

TELEMASP BULLETIN

TEXAS LAW ENFORCEMENT MANAGEMENT AND ADMINISTRATIVE STATISTICS PROGRAM

September/October 2002

Volume 9, No. 5

U.S. and Texas Crime Trends: 1980 to 2001

Introduction

In a study of crime rate trends in the United States during the 1960s period of social change, Cohen and Felson (1979) noted that crime increased rapidly after World War II. They concluded that crime rates rose because social circumstances changed so dramatically. Most criminologists and practitioners perceive social trends as a primary causative factor to explain current and expected future crime trends, including crime levels and patterns. However, based on the Uniform Crime Reports (UCR), crime rates have apparently *decreased* since 1992, albeit amid a more rapidly changed society in terms of social, cultural, economic, and political perspectives.

A series of six previous *TELEMASP Bulletins* (Vol. 5, No. 10-Vol. 6, No. 3) have explored the recent drop in crime. This bulletin updates this effort and explores the issue in greater depth. It analyzes the annual crime rates from 1980 to 2001 in the United States and Texas by examining official UCR, National Crime Victimization Survey (NCVS), and Texas Department of Public Safety (Texas DPS) crime statistics. Thus, the purpose of this bulletin is (1) to explore knowledge about crime levels, patterns, and trends in the U.S. and Texas; (2) to compare the crime trends between the U.S. and Texas by employing a correlation statistical technique; (3) to examine changed rates of crime and their statistical significance in six major Texas cities; and (4) to discuss possible explanations on changes of crime based upon current literature.

The UCR and NCVS: Official Sources of Crime Data

Before discussing UCR and NCVS crime trends from 1980 to 2001, the basic descriptions, limitations, and discrepancies of the measures themselves must first be addressed. Based on a legal definition of crime, the U.S. government routinely uses the most widely cited statistics of the UCR and NCVS as the main sources of official crime statistics. The UCR is compiled annually by the Federal Bureau of Investigation (FBI) from data submitted by over 16,000 police agencies throughout the U.S. The report contains crimes known to the police, including those reported by victims or observed or discovered by officers through proactive policing and sting operations. Index crimes, also known as Part I offenses, produce the best known summary of crime rates and, excluding arson, consist of two categories: violent crimes and property crimes. Violent crime categories include murder and non-negligent manslaughter, forcible rape, robbery, and aggravated assault, whereas property crime categories are comprised of burglary, larceny, theft, and motor vehicle theft.

The NCVS official crime statistics uses a representative sample of approximately 45,000 U.S. households and is designed to ascertain whether respondents or other persons in the household have been victimized. Like the UCR, the NCVS also classifies crime into violent and property crime categories. Violent crimes include rape, robbery, and assault (aggravated and simple), while property crimes are com-

Bill Blackwood Law Enforcement Management Institute of Texas

prised of burglary, larceny, and motor vehicle theft. Unlike the UCR, the NCVS provides a detailed picture of incidents, trends, and victims that includes age, gender, race/ethnicity, education, and income characteristics (Lanier & Henry, 1998). Although the UCR and NCVS differ in their purpose, the methods and aspects used each produces its own valuable information; together they provide a more comprehensive understanding of crime levels, patterns and trends by balancing misleading information (DOJ, 1995). Hence, this bulletin measures the magnitude, nature and impact of crime and analyzes UCR and NCVS contrasting statistics from 1980 to 2001.

UCR Crime Trends in the U.S. and Texas

During the past two decades, there have been significant changes in crime as measured by the UCR. It should be noted that cited UCR statistics reflect the standardized crime rate per 100,000 population, not the raw number of offenses known to the police. The United States UCR crime index rate showed a slight decrease by 15% from 1980 to 1984, and then increased rapidly by 17% between 1984 and 1991. From 1991 to 2001, there was a rapid decline by approximately 30%. Likewise, Texas crime also increased rapidly by 34% between 1983 and 1989, and then rapidly fell by 35% from 1989 to 2001 (see Figure 1).

Along with the national and Texas statewide crime reduction in the 1990s, index crimes fell sharply in six major Texas cities: Austin, Dallas, El Paso, Fort Worth, Houston, and San Antonio. Their average crime rates were approximately 50% higher than the average of statewide index crime rates but demonstrated the same direction of rapid decline in the UCR index crime rates (see Figure 2). Statistically, a *t*-test was conducted to determine if there was a significant difference in the average 1991 crime rates with a general peak of crime rates and 2000 with a general dip in each major city. The results of the *t*-test statistically support the same declining direction as the nation and Texas statewide. By using *df* = 5, the obtained *t*-value is 6.53 which is significant at the .05 level. Thus, it can be concluded that the Texas six major cities experienced significantly manifest crime drops from 1991 to 2000.

Similar trends are observable in the two crime categories of the UCR: violent and property crimes. Specifically, the UCR violent index crimes showed a slight decrease by 10% from 1980 to 1983, and then readily increased by 40% between 1983 and 1991 (see Figure 3). During the period from 1991 until 2001, violent crime in the United States declined by 34%. Notably, the U.S. figures of violent index crimes are fairly consistent with those of Texas. Texas showed an 8% decrease from 1980 to 1984, increased significantly (66%) from 1984 to 1991, and then fell by 35%. However, from 2000 to

