

RESEARCH NOTE

EFFECT OF ANTIFENCING OPERATIONS ON ENCOURAGING CRIME

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ABSTRACT

Assessments of the effect of antifencing operations on encouraging crime have not been found. In an attempt to make an assessment, the Illinois Department of Law Enforcement examined two of its own projects. Comparisons in crimes committed during the operation of the antifencing project were drawn between a period before and during the project and between different geographical areas. Also examined was a report by the U.S. Department of Justice. The results of both analyses suggest that crimes are not influenced by the operation of an antifencing project. The immediate availability of a buyer for stolen property does not encourage additional thefts.

Introduction

One concern of the Illinois Department of Law Enforcement (DLE) in its conduct of antifencing or sting projects was that such projects encouraged crimes. The Department has operated a number of apparently successful projects throughout the state. The value of stolen property recovered has been high. Arrests have been many; convictions have been certain. These results parallel the findings of other agencies. However, no evaluation of their effectiveness in control of crime has been conducted. At least one study for the United States Department of Justice made an attempt to address the relationship between sting operations and subsequent crime after arrests had been made (U.S. Department of Justice, 1979). Its findings were indeterminate, and it did not address the relationship between a sting and its potential to encourage crime. One reference to encouraging crime in the literature is by Gary Marx (1980) who stated without support, "...such police fencing units...may serve as a stimulant for theft and help generate capital for other illegal activities" (p. 414).

This claim by Marx encouraged DLE to reevaluate their antifencing operations. Did crimes increase and were these increases linked to the projects? This report summarizes answers to the questions. First it examines data presented in the U.S. Justice Department study for indication of increases in crimes during their reported antifencing projects. Second, the trend in crimes occurring in Illinois where antifencing operations took place are compared to those crimes occurring in geographically separated locations. Both analyses strongly suggest that a sting does not encourage crime.

Methods Employed

Data from both the U.S. Department of Justice (DOJ) study and the projects in Illinois cover at least seven months of operation. There are comparative periods of crimes from before and during the project. In the DOJ study, only property crimes are given. The

crimes used for evaluating the projects in Illinois include burglary, theft from motor vehicles, and other thefts.

Analyses for the DOJ study is performed separately for each of the three jurisdictions studied. Because the information was extracted from a graph, nonparametric analysis of variance using a Kruskal-Wallis test is employed (Siegel, 1956). This test yields an H which is interpreted as a chi-square. The degrees of freedom are the number of columns of data minus 1. For all three jurisdictions there is one degree of freedom (before and after).

The analysis for Illinois not only used a before-during comparison, but also extended this comparison to geographic areas with and without an antifencing program. Crimes occurring in the counties where the sting operated and in demographically, but geographically separated, similar counties were included. Because most of the criminals caught in the operation and the stolen goods recovered came from the immediate area of the sting, any potentially negative effects should not have occurred in another county 90 miles distant.

Because of the two-way effects (before and during, and county-by-county), a two-way analysis of variance was used. However, the frequency of occurrence varied substantially not only from month to month but also from county to county. To eliminate the unwanted effects of these variations, all data were standardized. The standard chosen was the mean and deviation in crimes during the period prior to the antifencing project. A standardized frequency was computed for each month in each county:

$$z = \frac{f - m}{s}$$

where:

- z — Standardized score
- f — Frequency of occurrence
- m — Mean frequency
- s — Standard deviation

Findings

Department of Justice Study

The Department of Justice study, *What Happened* (1979), examined changes in property crimes before and after antifencing operations had been undertaken. These programs had taken place in

three unnamed cities each with 150-300 thousand persons. A time-series analysis of changes showed limited success in terms of reducing crimes after the operations finished.

The same data were applied to this study. Here, the intent was to examine changes occurring between the period before the project began and while it was in operation. The monthly property crimes in each of the three jurisdictions are shown in Table 1 and further

Table 1
Changes in Property Crimes in Three Jurisdictions Before and During Antifencing Operations

Month	Jurisdiction A ^a		Jurisdiction B ^b		Jurisdiction C ^c	
	Average Before ^a	During	Average Before ^a	During	Average Before ^a	During
1	1,865	2,320	2,080	2,000	2,770	2,370
2	2,130	2,100	2,100	2,400	2,875	2,250
3	2,050	1,950	2,105	2,210	2,595	2,160
4	2,180	2,050	2,175	2,260	2,535	2,150
5	2,030	1,900	2,210	2,170	2,080	2,090
6	1,970	1,890	2,320	2,200	2,735	2,350
7	2,150	1,920	2,295	2,400	2,305	2,000
8	1,970	1,800	2,100	2,200	2,290	1,630
9	1,925	1,790	2,260	2,250	2,560	2,060
10	2,105	1,810	2,165	1,860	2,400	1,900
11	2,385	1,950	2,075	2,100	2,450	2,100
12	2,295	1,990	2,045	2,090	2,415	2,140
Average	2,090	1,955	2,160	2,230	2,500	2,100

Note. The average before covers the preceding two-year period.

