

# Exploring the Influence of Unemployment on Criminal Behavior in Punjab, Pakistan

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Nouman Khaliq\* Muhammad Shabbir<sup>†</sup> Zahira Batool<sup>‡</sup>

Abstract

The main objective of this research was to investigate the effect of unemployment on criminal behavior. A multistage sampling technique was used for the selection of a sample of 400 respondents who have ever committed a crime. A well-designed and the pre-tested interviewing schedule was used to collect information from the respondents in randomly selected district jails of Punjab, Pakistan. Descriptive analysis shows that majority of the respondents was young and married. Around one-fourth of the respondents were illiterate and about the same proportion had primary level education. Two-fifth of the respondents had less than Rs. 20,000 monthly family income. Multivariate analysis revealed that unemployed respondents had 30 percent more chances to commit the crime as compared to the employed respondents. Thus the set hypothesis that unemployment is significantly related to criminal behavior of the respondents is upheld.

Key Words: Unemployment, Criminal Behavior, Socio-Economic, Crime, Illiterate

### Introduction

Crime is a significant social problem society is worried about. As believed crime is mainly attributed to the economic situation of the individuals, and a considerable amount of social research over the last many decades has tried to investigate the relationship between unemployment and criminal. Available facts are indicative that the association is vague (Kangoh, 2017). Mostly, political and financial destabilization triggers such issues that badly affect the well-being of people. These issues disturb the employment situation which resultantly increases the crime rate and has severe implications for the growth and wellbeing of the general population.

Unemployment means the number of persons who are presently not employed and are keen to work for the prevailing market salary rates. Unemployment decreases the developmental pace of any country. The ILO describes unemployed as being over a certain age and is willing to work but presently jobless. Unending unemployment of youth is apparent in Pakistan. Each year, thousands of graduates are generated but the major portion of them remains jobless ( <u>Hooda, 2018</u>).

The crime market is an uncertain substitute to the labor market: If one is involved in crimes and sentenced, then sanctions, and a decrease in earnings, as well as social shame, follows. Therefore, there is a minute difference between becoming a criminal and becoming unemployed. The chance for a jobless person becomes more likely to engage in unethical activities and strive to owe monetary gains by all means. Thus anticipated legal income, if employed, turns down the jobsearch efforts and higher anticipated relative incomes by crime raise the tendency of crime (Becker, 1968; Cantor and Land, 1985)

Over time different approaches have been emerged to describe the crime phenomenon. These approaches are briefly described here.

# Criminological Approaches to Crime

The first criminological approach considers that earlier criminologists stressed the attribution of biological aspects in the criminal behavior of persons e.g., big jaws, abnormal teeth, and receding chin differentiate criminals from non-criminals. The second Criminological approach considers that the individual perceiving a gap among goals and attainments undergo a "strain" and react to this strain by taking part in criminal activities. The third criminological approach believes that social interaction, using which breach of law is learned, is culturally passed on. Differential associations or too much social interaction with

<sup>\*</sup>PhD Scholar, Department of Sociology, GC University Faisalabad, Punjab, Pakistan.

<sup>&</sup>lt;sup>†</sup>Assistant Professor, Department of Sociology, GC University Faisalabad, Punjab, Pakistan. Email: <a href="mailto:drmshabbir@gcuf.edu.pk">drmshabbir@gcuf.edu.pk</a>

<sup>&</sup>lt;sup>‡</sup>Professor, Department of Sociology, GC University Faisalabad, Punjab, Pakistan.

promoters of criminal activity inclines a person to crimes. This perspective predicts that person's tendency to carry out crimes increases when his peers and family members are as well connected in criminal actions.

# **Sociological Approaches to Crime**

Deprivation theory regards economic inequality as a source of crime. Relative deprivation can cause frustration and anger that unloads itself in violent crime. A person will commit a crime if the anticipated benefits from participation in legal activities are less than the expected benefits from participation in illegal activities. The very decision of indulging in crime mostly rests on certain elements e.g. incentives.

# **Economic Approach to Crime**

The economic approach supports the "deterrence" of crime, that is, a rise in the possibility of apprehension and the harshness of sentence decreases the gain to take part in criminal actions. Likewise, the economic approach supports the "incapacitation effect," that is, the decrease in deviant action attained by separating the lawbreaker from the mainstream.