Figure 1. UCR Total Crime Index Rate

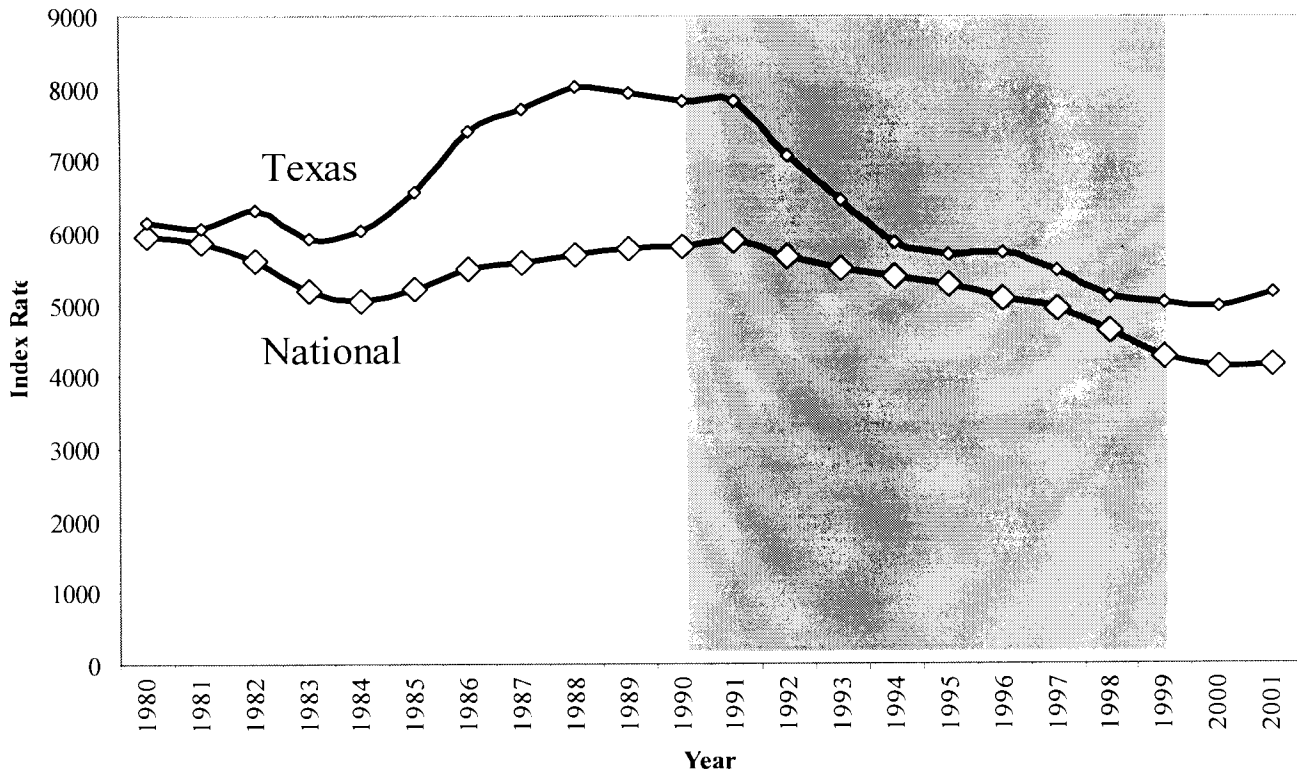


Figure 2. Texas MSA Crime Rate Trends

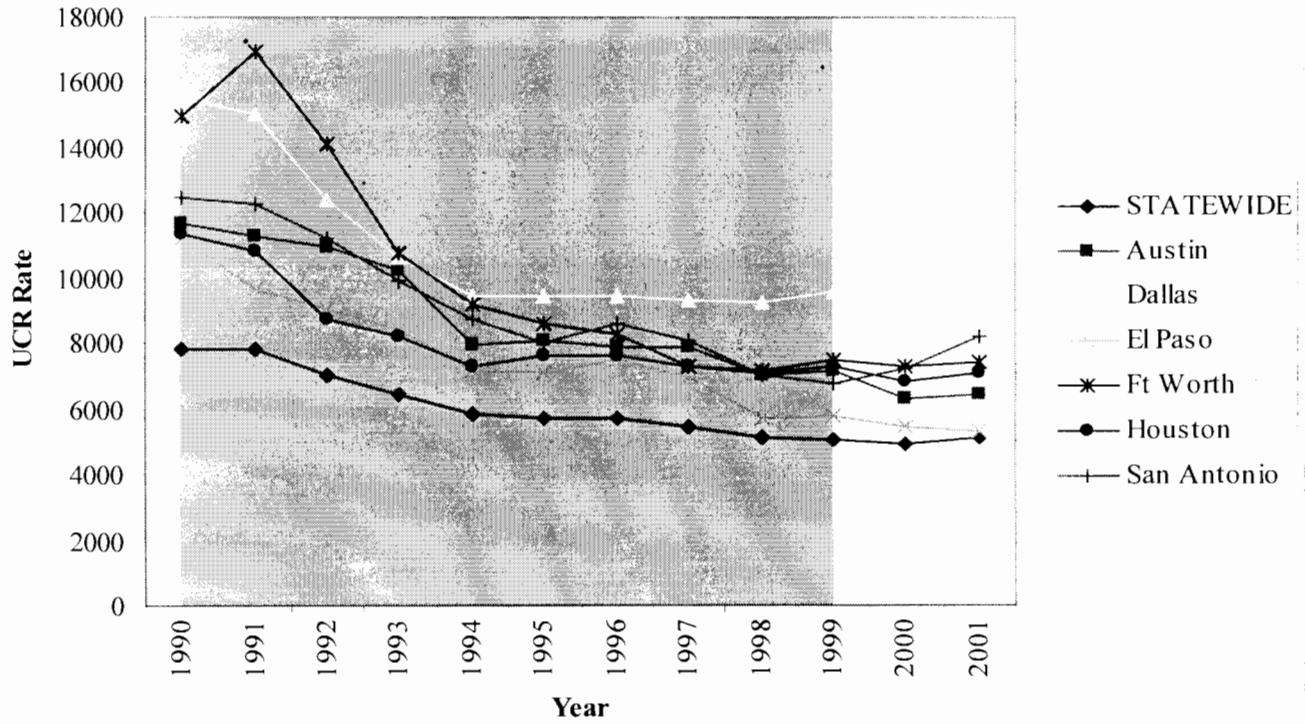
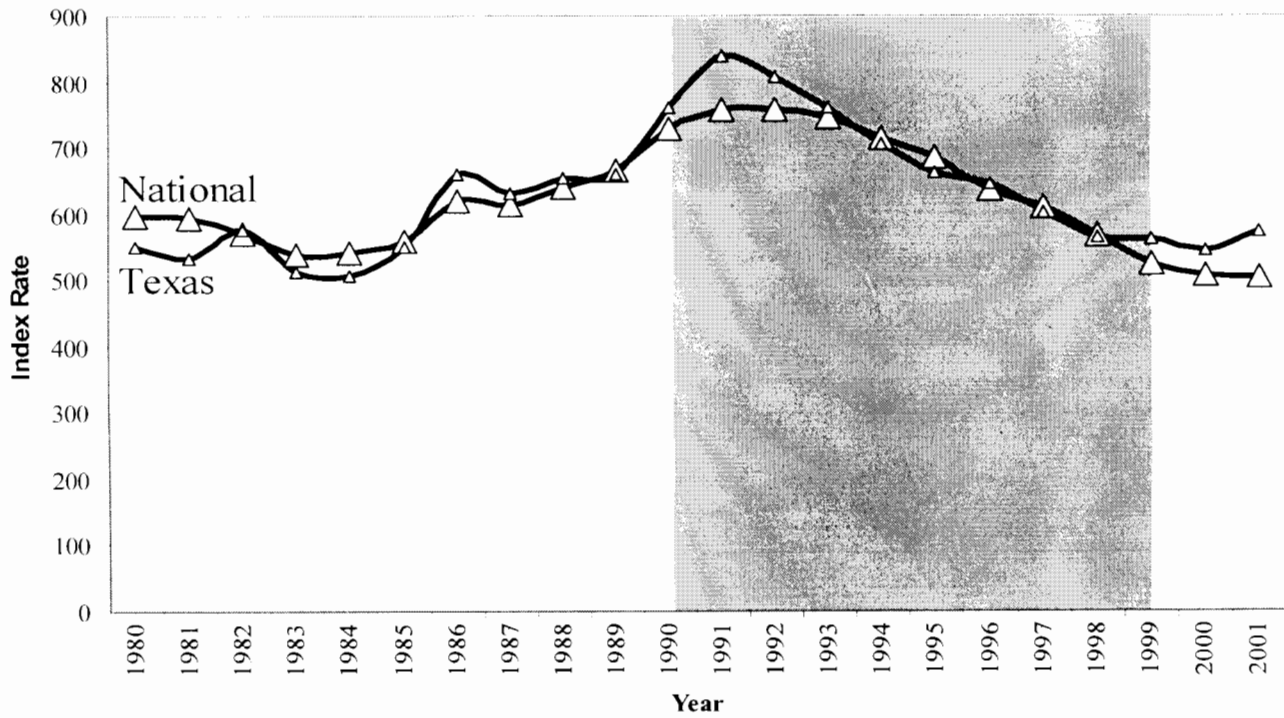


