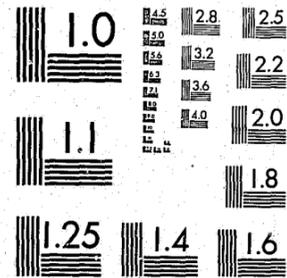


National Criminal Justice Reference Service



This microfiche was produced from documents received for inclusion in the NCJRS data-base. Since NCJRS cannot exercise control over the physical condition of the documents submitted, the individual frame quality will vary. The resolution chart on this frame may be used to evaluate the document quality.



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

Microfilming procedures used to create this fiche comply with the standards set forth in 41CFR 101-11.504.

Points of view or opinions stated in this document are those of the author(s) and do not represent the official position or policies of the U. S. Department of Justice.

National Institute of Justice
United States Department of Justice
Washington, D. C. 20531

Date Filmed
4/7/81

69477

69477

THE RELATIONSHIP BETWEEN UNEMPLOYMENT RATES AND
PRISON INCARCERATION RATES

BY

Ronald J. Waldron & Thomas J. Pospichal

UNITED STATES DEPARTMENT OF JUSTICE

FEDERAL PRISON SYSTEM

1979

NCJRS

JUL 31 1980

ACQUISITIONS

ABSTRACT

The relationship between unemployment and crime has been the subject of a number of studies. The majority of those reviewed here support the general proposition that unemployment is related to crime. The focus of this research was the relationship between unemployment rates and prison incarceration rates. On a cross-section or point-in-time analysis no significant correlation was found. On a longitudinal or period-in-time analysis a significant correlation was found nationally and in twenty-four states. In summary, at a given point-in-time states with high unemployment do not necessarily have high incarceration rates, however, over an extended period-in-time unemployment rates generally correlate with incarceration rates.

There has been much said and written on the theory that unemployment and crime are somehow related. The general position of most commentators is that increased unemployment will lead to increased crime. In general the theory could be stated as follows:

Mild unemployment will motivate a few to crime, moderate unemployment will push more across the threshold, and very high unemployment is likely to cause large segments of society to become involved in crime.¹

Swisher (1975) in an attempt to link crime and unemployment listed six plausible explanations:

1. Unemployed persons turn to crime to meet pressing economic needs.
2. Crime offers greater reward for less effort with acceptable risks to otherwise unemployed individuals.
3. Unemployed juveniles and youths turn to crime for "kicks" and "pocket" money.
4. Unemployment tends to precipitate criminal behavior of persons who have a predisposition or prior history of delinquency or crime.

5. Unemployed person are subjected to additional stress which exacerbates other interpersonal conflicts, and leads to an increase in the probability that arguments or despondency will erupt into violent offenses against family members or other acquaintances.
6. Unemployment undermines the stability of participation in primary social and economic institutions reducing the capacity of such institutions for instilling and reinforcing self-esteem, and social values that tend to be associated with lower crime rates.

Becker (1968) in an economic approach to crime and punishment viewed criminal behavior as one of several alternative income generating activities. To the unemployed individual crime is but one of several methods of obtaining income. If the risks are perceived as being low enough and the rewards high enough, the alternative becomes more desirable. Theoretically, at least a logical relationship is established between unemployment and crime.

Criminologist have explored the relationship between unemployment and crime in several ways. They have examined the employment status of arrested offenders, and the relationship between unemployment rates and several variables including crime rates, prison admission rates and prison incarceration rates. For the most part their findings have supported the argument of a relationship between unemployment and crime.

Glaser and Rice (1959) found, despite large deficiencies in available data, evidence which suggested relationships between crime and unemployment. Utilizing age specific data it was found that adult crime rates vary directly with unemployment, particularly rates of property offenses by persons 20 to 45 years of age. The data also suggested, less conclusively, that juvenile crime rates vary inversely with unemployment. In short, Glaser and Rice's study indicated as unemployment goes up adult crime rates go up and juvenile crime rates go down.

It is quite interesting to note the inverse relationship between unemployment rates and juvenile crime rates. Particularly so, since so much emphasis is placed on finding jobs for youth, ostensibly to prevent them from getting into trouble.