# **Alternative Approaches to Crime**

Alternative approaches hold that differences in the assurance and brutality of punishment do not notably discourage wrongdoers. Relatively crime is the outcome of a multifaceted set of social and economic aspects or maybe physical aspects. The suitable means to reduce the social price of crime is to bother these causes of crime. For example, to offer more funds for the creation of jobs, constant earnings, family guidance, mental health, drug and alcohol guidance, and new plans intended to improve the financial, social and physical reasons of crimes.

# Rationale and Significance of the Study

In Pakistan, thousands of crimes take place daily. Almost 50 percent of the crimes are never registered by the police authorities. Despite police and Rangers' posts after every five kilometers and beefed up patrolling of law enforcers on city streets, the rate of crime has not come down; instead the criminals have increased their activities (<u>Pakistan times</u>, 2013).

To overcome the underlying problems, solid future programs and plans are needed as corrective measures. But this will be useless unless there is a clear scientific understanding of the unemployment size's influence on crime involvement. This paper aims to identify the association between unemployment and criminal behavior. Several research studies demonstrate that the occurrence of various street crimes is linked with the unemployed status of the individuals, as they have plenty of time to wonder and become inclined to committing of nefarious deeds (Baron, 2004; Hagan and MaCarthy, 1977). Further, in the absence of any means to earn money or financial assistance, such unemployed youth becomes prone to adopting a criminal path, thus disturbing the community's social order.

### **Objectives**

- To illustrate the socio-economic & demographic characteristics of respondents.
- To investigate the effect of unemployment on the criminal behavior of respondents.
- To suggest some policy measures to overcome criminal behavior.

#### **Review of Literature**

A significant number of researches have been conducted across the globe which has furnished a link between unemployment and criminal. Chiricos (1987) concluded that there existed an unclear link between unemployment and the occurrence of a crime by an individual coupled with several investigations resulting in a considerable positive connection of joblessness and crime. On the other hand, some research findings could not find any association between the two variables. By utilizing UK data, Cantor and Land (1985) discovered that there was a weak link between joblessness and criminal behavior, especially in terms of tress passing. Similarly, there was a significant association between unemployment and committing conventional crimes among adults (Donohue and Levitt, 2011; Gould, Weinberg and Mustard, 1997; Machine and Meghir, 2004).

The economics crime theory considers crime as a kind of work, which individual alternates to get some financial gains (Becker, 1968). In case both job and crime are exchangeable exercises, there is a variety of gains on work and gains on crime. According to the economic model of crime, people opt for criminal behavior if the predictable gain of committing a crime is more than mental perception about crime and doing work (Ehrlich, 1973; Edmark, 2005). Likewise, if an individual is unemployed, naturally he will try for any income source. Consequently, the anticipated result of not doing work is positively

Vol. IV, No. I (Winter 2019) Page | 403

associated with criminal behavior. Though, experimental research on this specific association is considerably less convincing than recommended by this theory.

<u>Britt (1994)</u> has laid down the foundation for two sociological theories to describe the potential connection between crime and joblessness. He named those theories as *motivational* and *opportunity*. Motivational theory, as presented by economists, primarily renders to exhibit the link between unemployment and crime. As he clarifies, this association could be present due to numerous causes, but primarily as the financial situation gets worse individuals are forced towards crime as a means of earning.

Earlier findings of experiential studies on the connection between unemployment and the pace of crime did not agree with unemployment influence criminal behavior in two differing means. Cantor and Land (1985) initiated a broad structural model to investigate the overall effect of unemployment on criminal acts, together with motivated criminals, appropriate goals (persons or goods), and the condition of lack of suitable custodians. Contrarily, a soaring unemployment pace might raise the cumulated likelihood of committed criminal offenses as those jobless persons are engaged in crimes to sustain their livings in the condition of deficient earnings. On the other hand, a higher joblessness sluggish downs the flow of individuals and assets. As an outcome, individuals are capable to give extra time on protecting their assets. Therefore, a higher rate of unemployment decreases the appropriate goals of criminal actions and prevents crime. The previous positive effect of joblessness on offense rates is acknowledged as the criminal motivation effect and the afterward negative impact is known as the criminal opportunity effect. The altogether effect of unemployment on the pace of crimes relies on the intensity of these two conflicting effects. Empirical findings suggest that establish that unemployment has negative contemporary effects on crime rates even as in the long term unemployment is apparently to have a positive impact on the pace of crimes (Cantor and Land, 1985).

