*Crime and Small Business: An Exploratory Study of Cost and Prevention Issues in U.S. Firms**

by Donald F. Kuratko, Jeffrey S. Hornsby, Douglas W. Naffziger, and Richard M. Hodgetts

This article is an examination of the levels of crime and the methods of crime prevention in U.S. small business. A survey was taken of 422 small business owners from the Midwest and Southeastern United States to measure the level of occurrences of crime, the methods of prevention employed, and the owners' level of concern about this issue. The results demonstrated a considerable level of activity aimed at controlling crime loss, including various forms of training and other security measures. Differences by industry type were also identified.

Business crime is a world-wide issue confronting business owners in every nation. In Russia, for example, where the legal system does not define ownership of assets or transfer of property rights, Coleman (1997) reported that the number of crimes has doubled since 1985, making it "almost impossible for a Russian entrepreneur to operate within the framework of the law" (p.74). In Canada, recent statistics place the cost of employee theft (including theft of cash, inventory, and fixed assets) at $20 billion a year. Theft causes 30 percent of all small business failures and comprises 15 percent of the price of goods and services (Holt 1993).

Business crime costs the U.S. economy at least $186 billion annually. Estimated at between 2 percent and 5 percent of the gross domestic product, the cost of white-collar offenses may be 100 times that of street crimes, according to FBI statistics (U.S. Small Business Administration 2000). A 1993 fraud survey by the accounting firm KPMG covering 2,000

Dr. Kuratko is the Stoops Distinguished Professor of Business and founding director of the entrepreneurship program in the College of Business at Ball State University in Muncie, Indiana. His research has concentrated on entrepreneurship, corporate entrepreneurship, and small business.

Dr. Hornsby is professor of management and director of the human resources management program at Ball State University. His research interests include corporate entrepreneurship, and human resource management issues in small business.

Dr. Naffziger is associate professor of management at Ball State University. His research interests focus on management practices and strategic issues in small firms, and entrepreneurship motivation.

Dr. Hodgetts is professor of management at Florida International University in Miami, Florida. His research has concentrated on the strategic issues of quality, global challenges in contemporary firms, and strategic concerns of smaller ventures.

*An earlier version of this article was presented at the 1997 International Council of Small Business in San Francisco, California.

of the largest Dun and Bradstreet companies in the U.S. found 330 companies reported losses averaging more than $550,000 per company. The total losses reported were in excess of $180 million. This is in companies with strong internal controls and internal audit staffs; what, then, is the risk for small businesses with weak controls and no internal audit staff (Russell 1995)?

Crime and its effects are a major issue for small business owners. The United States Chamber of Commerce reported in 1995 that 30 percent of all small business failures resulted from the cost of employee dishonesty—internal crime. In addition, small businesses (under $5 million in sales) are 35 times more likely to suffer from business crime than larger firms (U.S. Department of Commerce 1995).

For a fuller picture, consider some of the following figures from national sources. The Federal Bureau of Investigation reports that white-collar crime in the United States has accounted for approximately $41 billion in losses each year during the 1990s. This total includes some startling statistics: $1.1 billion is attributed to credit card and check fraud; $7.0 billion is attributed to embezzlement and internal theft; and $100 million is accounted for by computer fraud (U.S. Small Business Administration 2000). In addition, *U.S. News & World Report* estimated that crime against business cost companies $128 billion annually in direct losses, litigation, and security expenses (Thompson, Hage, and Black 1992). Finally, a study conducted at the University of Florida in 1994 (Donnelly 1994) attributed 42.1 percent of the shrinkage in retailing inventory to employee theft (32.4 percent was attributed to shoplifting and poor paperwork).

Even if these estimates are exaggerated, employee theft is one of the most costly offenses committed by individuals in the United States, and the actual cost of employee crime exceeds the reported quantifiable costs. For instance, increases in sick leave requests, misuse of company materials, vandalism, sabotage, substance abuse, and theft of time all lead to higher prices and increased expenditures made to control these crimes (Kilborn 1992).