The Subcommittee on Penitentiaries of the Senate Judiciary Committee requested the Congressional Research Service (Robinson, Smith and Wolf, 1974) to do long-range projections of Federal and State prison populations and costs. The results of this study indicated a close correspondence between the unemployment rate and prison populations, that is when unemployment rates are up prison admissions are up. Unemployment rates were lagged one year when matched with Federal prison admissions but were not lagged when matched with State prison admissions. The correlation between Federal and State admissions and unemployment respectively was $r = .91$ and $r = .96$. The authors suggested "unemployment rates may influence the prison population in several ways. High levels of unemployment could lead to social unrest and a lessening of support for social institutions, possibly affecting crime rates, sentencing policies,

parole decisions, and other factors which in turn influence prison populations."

In the Robinson, et. al. study, researchers used projected unemployment rates to predict future admission rates to prisons. This analysis was made in 1974, and with the wisdom of hindsight we can now note that their projected unemployment rates have proved to be unreliable, hence their projected prison admission rates have also proved to be unreliable. The point is, anyone making future predictions of crime or related areas based on predicted economic trends is standing on weak ground, especially when one considers the record of economic predictions.

In an attempt to refine the Robinson, et. al. (1974) model for predicting future inmate populations a study by Ambrust and Deloney (1977) found changes in national employment rates are strongly indicative of changes in prison admissions. This study used national employment rates and Federal Bureau of Prison's admissions for a seventeen year period, 1960-1976. The mean unemployment rates of the current and prior year employment rates were matched to the current year admission rates. A coefficient of determination of $r^2 = .94$ was obtained, indicating a strong relationship between Federal Prison admissions and unemployment rates.

Spector (1975) examined the relationship between violent crime and five independent variables, one of which was unemployment. A sample of 103 Standard Metropolitan Statistical Areas was selected. A multiple-regression analysis of the violent crime rate and the independent variables

revealed no significant relationship between unemployment rates and violent crime rates.

We could perhaps expect less of a relationship between violent crimes and unemployment rates. It would seem if unemployment were to motivate individuals to commit crime it would likely motivate them to commit crimes that would improve their economic situation, i.e., crimes such as larceny, burglary, auto theft, etc.

A study (Turpin, Fisher and Powers, 1975) conducted by the Iowa Department of Corrections indicated the degree of change in unemployment rates in Iowa is not sufficiently related to prison admissions. These researchers concluded that the "baby boom" exacerbated the unemployment problems of young males, which in turn affected the prison population. To put it another way, the problem was one of an increasing young adult population, who as a general rule experience employment problems, than one of unemployment. Nevertheless, the authors did conclude, "one objective factor probably stands out above the others as a predictor of criminality: failure to become satisfactorily and permanently established in the working world in early life."

In contrast to Glaser and Rice's (1958) findings of inverse relationship between unemployment rates and juvenile crime the Iowa study indicated a relationship between unemployment rates and the incarceration rates in young adult males. The Iowa study is, however, focusing on one state and it is very likely that the findings can differ from state to state or city to city.

A 1975 study (Frank) of unemployment rates and the Federal Prison population from 1951 through 1975 found similar patterns in unemployment rates and the prison population allowing for a time lag of 15 months. Frank used the first quarter unemployment rates for males over twenty. This was lagged fifteen months behind the Bureau of Prison's fiscal year-end population. A correlation of $r = .77$ was derived. As Frank noted while unemployment may or may not cause increases in the inmate population there is a sufficient relationship here to make it suspect.

One could hypothesize from the above study that increased unemployment leads to increased criminality about a year later. The scenario one envisions is this: a man loses his job, after about a year he exhausts all of his resources, and finally in desperation he turns to crime. However, one could also hypothesize, those social events that cause increased unemployment also cause increases in the crime rate but at a slightly later point in time.

Using the period 1967 to 1974 Cox (1976) found Georgia unemployment rates and Georgia prison population levels to be closely related. Cox found one-half of the variation in the size of the prison population can be explained by unemployment. The strongest relationship was found between unemployment and prison populations at zero lag, i.e., unemployment rates and prison population levels in Georgia are up or down at the same point in time.

This is again a study limited to a particular state and population and like the Iowa study (Turpin, Fisher, and Powers, 1975) or the Federal Prison study (Frank, 1975) the findings may be limited to their particular

population and not generalizable to other populations.

In a comprehensive analysis, Brenner (1976) examined the relationship of imprisonment rates to several economic variables. State imprisonment rates for the United States as a whole and for nine geographical regions were examined for the years 1935 thru 1973. A significant relationship was found between unemployment rates and imprisonment rates both nationally and in the nine geographical regions. Brenner estimated that a one (1) percent change in unemployment rates sustained over a six year period would, based on the 1970 population, have increased the state prison admissions by 3,340 offenders.