Raphael and Winter (2001), by using OLS regression, analyzed the data to measure the association between crime and joblessness with state-level statistics from 1971 to 97 for all US states. They formulated the hypothesis that a positive relationship exists between unemployment and the rate of crimes. Persons get inspiration from economic gains of deviant behavior, as the absolute gain for accomplishing is more than the decline in earning with joblessness. However, other factors were not so clear to establish a link between two variables.

It is observed that individuals, who are keen on taking risks, are more likely to take part in unlawful actions than risk-avoiding people. As a matter of fact that people who are risk-avoiding take into deliberation the 'possibility of conviction, apprehension, and brutality of punishment' that is the straight price of crime (Becker, 1968).

After reviewing the concerned literature on the underlying research topic following hypotheses are constructed:

- Unemployment is significantly associated with the criminal behavior of the respondents.
- Illiterate and less educated as well as people with low incomes are more likely to engage in criminal behavior while controlling for other background variables.

#### **Materials and Methods**

The province of Punjab, the universe for this study, has been classified into central, southern, and northern regions. All the district jails (prisons) in these three regions were taken as the population/universe for the study. A multi-stage sampling technique was used for a sample size of 400 respondents who ever have committed a crime and are currently imprisoned in jail. At the first stage, three district jails (Rawalpindi, Faisalabad, and Multan) were selected randomly from the total district jails. At the second stage, a proportionate sampling frame was prepared for each selected district jail and a total sample of 400 prisoners/respondents was selected for collection of data through an interview schedule, covering the research objectives. Since it was expected that those respondents/prisoners would have lower levels of education, therefore, face to face interview survey was used in this study. Mock interview sessions and pre-testing were carried out for checking the reliability of this instrument of data collection. Descriptive, bivariate and multivariate analyses were carried out on the collected data to draw inferences and conclusions. Logistic regression models were applied to assess the contribution of each independent variable in explaining the dependent variable in this study. As the dependent variable had dichotomous responses in addition to all independent variables, therefore, Logit regression estimation best suits the statistical analyses.

#### **Results and Discussion**

This section describes the descriptive statistics of the data and multiple estimations of the variables to assess the linkage between unemployment and criminal behavior.

**Table 1.** Socio-Economic Characteristics of the Respondents (n=400)

Socio-economic characteristics	Fre. (F)	Per. (%)	Socio-economic characteristics	Fre. (F)	Per. (%)	Socio-economic characteristics	Fre. (F)	Per. (%)
1-Age			2-Type of Family			3- Total family incom	e	

8-27 years	114	28.50	Joint family	237	59.25	Less than 20000	156	39.00
28-37 years	159	39.75	Nuclear family	163	40.75	20001 to 30000	132	33.00
38-47 years	76	19.00	•			30001 to 40000	49	12.25
48 + years	51	12.75				40001 to 50000	28	07.00
, i						50001 or above	35	08.75
4- Educational level			5- Marital Status			6- Employment Status	S	
Illiterate	113	28.25	Unmarried	111	27.75	Unemployed	142	35.50
Primary	102	25.50	Married	229	57.25	Employed	120	30.00
Middle/Matric	121	30.25	Divorced	28	07.00	Underemployed	138	34.50
Intermediate level	34	08.50	Widower	19	04.75	• •		
Graduation	19	04.75	Separated	13	03.25			
Master and above	11	02.75	•					

### Age

Age may be considered a pivotal and significant factor in the criminal behavior of individuals. Data in Table No. 1 shows that 40 percent of the respondents in the age group of 28-37 years followed by 29 percent of the respondents in the age group 18-27 years. About one-fifth of the respondents were in the age group of 38-47 years. It can be derived that a vast majority of the respondents were at relatively young ages when they committed the crimes. According to the Uniform Crime Report by FBI (2014), young adults have more tendencies to commit crimes across various US states over the last many decades.