^aH = 4.94, df = 1, and p < .05.

^bH = 0.27, df = 1, and N.S.

^cH = 12.0, df = 1, and p < .001

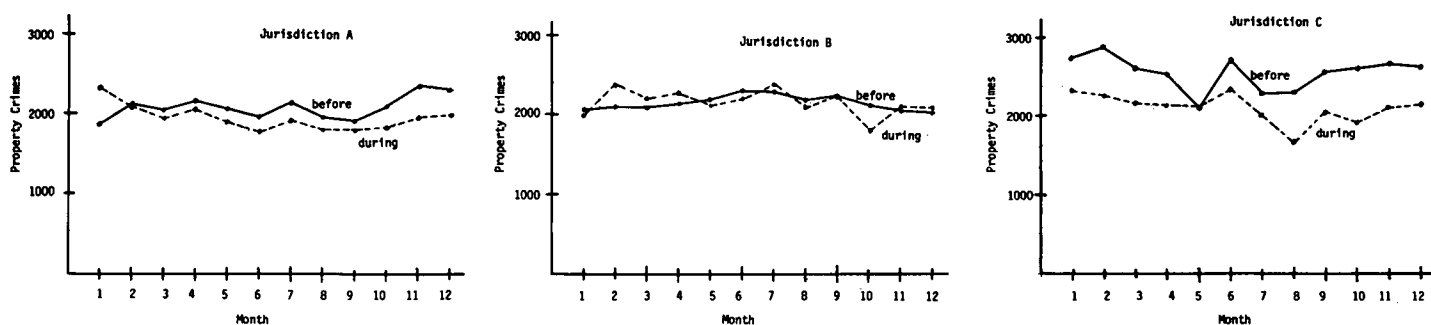


Figure 1. Changes in property crimes in three jurisdictions before and during antifencing operations.

depicted in Figure 1. All comparisons within any jurisdiction are for comparable 12-month periods. (The actual span in terms of starting month and year is not the same from jurisdiction to jurisdiction.)

Jurisdiction A and Jurisdiction C had a higher monthly average frequency of property crimes before the antifencing projects began than during these projects. The opposite occurred in Jurisdiction B. The null hypothesis tested was that crimes did not increase during the operation of a sting. The results of a Kruskal-Wallis analysis of variance rejects this hypothesis for Jurisdictions A and C. There were significant changes, but they were decreases rather than increases. The slight increase in Jurisdiction B was not significant.

Illinois

During a period from October 1979 through June 1980 an antifencing operation took place in Sangamon County (Springfield)

Illinois. Concurrent operations occurred in Rock Island County (Rock Island and Moline) for a seven-month period from June through December 1980. All three undercover operations were successful in the usual terms. Significant amounts of stolen property were recovered. Those arrested subsequently were tried and convicted of various crimes including burglary and robbery.

Crimes in the counties involved in the projects were compared to crimes in counties with similar demographics. If the antifencing operations encouraged crime, increases in crimes should have appeared in Sangamon and Rock Island Counties in relation to crimes that occurred in selected county-pairs. Sangamon County was paired with Peoria and Champaign Counties. Peoria County with its city of Peoria (approximately 127,000 persons compared to 100,000 in Springfield), is 85 miles north. Champaign County with its paired cities of Champaign-Urbana (93,000 persons including students at the University of Illinois) is 85 miles east. Both are believed to lie far enough from Sangamon County to be independent of criminal activity in that county.

Table 2
Property Crimes in Sangamon, Peoria and Champaign Counties

Period	Month	Frequency		
		Sangamon	Peoria	Champaign
Before 1978/1979	Oct	983	1019	708
	Nov	1218	956	680
	Dec	1486	922	734
	Jan	613	576	530
	Feb	604	473	508
	Mar	760	798	657
	Apr	841	842	675
	May	893	896	758
	Jun	793	1083	785
		Mean	910.1	840.6
	Deviation	269.8	188.7	89.8
During 1979/1980	Oct	955	1185	870
	Nov	960	1171	767
	Dec	947	1121	757
	Jan	900	1031	648
	Feb	781	730	531
	Mar	846	858	755
	Apr	879	954	785
	May	948	1143	895
	Jun	981	1194	919
		Mean	910.8	1043.0
	Deviation	61.6	154.8	115.7
Total	Mean	910.4	941.8	720.1
	Deviation	195.7	200.1	114.8

Table 2 and Figure 2 show the number of property crimes that occurred in each of the three counties for two periods, before and during the operation. The average number of crimes per month increased in both Peoria and Champaign Counties. No increase occurred in Sangamon. However, because of the substantial differences in frequencies of crime in the three counties, the use of an average could be misleading. Data for the three counties in each of the nine-month periods were standardized based upon the overall average and deviation for each county. Such a standardized score also helped eliminate total variation from county to county.