In Colorado researchers (Crago and Hromas, 1976) using quarterly statistics established an inmate population projection model focused on unemployment rates, population at risk (males age 18-49), and court commitments. They found, with a three month lag, unemployment and court commitments to be highly correlated. While acknowledging the Congressional Research Service (1975) study, Crago and Hromas failed to note the obvious weakness in this report; predicting a dependent variable from a predicted independent variable. Strangely enough Crago and Hromas were quite willing to predict an average unemployment rate for the forthcoming years. They then used their predicted average unemployment rate to predict the court commitments. Crago and Hromas were probably less qualified to predict unemployment rates than incarceration rates, yet they were quite willing to do so.

When monthly court commitments to the Federal Bureau of Prisons (Waldron, 1977) were matched with monthly national unemployment rates, a correlation of $r = .44$ was obtained. When the unemployment data was lagged behind court data one through six months the correlation declined. However, when court data was lagged behind unemployment data one through six months the correlation remained essentially the same for five months. One could infer from this analysis, social events resulting in increases in unemployment rates affect court commitment rates first.

Focusing on the city of Atlanta, Georgia, Kvalseth (1977) found "(1) the total urban unemployment rate has a positive influence on the rates of burglary and larceny, (2) the male unemployment rate exerts a positive influence on the robbery rate, and (3) both the male and female unemployment rates have a positive effect on the rate of rape." Kvalseth pointed out that this is limited evidence which was not entirely conclusive nor consistent.

Nagle (1977) in a study analyzing several variables found a positive correlation between the unemployment rate and crime rate (.517). Interestingly enough Nagle found "little or no relationship between a state's crime rate and its incarceration rate (.214). Additionally, no relationship was found between the incarceration rate and the unemployment rate .082. This study would seem to suggest that those driven to crime by unemployment are not caught or if caught are not sufficiently criminal in behavior to warrant a prison sentence. Nagle's study, however, uses point-in-time data, no longitudinal analysis is made. Such an approach can be extremely misleading. For example at a given point-in-time un-

employment in the South may be lower than unemployment in the North while prison population rates in the South may be higher than prison population rates in the North, hence, no positive correlation would be detected. However, over a period-of-time the low unemployment rates in the South may rise and fall with the South high imprisonment rate and a correlation would exist. Findings of other studies (Brenner, 1976; Frank, 1975; Cox, 1976, and others) indicate this to be the case.

A survey of pre-trial offenders (Walsh and Viets, 1977) revealed 46 percent were unemployed at the time of arrest. The jobless rate was highest among those under 23, with the greatest levels of unemployment among blacks and women. Data on the employed population did not reveal strong employment ties as less than half of those employed had worked at their current job for less than a year. This study suggests that offenders are at least unemployed whether unemployment contributed to their criminality, however, is yet another matter. One wag has stated, "Criminals do not suffer from unemployment, as crime is there employment and lately they seem to be doing very well."

METHODS AND FINDINGS

The preponderance of findings of the studies surveyed herein indicate: unemployment rates and crime rates are directly related; unemployment rates and prison admission rates are directly related; and unemployment rates and incarceration rates are directly related.

To further explore the relationship between prison incarceration and unemployment during the past several years a linear regression analysis

was conducted between State unemployment rates and state incarceration rates.

The focus of this study is the relationship between unemployment rates and prison incarceration rates for the years 1971 through 1976. Unemployment rates were obtained from reports prepared by the United States Department of Labor, Bureau of Labor Statistics. Incarceration rates were obtained from reports prepared by the United States Department of Justice, Law Enforcement Assistance Administration, National Prisoner Statistics.

Linear regression statistics were used to determine the correlation between unemployment rates and incarceration rates. The correlation coefficient was determined between unemployment rates and incarceration rates for, (a) all states in a given year (point-in-time or cross-sectional analysis), and (b) and for each state from 1971 through 1976 (period-in-time or longitudinal analysis).

In Table 1 the point-in-time correlation between unemployment rates and incarceration rates for all states are displayed for the years 1971 through 1976. You will note that the correlation for all years is extremely low. None are statistically significant. Unemployment rates and incarceration rates at a point-in-time, do not correlate as was indicated in Nagle's (1977) study.