Figure 3. UCR Violent Crime Index Rate



2001, compared to the decreased number of violent crimes in the U.S., the data indicates that Texas showed an increase (5%).

A comparison between the U.S. and Texas UCR property index crimes (see Figure 4) reveals that the trends are more divergent than the overall and violent index crimes: there was a sharp contrast between the rates of the U.S. (16% decrease) and Texas (merely a 1% decrease indicating relatively stable crime trends) property crimes during 1980 to 1984. Continuing the divergence, the UCR property index crimes of the U.S. increased 14% from 1984 to 1991, and in Texas by a significantly larger amount (32%) from 1984 to 1989. Then, both trends turned into rapid declines, the U.S. by 30% from 1991 to 2000 and Texas by 39% from 1989 to 2000. Between 2000 to 2001, property index crimes increased 1% and 4%, respectively.

To better examine the divergence between the UCR rates for the U.S. and Texas, the murder and non-negligent manslaughter rate in the violent crime category and the motor vehicle theft rate in the property crime category can be employed (Reynolds, 2000). Both are regarded as nearly 100% reported offenses. Further, neither is subject to definitional "manipulation." Murders are all reported because of their seriousness. Motor vehicle thefts are nearly all reported

because of insurance coverage. As shown in Figure 5, murder rates in the U.S. and Texas indicate an almost identical pattern. The number of murders declined nationally by 22% from 1980 to 1984 and in Texas by 23% from 1980 to 1985, then rapidly rose by 23% nationally from 1984 to 1991 and by 18% in Texas from 1985 to 1991. From 1991 to 2000, the murder rates in the U.S. fell by 41% and in Texas by 61%. However, between 2000 and 2001, the murder trend changed in both directions in both the U.S. and Texas increasing nationally by 2% and in Texas by 5%. It should be noted that the more dramatic drop in Texas during the 1990s brought the state's rate down close to the national rate.

Motor vehicle thefts indicate an almost identical pattern between the U.S. and Texas (see Figure 6). Motor vehicle thefts declined respectively by 14% and 23% from 1980 to 1983 and then rose nationally by 53% and in Texas by 79% from 1983 to 1991. In the period between 1991 to 2000, auto theft in both the U.S. and Texas fell respectively, 38% and 53%. However, vehicle theft rates showed a slight increase between 2000 and 2001 by 5% nationally and 7%, in Texas.

In addition to these two "objective" measures, a statistical technique was employed to test the degree of correlation between violent and property crimes between the U.S. and Texas. All correlations were highly positive, the coefficient