Recently, computer crimes have posed increasing problems for law enforcement. A survey of 3,500 computer-security professionals by the National Center for Computer Crime Data estimated the annual loss from computer abuse to be more than $555 million nationwide. According to the survey, telephone service was the most common service theft, followed by computer services (Traub 1996). One specific study estimated the annual loss from computer crime at $3-5 billion annually (Coutorie 1995). It is clear that as computers come to be used more through automated teller machines, credit cards, home banking, bank transfers, and business transactions, the opportunities for their fraudulent operation will increase proportionately. A survey of 1,200 security managers found that nearly 20 percent of the companies had detected a computer crime within the last five years, and that the rate of these crimes was directly related to the number of employees using computers (Albanese and Pursley 1993).

Another study revealed that 30 percent of American workers plan to steal from their employers, while another 30 percent may give in to an occasional temptation. Thus, 60 percent of the U.S. workforce may contribute to the internal crime problem (Hogsett and Radig 1994). It has been reported that in the U.S.A. a company can expect criminal loses of one to two percent of its annual sales, most of which is attributed to "insiders." These losses can mean the difference between viability and failure for many smaller firms.

Small firm owners must bear the costs of both loss from and prevention of crime. Costs are incurred in attempts to reduce the cost of the loss (insurance, for example), in after-the-fact costs (replacing stolen merchandise), and in associated loss reduction efforts such as employee training. Obviously, these costs are eventually passed on to the consumer; however, there may come a point at which that ceases to be a viable option, as consumers may purchase products or services from other vendors. In addition, the owner's intensified efforts to reduce risk through the use of internal controls and crime prevention measures can lead to increased employee dissatisfaction and reduced productivity (Holt 1993).

Recent Literature

While crime poses a critical threat to small businesses, little recent research exists on this subject. A search of the small business literature reveals very few articles on the subject of small businesses and crime. The following is a discussion of the relevant literature.

Snyder, Broome, and Zimmerman (1989) asked certified public accountants to identify internal controls that can be used to reduce the likelihood of internal monetary theft. The accountants identified 42 essential controls, 21 of which dealt with the protection of cash (the most liquid asset and the one most vulnerable to theft). Other controls addressed potential problems in the areas of payroll, investments, general business, inventories, accounts and notes receivable, and accounts payable. The surveyed CPAs indicated that implementation of these controls and protection of company assets can lead to better employee morale, improved customer service, and profit growth.

Albrecht and Schmoldt (1988) researched state and federal court cases in a study of employee fraud. Of the 126 cases that met their criteria of fraud, 98 dealt with theft by insiders. Fifty of these cases of insider theft involved the theft of cash, 25 dealt with stolen checks, 19 involved inventory theft, and four dealt with theft of other forms of company property.

Coutorie (1995) conducted a survey of industry experts on the future of high tech crime. The experts predicted that this sort of crime would increase with the overall level of education in society and the growing pervasiveness of computers. Experts also predicted an increase in the use of computers to commit crimes such as monetary theft or fraud and attacks on information and databases.

The non-empirical literature about business crime focused on crime prevention and apprehension. Vigneau (1995) identified important issues such as how to legally observe employees, how to investigate employees and specific crimes, and who should perform the investigations. Observation techniques included electronic, managerial, and undercover methods. Keenan (1995) focused on internal crime in the sales function of a firm and discussed clues to look for and types of suspicious employee behavior. Hutchison (1994) was more specific, addressing the issue of employee insurance claim fraud. In each of these articles, careful employee selection was mentioned as the best way to prevent crime. Background checks and the use of references were cited as critical in choosing honest employees. Employee training programs were also mentioned as ways to prevent and/or lessen losses to crime.

Purpose of the Study

The purpose of this study was to investigate how owners perceive the issue of crime, its severity, and its impact on their businesses. This was done by conducting a survey of small business owners in the United States concerning the occurrence of and the prevention of crime. Research questions included the following:

- What are the different kinds of crime that owners are susceptible to?
- How much do these crimes cost per occurrence?
- What are owners doing to prevent crime and at what cost?
- Are owners making significant investments in loss reduction or crime prevention measures (for example, after-hours security systems, in-house elec-

tronic security systems, changes in the physical layout of their exposure, and insurance)?
- Are firms in different sectors (retail, manufacturing, and service) affected differently by criminal activities?

Empirical and systematic research on these issues can help to determine reasonable and affordable solutions. Therefore, the goal of this research is to analyze of the impact of crime on smaller firms and identify the actions these firms take to prevent criminal activity.

