Small Business Crime: The Evaluation of a Crime Prevention Initiative

Kate /. Bowers[1]

There has been a dearth of evaluation research concerned with assessing the effectiveness of crime prevention schemes that aim to reduce levels of crime committed against businesses and non-residential properties generally. This paper describes the implementation of a scheme aimed at reducing small business crime, with a particular emphasis on burglary in the county of Mersey side. Details of the results of an evaluation of the scheme are then given. The evaluationfound that contact with a Crime Prevention Officer significantly reduced levels of crime against businesses. Advice offered by such experts was more effective than the isolated installation of target-hardening measures. The paper also attempts to gather evidence regarding the means by which and the situations in which particular crime prevention measures are effective at reducing levels of crime.

Keywords: Commercial victimization; repeat burglaries; situational crime prevention; evaluation; small businesses

Introduction

An area of criminology in which research has the potential to make an impact on practice is in the evaluation of crime prevention initiatives. The current political climate has encouraged investment in evaluation studies in an attempt to increase the impact of government resources by establishing which techniques are successful at reducing crime and in which circumstances they succeed. This is the aim of an in-depth evaluation, funded by the Home Office, of a recent national burglary reduction scheme.

Much crime prevention to date, and therefore the majority of evaluations, have concentrated on residential crime, especially residential burglary. For instance, a large-scale evaluation of the Safer Cities programme has been conducted.[1] The programme was nation-wide, and the evaluation of its domestic burglary element utilized information collected from 300 different schemes. The evaluation used before-and-after surveys and local police crime statistics. Control areas were set up, so it was possible to measure the extent to which any changes in the action areas reflected changes elsewhere. The overall results were comprehensive, showing that the survey and the crime figures both identified reductions in levels of burglary. Some evidence of displacement, both to other areas and to other types of crime, was found.

A further residential burglary intervention, the 'Biting Back' initiative implemented in an area of Hudderstield, concentrated efforts on victims of repeat burglary. An in-depth evaluation of the scheme proved that it had been successful in reducing both overall levels of burglary and levels of repeat burglary against domestic dwellings over its period of operation.[1]

An area which now needs addressing is the prevention of crime against non-residential properties, such as schools, businesses or community facilities. Evidence has been found to show that levels of crime against non-residential properties are often higher than those against their residential counterparts. The Commercial Victimisation Survey, conducted by the Home Office, found that 25 per cent of a national sample of retailers and 24 per cent of manufacturers had suffered from at least one burglary in 1994." This can be compared with five per cent of residential households being burgled in one year, according to the British Crime Survey.[5] A study of burglary conducted on Merseyside found similar results using police data, reporting that 23.7 per cent of non-residential properties had experienced burglary in a one-year period, in comparison with 3.3 per cent of residential properties.[6]

There are several reasons for the relative lack of initiatives focusing on the business sector, and indeed on the non-residential sector generally. First, public concern about crime tends to focus on the residential community.[7] Second, the business community often sees crime prevention as a relatively low priority in its drive towards profitability, and therefore a balance needs to be found between profit and security.[8] Lastly, it is particularly difficult to obtain reliable information on business victimization; indeed, it is a hard enough task just to determine the number of businesses in operation in an area at a particular point in time.[9]

Notwithstanding these problems, there have been some evaluations of crime prevention initiatives focusing on non-residential properties. The most comprehensive of these was Tilley and Hopkins' evaluation of the Small Business and Crime Initiative (SBCI).[10] This demonstrated that such a commercial crime initiative can achieve significant reductions in crime in a small area (the area of operation was two streets in London). However, it also concluded that:

> Further research is needed to understand better what switches businesses on to high levels of victimisation and what switches them off. "

The SBCI evaluation broke new ground in evaluation research. However, more needs to be done to help assess the effectiveness of business crime prevention initiatives. Specifically, more evidence is required concerning larger-scale initiatives that target a wider area than did the SBCI. As pointed out above, more information is also required concerning the method by which crime prevention initiatives are succeeding, in addition to reports of whether burglary rates have been reduced. The importance of determining the context within which and the mechanism by which crime prevention measures are successful has been highlighted as being an important issue in contemporary evaluation research.[12] These issues will be addressed by this paper, which details the results of an evaluation of an initiative, operating in the Merseyside area, aimed at the reduction of crime against small businesses throughout the County (the 'Small Business Strategy').

The second section of this paper will begin by describing the method by which businesses in the Merseyside area that were particularly vulnerable to crime were identified; this includes a description of a baseline survey of businesses in the region to establish initial levels of crime against businesses. It then describes how the most vulnerable businesses received assistance in improving their security. In particular, there is a discussion of the role of Crime Prevention Officers from Merseyside Police in providing advice to businesses. This part of the paper then goes on to examine some of the potential limitations of the system that was used to prioritize and assist these businesses, and to report lessons learnt in the course of the implementation process.

In the third section, the evaluation framework that was used to assess the effectiveness of the business crime initiative described in the second section is outlined in general terms. The fourth

section goes on to describe the results of the survey-based part of this evaluation. Methodological issues are covered concerning the administration of a follow-up evaluation survey to the businesses that had participated in the earlier baseline survey. The effect of the initiative on crime in general and on particular types of crime is reported. There is then a discussion that compares the effectiveness of different crime prevention measures taken to help secure businesses, and a preliminary exploration of the mechanism by which these measures reduce crime.

Finally, the fifth section aims to complement the survey-based evaluation with an analysis of changes in police data on recorded burglaries by comparing burglary incidence rates before, during and after the initiative was implemented within the initiative's operational area and elsewhere in the County of Merseyside.

Implementation of the Small Business Strategy

Targeting need

The Small Business Strategy (SBS) of the Safer Merseyside Partnership (SMP) was set up in order to combat the problem of excessive victimization against non-residential properties. The SBS concentrated on businesses with fewer than 25 employees, that were not part of a larger business, and that were situated in the most deprived neighbourhoods of Merseyside. These neighbourhoods (or 'Objective 1 * areas) are those recognised by the EU as qualifying for grant aid, and are home to 485,000 (roughly one-third) of Merseyside's residents. The strategy also required that businesses involved in the scheme were located in residential areas. It was therefore likely that, for example, small, family-run comer-shops would be included in the scheme. Due to their size and location, the establishments meeting the strategy's criteria were likely to have fewer resources to channel into crime prevention.

Businesses meeting the criteria were identified using a Geographical Information System. In the phase of the SBS that was evaluated, a stratified sample of 1000 of these businesses (which totalled 2517) were each visited by one of a team of six interviewers, who assessed the crime risk of the property. Business owners were asked questions regarding the level of victimization they had experienced over the previous year. Specifically, questions focused on any incidents of burglary, attempted burglary, criminal damage, fraud, forgery, assault, robbery, employee theft, theft by customer, or theft from customer. Other questions assessed the adequacy of crime prevention measures that were in place in the property, and the level of concern felt by the business owner regarding crime in the area. The survey also examined any possible variation in crime risk associated with different businesses and trading activities.