Figure 4. UCR Property Crime Index Rate

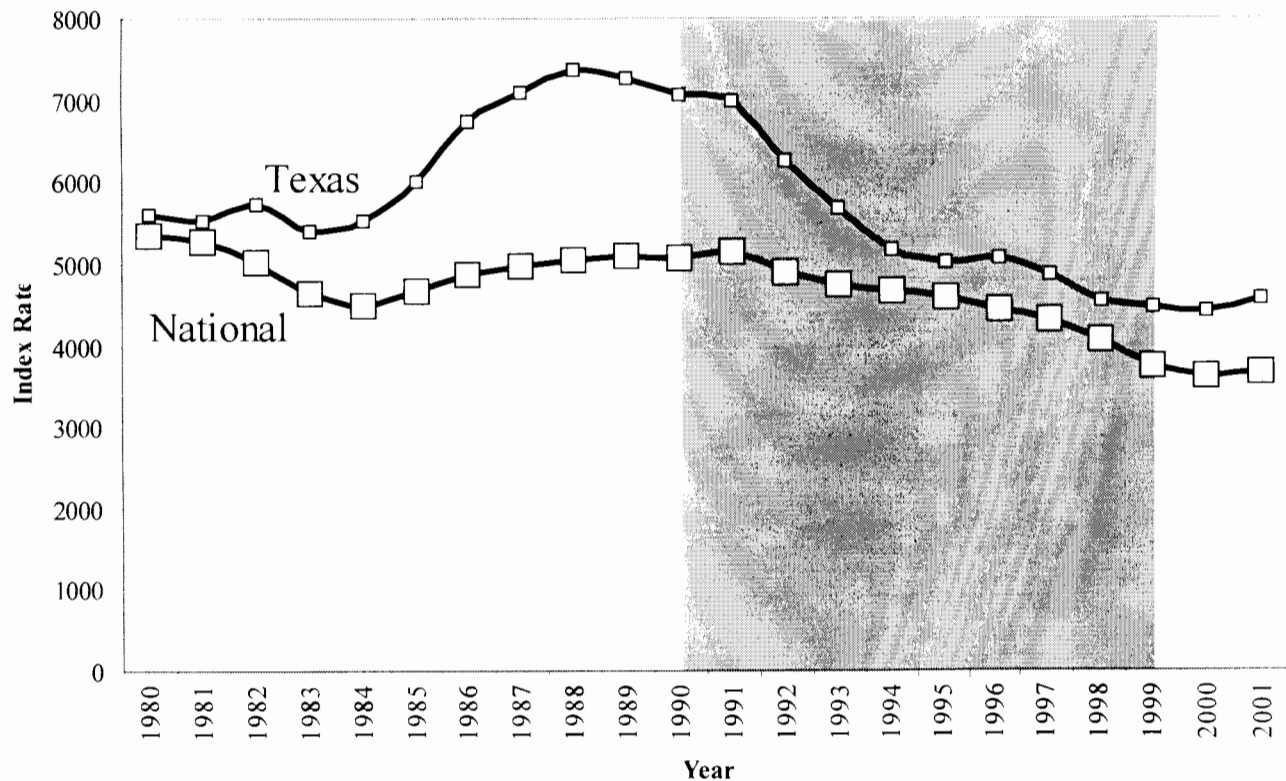


Figure 5. UCR Murder Index Crime Rate

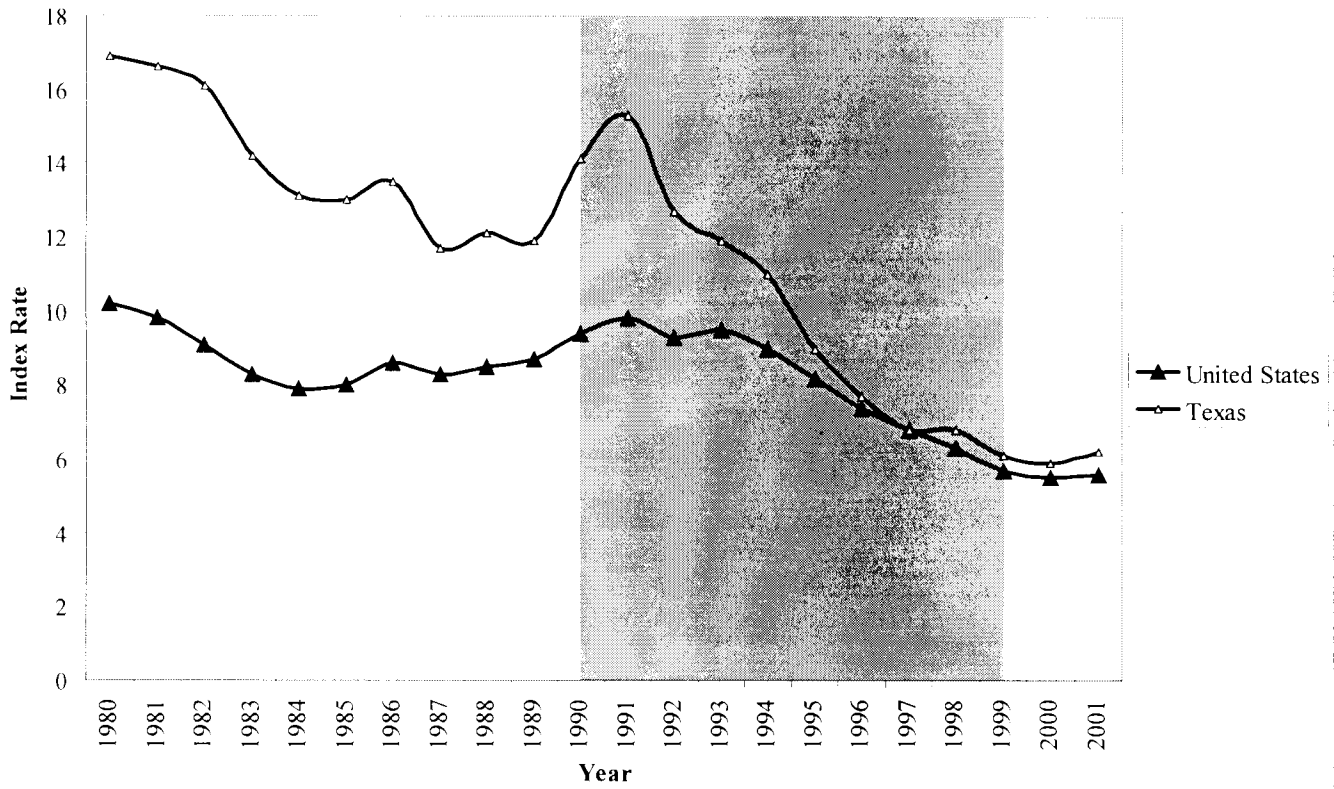
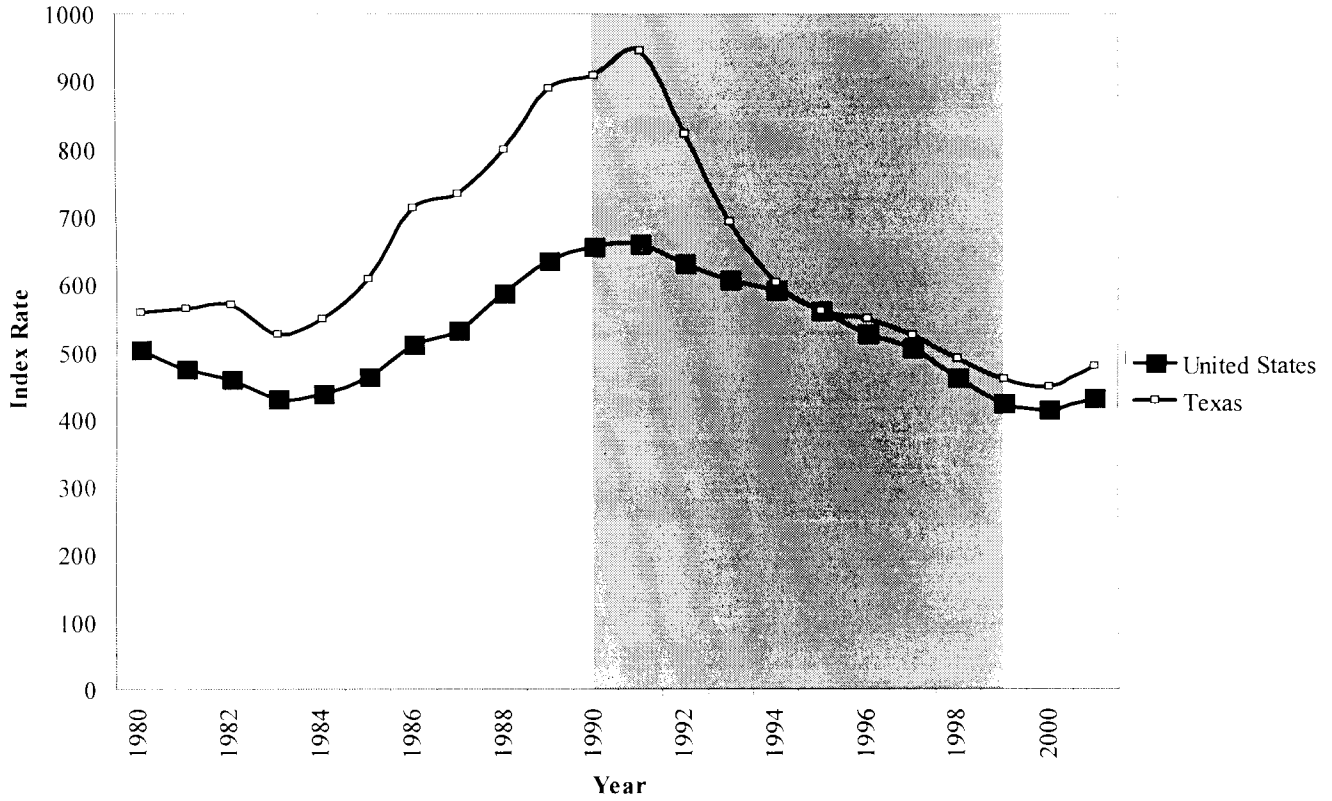