A two-way analysis of variance based on the standardized scores which are shown in Table 3 shows a statistical difference at the .05 level between the "before" and "during" periods. These differences are attributed to the increases in crimes in the two counties not affected by the sting, Peoria and Champaign. Crimes in Sangamon County remained constant.

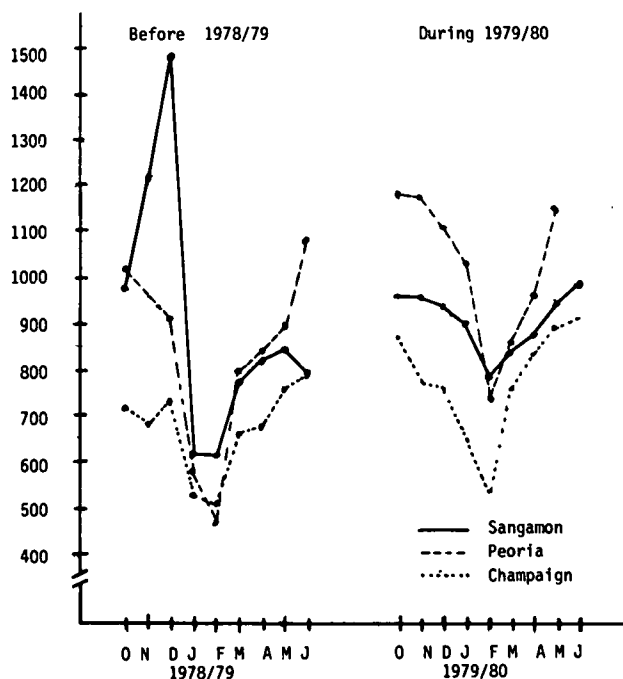


Figure 2. Comparison of property crimes in Sangamon, Peoria and Champaign Counties.

Table 3
Standardized Property Crimes in Sangamon, Peoria and Champaign Counties

Period	Month	Standardized Frequency				
		Sangamon	Peoria	Champaign		
Before 1978/1979	Oct	0.371	0.386	-0.105		
	Nov	1.572	0.071	-0.349		
	Dec	2.941	-0.099	0.121		
	Jan	-1.520	-1.828	-1.656		
	Feb	-1.566	-2.343	-1.847		
	Mar	-0.769	-0.719	-0.550		
During 1979/80	Oct	0.228	1.216	1.305		
	Nov	0.253	1.146	0.048		
	Dec	0.187	0.896	0.321		
	Jan	-0.053	0.446	-0.628		
	Feb	-0.662	-1.058	-1.647		
	Mar	-0.329	-0.419	0.304		
	Apr	-0.161	-0.001	0.565		
	May	-0.192	1.006	1.523		
	Jun	0.361	1.261	1.732		
		Sum of Squares	df	Variance	F	Sign.
	Between years	5.292	1	5.292	5.723	.05
	Between counties	0	2	0	0	NS
Interaction	4.317	2	2.159	2.334	NS	
Within	44.391	48	0.925			

The second comparison was drawn between the combined anti-fencing operations in Rock Island County, and the counties of Peoria and Champaign. Rock Island County, has the cities of Rock Island and Moline with a combined population of 97,000. Also included in the metropolitan area (Quad Cities) are Bettendorf and Davenport, Iowa which increase the metropolitan population to approximately 175,000 persons.

As shown in Table 4 and Figure 3 the combined projects operated in a seven-month period from June through December 1981. As in Sangamon County, crimes did not increase during operation of the project. However, the crimes in the counties used for comparison decreased slightly. An analysis of variance based on standardized frequencies, as shown in Table 5, indicated that the differences were not significant.