Each completed survey was then scored to assess the overall vulnerability of the business. Each business was placed in one of three categories: high, medium or low risk. The scoring system gave particular weight to businesses that had experienced repeat burglary. The score also reflected the adequacy of crime prevention measures already installed at the business premises.

Those businesses that scored high or medium risk on the survey were then asked whether they would like to be visited by a Crime Prevention Officer (CPO) from Merseyside Police. The CPOs provided the business owners with advice in relation to specific crime prevention measures, and, in the case of the high-risk properties, put forward recommendations to the SMP for target-hardening measures.

The SMP provided financial assistance towards the installation of these recommended measures, using Single Regeneration Budget funding. The grant aid offered, up to a value of £1500 per property, were 50 per cent contributions towards the total cost of the measures, in order to encourage

the proprietors to match the funding and upgrade their security. The measures that were recommended included burglar alarms, CCTV systems, roller shutters, window locks, and occasionally detection devices.

Of the 1000 businesses visited, 470 surveys were completed in full. In all, 140 businesses were visited by a CPO, and a subset of these (46) also received offers of financial assistance from the SMP towards the cost of installing recommended crime prevention measures.

The role of Crime Prevention Officers

The visits made to vulnerable properties by CPOs from Merseyside Police, mentioned above, made up a critical element of the SBS intervention. This section will therefore outline the content of these visits in more detail.

CPO visits to the high- and medium-risk businesses involved detailed risk assessments of the *particular* property. Internal and external appraisals of existing security measures and of the property's layout were carried out. During this process 'weak spots' were identified, and recommendations for improvement of security measures were made on the basis of the appraisals. The CPOs had some details of current security measures in advance of the visit, through information collected during the initial survey, and this assisted in the appraisals. Further information was elicited from business owners regarding their current security practices, and advice was given on the way in which changes to routine staff activities could improve security. Advice was tailored to the *types* of crime frequently experienced by the business, which was also available to the CPO, from the survey data, in advance of the visit.

Some of the areas that were covered in the CPO visits included:

- critical assessment of the layout of premises, eg the planning of displays, position of staff, placement of security mirrors;
- practical advice on' weak spots', eg securing rear access, using security lights, encouraging natural surveillance;
- encouraging 'thoughtful' routine activities, eg keeping money in tills to a minimum, being careful with keys, not disclosing information to a stranger, not leaving valuable items unattended;
- promoting consideration of crime prevention in future alterations, eg checking the security of new doors, windows or other alterations/extensions to the premises;
- giving advice on target-hardening measures, eg specifying which additional measures would be of most benefit and most cost-effective, giving advice on the upgrading of existing measures;
- leaving information on products and services (although recommendations on particular companies are not given), on good crime prevention practice, and on how to get further advice in the future.

An important point to emphasize is the unique nature of each visit. Many sources of information were used to ensure that the advice offered was tailor-made for the individual business owner. For instance, preparation before the visit helped to establish the type of area the business was located in, and any particular crime problems that area faced. Examining the property and its surroundings at

both the front and the rear, and asking the business owners to give their own account of what they perceived as problems and potential solutions, also assisted in identifying the most valuable type of crime prevention advice for the particular business.

Some implementation concerns

One problem facing the Small Business Strategy implementation team was the 'learnt helplessness' of the most vulnerable proprietors within the business community in relation to victimization, and their underlying belief that crime was simply a marginal cost to be endured. Many business owners seemed to put up with, or even expect, a certain level of victimization, and felt that neither the police nor any additional investment in security would have much impact in reducing their future crime risk. This is reflected in the percentage of the businesses that reported different types of crime to the police. For example, incidents of shoplifting, employee theft and fraud were reported to the police by less than a third of business owners.

Other issues raised by the implementation included the high number of empty or boarded-up properties found by the surveying team; this reflected the high turnover of small businesses in the Merseyside area. For purposes of regeneration it is important to make these properties viable for new business ventures. The SMP liaised with other agencies to address this problem.

A further issue raised was the importance of providing proprietors with support and encouragement to invest time and money in security measures; crime prevention strategies concentrating on giving grants for physical target-hardening alone are likely to have little impact on decreasing vulnerability. It is also important to provide tailor-made advice to business owners. This guidance should include encouraging a problem-orientated approach to the identification of what was making the property vulnerable, and assisting in the identification of the most cost-effective and affordable security devices, as well as examining everyday operational routines that minimize future crime risk. The need for this type of crime prevention advice was also highlighted in the Leicester SBCI study.[13]

An area for potential improvement in the implementation of the SBS was that of grant take-up. Although 46 properties were offered financial assistance, only 17 actually completed the grant application process. Two reasons were given for this low take-up: first, the forms that needed to be completed for assistance were found to be very complicated; and second, the grants were offered for limited periods, and only consisted of a contributions of up to 50 per cent, which were prohibitive conditions for some business owners. These issues were addressed in the second round of the strategy. A detailed description of the SBS implementation and the targeting procedure that was used to identify vulnerable properties is available elsewhere.[14]

Evaluation methods

In order to produce a more reliable evaluation, it was decided that a dual approach would be taken, using information from a follow-up survey and from Merseyside Police's Recorded Crime System to assess the impact of the SBS. This had the advantage that it could determine the effect of the scheme at the level of both the individual and the area.

The survey design enabled the longitudinal tracking of individual properties that either had or had not been assisted by the SBS. However, since the scheme required that specific criteria were met in order for a business to be surveyed in the first instance (ie, the baseline survey

described above), this information does not reflect changes that might have occurred in levels of victimization in the non-residential community as a whole (ie, any area-level effects of the scheme).

The area-level analysis, based on recorded crime, allowed comparisons between fluctuations in the burglary rate in the scheme's areas of operation with those occurring elsewhere. For instance, how did the burglary rate in residential parts of Objective 1 areas (the scheme areas) compare with that in non-residential parts?

In addition to studying changes in levels of crime, it is possible to assess the wider impacts of the scheme in terms of the initiative's side-effects. For example, information was collected from survey participants regarding their fear of crime and their levels of satisfaction with the police. Any positive side-effects identified, such as a decrease in the fear of crime, have implications for the identification of particularly successful and cost-effective schemes. However, it is outside the scope of the current paper to outline results connected with these issues; its primary concern is rather to focus on the direct effect of the initiative on levels of crime—and in particular on levels of burglary—and to try to gain some insight into the method by which the initiative is achieving any reduction in these levels.

An evaluation survey of small businesses

This following section describes results which have been compiled from the information collected in the evaluation phase of the SBS. The evaluation form was designed to obtain information from businesses that had responded to the baseline survey described above, and asked for information on the following:

- levels of victimization of the property since the last survey had been conducted;
- details of any up-date/installation of security measures since the last survey, and information regarding the funding of these measures;
- information concerning dealings with the SMP and other agencies;
- details of the mechanism by which any attempted burglary had failed;
- details concerning the detection of offenders when an incident of crime had occurred.

These questions, in combination with information from the baseline survey, allow the evaluator to track the progress of businesses over time and assess the effectiveness of steps taken by the SBS initiative. The last two types of question should also help to shed light on the degree to which different crime prevention and detection measures are effective in different circumstances. The surveyors visited all 470 businesses that had responded in the initial baseline phase of the SBS survey described earlier.