Method

Sample and Data Collection Procedures

Data for the analysis were collected from 422 small business owners in the Midwest and Southeastern United States during the spring and summer of 1997. Lists of these small business owners were developed from Chambers of Commerce directories. Research assistants personally delivered the questionnaires and oversaw their completion. The research assistants were required to collect business cards so that any necessary follow-up information could be collected. Owners were contacted in advance and informed that this was part of an ongoing effort to study small businesses and their owners; they were advised that participation in the survey was voluntary and all responses would be kept confidential. Of the 500 owners contacted, 422 responded, for an 84.4 percent response rate. This format has been successful in similar studies of small firms (for example, McEvoy 1984; Hornsby and Kuratko 1990).

Instrumentation

The data were gathered by means of a 73-item questionnaire. Ten items were devoted to demographic questions, and 63 items focused on the small business owners' experiences with crime and the crime prevention measures they had taken. Specifically, for each of the nine common types of crimes against business cited in the literature, owners were asked to indicate (1) the level of concern the crime caused them; (2) the number of times the business had experienced this type of crime during the previous year; (3) what their average loss was per incident; (4) whether they had taken any action against that particular crime; and (5) whether they had provided employee training for the crime category. The nine types of crime analyzed were: credit card fraud, shoplifting, check deception, burglary/robbery, employee monetary theft, employee merchandise theft, sale of trade secrets, embezzlement, and vandalism. Owners were also asked whether they felt the level of crime against their business had changed, whether they had made any particular changes in their facilities or operations in response to crime, and how much they thought crime cost them in terms of both prevention and loss.

Data Analysis

The data analysis consisted of four phases. First, in order to assess whether the sample was representative of the U. S. small business population, demographic statistics were computed by means of a frequency analysis. Second, frequency analysis was conducted on questions regarding the impact of crime and the small business owners' reactions to it. Third, survey responses were categorized by industry type and then compared to determine whether any statistically significant differences existed among them. Fourth, the owners' experiences with crime were correlated with their respective actions. This step was taken to test the notion that most small firms are reaction-oriented and deal with issues such as crime only when they are personally affected.

Results

Demographic Breakdown

The demographic profile of the 422 responding small business owners suggests that a wide variety of businesses

Table 1
Sample Demographics
(n=422)

	Number of Owners	Percentage of Sample
Owner gender		
Male	336	79.6
Female	86	20.4
Owner age		
25 or under	13	3.1
26-35	96	22.9
36-45	113	26.9
46-55	113	30.0
56 or older	72	17.1
Owner age upon founding		
25 or under	78	23.0
26-35	136	40.1
36-45	87	25.7
46-55	34	10.0
56 or older	88	1.2
How became associated with firm		
Founder	211	50.8
Family business	80	19.3
Married into	4	1.0
Bought firm	91	21.9
Other	29	7.0
Years in business		
5 or less	89	34.4
6-10	66	20.9
11 or More	193	44.7
Number of employees		
5 or less	166	40.4
6-10	92	21.9
11-25	79	21.3
26 or more	193	15.5
Educational level		
High school	129	30.9
Some college	113	27.0
College graduate	123	29.4
Some graduate school	11	2.6
Graduate degree	42	10.0
Annual sales		
Less than $100,000	88	22.4
$100,001-500,000	134	34.2
$500,001-1 million	64	16.3
$1-2 million	39	9.9
$2 million or more	67	17.1

participated in the study. Table 1 provides some summary demographic statistics for the respondents and their firms. In general, participants were well distributed across owner's age, owner's education, firm age, firm size, and firm sales. The sample does over-represent male owners (79.6 percent), since women-owned businesses now constitute almost 34 percent of small business. However, full-time self-employed business owners are still predominantly (72 percent) male (*The State of Small Business* 1997). Approximately 69.1 percent of the owners had at least some college experience, with 42.1 percent being college graduates. As to the firms, 66 percent had been in business more than five years, and 84 percent had 25 or fewer employees. The annual sales levels were fairly evenly distributed —22.4 percent had less than $100,000; 34.2 percent were between $100,000 and $500,000; 16.3 percent had between $500,000 and $1,000,000 in sales; 9.9 percent were between $1.2 million and $2.0 million; and 17.1 percent were over $2.0 million in annual sales. The industry breakdown shows an emphasis towards retail business at 67.9 percent, with service firms representing 21.7 percent and manufacturing firms at 10.3 percent.