Figure 6. UCR Vehicle Theft Index Rate





varying between .91 to .99. Note that a correlation coefficient ranges from -1, a perfect negative correlation, to +1, a perfect positive correlation. Hence, an application of the statistical technique suggests both violent and property crimes in the U.S. and Texas trended in the same direction and with similar magnitudes (see Table 1).

To recapitulate, the UCR crime trends from 1980 to 2001 in the U.S. and Texas appear to have three phases: (1) early 1980s; (2) mid-1980s to 1991; and (3) 1991 to 2001 (see Table 2). The early 1980s show a common decline of all index crimes ranging from 8% to 16%—with the exception of property crime rates in Texas that were stable. The mid-1980s phase is marked by a rapid increase of all index crimes, varying from 14% to 66%. Interestingly, while the U.S. shows a steady increase in crime rates to 1991, Texas shows a steady increase only until 1989, the turning point within the state from an

increase to a decrease. Notably, Texas had a remarkable increase in the violent crime rate (66%) in the second phase. That is much higher than changes of other crime rates in either the U.S. or Texas. The more rapid decline in violent crime in Texas during the 1990s may have been an artifact of their more rapid rise during the 1980s. During the third phase, from 1991 to 2001, all crime rates drop with a variation from 30% to 39%. Between 2000 and 2001, the violent crime rates in Texas and the property crime rates in both the U.S. and Texas show a slight increase varying from 1% to 5%.

NCVS Crime Trends in the United States

As a mirror image of the UCR, the NCVS functions to balance information about the real amount of crime. The NCVS also provides a more detailed picture of incidents, trends, and victims. The NCVS rates, as an adjusted victimization rate per

Table 1. Correlation of U.S. and Texas Trends in UCR Over 1990s

	Correlation
U.S. Violent and U.S. Property Crime	.976**
U.S. Violent and Texas Violent Crime	.955**
U.S. Violent and Texas Property Crime	.984**
U.S. Property and Texas Violent Crime	.915**
U.S. Property and Texas Property Crime	.993**
Texas Violent and Texas Property Crime	.935**

Note: significant correlation * $p < .05$, two-tailed, ** $p < .001$, two-tailed.

Table 2. Changed Crime Rates Based on Three Year Phases

Phase	Overall Index Crime Rates				Violent Crime Rates				Property Crime Rates			
	U.S.	Years	Texas	Years	U.S.	Years	Texas	Years	U.S.	Years	Texas	Years
I	-15%	80-84	stable	80-83	-10%	80-83	-8%	80-84	-16%	80-84	stable	80-84
II	17%	84-91	34%	83-89	40%	83-91	66%	84-91	14%	84-91	32%	84-89
III	-30%	91-01	-35%	89-01	-34%	91-01	-35%	91-00	-30%	91-00	-39%	89-00
00-01							5%	00-01	1%	00-01	4%	00-01



1,000 persons age 12 and over, suggest violent crime rate trends through the 1980s, even up to 1994, were either flat or downward (see Figure 7) in contrast to a precipitous increase in the UCR violent crime rates during the 1980s (c.f., Figure 3). Likewise, the NCVS property crime rate trends were apparently downward during the 1980s (see Figure 8), while the UCR data showed a universal increase over the same period (c.f., Figure 4).

There are a number of explanations to account for apparent discrepancies between the UCR and NCVS crime figures in the 1980s. Generally speaking, each of the two data sources has debatable issues of reliability and validity due to various errors and each source's way of collecting data. Much literature has addressed major disadvantages in the UCR. The primary problem is inflated crime figures due to more reported crimes. There are also issues of classifications by

police agencies, and police discretion (Lanier & Henry, 1998; and O'Brien, 1996). On the other hand, although the NCVS includes both reported and unreported crimes, producing a more comprehensive estimate, its sampling deficiencies and procedural changes from face-to-face to telephone interviews may lead to a systematic underestimation of victimizations (Lanier & Henry, 1998; O'Brien, 1996; and Steffensmeier & Harer, 1999). In addition to deficiencies in reporting true indicators of crimes, the discrepancies of crime trends in the 1980s may be attributed to increases in both police productivity and better reporting systems rather than actual increases of violent crimes (Boggess & Bound, 1997; and O'Brien, 1996). In O'Brien's study, police productivity—defined as the ratio of recorded crimes of the UCR to actual crimes obtained from the NCVS—showed a substantial increase. In short, these reasons may partially explain discrepancies between the UCR and NCVS during the 1980s.