Response levels and reliability issues

In all, the evaluation surveyors collected information from 326 (70 per cent) of the 470 businesses that had originally responded to the baseline survey. The most common reasons why information was not collected from the remaining 144 businesses was that they had been shut down and boarded-up (42 per cent), or that, after several attempts, the manager could not be contacted (43 per cent), although, in some cases, he/she had refused to take part in the evaluation survey (15 per cent).

SBS intervention and target-hardening measures

Many of the tables below classify respondents on the basis of whether or not they were involved in the SBS intervention. Overall, 105 (32 per cent) of those surveyed in the evaluation phase had been involved in the SBS intervention. The evaluation respondents also included all 17 properties that had been assisted by the SMP with physical target-hardening.

It was important to collect information from all the businesses regarding target-hardening. It is very likely that a certain number of those that did not receive assistance from the SBS had upgraded or installed security measures at their business location since the baseline survey, by financing the measures themselves or even through assistance from elsewhere (for instance another crime prevention agency, or a landlord). Without this information, any analysis of the effectiveness of different measures would be vitiated, since it would not identify all businesses that had improved their security.

For the purposes of analysis, therefore, the evaluation survey respondents were split into four categories: those who *were* involved in the intervention[15] and *had* target-hardened their property; those who were involved in the intervention but had *not* target-hardened; those who were *not* involved in the intervention but *had* target-hardened; and those who were not in the intervention and had *not* target-hardened. Table 1 below summarizes the numbers falling into each of these categories.

Table I. Evaluation survey respondents and crime prevention measures

Type of action	Number of cases	Percentage of cases
Target-hardening only	73	22.4
Target-hardening and intervention	63	19.3
Intervention only	42	12.9
No action	148	45.4

The table shows that a substantial proportion of the properties surveyed had target-hardened their properties within the intervention period, although they were not involved in the SBS intervention. In the tables that follow, where the impact of the SBS is being assessed, the analysis simply distinguishes between those who were and were not involved in the intervention. However, where the effectiveness of a particular type of measure is being assessed, the analysis uses information from all the properties that installed or upgraded their security system with that measure, irrespective of the way in which it was funded.

Changes in levels of crime

Tables 2a-2c overleaf compare levels of crime experienced by the businesses surveyed in the baseline and the evaluation studies. Examining Table 2a first, it is apparent that there are some overall differences in the levels of crime experienced: in all crime types, with the exception of robbery, the number of businesses suffering from the crime was lower in the evaluation study than in the baseline study. This implies that the prevalence of crimes against businesses has dropped over the period of the initiative. This is especially true in the case of burglary, attempted burglary, shoplifting, and fraud and forgery, where the overall number of businesses suffering from these crimes appears to have dropped substantially. Although this trend is encouraging, it is not so far possible to attribute these declines in prevalence to the SBS initiative.

Table 2a. Overall changes in number and percentage of businesses experiencing crime

Crime type	**Baseline** survey		**Evaluation survey**		**Difference in** %	% **change**
	%	Number	%	Number		
Burglary	18.0	58/322	11.4	37/325	-6.6	-36.7
Attempted burglary	29.1	95/321	**17.1**	55/322	-12.0	-41.2
Criminal damage	37.2	120/323	35.6	114/320	-1.6	-4.3
Shoplifting	43.8	141/322	35.0	112/320	-8.8	-20.1
Employee theft	4.7	15/319	2.0	6/307	-	-
Fraud and forgery	36.4	117/321	20.3	65/330	-16.1	-44.2
Robbery	5.6	18/323	6.8	22/323	+1.2	+21.4
Assault	20.7	67/323	16.5	53/322	-4.2	-20.3
Theft from customer	7.5	24/321	6.8	22/323	-0.7	-9.3

Notes:

The following conventions apply throughout Tables 2a-c and 3a-c:
% = percentage of businesses experiencing crime type.
Number = number of businesses suffering crime type as a fraction of those responding to the question.
Difference = difference in prevalence rates for baseline and evaluation: (increase (+) or decrease (-).
% change = change in crime rate as a percentage of the baseline prevalence rate.

In some tables there are insufficient cases of employee theft to conduct an analysis.

In order to begin to assess the impact of the SBS, the information given in Table 2a needs to be separated into two further tables: one that tracks the victimization of the businesses involved in the SBS intervention, and one that tracks the non-intervention group. This information is shown in Tables 2b and 2c respectively. The most striking result when comparing these two tables is that although levels of burglary decreased in both groups, there is a far more marked decrease in burglary in the SBS intervention group.

In fact, for the intervention group, the prevalence of burglary dropped from 32.4 per cent to 13.3 per cent, which is a decrease in the prevalence rate of 58.9 per cent between the two surveys. This can be compared to a drop from 11.4 per cent to 10.5 per cent in the non-intervention group, an overall decrease of only 7.9 per cent. This huge decrease in the prevalence of burglary in the intervention group was also tested for statistical significance.

Chi-squares were performed to assess whether there were any differences between the proportion of businesses that were victims and non-victims in the baseline and evaluation surveys. Results show that there are significant differences in these proportions in the intervention group, due to the decline in the number of victims. In fact, the chi-square figure reaches a significance value of $p<0.005$. There was no significant result for buTglary in the non-intervention group.

Table 2b shows that the change in levels of successful burglary was the greatest percentage decrease in the intervention group of all the crime types. This is not surprising, since the SBS initiative was targeted primarily at businesses that had experienced successful burglary. In addition, there had also been substantial decreases in other types of crime as well. This is particularly marked in the case of attempted burglary and of fraud and forgery, which saw percentage decreases of 48.9 per cent and 55.3 per cent respectively; both achieved a high level of statistical significance for the intervention group. However, when these results are compared with those for the non-intervention group, it can be seen that caution needs to be

exercised in attributing these decreases to the SBS initiative. This is because the non-intervention group also saw a large decrease in these offence types, although it is not as significant as those observed in the intervention group.

Table 2b. Changes in number and percentage of businesses experiencing crime for the intervention group

Crime type	Baseline survey		Evaluation survey		Difference in %	% change
	%	Number	%	Number		
Burglary	32.4	33/102	13.3	14/105	**-19.1**	-58.9
Attempted burglary	49,0	50/102	25.0	26/104	**-24.0**	-48.9
Criminal damage	51.5	53/103	45.6	47/103	**-5.9**	**-11.5**
Shoplifting	55.3	57/103	43.3	45/104	-12.0	-21.7
Employee theft	2.9	3/102	0.0	0/100	-	-
Fraud and forgery	46.1	47/102	20.6	21/102	-25.5	-55.3
Robbery	6.8	7/103	5.8	6/104	**-1.0**	-14.7
Assault	24.3	25/103	20.2	21/104	**-4.1**	-16.9
Theft from customer	8.7	9/103	7.8	8/103	**-0.9**	-10.3

Lastly, it is interesting to observe that Table 2b shows that for the intervention group there were decreases in the prevalence of all the crime types dealt with by the survey. This means that it is unlikely that there has been any crime type displacement experienced by the intervention group whereby offenders return to the same target but commit another type of crime.