Overall, the distribution of businesses and their owners' demographics represented a good cross-section of American small business. Recent statistics show that over 80 percent of small business owners range in age between 26 and 64, 90 percent have some college experience, and over 35 percent have college degrees. In terms of the firm statistics, 90 percent of U.S. small businesses employ fewer than twenty people. Sales figures vary greatly throughout each industry due to differing sizes of businesses and markets (*The State of Small Business* 1997).

Level of Concern over Crime

The first set of items asked the owners to indicate the level of concern they had about certain kinds of crime, how frequently these crimes occurred per month in their business, and the average cost per occurrence. The level of concern was reported on a five-point Likert scale (1= not very concerned and 5 = very concerned). Table 2 presents the mean and standard deviation for the level of concern and the means for the frequency of occurrence and loss per occurrence. The mean responses for level of concern ranged from 1.575 for embezzlement to 3.195 for check deception. As seen in Table 2, shoplifting, employee monetary theft, and employee merchandise theft had the highest average concern, frequency, and cost.

Crime Prevention Actions Taken by Owners

Owners were also given a list of 38 possible preventative actions and asked to indicate whether they had taken any of these to reduce the likelihood of falling victim to crime or to minimize the loss should it occur. On the average, the owners had taken 15.2 of the listed preventative actions. The three most common actions taken were (1) providing good lighting for the premises (n=334); (2) keeping little cash on site (n=344); and (3) keeping tight control of the keys to the business (n=317). Other frequently mentioned actions included requiring proper authorization procedures, installing burglar alarms, using check identification procedures, and requiring employee identification procedures. See Table 3 for a detailed list of actions taken and their frequency.

Crime Prevention Training Provided by Owners

As employees are often on the front line of the business' interface with customers, they are also in a position to prevent crime against the business. Thus, providing employee training in certain preventive techniques may help reduce the occurrence of crime. Owners were asked to indicate whether they had provided any of 19 different types of training for their employees. Table 4 indicates the number

Table 2
Average Concern, Frequency of Occurrence, and Cost of Crime

Crime Category	Level of Concern Mean	Level of Concern Std. Dev.	Frequency Mean	Cost Mean
Credit card fraud	1.913	1.373	2.761	$580.61
Check deception	3.195	1.535	18.183	667.96
Shoplifting	2.288	1.533	35.491	185.47
Burglary and robbery	2.915	1.488	1.696	1811.27
Employee monetary theft	2.352	1.468	7.917	1485.19
Employee merchandise theft	2.347	1.481	15.412	305.46
Trade secrets	1.922	1.300	0.606	472.18
Embezzlement	1.575	1.084	0.279	172.42
Vandalism	2.404	1.385	2.094	492.61

Table 3
Crime Prevention Actions Taken

Action	Number[a]	Action	Number
Low amounts of cash on premises	344	Good lighting	334
Employee identification procedures	302	Key control	317
Burglar alarms	260	Check identification	267
Clear visibility	241	Attentive employees	258
Proper authorization	238	Prospective employee checks	247
Separate employ functions	221	Personally examined statements	234
Neat merchandise arrangement	216	Security system	223
Protected back doors	211	Controlled pricing procedures	216
Limited access areas	190	Electronic card scanners	186
Signatures scrutinized	174	Unannounced spot checks	161
Supervisor approval	172	Two-person opening and closing	154
Rubber stamp	155	Additional identification	148
Check cashing limit	93	Check verifying services	136
Television cameras	83	Locked display cases	110
Guard dogs	51	Signed agreements	107
Patrol services	47	Mirrors	100
Honesty testing	45	Different travel routes	91
Code-10 (call-in for credit cards)	41	Check cashing card	41
Lie detector	6	Fitting room attendants	17

[a]Multiple responses resulted in total responses >422.

of owners who had provided the types of employee training listed. The owners had taken a total of 2,427 training actions, or 5.8 per owner. The most common were training employees how to be more attentive to their surroundings, how to conduct proper check identification, how to secure proper authorization, and how to ensure clear visibility on the premises.