Figure 7. Violent Crime Rates

Adjusted victimization rate per 1,000 persons age 12 and over

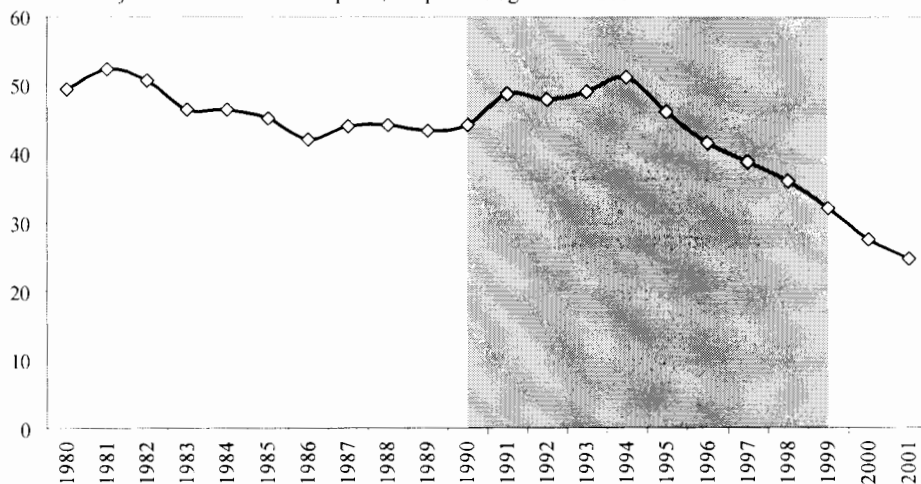
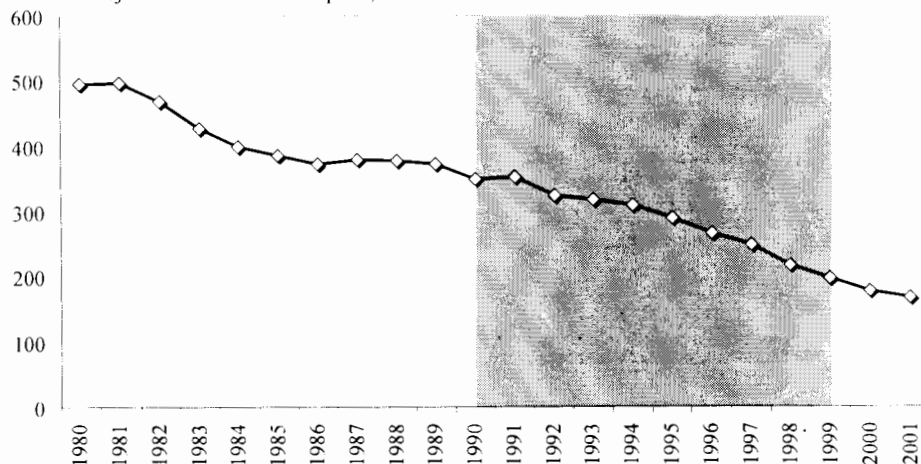


Figure 8. Property Crime Rates

Adjusted victimization rate per 1,000 households





Despite prominent shortcomings indicating in the 1980s almost opposite crime trends between the two official sources of crime data, more important is the crime trend of the 1990s. The trend of the NCVS appears to be fairly associated with that of the UCR throughout the 1990s (c.f., Figures 3 & 7). As for the NCVS' violent crimes (c.f., Figure 7), the trends throughout the 1990s revealed an apparent divergence in two periods: 1990 to 1994 which indicates a 16% increase and 1994 to 1999 indicating a more rapid 37% decrease. However, the long-term trends over the 1990s showed crime rates decreasing, like the UCR violent index crime rates over the same period. Even after 1999, the decline in the NCVS violent crime trend continued.

The NCVS violent crime rate is comprised of rape, robbery, aggravated assault, or simple assault victimizations. All of these violent crimes show overall declines throughout the 1990s and even thereafter (see Figures 9-11). In the case of rape, its trend showed a 47% decrease from 1990 to 1996, remained stable from 1996 to 1999, and then decreased again from 1999 until 2001 (see Figure 9). During the same period, robbery and aggravated assault increased by 7% from 1990 to 1992 and by 22% from 1990 to 1993, respectively. Thereafter, they showed a rapid decrease by 41% and 44% (see Figures 10 & 11). Finally, simple assault reflects a declining crime trend (by 34%) as well, with the exception of fluctuation during the period from 1990 to 1994 (see Figure 11).

Likewise, similar trends were observable in property crimes of both the UCR and the NCVS throughout the 1990s. At the onset of the 1990s, the UCR property index crime trend showed a rapid decline by 30% from 1991 to 2000 (c.f., Figure 4), and the NCVS also showed a dramatic decrease by 43% (c.f., Figure 8) with a continuing decline thereafter. NCVS property crimes—comprised of burglary, larceny, or motor vehicle theft—reveals rapid declines throughout the 1990s. During the same period, theft crime rates decreased by the largest amount (71%), followed by motor vehicle theft (52%), and burglary (47%) (see Figures 12 - 14); thereafter, theft and

burglary continued to decrease while motor vehicle theft increased by a mere 7%.

Additionally, a statistical technique employed to determine the correlation between violent and property crimes of both the UCR and NCVS supports the declining trends throughout the 1990s. All correlations are highly positive just varying from the correlation coefficient of .85 to .97 (see Table 3). Over the period from 1990 to 1999, as the number of all crimes in the UCR decreases, the NCVS crime rates also decrease.

In summary, throughout the 1980s, there were almost opposing directions in UCR and NCVS crime trends. These discrepancies suggest caution in interpreting changes of crime trends by relying solely on either source. However, centering on the crime trends of the 1990s in both official data sets, NCVS violent and property crimes were found to be strongly associated with those of the UCR throughout the 1990s, revealing a significantly large drop in each crime trend.

Plausible and Empirical Causes

Based on the UCR and NCVS official crime statistics, an unprecedented rapid crime decline throughout the 1990s may be observed in contrast to the 1980s crime increases. Crime statistics in major Texas cities statistically supported a decline. According to Bernard, Vold, and Snipes (2001), criminologists and/or practitioners have essentially different and contradictory frames of references to explain and solve crime by observing the known facts. Thus, it may be difficult for theories to explain this exceptional trend.

Despite difficulties due to diverse frames of references, some efforts have been made to explain the phenomena with various partial and interrelated factors. Even without relying on empirical testing, Blumstein and Wallman (2000) offered useful insights into possible explanations of the crime trend

Table 3. Correlation of UCR and NCVS Trends in 1990s

	Correlation
UCR Violent and UCR Property Crime	.958**
UCR Violent and NCVS Violent Crime	.939**
UCR Violent and NCVS Property Crime	.974**
UCR Property and NCVS Violent Crime	.847**
UCR Property and NCVS Property Crime	.989**
NCVS Violent and NCVS Property Crime	.880**

Note: significant correlation * p < .05, two-tailed, ** p < .001, two-tailed.