TABLE 1

When you examine each state on a case by case basis some possible explanations become apparent. For example, the South has extremely high incarceration rates yet low unemployment rates. The relative lack of

labor unions in the South has attracted a larger number of industries, to the "sun belt". Thus, high employment is possible. On the other hand, the cultural mores of the South are more conservative and a criminal offender is more likely to be incarcerated in the South than in the North as indicated by higher incarceration rates in the South. Also, the crime rates have been traditionally higher in the South and from this we would expect higher incarceration rates. From this analysis one could infer that incarceration rates are more a function of parochial attitudes than unemployment rates.

In roughly half of the 50 states unemployment rates vary directly with incarceration rates at levels of significance greater than .10 during a period-in-time. For example, in the state of Alabama when the unemployment rates are up the incarceration rates are up (see Table 2). This analysis also confirms studies of Turpin, Fisher and Powers (1975) of no relationship in Iowa; of Cox (1976) of a relationship in Georgia; and of Crago and Hromas (1976) of a relationship in Colorado.

TABLE 2

In view of the fact that in one half of the states a significant relationship was found and in the other half no significant relationship was found one would have to conclude the evidence that unemployment rates and incarceration rates are related is inconclusive at least for

the period of time covered. However, the fact that almost all states indicate a direct relationship though not statistically significant, offers some evidence of a relationship, at least one worthy of further investigation.

SUMMARY

The majority of the research supports the general proposition that unemployment is directly correlated with crime and specifically with property crimes, incarceration rates, prison admissions, court commitments, prison populations, robbery and even rape.

This study found significant positive relationships between unemployment rates and incarceration rates over the 1971 through 1976 time period. However, using point-in-time analysis by year no significant correlations were found.

NOTE

1. This is a paraphrase of a comment by Robert Gurr in Why Men Rebel. Gurr's comment was in reference to the relationship of deprivation to rebellion.

REFERENCES

- ARMBRUST, EARL A. and DONALD G. DELONEY (1977) Federal Prison Construction Alternative Approaches. Washington, D.C.: Congressional Budget Office.
- BECKER, GARY S. (1968) "Crime & Punishment: An Economic Approach," Journal of Political Economy. 76 (March/April), p. 176.
- BRENNER, M. HARVEY (1976) Estimating the Social Costs of National Economic Policy: Implications for Mental and Physical Health, and Criminal Aggression. A study for the Joint Economic Committee Congress of the United States, Washington, D.C.: Government Printing Office.
- COX, GEORGE H. (1975) Unemployment and Prison Population: An Indication of Social Dependence of the Criminal Justice System. Atlanta: Georgia Department of Corrections.
- CRAGO, TOM G. and C. SCOTT HROMAS (1976) Beyond a Straight Line Fit Population Projection. Denver: Colorado Division of Correctional Services.

FRANK, COLIN (1975) Correlation of Unemployment and Prison Population
Washington, D.C.: Bureau of Prisons.

GLASER, DANIEL and KENT RICE (1959) "Crime, Age, and Unemployment",
American Sociological Review. 24 (October).

GURR, TED ROBERT (1970) Why Men Rebel. Princeton, N.J.: Princeton
University Press.

KVALSETH, TAROLD O. (1977) , "A Note on the Effects of Population Density
and Unemployment on Urban Crime", Criminology. 15 (May).

NAGEL, WILLIAM G. (1977) "On Behalf of Moratorium of Prison Construction".
Crime and Delinquency. 23 (April).

ROBINSON, WILLIAM H., PHYLLIS SMITH and JEAN WOLF (1974) Prison Population and
Costs: Illustrative Projections to 1980. Washington, D.C.:
Congressional Research Service.

SWISHER, RALPH (1975) Unemployment and Crime. Washington, D.C.: Law
Enforcement Assistance Administration.

TURPIN, IRA G., DARYL FISHER and DAROLD POWERS (1975) Iowa's Rising Prison
Population. Des Moines, Iowa: Bureau of Correctional Services.

WALDRON, RONALD J. (1977) Relationship Between National Unemployment Rates
and Court Commitments to the Bureau of Prisons. Washington, D.C.:
Bureau of Prisons.

WELSH, J. DANIEL and DEBORAH VIETS (1977) The Pre-Trial Offender in the District of Columbia. Washington, D.C.: Government of the District of Columbia.