Table 2c Changes in number and percentage of businesses experiencing crime for the non-intervention group

Crime type	Baseline survey		Evaluation survey		Difference in %	% change
	%	Number	%	Number		
Burglary	11.4	25/220	10.5	23/220	-0.9	-7.9
Attempted burglary	20.5	45/219	13.3	29/218	-7.2	-35.1
Criminal damage	30.5	67/220	30.9	67/217	+0.4	+1.3
Shoplifting	38.4	84/219	31.3	67/216	-7.1	-18.5
Employee theft	5.5	12/217	2.9	6/207	.	-
Fraud and forgery	32.0	70/219	20.2	44/218	-11.8	-36.9
Robbery	5.0	11/220	7.3	16/219	+2.3	+46.0
Assault	19.1	42/220	14.7	32/218	-4.4	-23.0
Theft from customer	6.9	15/218	6.4	14/220	-0.5	-7.2

Table 2c shows the same general trend in crime, although there were increases in levels of criminal damage and robbery in the non-intervention group. When the numbers involved are examined, it can be seen that these are not trends to cause alarm, since there is only a slight increase in prevalence in each case. Table 2c therefore shows that there is no evidence of target displacement of crime. In other words, it does not appear to be the case that offenders that were targeting the intervention group businesses have started to target those in the non-intervention group. However, to be certain that target displacement has not occurred, information would be required from all other businesses not surveyed, and from residential properties, to ensure that burglars have not switched to other property types.

Table 3a. Overall changes in number and percentage of businesses experiencing repeated incidents of crime

Crime type	Baseline survey		Evaluation survey		Difference in %	% change
	%	Number	%	Number		
Burglary	54.3	31/57	33.3	12/36	-21.0	-38.7
Attempted burglary	54.4	49/90	50.0	27/54	***-4A***	-8.1
Criminal damage	54.3	63/116	71.6	73/102	+17.3	+31.9
Shoplifting	75.5	83/110	75.5	74/98	0	0
Employee theft	30.8	4/13	50.0	2/4	+19.2	+62.3
Fraud and forgery	73.2	82/112	70.0	42/60	-3.2	-4.4
Robbery	5.6	1/18	45.0	9/20	+39.4	+703.6
Assault	58.3	35/60	65.2	30/46	+6.9	+11.8
Theft from customer	50.0	12/24	42.1	8/19	-7.9	-15.8

Tables 3a-3c show changes in levels of repeat incidents of crime against businesses between the baseline survey and the evaluation survey. It is important to track this, because reducing repeat victimization, especially repeat burglary, was one of the original objectives of the SBS initiative. Table 3a shows that for the whole sample there were some overall changes in levels of repeat victimization. There was a marked decrease in the number of burglary victims suffering from repeat incidents of the crime (54 per cent in the baseline survey and 33 per cent in the evaluation). Other trends show a small decrease in the number of repeat victims of attempted burglary and of fraud and forgery, and an increase in the number of victims experiencing repeat criminal damage and repeat robbery. The decrease in repeat burglary and the increase in repeat criminal damage and robbery result in significant chi-square tests.

Table 3b. Changes in number and percentage of businesses experiencing repeated incidents of crime for the intervention group

Crime type	Baseline survey		Evaluation survey		Difference in %	% change
	%	Number	%	Number		
Burglary	67.6	23/34	26.7	4/15	-40.9	-60.5
Attempted burglary	60.9	28/46	60.0	15/25	-0.9	-1.5
Criminal damage	57.1	28/49	69.2	27/39	+ 12.1	+21.2
Shoplifting	74.4	32/43	72.5	29/40	-1.9	-2.6
Employee theft	33.3	1/3	-	0/0	-	-
Fraud and forgery	69.8	30/43	75.0	15/20	+5.2	+7.5
Robbery	0.0	0/7	50.0	3/6	+50.0	-
Assault	66.7	14/21	68.4	13/19	+1.7	+2.6
Theft from customer	55.6	5/9	50.0	4/8	-5.6	-10.1

In Tables 3b and 3c this information is separated into data for the intervention and non-intervention groups. The most striking result seen from these tables is the decrease, for the intervention group, in the number of repeat victims of commercial burglary between the baseline survey and the evaluation. The percentage of burglary victims experiencing repeat incidents fell from 67.6 per cent to 26.7 per cent during this time. This result is statistically significant at the $p<0.01$ level. In contrast, the number of victims of burglary experiencing repeat incidents in the non-intervention group was very similar for the baseline and evaluation surveys (37.5 per cent and 38.1 per cent respectively). In fact, the prevalence of repeat burglary amongst burglary victims was much

higher in the intervention group at the baseline stage, but had become lower than the non-intervention group by the evaluation stage. It is possible to conclude that the SBS intervention had an effect on the level of repeat burglary experienced by participants.

Table 3c. Changes in number and percentage of businesses experiencing repeated incidents of crime for the non-intervention group

Crime type	Baseline survey		Evaluation survey		Difference in %	% change
	%	Number	%	Number		
Burglary	37.5	9/24	38.1	8/21	+0.6	+1.6
Attempted burglary	47.7	21/44	41.4	12/29	-6.3	-13.2
Criminal damage	52.2	35/67	73.0	46/63	+20.8	+39.8
Shoplifting	76.1	51/67	77.6	45/58	+1.5	+2.0
Employee theft	30.0	3/10	50.0	2/4	+20.0	+66.7
Fraud and forgery	75.4	52/69	67.5	27/40	-7.9	-10.5
Robbery	9.1	1/11	42.9	6/14	+33.8	+371.4
Assault	53.8	21/39	63.0	17/27	+9.2	+17.1
Theft from customer	46.7	7/15	36.4	4/11	-10.3	-22.1

Interestingly, Tables 3b and 3c also show some evidence of increasing levels of repeat victimization. Repeat robbery and repeat criminal damage rose significantly in the intervention and non-intervention groups respectively. Since these crime types are still property crime, this raises the issue of whether there has been any displacement of repeat crime to other crime types associated with the SBS implementation. However, these trends arc not reflected by any overall increases in the prevalence of criminal damage or robbery from the figures in Table 2, and in the case of robbery in the intervention group, there are only small numbers to analyse in Table 3, which decreases the reliability of this result.

Changes in burglary rate by type of intervention and type of crime prevention measure

Table 4 below gives further details about burglary Tates and type of intervention. As explained above, it was important to obtain information from both intervention and non-intervention businesses regarding the extent and the effect of target-hardening. As expected, given the mechanisms used to identify vulnerable businesses, prevalence rates before the initiative were highest in the intervention groups. However, prevalence rates were also higher in the baseline survey for those businesses that made their own decision to target-harden their properties than for those who had not taken any action. This implies that business owners are more likely to take crime prevention action after they have been victimized.