Owner Perceptions of Crime against Business

The next area of investigation was the business owners' perceptions of trends in crime against business. Owners were asked to indicate whether they felt crime against their business and against business in general had changed over the last three years. They could respond that crime had increased, decreased, or stayed about the same. If they reported it had increased or decreased, they were asked to indicate the degree of change they perceived by choosing among "less than 10 percent, nearly 25 percent, or over 50 percent." Interestingly, although approximately 75.1 percent of the owners indicated that they felt crime against their own business had decreased or stayed about the same, only 41.4 percent felt the same about crime against business in general. Table 5 presents the results for these two items.

Annual Cost of Crime to Small Business Owners

Finally, owners were asked to indicate what the total annual cost of crime was for their business. This cost was broken down into categories of prevention and loss. Examples of prevention costs were given to the respondents, and included things such as insurance, equipment, security services, and training. The mean cost of crime prevention was $7,805 per year, with the median considerably lower at $2,500 per year. The annual average loss incurred by the sample was $9,010, with the median being $1,325.

Impact of Industry Type

An additional goal of this research was to determine what impact (if any) business type might make on the respondents' perceptions and experiences of crime. Survey responses were divided into three

Table 4
Employee Training for Crime Prevention

Action	Number[a]	Action	Number
Proper authorization	209	Check identification	221
Clear visibility	186	Attentiveness	213
Neat merchandise arrangement	177	Electronic card scanners	162
Signatures scrutiny	153	Additional identification	138
Limited access areas	150	Check verifying services	119
Supervisor approval	147	Locked display cases	90
Rubber stamp	129	Mirrors	79
Check cashing limit	87	Check cashing card	41
Television cameras	69	Fitting room attendance	16
Code-10 (call-in for credit cards)	41		

[a]Multiple responses resulted in total responses >422.

Table 5
Owner Perception about Crime against Business

Owner Perception of Crime	Against My Business (percent)	Against Business in General (percent)
Increased by over 50 percent	5.0	10.0
Increased nearly 25 percent	8.1	28.6
Increased less than 10 percent	11.8	20.0
About the same	42.0	23.6
Decreased less than 10 percent	25.5	13.1
Decreased nearly 25 percent	3.4	3.3
Decreased by over 50 percent	4.2	1.4

categories: retail (n=284), service (n=91), and manufacturing (n=43). An analysis of variance (ANOVA) was used to determine differences in (1) degree of concern over various crimes; (2) annual crime prevention costs; and (3) annual crime losses (see Table 6). Statistically significant differences (p<.05) were found for four of the nine crime types—credit card fraud, check deception, shoplifting, and employee money theft. Employee merchandise theft was very nearly significant as well, at p=.07. The four weakest relationships were in categories which probably affect all businesses (burglary and robbery; theft of trade secrets and specialized business knowledge; embezzlement and fraud; and vandalism), while the four strong relationships were in areas which probably affect retailers and service businesses more than manufacturers.

The Effects of Crime Experience on Preventative Actions

A final question dealt with the relationship between the concern the owners felt about specific types of crime and three crime-related variables—the number of times a crime was experienced, the average loss per experience, and the number of actions taken to prevent crime. Analysis of the responses indicated a strong relationship between an owner's concern over a given crime and the number of times that crime was experienced. The only non-significant relationship was with vandalism. These results suggest that owners may become concerned only when they experience crime instead of taking preventative actions to avoid crime.

There also was a strong relationship between the concern for a given type of crime and the amount of the average loss due to that crime. This time, the only non-significant relationship was with employee money theft, suggesting that either the amount of theft per incident is low or that in these smaller firms employees do not handle the money as often as does the owner/manager.

Finally, strong relationships also existed between the owners' concern and preventative actions taken. The only non-significant relationships were for theft of trade secrets and vandalism. This lack of significance was probably due to the relatively low incident rates of these crimes.

Table 7 presents the results of this analysis. Correlation analysis was conducted to determine the relationship between money spent on prevention and the annual dollar value of losses. A small but significant relationship (r=.1893, p=.002) was found.

