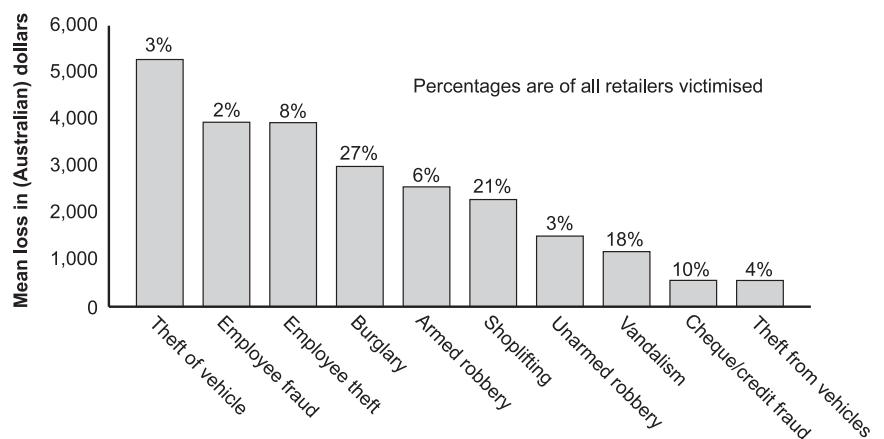
across all liquor retailers. Again, cafes and restaurants had the lowest average loss across both victimised and non-victimised premises, averaging \$1,200 for the year. Hence, while average costs for victimised businesses were reasonably high across the retail sectors (excepting cafes/restaurants), the retail liquor sector as a whole appeared to be hardest hit in terms of dollar costs. This is partly due to the fact that more liquor retailers had experienced crime in the previous year (72 per cent) than the other retail sectors, and partly due to the fact that more liquor outlets were victimised by crimes such as burglary, robbery, vandalism, shoplifting, credit fraud and assault than the other retail sectors (see Taylor & Mayhew 2002).

### Losses Suffered as a Result of Different Types of Crime

Figure 2 shows the mean annual (direct and indirect) dollar losses reportedly incurred by victims of each type of crime. It also shows the percentage of businesses that experienced each type of crime. Three of the most expensive crimes, on average, were experienced fairly infrequently: theft of a vehicle, employee fraud, and armed robbery. Employee thefts and burglaries were also relatively expensive, on average.

The separate average direct and indirect dollar losses for victims of different types of offences were as follow:

**Figure 2:** Total mean (direct and indirect) dollar losses incurred by businesses experiencing each type of crime



Note: For several of the crimes, a small number of victims were unable to provide a dollar value for losses incurred. The average losses reflected in Figure 2 were averaged only across victims who were able to specify their loss.

Source: AIC Small Business Crime Survey, 1999 [computer file]



- motor vehicle theft incurred direct costs of \$4,200 and indirect costs of \$1,600;
- employee theft incurred direct costs of \$4,100 and indirect costs of \$350;
- employee fraud incurred direct costs of \$3,550 and indirect costs of \$1,200;
- shoplifting incurred direct costs of \$2,700 and indirect costs of \$250;
- burglary incurred direct costs of \$2,282 and indirect costs of \$896;
- armed robbery incurred direct costs of \$1,700 and indirect costs of \$1,150;
- unarmed robbery incurred direct costs of \$1,350 and indirect costs of \$250;
- vandalism incurred direct costs of \$900 and indirect costs of \$250;
- cheque/credit card fraud incurred direct costs of \$550 and indirect costs of \$100; and
- theft from a vehicle incurred direct costs of \$450 and indirect costs of \$200.

The ratio of indirect to direct costs was highest for robbery, which may signify that there was more significant business disruption and time spent with the police. Robbery may also result in a greater psychological impact on staff than other types of crime (see Table 3), contributing to higher indirect costs for robbery. Indirect costs were also proportionately quite high for theft of and from vehicles, burglary and employee fraud.

### Relative Overall Costs of Different Types of Crime

Translating the survey results to the national context, the estimated total national direct and indirect costs of all crimes covered by the AIC Small Business Crime Survey in 1998–99 in the six retail sectors amounted to approximately \$170 million. Figure 3a shows the breakdown of the total cost by type of crime, while Figure 3b shows the breakdown by retail sector. The most expensive crimes for victims overall were burglary (accounting for 35 per cent of the total costs) and shoplifting (20 per cent). Employee theft/fraud was the third most expensive crime (18 per

cent). Cafes/restaurants/takeaway food outlets accounted for one-quarter of the total costs but, given that they comprised half the retailers, this is not surprising. Liquor outlets accounted for over one-fifth of the total costs yet comprised only one-eighth of the retailers. Costs, then, were unevenly distributed among the retail sectors, with liquor outlets appearing to bear a heavy share of the total costs.