Table 4. Burglary rates by type of intervention

Intervention	Baseline survey		Evaluation survey		Difference in
	Number burgled	% burgled	Number burgled	% burgled	prevalence between baseline and evaluation
Target-hardening only	15/73	20.5	12/73	16.4	-5.9
Target-hardening and intervention	18/62	29.0	6/63	9.5	-19.5
Intervention only	15/40	37.5	8/42	19.0	-18.5
No action	10/147	6.8	11/147	7.5	+0.7

Table 4 shows that there was a decrease in the prevalence of burglary in *all* the groups where some action was taken, and a slight increase in the group where no action was taken. This shows that any one of the type of actions described in the table is effective in reducing levels of burglary. However, it is also- apparent that the largest reductions in the prevalence of burglary occurred in the groups that were involved in the SBS intervention. This suggests that visits from the Crime Prevention Officers and liaison with the SMP had an effect over and above that produced by simply target-hardening a property. It also shows that it is important to give businesses crime prevention advice and to encourage owners to think about crime prevention, in addition to improving or installing physical target-hardening measures. It is worth noting that the group that experienced the biggest decrease in levels of burglary had both elements of the intervention: target hardening and a visit from a CPO, which indicates that a combined approach is particularly effective.

It is useful at this point to examine reasons why the CPO visits were successful at reducing burglary rates, even in the absence of target hardening. In recent years the role of Crime Prevention Officers within the Police has been changing. An interview with a CPO from Merseyside Police revealed that there has been increased pressure due to a lack of funding in the area. This meant that it was very difficult to visit more than one site of crime a day. In addition, victims tha* were visited within a short time frame were generally restricted to those that police records identified as repeat victims- Furthermore, victims not fitting certain criteria could only get advice from a CPO by telephone or by visiting a police station in person.

One of the most likely explanations for the success of the visits undertaken by the CPOs in helping to reduce crime against businesses is, therefore, the fact that a visit had actually been made *at all* to the vulnerable properties involved. The SBS put a formal framework on the particular sites that were to be visited, which prioritized those at risk and also brought the CPOs into contact with business that had suffered from crime but did not report many of these incidents to the police. Although there was no extra budget for the CPOs to conduct the site visits, the SBS motivated the CPOs to concentrate on the small business sector for a period of at least several months.

Results from the earlier baseline survey demonstrated that many of the vulnerable businesses involved had not had any formal, or indeed informal, crime prevention advice for a number of years, if at all. Therefore, having an unlimited amount of time with a crime prevention expert who cared about the security of the site and was available to give *specific* advice on issues such as layout, natural surveillance, staff behaviour, and cheap and effective ways of improving current security, inspired business owners to take steps to implement the recommendations given.

In essence, the proactive nature of the SBS in reaching businesses that had had little or no contact with crime prevention experts, or had limited knowledge of good crime prevention practices, was a major reason for its success. A further factor was, of course, the standard of the advice given to businesses; the CPOs working on the SBS were all experts in the field and had received training in the provision of crime prevention advice. Furthermore, as mentioned above, the advice that was given was *tailor-made* for the particular business, which was also a distinct advantage of an approach that involved individual site visits.

Table 5 examines the effect of different *types* of target-hardening measure on the prevalence of burglary. It is evident that all the measures listed in the table, with the exception of security lighting, appear to have had an effect; however, there are particularly small numbers isi some of the categories, which means there are likely to be problems with the reliability of these results. In addition, the fact that there have been overall decreases in levels of burglary should be taken into account. Some measures that appear to be particularly effective in combating burglary (Table 5) are roller shutters, window locks and window protection, although these results are far from conclusive.

***Table* 5. Burglary rates by type of security measure**

Security measure installed in intèrvention period	Baseline survey Number burgled	% burgled	Evaluation survey Number burgled	% burgled	Difference in prevalence between baseline and evaluation
Burglar alarm	15/58	25.9	12/60	20.0	-5.9
Roller shutters	10/32	31.3	5/33	15.1	-16.2
Window locks	6/13	46.2	1/13	7.7	-38.2
Window protection	5/14	35.7	2/14	14.3	-21.4
Reinforced doors	9/31	29.0	6/31	19.4	-9.6
CCTV	5/28	17.9	3/29	10.3	-7.6
Security lighting	0/16	0	2/17	11.8	+11.8
Security fencing	3/9	33.3	2/9	22.2	-U.I
Other measures	2/10	20.0	1/10	10.0	-10.0
Security procedures	1/5	20.0	0/5	0	-20.0

Table 6 gives some information regarding the *modus operandi* (MO) of successful burglaries before and after the SBS intervention. Again, the information should be treated with caution due to the small numbers involved, but generally it can be seen that the most common form of MO, both before and after the intervention, was where offenders had entered through the door. Also common before intervention was entry through roller doors and through windows other than a main shop window. These MOs were less common after the SBS intervention. Table 6 does not show any firm evidence of MO displacement between the baseline and evaluation surveys.

Table 6. MO of successful burglaries before and after intervention

MO of entry to premises	Total for baseline	% for baseline	Total for evaluation	'% for evaluation
Door	16/56	28.6	13/33	39.4
Roller door	13/56	23.2	3/33	9.1
Main shop window	4/56	7.1	4/33	12.1
Another window	12/56	21.4	3/33	9.1
Perimeter fence	4/56	7.1	3/33	9.1
Roof	8/56	14.2	3/33	9.1

Note: The percentages in Tables 6 and 7 do not add up to 100 since more than one response might apply. The percentages are based only on those who responded to the question and do nol include cases where the respondent 'did not know' or where data was missing.

*The mechanism by which measures are effective for crime prevention **and** detection*

Table 7 displays figures indicating the reason why incidents of attempted burglary had failed. This could provide information on the types of measure that are particularly effective at preventing burglary. This question was asked of those experiencing attempted burglary in the evaluation phase of the survey. The table shows that the most common reason given for burglary failure was a burglar alarm alerting the public. Although most businesses are now equipped with a burglar alarm, this result demonstrates that they are still an effective measure in deterring crime. Reinforced doors also caused burglary failure in a significant number of cases. This might be an issue to focus on in any future crime prevention initiative, since Table 6 demonstrates that entry through a door was still a common MO for successful burglary, even following the SBS initiative. Roller shutters also appeared to be an effective deterrent (Table 7). Finally,

simply being located in an area where there is a public presence can cause burglaries to fail. This ties in with the guardianship element of the routine activities theory, which states that the three elements required for a crime to occur are a motivated offender, a suitable target and a lack.of capable guardianship.[16]

Table 7. Reasons for failure of attempted burglaries

Reason for failure	Number	% of Cases
Burglar alarm alerted public	10/38	26.3
Reinforced doors	8/38	21.1
Roller shutters	7/38	18.4
Disturbed by public	6/38	15.8
Burglar alarm alerted police	5/38	13.2
Other	5/38	12.5
Mortice locks	3/38	7.9
Window locks	2/38	5.3
Disturbed by security	1/38	2.6
CCTV alerted police	0/38	0

Where a crime was successfully committed, business owners in the evaluation phase were asked whether or not to their knowledge an offender was identified for the crime. The results of this are shown in Table 8. Offenders were most commonly identified for crime types such as assault, robbery and fraud. This is likely to be due to the nature of these crimes; there is some level of interaction between the offender and the business owner or member of staff in all these cases. This is less likely to be the case for crimes such as burglary and criminal damage, which are often committed in the absence of any staff.