#### Education

Around one-third of the respondents had middle or matriculation level education. About 28 percent of respondents were illiterate, while 25 percent of respondents had primary level education. Some respondents had graduate and postgraduate level education e.g. 5 and 3 percent respectively. The data shows that respondents with low-level education were more likely to commit a crime. This fact is endorsed by other research findings as is a noteworthy association that exists between educational achievement and criminal behavior of individuals (<u>Hjalmarsson, Holmlind, & Lindquist, 2011</u>; <u>Meghir, Palm, & Schnabel</u>, 2011).

### Family Type

About two-thirds (59%) of the respondents belonged to a joint family, whereas 41 percent belonged to a nuclear family. The statistics reveal that people living in large families and living with relatives may lead to include in criminal behavior to feed their financial needs. Additionally, the joint family system renders less number of earning hands, while they have to feed more people, therefore, sometimes leaving them barely fulfilling their needs. Such a situation provides incubation for youngsters especially jobless persons to be involved in crimes.

#### **Marital Status**

The majority of the respondents i.e. 57 percent were married, followed by 28 percent who were unmarried. A small proportion of the respondents 7 percent were divorced, 5 percent were widowed and only 3 percent were separated. The data revealed that married people were more likely to commit crimes as compared to their counterparts. Unlike these findings, some empirical studies show that marriage most likely decreases unethical and deviant behavior especially committing crimes, for instance (Farrall, Godfrey, & Cox, 2009; Sampson et al., 2006; Savolainen, 2009).

#### **Total Family Income**

About two-thirds (39%) of the respondents had family income only up to 20,000, while 33 percent had income between 20,001 to 30,000. Respondents who had monthly income range 30,001 to 40,000 were 12 percent followed by 7 percent and 9 percent of respondents who had monthly income range 40,001 to 50.000 and 50,000 and above. As described the people with low incomes are more likely to involve in criminal behavior as low-economic profiles instigate them to yield more financial gains, by all means, whatever the way it comes to them. Earning disparity among adults significantly leads them to unethical means of earnings due to various factors (Buonanno, 2003). Further, less economic benefits from lawful action aggravate the situation (Kelly, 2000).

### **Employment Status**

As the employment statuses of the respondents were analyzed, more than one-third (36%) respondents were jobless at the moment when they committed their first crime. Almost the same proportion (34%) of the respondents was underemployed, while only 30 percent were in employment at the time of their first-ever committing of a crime. It is evident from the data

that people with no job or having any source of income are more likely to indulge in criminal behavior as compared to people who have some reasonable source of income. Similar study findings depict that unemployment has a positive association in committing street crimes (Rafael, and Winter; 2001). Likewise, Charmicheal and Ward (2001) revealed that joblessness is an important factor behind robbery events in the UK.

**Table 2.** The opinion of the Respondents Regarding Unemployment and other Factors as a Cause of Criminal Behavior. (n=400)

Factors	To a great extent	To some extent	Not at all
Illiteracy	59.25	13.50	27.25
Media	50.25	27.75	22.00
Inadequate Socialization	47.00	30.25	22.75
Peer Group	86.00	10.75	03.25
Poverty	55.25	27.25	17.50
Broken Homes	48.25	33.50	18.25
Cheap movies and literature	21.75	42.75	35.50
Unemployment	68.00	25.25	06.75

The respondents were also asked to express their opinion regarding factors causing criminal behavior in addition to unemployment. Table.3 shows that about three-fifth (59%) of the respondents expressed that illiteracy is to a great extent the major cause of criminal behavior followed by 13 percent of respondents expressing it to some extent. However, one-third of the respondents don't see illiteracy as the reason for deviant behavior. While talking about the role of media, half of the respondents declared unemployment as a major cause of crime to a great extent followed by one-third of respondents perceiving the phenomenon as to some extent.

Slightly less than half (47%) of the respondents said that inadequate socialization is the major reason for deviant activities and followed by 30 percent of respondents saying it to some extent. Thumbing majority i.e. 86 percent of the respondents were of the view that peer group is the major cause of criminal behavior among people. Poverty is considered the far most major cause of criminal behavior as depicted by the respondents i.e. 55 percent and 27 percent of the respondents declared it to a great extent and some extent, respectively. Whereas, 17 percent said that poverty is unrelated to criminal behavior. The majority of the respondents i.e. 48 percent expressed that broken homes were to a great extent the major cause crimes followed by the proportion (33%) expressing it to some extent the major cause.