### Comparisons Between Surveys

Comparing estimates of costs between surveys is attractive because it ostensibly provides a mechanism to validate findings. However, such comparisons are highly problematic. Comparisons with surveys in other countries are difficult to do because currencies differ. Inflation can also be a factor with regard to surveys conducted at different times. More important is the range of crimes counted within a survey, how crimes are defined, and how exactly respondents are prompted about their experiences. The types of businesses included in the sample and how they are defined are also issues for consideration, since victimisation rates can vary, as seen here. Comparisons between the current results and those from the previous AIC business survey reported by Walker (1994) fall prey to these problems. Walker's estimates (see Walker 1994, 1995) are higher with respect to crime against retailers, even discounting inflation. Some of the difference may reflect variations in estimates due to relatively small samples (particularly Walker's sample of retailers), but a number of other factors will also underlie many of the differences.<sup>1</sup>

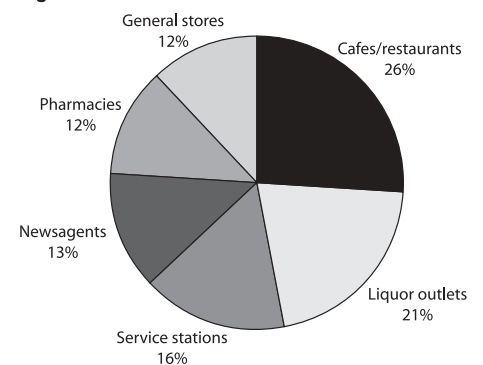
The most useful comparison with other surveys is to look at overall *patterns* of costs rather than at actual financial losses. The patterns for burglary and theft appear similar to the AIC Small Business Crime Survey. For instance, Walker (1994) identified customer theft and burglary as having the highest direct costs for Australian retailers in 1992, along

Figure 3: Breakdown of total dollar costs reported in the Small Business Crime Survey, by type of crime (a) and retail sector (b)

Figure 3a



Figure 3b



Note: Vehicle theft in Figure 3a reflects both thefts of motor vehicles and thefts from motor vehicles.

Source: AIC Small Business Crime Survey, 1999 [computer file]

with fraud. Mirrlees-Ross and Black (1995) also found that burglary and customer theft were the most costly crimes for UK retailers, with costs of vehicle crime also high.

### Crime Prevention Costs

All respondents were asked:

Approximately how much was spent by your business on the purchase and maintenance of crime prevention measures in the last financial year (excluding insurance)?

Table 2 shows the mean amount spent by both victimised and non-victimised businesses in each retail sector. Costs were higher for victimised businesses generally, indicating that they may have a sense of their vulnerability, or at least implement crime prevention measures after they have been victimised. Liquor outlets were the biggest spenders on crime prevention, both among victims and

**Table 2: Mean amount (\$A) spent on crime prevention measures in previous year for non-victimised and victimised businesses by retail sector**

Sector	Non-victims \$	Victims \$	Total \$
Liquor outlets	2,660	4,980	4,310
Pharmacies	1,590	3,500	2,770
Service stations	1,520	3,110	2,410
Newsagencies	1,300	2,200	1,830
General stores	1,410	2,080	1,820
Cafes/restaurants/takeaways	720	1,610	1,090

Source: AIC Small Business Crime Survey, 1999 [computer file]

non-victims. Given that the average costs of crime across liquor outlets were higher than in other retail sectors, their comparatively high crime prevention costs are not surprising and further highlight the particular vulnerability of liquor outlets (see Taylor & Mayhew 2002). Pharmacies and service stations spent the next highest amounts on crime prevention.

### Changes to Business Operations

Businesses that had been victimised were asked to indicate what measures they had taken as a consequence of experiencing crime. It was found that:

- one in 20 businesses:
  - increased prices to compensate for losses;
  - borrowed money to finance the purchase of security measures;
  - introduced staff training; and
- one in 25 businesses:
  - borrowed money to keep the business afloat;
  - paid for employee counselling; and
  - changed their hours of operation.

### The Psychological Costs of Crime for Small Businesses

Business owners/managers who had experienced crime in the previous year were asked about how they themselves had been affected psychologically, and how their employees had reacted.

Table 3 shows results for business victims of burglary and robbery. The impact for robbery victims was greater. For instance, while a quarter of burglary victims reported feeling fearful after the event, more than half of robbery

victims did so. Moreover, about one-third of robbery victims reported nightmares and flashbacks—double the level of that among burglary victims.

### Conclusion

The results here assess the impact of crime as reported by a sample of small retail businesses in Australia. They are based on the largest survey yet of small retail businesses in the country, and provide information not available from any other source on the financial and psychological costs of business crime. The latter have not, to date, been assessed much at all. The results here strikingly underline some of the deleterious effects of victimisation for business managers and employees in terms of everyday functioning and interpersonal relationships. There would be merit in a more thorough assessment of how pervasive these psychological costs are, and how long they last.