Table 8. Incidents of crime where offenders were identified

Type of crime	Number of cases where offender was identified	% of cases where offender was identified
Assault	32/49	65.3
Robbery	9/19	47.4
Fraud	27/58	46.6
Customer theft	35/96	36.5
Burglary	7/22	31.8
Theft from customer	5/21	23.8
Criminal damage	15/88	17.0
Employee theft	-	-

Table 9 looks in more depth at the mechanism by which the offenders in Table 8 were identified. This can give us information regarding measures or procedures that are effective in the detection of particular crime types. The most common way in which an offender was detected was through identification by a member of staff, and this form of identification also led to the most convictions. Some other mechanisms of offender identification were particularly effective for certain crime types. For instance, a substantial number of shoplifters were detected using CCTV systems, which also proved to be effective in terms of convictions. CCTV also appeared to be effective in cases of robbery and assault, but less so in identifying offenders committing burglary or acts of deliberate damage. Credit card checks were effective

in the detection of fraud, and physical detection measures appeared to be useful in cases of deliberate damage. Security guards did not appear to be effective in detecting crime in the cases analyzed, although members of the public and the police assisted in some cases, especially in relation to criminal damage.

Table 9. Mechanism of offender identification

	Burglary	Deliberate damage	Shop **theft**	Fraud	Robbery	Assault	Theft from customer
CCTV	0	1	!0 ****	1	3*	3*	1
Physical detection	0	2*	N/A	N/A	0	0	N/A
Respondent/staff member	3	4	25***	21 ***	6*	26**	5
Police	1	2*	2	1 *	1 *	1	0
Security guard	0	0	0	0	0	0	0
Member of public	1*	3*	0	0	0	1	0
Security alarm (eg, tagged goods)	N/A	N/A	0	N/A	N/A	N/A	N/A
Credit card check	N/A	N/A	N/A	4*	N/A	N/A	N/A
Police alerted by alarm	N/A	N/A	N/A	N/A	0	N/A	N/A

Note: Figures in cells = number of offenders detected. * = number of convictions. For example, 10 shoplifters were detected using CCTV, and in four of these cases the offender was convicted.

Levels of crime reported to the police

Before moving on to discuss changes in Merseyside Police's recorded crime figures, it is important to establish possible levels of under-reporting. Table 10 below summarizes differences in levels of reporting of crimes to the police between the baseline and intervention surveys. Generally, there are only small differences in these levels between the surveys, with commercial burglary remaining the offence type which is most widely reported to the police. This means that commercial burglary information from police statistics is likely to provide the most accurate picture of true changes in all the types of business crime over time. Inierestingly, there has been a small decrease in the number of burglaries reported to the police between the two surveys. This means that the implementation of the SBS has not provoked an increase in reporting levels in the long term, which has been found to happen with some crime prevention initiatives.

Table 10. Levels of reporting to police in baseline and evaluation surveys

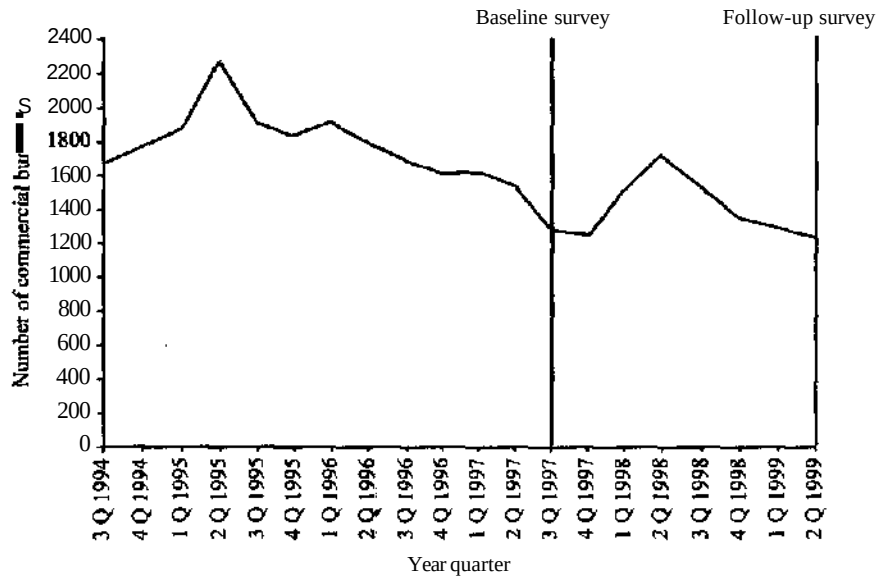
Crime type	% of businesses reporting crime in baseline survey	% of businesses reporting crime in evaluation survey
Burglary	89.3	83.3
Attempted burglary	53.3	58.2
Criminal damage	44.3	37.0
Shoplifting	23.5	26.9
Employee theft	15.4	50.0
Fraud and forgery	23.2	13.1
Robbery	83.3	60.0
Assault	44.6	42.2
Theft from customer	42.9	52.4

Longitudinal information on commercial burglaries recorded by the police

In addition to direct information from crime surveys, it is also important to monitor the level of commercial burglary recorded by the police to produce the most comprehensive picture possible regarding the success of the SBS initiative. There are many issues relating to the accuracy of commercial burglary data and the production of commercial burglary rates, which are discussed in full elsewhere.[17] At this point, it will suffice to say that these issues have been taken into consideration in the following analysis, which uses 'cleaned* data.

A useful starting point is to track the total number of recorded commercial burglaries on Mersey side over the period of the intervention. Figure 1 shows that, in the three months when the baseline survey was conducted, there were 1288 commercial burglaries recorded, and that in the three months of the evaluation (depicted on the graph as 'follow-up survey') there were 1234 burglaries. This implies that overall levels of commeicial burglary had fallen over this period. However, it is interesting to examine the levels of burglary recorded between these two reference points: there was a sharp rise between the beginning of the intervention period and the second quarter of 1998. After that, commercial burglary decreased steadily up to the second quarter of 1999, where it was at its lowest for the entire five-year period analyzed.

Figure I. Number of commercial burglaries



The overall decrease in levels of commercial burglary reflects findings from the survey described above. To look in more detail at the trends in the areas of operation of the scheme, the remaining figures distinguish between Objective 1 areas and other areas, and between residential and non-residential areas.

Figure 2 compares the commercial burglary rate per 1000 premises in Objective 1 areas to that elsewhere. The figure shows a differential picture for Objective 1 areas and other areas. Between the baseline survey and the evaluation, the burglary rate in Objective 1 areas rose from 36 to 40 burglaries per 1000 premises. By contrast, the burglary rate had fallen from 30 to 25 per 1000 in other areas. In a similar way to Figure 1, there was a rise ba the burglary rate in both areas around the second quarter of 1998. At first sight, this slight increase in the burglary rate in Objective 1 areas brings the impact of the SBS initiative on area-level burglary rates into question. In order to assess the scheme's effectiveness in more detail, it is necessary to compare results for residential and non-residential areas.