Table 6
ANOVA Results for Differences by Firm Type in Perception of Concern for Different Categories of Crime, Prevention Cost, and Crime Loss

Type of Crime	Retail (Mean)	Service (Mean)	Manufacturing (Mean)	*F*	*p*
Credit card fraud	1.982	2.048	1.191	6.77	.0013*
Check deception	3.333	3.184	2.186	10.88	.0000*
Shoplifting	2.627	1.667	1.122	29.22	.0000*
Burglary and robbery	2.942	2.852	2.786	.26	.7595
Employee money theft	2.479	2.167	1.892	4.38	.0132*
Employee merchandise theft	2.444	2.212	1.929	2.65	.0717
Trade secrets	1.880	1.907	2.262	1.57	.2087
Embezzlement and fraud	1.578	1.565	1.595	.01	.9886
Vandalism	2.394	2.341	2.463	.11	.8947
Annual prevention cost	$7,866	$8,929	$5,957	.34	.7155
Annual crime loss	$6,192	$21,550	$3,033	1.64	.1962

* $p < .05$

Table 7
Concern for Crime Correlated with Crime Experience, Loss Experienced, and Actions Taken

Concern	Number of Times Crime Experienced		Average Loss per Experience		Actions Taken	
	r	*p*	*r*	*p*	*r*	*p*
Credit card fraud	.3149	.000*	.1992	.015*	.2967	.000*
Check deception	.2477	.000*	.1724	.008*	.2489	.000*
Shoplifting	.2558	.001*	.2155	.013*	.4231	.000*
Burglary and robbery	.1956	.004*	.2599	.001*	.1572	.001*
Employee money theft	.2531	.001*	.0258	.773	.3045	.000*
Employee merchandise theft	.3470	.000*	.2437	.007*	.3204	.000*
Trade secrets	.2461	.005*	.2930	.009*	.0971	.051
Embezzlement and fraud	.4459	.000*	.4129	.000*	.2059	.000*
Vandalism	.1635	.034	.2462	.004*	.0775	.120

* $p = .05$

Discussion

The results of this exploratory study on crime and small business provide several practical implications for owners of small firms to consider. One is the level of concern for certain crimes which may in fact direct the owners' specific actions. Shoplifting and employee theft (monetary and merchandise) were the most frequently occurring crimes, the most costly, and the crimes that caused the owners the most concern.

In general, the respondents did not seem overly concerned with crime and its impact on their business. With the average experience with crime at 2.28 occurrences per month and the median annual loss being $1,325, one might ask why the average rating for concern across crime types was only 2.23 out of five. Is it that owners perceive crime to be the normal course of business? It may also be that the precautions they have taken have held crime (and/or their concern over it) at its present level.

This sample of respondents does appear to be fairly active in taking the kinds of preventative actions many experts recommend, such as training their employees and minimizing cash kept on the premises. Although it could always be argued that owners can do more, the owners may feel there is a point of diminishing returns at which the cost of prevention outweighs the loss, especially when they weigh the likelihood of crime happening to them personally. It must be remembered that the average owner has taken approximately 15 different kinds of preventative action and has provided employees nearly six kinds of training.

Finally, the analysis of variance for industry type suggests that businesses in the retail and service sectors feel more need to protect themselves against crime than manufacturing firms. The cash and merchandise handling that these businesses involve seem to require a more concerted effort against theft.

The correlation found here among crime experience, concern, and prevention suggests that many of the firms in this study react after they are victimized instead of trying to prevent it in the first place. The statistics on the frequency of crime found in this study indicate that there is a high probability that small firms, especially in retail and service industries, will be victimized. Thus, preventive actions and the capital investment required may be justified. Small business owners should note that watching for warning signs of impending crime (changes in an employee's bookkeeping procedures, changes in vacation or spending habits, decreases in productivity, for example) can be the most beneficial step in stopping crime before it happens. In addition, clear communication with employees will always benefit owners attempting to reduce the loss and fear that crime causes (Delaney 1983).

There are limitations to this exploratory study. First, since its focus is only on the known and detectable crimes as reported by the small business owners, it is possible that crime is more serious than the self-reported numbers indicate. Crimes may have occurred and gone undetected or unreported. Second, this study focused on U.S. businesses specifically from the Midwest and Southwest regions. There may be important differences in other regions of the U.S. as well as in other nations. Third, the respondents were predominately male (almost 80 percent), which indicates the possibility of differences in women-owned businesses.