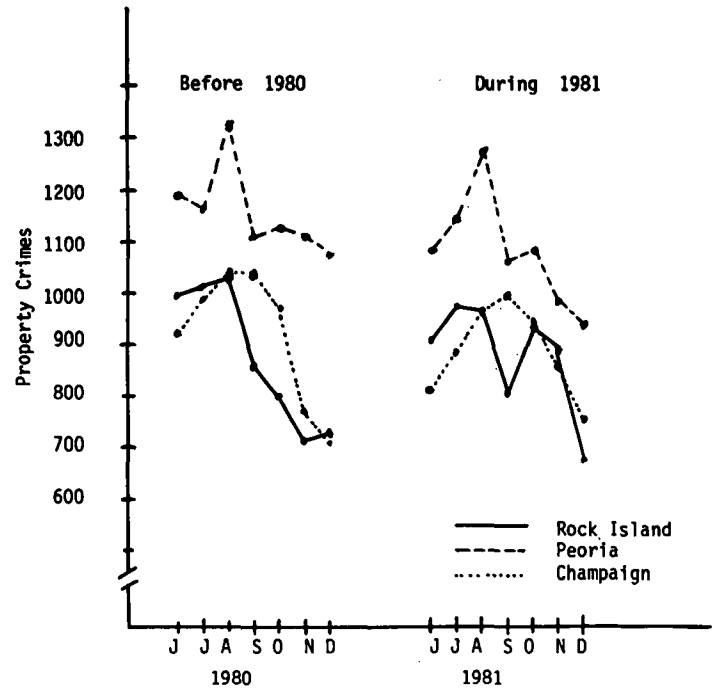


Figure 3. Comparison of property crimes in Rock Island, Peoria and Champaign Counties.

Table 4
Property Crimes in Rock Island, Peoria and Champaign

Period	Month	Frequency		
		Rock Island	Peoria	Champaign
Before 1980	Jun	995	1194	919
	Jul	1014	1162	988
	Aug	1030	1331	1041
	Sep	854	1109	1047
	Oct	802	1126	970
	Nov	703	1105	762
	Dec	728	1079	718
	Mean	875.1	1158.0	920.7
Deviation	128.0	79.0	121.7	
During 1981	Jun	908	1089	805
	Jul	974	1147	881
	Aug	963	1275	964
	Sep	802	1063	999
	Oct	931	1083	947
	Nov	889	981	861
	Dec	675	944	752
	Mean	877.4	1083.1	887.0
Deviation	98.0	100.8	82.6	
Total	Mean	876.3	1120.6	903.9
	Deviation	114.0	98.0	105.3

Table 5
Standardized Property Crimes in Rock Island, Peoria and Champaign Counties

Period	Month	Standardized Frequency			
		Rock Island	Peoria	Champaign	
Before 1980	Jun	1.041	0.749	0.144	
	Jul	1.208	0.423	0.799	
	Aug	1.348	2.147	1.302	
	Sep	-0.195	-0.118	1.359	
	Oct	-0.651	0.055	0.628	
	Nov	-1.520	-0.159	-1.347	
	Dec	-1.300	-0.424	-1.764	
During 1981	Jun	0.278	-0.322	-0.938	
	Jul	0.857	0.270	-0.217	
	Aug	0.761	1.576	0.571	
	Sep	-0.652	-0.587	0.903	
	Oct	0.480	-0.383	0.410	
	Nov	0.112	-1.424	-0.407	
	Dec	-1.765	-1.802	-1.441	
	Sum of Squares	df	Variance	F	Sign.
Between years	1.320	1	1.320	1.207	NS
Between counties	0	2	0	0	NS
Interaction	1.307	2	0.653	0.597	NS
Within	39.373	36	1.094		

Conclusions

The analyses performed for the three jurisdictions originally discussed in the U.S. Department of Justice report *What Happened* showed no significant changes in property crimes occurring during the period each antifencing project operated. In two of the three jurisdictions, property crimes decreased. An increase which appeared in the other jurisdiction was not significant.

The number of property crimes and thefts in both Sangamon and Rock Island counties remained constant from the period before projects began to the period the projects were in operation. Crimes in Sangamon County also remained constant while they were increasing in other counties with similar demographics. Because of distance separating the counties and the finding that those arrested and recovered material were from the immediate geographic area, these findings suggest that the antifencing operation in Sangamon County would not have affected the other two counties. Therefore,

the sting in Sangamon County probably did not encourage thefts and burglaries.

Although crimes remained constant in Rock Island County during the antifencing operation, they fell slightly in the two comparison counties. However, the decreases were not significant. The occurrence of property crimes in Rock Island like those in Sangamon County, appeared to be unaffected by the operation of an antifencing project. The findings are not as strong as those for Sangamon County. They still, however, reject the hypothesis that antifencing projects encourage crime.

References

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