Figure *2.* Commercial burglary rates

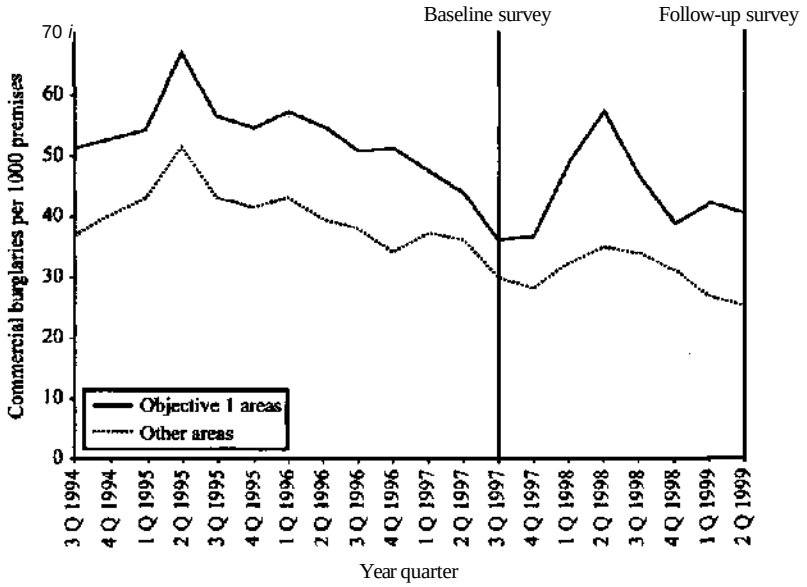


Figure 3 below shows the crime rates in non-residential parts of Objective 1 areas and other areas that are non-residential. In this case, there is a fairly noticeable increase in rates of burglary between the baseline and evaluation quarters, especially in the Objective 1 areas. In fact, the rate rose from 35 to 54 per 1000 in Objective 1 areas, and from 38 to 42 per 1000 elsewhere. Looking at the general trend in non-residential Objective 1 areas, it is apparent that the burglary rate was never as low, in the subsequent quarters of 1997, 1998 and 1999, as it had been in the baseline quarter. There was certainly no decrease in burglary rates in non-residential Objective 1 areas, or indeed in non-residential areas elsewhere since the implementation of the SBS.

Figure 3. Commercial burglary rates in non-residential areas

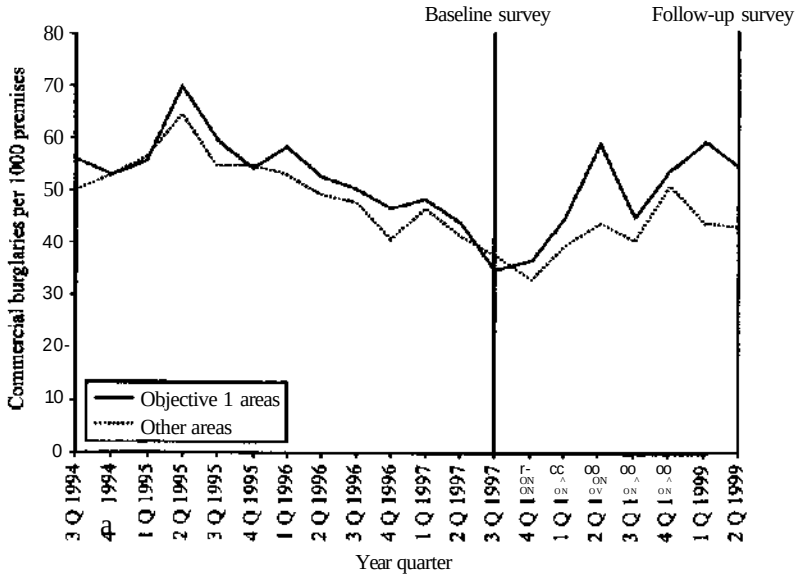
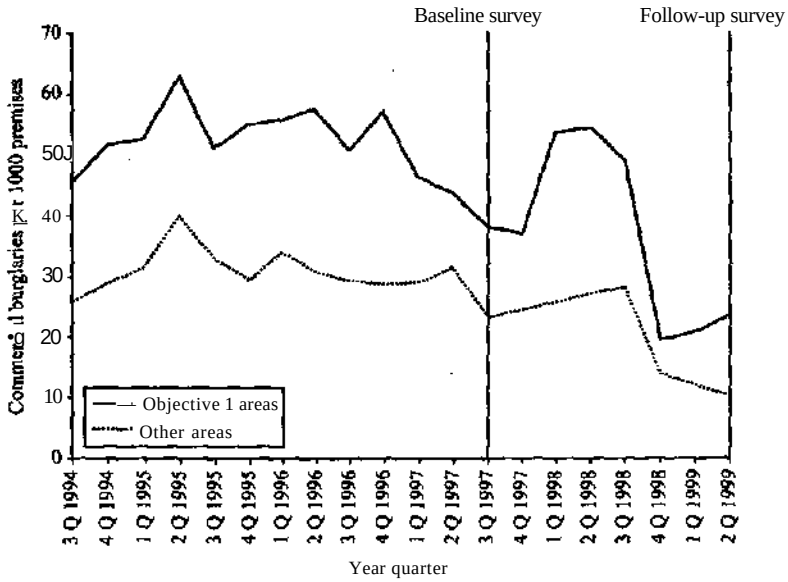


Figure 4 shows changes in the burglary rate of residential parts of Objective 1 areas and other residential areas. The SBS scheme was implemented in these residential Objective 1 areas. The figure shows that there was a dramatic decrease in the burglary rate between the baseline survey and the evaluation survey in both Objective 1 areas and in the other residential areas. In fact, burglary rates in residential parts of Objective 1 areas decreased from 38 to 23 per 1000 premises over the SBS implementation period.

Figure 4. Commercial burglary rates in residential areas



This evidence backs up the results found through the analysis of survey data above, showing that the burglary rates in the SBS operational areas decreased very noticeably after the scheme was implemented. This could indicate that the SBS had a general area-level effect, as well as an effect on the particular properties within the area that were singled out for assistance through the scheme. In other words, the fact that some properties in the area had been assisted might have discouraged offenders from committing burglary against other properties in the area, which would be a positive side-effect of the SBS scheme.

It is important to consider this drop in the burglary rate in Objective 1 parts of residential areas in relation to other residential areas. It can be seen from Figure 4 that there was a decrease in both these areas. The decrease in the burglary rate in other residential areas might be a further positive side-effect of the SBS scheme, but this seems unlikely since residential areas that are inside and those that are outside Objective 1 areas are not in general located near to each other. There may be another reason for this overall decline in levels of burglary in residential areas. For instance, it is possible that other schemes that target commercial properties in residential areas have had an effect on levels of crime. However, other known burglary schemes on Merseyside concentrate on particular areas and are thus unlikely to have an effect on residential areas as a whole throughout the region.