While describing their opinion about the role of cheap movies and literature as a major cause of criminal behavior only 22 percent of the respondents expressed it to a great extent level, while 43 percent were of the view to see both factors as the cause of criminal behavior to some extent. However, 35 percent thought that cheap movies and literature are not there as one of criminal behavior. About two-thirds of the respondents followed by 25 percent thought that unemployment is the main reason for criminal behavior to a great extent/some extent. While only a small proportion of the respondents (7%) said that unemployment is not there on of illegal activities at all.

### **Regression Results**

Multivariate analysis (Table-3), by using the logit regression estimation model, of the background variables of the respondents and dependent variable demonstrate the cause-effect relationship.

**Table 3.** Employment Status of the Respondent at the Time of First Crime (n=400)

Socio-economic characteristics	Model I	Model II	Socio-economic characteristics	Model I	Model II
Age			Marital Status		
18-27 years	3.67***	3.69***	Unmarried (r)	1.00	1.00
28-37 years	2.51**	2.63**	Married	3.57***	3.19**
38-47 years	1.3	1.19*	Divorced	1.21*	1.18**
48 + years(r)	1.00	1.00	Widower	1.13*	1.13
•			Separated	1.62	1.62
Educational level			Total family income		
Illiterate (r)	1.00	1.00	Less than 20000 (r)	1.00	1.00
Primary	2.17***	2.20***	20001 to 30000	1.73**	1.58***

Middle/Matric	1.91**	1.93**	30001 to 40000	1.12	1.11
Intermediate level	1.29	1.05*	40001 to 50000	0.63**	0.64**
Graduation	0.61**	0.57**	50001 or above	0.59**	0.59**
Master and above	0.19***	0.17***			
Type of Family			Employment Status		
Nuclear family (r)	1.00	1.00	Unemployed (r)	-	1.00
Joint family	2.33**	2.33**	Employed	-	0.60**
•			Underemployed	-	0.94**
Wald $\chi^2$	324.71	35:	2.84		
Pseudo R <sup>2</sup>	0.29	0.	31		

r = reference category. Significance level: \*p = 0.05; \*\* p = 0.01; \*\*\* p = 0.001

Two models were employed to assess the relationship between unemployment and criminal behavior. In the first mode; age, educational level, type of family, marital status, and total family income of the respondents were included as independent variables. While in the second model; employment status was also included in addition to model-I variables, which worked as a control variable to check the effects on criminal behavior. The results indicated that people in the age group 18-27 were significantly more likely (3.67 higher odds) to commit crime than their counterparts in the age group 48 years and above (reference category) followed by age group 28-37 (2.51 odds). With the introduction of the employment status variable in model-II, the odds for all age groups slightly increased and the result turned significant for the age group 38-47.

The educational level of the respondents yielded the expected results. People with a primary level of education were more likely (2.17 higher odds) to show criminal behavior as compared to illiterate people (reference category). The results were significant for primary and middle level educated respondents. However, respondents with graduation and master level education were significantly less likely to commit crime as compared to their counterparts. Whereas, an intermediate level of education showed no statistically significant association with the dependent variable. In model-II all levels of education remained significantly associated with the dependent variable. Thus results in support and upheld the hypothesis for this study that illiterate and less educated people are more likely to engage in criminal behavior while controlling for unemployment and other background variables.

The family type of respondents revealed a significant relationship with the criminal behavior of the respondents in both models. It showed that people who were living in a joint family system committed the crime with higher odds (2.33) as compared to people who had a nuclear family system.

The marital status of the respondents revealed a statistically significant association with the criminal behavior of respondents. The unmarried respondents were placed in the reference category to compare the net effect of unemployment on criminal behavior. In this case, married, divorced and widower status of the respondents depicted significant relationship with 3.57, 1.21 and 1.13 odds respectively while controlling for the unemployment status. Whereas, in model-II, the widower status become unrelated to criminal behavior with other categories' effects remained the same.

The total monthly family income of the respondents showed an inverse significant relationship with the likelihood of committing a crime. People with income range Rs. (20,000 to 30,000) were 1.73 times more likely to commit crime as compared to people who had less than Rs. 20,000 income (reference category). Model-II, the odds for the same income category slightly declined but remained significant. No significant association found for Rs. (30,000 to 40,000) income category. Respondents' income categories Rs. (40,000 to 50,000) and Rs. 50,000 and above depicted less likelihood of committing crime i.e. 37 percent and 41 percent respectively as compared to the reference category. For these both categories, the results remained almost the same in model-II.