Figure 9. Rape Rates

Adjusted victimization rate per 1,000 persons age 12 and over

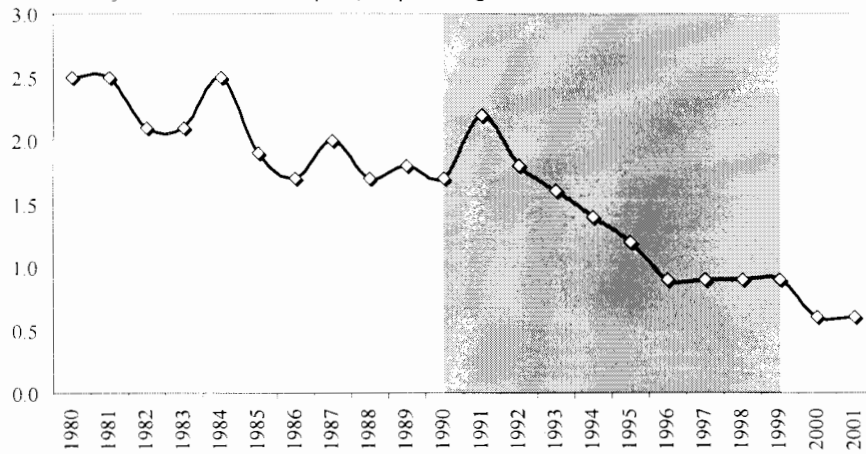


Figure 10. Robbery Rates

Adjusted victimization rate per 1,000 persons age 12 and over

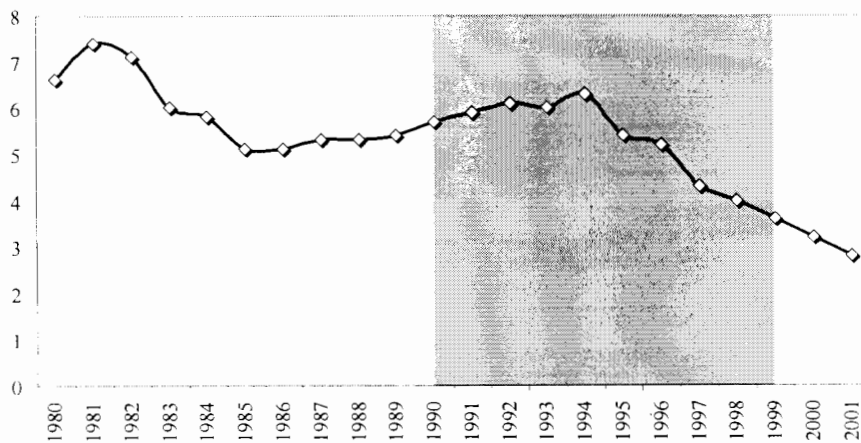


Figure 11. Assault Rates

Adjusted victimization rate per 1,000 persons age 12 and over

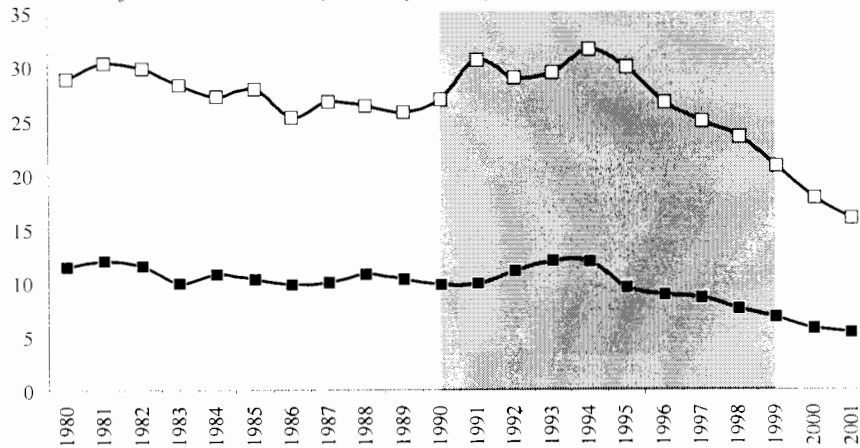


Figure 12. Theft Rates

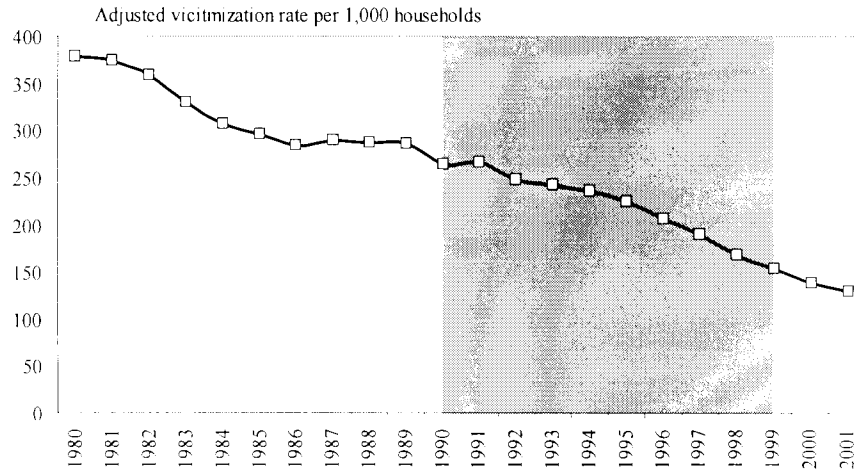


Figure 13. Motor Vehicle Theft Rates

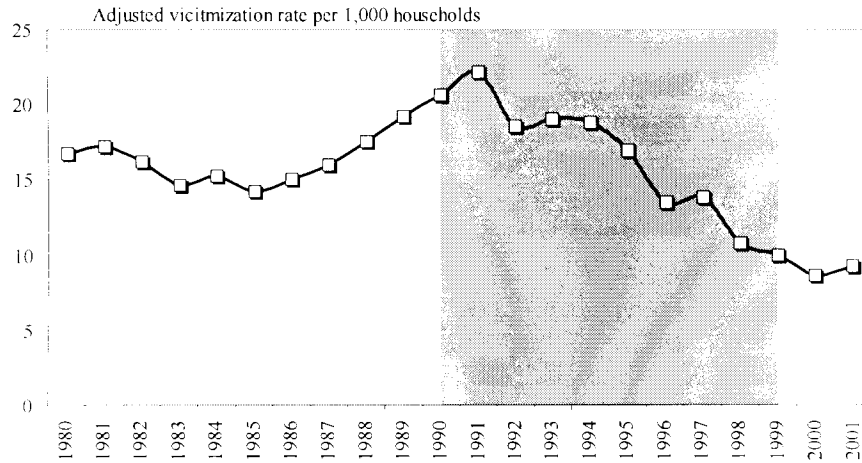
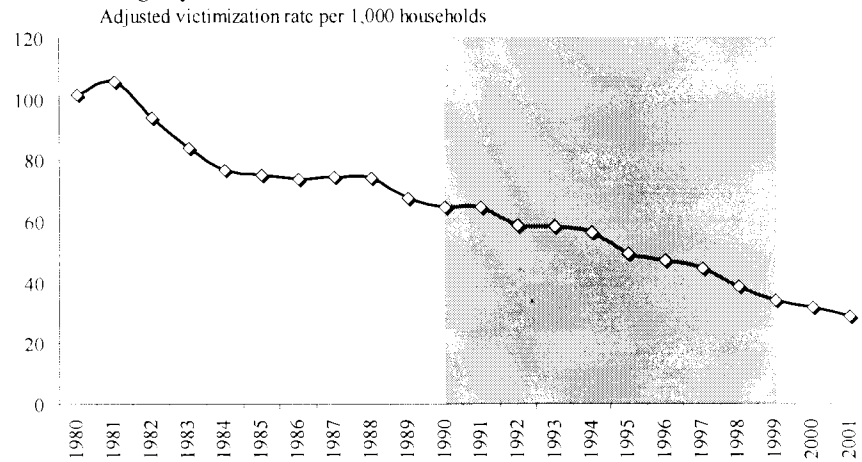