A further possibility in accounting for the overall reduction in levels of crime in residential areas is that there has been a sustained reduction in business owners reporting cases of burglary to the police. Once more, this is unlikely, since results from the baseline and evaluation surveys, described above, found that there was only a small variation in levels of reporting of burglary between the two surveys, although admittedly these results apply to the SBS implementation areas, and not necessarily to other residential areas.

It is useful to examine the trends in burglary rates *between* the quarters when the baseline and evaluation surveys took place. There was an initial increase in the number of recorded burglaries in the residential Objective 1 areas between the third quarter of 1997 and the second quarter of 1998. This was during the period when the SBS was implemented; all properties that were involved in the scheme had been visited by the second quarter of 1998. From then onwards, burglary rates peaked, then fell dramatically in residential Objective 1 areas. This sharp rise in recorded crime rates shortly after the baseline survey did not occur in residential areas outside Objective 1 areas. One explanation for the increase in burglary rates in the SBS areas could be that word had spread throughout the business community that the SMP were offering assistance. As a consequence, business owners were more inclined to report incidents to the police during this period, in the hope that they too would be assisted. If this increase in reporting levels is the reason for the increase in burglary rates at this time, we know that the effect was fairly short-lived, given the fact that reporting levels at the time of the baseline and evaluation surveys were very similar.

Another interesting observation is that by the fourth quarter of 1998, rates in the Objective 1 areas and other areas had converged to their closest levels within a four-and-a-half year period. This convergence is one indicator of the success of the SBS scheme, since it shows that for some time burglary rates in the scheme's operational areas were more in line with those elsewhere. In the two quarters since the convergence occurred, the burglary rate in the Objective 1 residential areas rose again very slightly, whereas the other residential areas continued to see a decline in the rate. This tendency would need to be monitored over several quarters to investigate the possibility that the SBS did have an effect on burglary rates, but only in the short term. If this proved to be the case, future crime prevention schemes should focus on ways of maintaining decreases in levels of burglary over the long term.

Conclusion

This paper has evaluated the effectiveness of the Small Business Strategy in achieving its aim of making vulnerable small businesses safer and, in particular, of reducing levels of burglary and repeat burglary against such premises. The results show that levels of burglary have been significantly reduced in the properties that were involved in the SBS intervention. The number of burglary victims that experienced repeat victimization was also substantially reduced in the intervention group. These drastic reductions were not seen in the group of properties that were not involved in the intervention.

Through examining the intervention and non-intervention groups, it was found that there was no evidence of crime displacement to other crime types, other MOs or other areas. This paper has also attempted to investigate the means by which particular methods are effective in reducing crime, although information from a larger-scale survey would be required to substantiate these results.

Recorded crime data relating to burglary from Merseyside Police backed up the findings from the survey; burglary had substantially reduced in the SBS scheme areas over the implementation period. Since the scheme did not assist all properties in the scheme area, the SBS might have had an additional effect of discouraging offenders from committing burglary against properties in the scheme area generally. However, the effect of the SBS on recorded burglary rates might be exaggerated, since a general downwards trend in crime rates was observed in other residential areas in addition to the Objective 1 residential areas in which the scheme operated.

There were also concerns that the effect of the SBS might be fairly short-term in its nature. This reflects the general dilemma, in terms of sustainability, of short-term interventions, typified by

government schemes funded through sources such as the Single Regeneration Budget. This would be an issue to examine in the future. Furthermore, non-residential areas saw a rise in levels of recorded burglary over the intervention period. Properties within these areas could be a fruitful focus for future crime prevention initiatives in the Merseyside area.

Notes

1 The author is a Research Associate in the Urban Research and Policy Evaluation Regional Research Laboratory, Department of Civic Design, University of Liverpool, P.O. Box 147, Liverpool, L69 3BX; tei: 444 (0) 151 794 3118; fax: +44 (0) 151 794 3125; email: kjb@liverpool.ac.uk. She would like to thank Alex Hirschfield, Alan Roberts, the staff at the Safer Merseyside Partnership, and the Crime Prevention Officers of Merseyside Police for their assistance with the research described in this paper.

2 Ekblom, P., Law, H. and Sutton, M. (1996) *Domestic Burglary Schemes in the Safer Cities Programme.* Research Findings No. 42, Home Office Research and Statistics Directorate. London: Home Office.

3 Chenery, S., Holt, J. and Pease, K. (1997) Siring *Back II: Reducing Repeat Victimisation in Huddersfield.* Crime Detection and Prevention Series, Paper No. 82, London: Home Office.

4 Mirrlees-Black, C. and Ross, A. (1995) *Crime Against Retail and Manufacturing Premises: Findings from the 1994 Commercial Victimisation Survey.* Home Office Research Study No. 146. London: Home Office.

5 Mayhew, P., Maung, N.A. and Mirrlees-Black, C. (1993) *The 1992 British Crime Survey.* Home Office Research Study No. 132. London: Home Office.

6 Bowers, K.J., Hirschfield, A. and Johnson, S.D. (1998) Victimisation Revisited: A Case Study of Non-Residential Repeat Burglary on Merseyside. *British Journal of Criminology.* Vol. 38, No. 3, pp 429-52.

7 Fisher, B. (1991) A Neighbourhood Business Area is Hurting: Crime, Fear of Crime and Disorders Take their Toll. *Crime and Delinquency.* Vol. 37, No. 3, pp 363-73.

8 Beck, A. and WUUs, A. (1998) Sales and Security: Striking the Balance. In Gill, M. (ed.) *Crime at Work.* Vol. 13: *Increasing the Risk for Offenders.* Leicester: Perpetuity Press.

9 Hollinger, R. C. (1997) Measuring Crime and Its Impact in the Business Environment. In Felson, M. and Clarke, R.V. (eds) *Business and Crime Prevention.* New York: Criminal Justice Press, pp 57-80.

10 Tilley, N.and Hopkins, M. (1998) *Business as Usual: An Evaluation of the Small Business and Crime Initiative.* Police Research Series, Paper No. 95. London: Home Office.

11 Ibid, p vii.

12 Pawson, R. and Tilley, N. (1994) What Works in Evaluation Research? *British Journal of Criminology.* Vol. 34, No. 3, pp 291-306.

13 Taylor, G. (1999) Using Repeat Victimisation to Counter Commercial Burglary: The Leicester Experience. *Security Journal.* Vol. 12, No. 1, pp 41-52.

14 Bowers, K and Hirschfield, A. (1998) High Risk, Low Risk: The Use of Data in the Identification of Potential Targets of Commercial Crime Offenders. In Gill, op cit.

15 In other words, those that were visited by a Crime Prevention Officer.

16 Cohen, L.E. and Felson, M. (1979) Social Change and Crime Rate Trends: A Routine Activity Approach. *American Sociological Review.* Vol. 44, No. 4, pp 588-608.

17 Tilley, N. (1993) *The Prevention of Crime Against Small Businesses: The Safer Cities Experience.* Police Research Group, Crime Prevention Unit Series, Paper No. 45. London: Home Office.