With these limitations in mind, this descriptive study of crime in small business suggests questions for future research. One question might be whether new technological advances, such as computer databases to track high-risk customers, instant electronic verification procedures for bank credit cards and check writers, Internet purchasing, and more sophisticated electronic premises surveillance systems, reduce the cost and probability of certain crimes occurring. More longitudinal studies are required to answer this research question. Another avenue for future research would be to determine which actions or investments give the greatest return and/or are the most effective. Finally, more extensive studies should represent other regions of the U.S. as well as other countries in order to better assess the national and international results of crime in small firms. Also, studies focusing on women-owned business may provide additional insights into gender differences in frequency and prevention of crime.

In summary, it appears that most of the small businesses surveyed in this study institute some form of crime prevention; however, the level of investment seems to be low compared to the apparent risks. Crimes such as shoplifting, embezzlement, employee theft of merchandise, and check fraud appear to be on the rise. Therefore, small business owners and managers should be advised to make an increased proactive effort toward crime prevention instead of waiting until after they have been victimized to take specific actions.

References

Albanese, Jay S., and Robert D. Pursley (1993). *Crime in America.* Englewood Cliffs, N.J.: Prentice Hall.

Albrecht, W. Steve, and David W. Schmoldt (1988). "Employee Fraud," *Business Horizons* (July-August), 16-18.

Coleman, Susan (1997). "Crime in Russia: Implications for the Development of Training Programs for Russian Entrepreneurs," *Journal of Small Business Management* 35(1), 73-77.

Coutorie, Larry E. (1995). "The Future of High Technology Crime: A Parallel Delphi Study," *Journal of Criminal Justice* 23(1), 13-27.

Delaney, Joan (1993). "Handcuffing Employee Theft," *Small Business Reports* (July), 29-38.

Donnelly, Harrison (1994). "Store Security: The Retail Perspective," *Stores* 76(11), 57-58.

Hogsett, Randall M., and William J. Radig (1994). "Employee Crime: The Cost and Some Control Measures," *Review of Business* 16(2), 9-14.

Holt, Andrew (1993). "Controlling Employee Theft," *CMA Magazine* (Septem-ber), 16-19.

Hornsby, Jeffrey S., and Donald F. Kuratko (1990). "Human Resource Management in Small Businesses: Critical Issues for the 1990s," *Journal of Small Business Management* 28(3), 9-18.

Hutchison, Ty (1994). "Adding Insult to Injury," *Small Business Reports* (February), 43-47.

Keenan, William, Jr. (1995). "Are Your Salespeople Stealing Your Profits?" *Sales and Marketing Magazine* (April), 33-34.

Kilborn, Peter (1992). "Abuse of Sick Leave Rises and Companies Fight Back," *New York Times* (November 30), A12.

McEvoy, Glen M. (1984). "Small Business Personnel Practices," *Journal of Small Business Management* 22(4), 1-8.

Russell, Ronald C. (1995). "Understanding Fraud and Embezzlement," *The Ohio CPA Journal* (February), 37-39.

Snyder, Neil H., O. Whitfield Broome, and Karen Zimmerman (1989). "Using Internal Controls to Reduce Employee Theft in Small Business," *Journal of Small Business Management* 27(3), 48-55.

The State of Small Business: A Report to the President (1997). Washington D.C.: U.S. Government Printing Office.

Thompson, Terri, David Hage, and Robert F. Black (1992). "Crime and the Bottom Line," *U.S. News & World Report* 13(April), 55-58.

Traub, Stuart H. (1996). "Battling Employee Crime: A Review of Corporate Strategies and Programs," *Crime and Delinquency* 43(2), 244-256.

U.S. Department of Commerce (1995). *Costs of Crime Against Business.* Washington, D.C.: U.S. Government Printing Office.

U.S. Small Business Adminstration (2000). "Curtailing Crime—Inside and Out," *Crime Prevention Series.* Washington, D.C.: U.S. Government Printing Office.

Vigneau, James D. (1995). "To Catch a Thief . . . and Other Workplace Investigations," *HR Magazine* (January), 90-95.