TABLE 1
RELATIONSHIP BETWEEN
UNEMPLOYMENT RATES AND INCARCERATION RATES

YEAR	r
1971	.17
1972	.22
1973	.20
1974	.17
1975	.14
1976	.14

TABLE 2
 RELATIONSHIP BETWEEN UNEMPLOYMENT RATES
 AND INCARCERATION RATES
 1971-1976

STATE	r	SIGNIFICANCE	STATE	r	SIGNIFICANCE
National	.72	.02	Montana	.00	
Alabama	.76	.10	Nebraska	.22	
Alaska	.61		Nevada	.66	
Arizona	.97	.001	New Hampshire	.10	
Arkansas	.69		New Jersey	.86	.05
California	.44		New Mexico	.95	.01
Colorado	.39		New York	.85	.05
Connecticut	.66		North Carolina	.54	
Delaware	.86	.05	North Dakota	.10	
Florida	.86	.05	Ohio	.85	.05
Georgia	.86	.05	Oklahoma	.00	
Hawaii	.97	.001	Oregon	.88	.02
Idaho	.00		Pennsylvania	.40	
Illinois	.86	.05	Rhode Island	.00	
Indiana	.20		South Carolina	.74	.10
Iowa	.65		South Dakota	.00	
Kansas	.85	.05	Tennessee	.81	.05
Kentucky	.66		Texas	.75	.10
Louisiana	.49		Utah	.00	
Maine	.88	.02	Vermont	.50	
Maryland	.73	.10	Virginia	.57	
Massachusetts	.75	.10	Washington	.00	
Michigan	.67		West Virginia	.85	.05
Minnesota	.82	.05	Wisconsin	.80	.10
Mississippi	.86	.05	Wyoming	.14	
Missouri	.73	.10			

NOTES

1. This is a paraphrase of a comment by Robert Gurr in Why Men Rebel. Gurr's comment was in reference to the relationship of deprivation to rebellion.

REFERENCES

- Armbrust, Earl A. and Donald G. Deloney, Federal Prison Construction: Alternative Approaches. Washington, D.C.: Congressional Budget Office, 1977.
- Becker, Gary S., "Crime & Punishment: An Economic Approach," Journal of Political Economy, Vol. 76, No. 2 (March/April 1968), p. 176.
- Brenner, M. Harvey, Estimating the Social Costs of National Economic Policy: Implications for Mental and Physical Health, and Criminal Aggression. A study for the Joint Economic Committee Congress of the United States, Washington, D.C.: Government Printing Office, 1976.
- Cox, George H., Unemployment and Prison Population: An Indication of Social Dependence of the Criminal Justice System. Atlanta: Georgia Department of Corrections, 1975.
- Crago, Tom G. and C. Scott Hromas, Beyond a Straight Line Fit Population Projection. Denver: Colorado Division of Correctional Services, 1976.

Frank, Colin, Correlation of Unemployment and Prison Population.

Washington, D.C.: Bureau of Prisons, 1975.

Glaser, Daniel and Kent Rice, "Crime, Age, and Unemployment", American Sociological Review. Vol. 24, No. 5, October, 1959.

Gurr, Ted Robert, Why Men Rebel. Princeton, N.J.: Princeton University Press, 1970.

Kvalseth, Tarold O., "A Note on the Effects of Population Density and Unemployment on Urban Crime", Criminology. Vol. 15, No. 1, May 1977.

Nagel, William G., "On Behalf of Moratorium of Prison Construction".
Crime and Delinquency. Vol. 23, No. 2, April 1977

Robinson, William H., Phyllis Smith and Jean Wolf. Prison Population and Costs: Illustrative Projections to 1980. Washington, D.C.: Congressional Research Service, 1974.

Swisher, Ralph, Unemployment and Crime. Washington, D.C.: Law Enforcement Assistance Administration, 1975.

Turpin, Ira G., Daryl Fisher and Darold Powers, Iowa's Rising Prison Population. Des Moines, Iowa: Bureau of Correctional Services, 1975.

Waldron, Ronald J., Relationship Between National Unemployment Rates and Court Commitments to the Bureau of Prisons. Washington, D.C.: Bureau of Prisons, 1977.

Welsh, J. Daniel and Deborah Viets, The Pre-Trial Offender in the District of Columbia. Washington, D.C.: Government of the District of Columbia, 1977.