Figure 14. Burglary Rates





drop throughout the 1990s: (1) various gun control efforts; (2) increased incarceration rates; (3) decline of drug markets in inner cities; (4) more effective policing; and (5) changing demographics, especially in the crime-prone age. Moreover, empirical support from the *TELEMASP Bulletin* series previously published offered explanations for the drop. The five factors examined included social demographic trends, drug use prevalence, economy, incarceration rates, and policing as plausible explanations. Hoover (1999) noted that among these five factors, the major contributors to the drop in crime were likely the booming economy, dramatically increased incarceration, and proactive policing efforts.

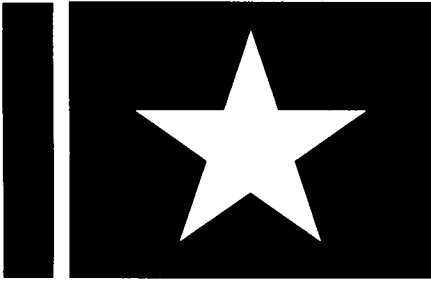
Along with the rapid crime decline in the U.S., Texas showed an even more rapid one. In an in-depth study of the Texas crime rate in the 1990s, Reynolds (2000) concluded that the reduction was attributed to successful tough prison policies, a modified juvenile justice code that facilitated deinstitutionalization of many juveniles, and an increased number of law enforcement personnel. He suggested that both prison policies and crime prevention efforts by police may have been the most important strategies to deter crime. To summarize, dramatically increased incarceration and proactive policing efforts provide convincing answers to the unprecedented and questionable rapid drop of crime rates in both the U.S. and Texas.

Conclusion

During the 1990s, crime rates measured by the UCR and NCVS decreased dramatically. Proactive policing efforts in the 1990s may have played an important role in reducing crime rates, but other social, economic, or political factors should not be dismissed. However, to be effective in accomplishing crime control, police agencies rely on support and resources from their environment.

References

- Bernard, T.J., Vold, G.B., & Snipes, J.B. (2001). *Theoretical criminology*. 5th ed. New York: Oxford University Press.
- Blumstein, A., & Wallman, J. (2000). *The crime drop in America*. Cambridge, UK: Cambridge University Press
- Boggess, S., & Bound, J. (1997). Did criminal activity increase during the 1980s? Comparisons across data sources, *Social Science Quarterly*, 78 (3), 725-739.
- Bureau of Justice Statistics. (December 2002). Crime trends from the FBI's Uniform Crime Reports. On-line: <http://149.101.22.40/dataonline/Search/Crime/Crime.cfm>
- Bureau of Justice Statistics. (December 2002). National Crime Victimization Survey (NCVS). On-line: <http://www.ojp.usdoj.gov/bjs/cvict.htm>
- Cohen, L.E., & Felson, M. (1979). Social change and crime rate trends: A routine activity approach, *American Sociological Review*, Vol. 44, August. 588-608.
- DOJ (1995). *Nation's two crime measures*. Rockville, MD: National Institute of Justice.
- Federal Bureau of Investigation. (December 2002). Uniform Crime Reports. On-line: <http://www.fbi.gov/ucr/ucr.htm>
- Hoover, L.T. (1999) Why the drop in crime? Part III, recent trends, *TELEMASP Bulletin*, 5(1): Huntsville, TX: Sam Houston Press.
- Lanier, M.M., & Henry, S. (1998). *Essential criminology*. Boulder, CO: Westview Press.
- O'Brien, R.M. (1996). Police productivity and crime rates: 1973-1992," *Criminology*, 34, (2), 183-207.
- Reynolds, M.O. (2000). *Crime and punishment in Texas in the 1990s*. Dallas: National Center for Policy Analysis.
- Steffensmeier, D., & Harer, M.D. (1999). Making sense of recent U.S. crime trends, 1980 to 1996/1998: Age composition effects and other explanations, *Journal of Research in Crime and Delinquency*, 36 (3), 235-274.
- Texas Department of Public Safety (December 2002). The crime report for 1999 and 2000. On-line: <http://www.txdps.state.tx.us/crimereports>



BILL BLACKWOOD

L aw
E nforcement
M anagement
I nstitute of
T exas

Rita Watkins, Ed.D.
Executive Director

Kay Billingsley
Publications Manager

For information about LEMIT
programs, call (800) 477-9248

TELEMASP Monthly Bulletins,
ISSN 1075-3702, are produced
under an agreement with the

Police Research Center
Sam Houston State University
Larry T. Hoover, Ph.D., Director
Jamie L. Tillerson, Program Manager

© Sam Houston State University

For information about TELEMASP
Bulletins, call (936) 294-1704 or
email: jtillerson@shsu.edu

This bulletin was authored by Won-Jae Lee,
an international Ph.D. student at Sam Hous-
ton State University. He received his
bachelor's degree from the police adminis-
tration department in Dong-Guk University
in Seoul, Korea. His major research inter-
ests are comparative criminal justice sys-
tems, policing and program evaluation.



A Member of The Texas State University System

**Bill Blackwood Law Enforcement
Management Institute of Texas**
Criminal Justice Center
Sam Houston State University
Huntsville, TX 77341-2417

Non-Profit
Organization
U.S. POSTAGE
PAID
Permit No. 26
Huntsville
Texas