The results have some limitations. For one, not all types of small retailer were sampled.

Answers can only be taken at face value, and there is inevitable statistical error associated with results taken from a sample survey. The dollar loss figures reported need special mention. Although several losses that were quoted well above the normal range (“outliers”) were omitted from analysis, the variability in dollar losses remained large. (A minority of respondents was also unable to provide a dollar value in respect of their losses.) Respondents’ estimates of their indirect losses from crime may be particularly problematic too, since lost customers, business disruption and so on will be difficult for businesses to cost.

As mentioned, crimes against small business affect not only the businesses involved but also carry costs for consumers, employment levels and the economy. While many businesses manage to cover the costs of crime, this may well curtail their opportunities for expansion and better service. Although it is currently not known how many small businesses in Australia close permanently due to crime, Fisher and Looye (2000) found that four per cent of small businesses surveyed in the United States had considered doing so. Business closure is a drastic, final step that carries consequences for the whole community. It is in all our interests to find ways of reducing crime against small businesses to ensure their continuing viability.

**Table 3: Psychological costs of crime for those experiencing burglary and/or robbery**

	Burglary %	Robbery %
Personal difficulties		
Fear of crime (not necessarily while at work)	27	53
Difficulty attending premises	9	19
Nightmares/difficulties sleeping	16	33
Relationship difficulties	8	12
Flashbacks	12	29
Employee difficulties		
Frequent employee absences	4	14
Employee requested timetable changes	6	17
Difficulties interacting with customers	4	11
Resentment by employee toward employer	5	8
Change in employee/employer relationship	2	8

Source: AIC Small Business Crime Survey, 1999 [computer file]

## Details of the Small Business Crime Survey

Information for the Small Business Crime Survey was collected at the end of 1999 via a postal questionnaire devised with the assistance of the Council of Small Business Organisations of Australia. The questionnaire was sent to about 28,000 randomly selected small businesses across Australia within a restricted set of sectors generally thought to have higher crime risks. Business owners/managers were asked to recount experiences of crime during the 1998–99 financial year. The response rate was 16 per cent. While this might not seem high, surveys investigating crimes against business are notorious for low response rates (Gill 1998, for example, reported a 10 per cent response rate, while the KPMG (2002) fraud survey obtained a response rate of 18 per cent). A preliminary analysis of the Small Business Crime Survey results was presented in Perrone (2000). There are, however, some differences between this and the present analysis. First, a small number of non-retail businesses in the initial sample (n=114) were excluded to leave a retail-only sample. Second, to be consistent with the ABS definition of small business (ABS 1999b), some businesses employing 20 or more full-time staff were also excluded (n=139). Third, results were weighted for better national representativeness (see below). In comparison with available ABS national figures for each of the six retail sectors, the sample slightly under-represented cafes/restaurants/takeaways, general stores/milk bars and liquor outlets, and over-represented service stations, newsagencies and pharmacies. To correct for this, the sample was weighted according to ABS national figures for (i) the size of the retail sector and (ii) business size (that is, number of employees). A further weight (iii) was applied to reflect the national as opposed to the sample distribution across Australian states and territories. Nationally, the number of small businesses in the six retail sectors was approximately 72,400 in 1999. The data in this paper are weighted up to this number, incorporating the other weights described. This yielded a sample comprising cafes/restaurants/takeaways (51%), general stores/milk bars (8%), liquor outlets (13%), service stations (11%), newsagencies (9%) and pharmacies (8%). Micro businesses (fewer than five full-time employees) comprised 56 per cent of the weighted sample, while small businesses (five to 19 full-time employees) comprised 44 per cent.

### Note

- 1 Comparisons between the Small Business Crime Survey (SBCS) and Walker's (1994) business survey are best restricted to retailers (which comprised about 40 per cent of the Walker sample). The grossed-up national crime cost figures for retailers from Walker are higher than those from the SBCS for a number of reasons. The main ones are:
- (a) the grossing up factor for non-food retailers in Walker was higher than in the SBCS, where fewer retail sectors were covered; and
  - (b) fraud and theft are treated differently in the two surveys. Differences could also arise due to how outliers were handled. The main difference between the surveys as regards costs for particular crimes is that Walker's survey gives a much higher mean cost for customer theft.

### Acknowledgment

*This paper is part of an ongoing project investigating crimes against small businesses, funded by the Commonwealth Attorney-General's Department's National Crime Prevention Program.*

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**Note:** *Trends and Issues in Crime and Criminal Justice* are refereed papers.

Project no: 0035 Ethics no: PO37, PO39