The employment status of the respondents was considered as a central explanatory variable for this paper. In model-I, only background characteristics of the respondents were introduced to measure the effect of these variables on the dependent variable-criminal behavior. Model-II, emolument status added to check the effect on the criminal behavior of the respondents while controlling for the variables which were included in the model-II. In model-II, unemployed respondents were treated as reference category against underemployed and employed. The results indicated that employed respondents had 30 percent fewer chances to commit the crime as compared to the reference category. While in case of underemployment of the respondents the odds were almost the same (0.94). All results indicated a statistically significant relationship with the dependent variable. Thus the set hypothesis that unemployment is significantly related to criminal behavior of the respondents is upheld. The second hypothesis i.e. illiterate and less educated, as well as people with low incomes, are more likely to engage in criminal behavior while controlling for other background variables is also supported.

Vol. IV, No. I (Winter 2019) Page | 407

#### Conclusion

This paper studies the relationship between unemployment and criminal behavior of people in Punjab, Pakistan. The results show that unemployment is an important determinant of crime. It may imply that unemployed adults feel some kind of inferiority as compared to employed people, which creates anxiety and frustration among them. Descriptive findings indicate that majority of the respondents were young, married, have low levels of education, had low levels of monthly family income and unemployed/underemployed. Regression results revealed that unemployment demonstrated a significant relationship with criminal behavior while controlling for socio-economic factors of the respondents. As research findings of previous studies have indicated, for instance, Donohue and Levitt (2011) and Machine and Meghir (2004) that illiterate or individuals with lower levels of education have more tendency to commit the crime. Young people were more inclined to depict criminal behavior as compared to mature people. It is, therefore, imperative for the government to act more responsibly to engage as much the youth as in economic activities so that idle people refrain from indulging in criminal behavior.

Similarly, poor economic conditions of the families compel their individuals to become prey to evil activities. In this study total, monthly income of the respondents showed an inverse but significant relationship with the likelihood of committing a crime. Findings are consistent with the results reported by Edmark (2005). Thus a better wealth quintile of a family may prevent its members to become a part of the evil team who commit crimes especially street crimes. Additionally living with more people or in a large household, people are more prone to commit social evils. This could be mainly because families with the joint system or having more people have less money or resources to fulfill every individual's monetary needs, therefore, to grab economic gains they tend to involve in criminal activities.

In summing up unemployment has a significantly predicted effect on the criminal behavior of people as hypothesized by the study, while controlling for other socio-economic characteristics of the respondents. Therefore, results upheld the hypothesis that unemployment is closely linked with committing crimes.

#### Recommendations

To reduce the incidence of crimes, the government should try to create economic opportunities for the working-age population so that more people may join the active labor force and reduce the unemployment rate. For this purpose, the private sector should also be engaged to provide more job opportunities. Also, less educated people may be equipped with practical training of various occupational skills so that they may become self-employed and don't become a burden on their families and ultimately for government and society.

#### References

- Baron, S. W. (2004). General strain, street youth and crime: A test of Agnew's revised theory. Criminology, 42(2), 457-484.
  Becker, G. S. (1968). Crime and punishment: An economic approach. The economic dimensions of crime (pp. 13-68). Palgrave Macmillan, London.
- Britt, C. L. (1994). Crime and Unemployment Among Youths in the United States, 1958-1990: A Time Series Analysis. American Journal of Economics and Sociology, 53(1), 99-109.
- Buonanno, P. (2003). The socioeconomic determinants of crime. A review of the literature.
- Cantor, D., & Land, K. C. (1985). Unemployment and crime rates in the post-World War II United States: A theoretical and empirical analysis. American Sociological Review, 317-332.
- Carmichael, F., & Ward, R. (2001). Male unemployment and crime in England and Wales. *Economics Letters*, 73(1), 111-115. Chiricos, T. G. (1987). Rates of crime and unemployment: An analysis of aggregate research evidence. *Social problems*, 34(2),
- Donohue III, J. J., & Levitt, S. D. (2001). The impact of legalized abortion on crime. The Quarterly Journal of Economics, 116(2), 379-420.
- Draca, M., & Machin, S. (2015). Crime and economic incentives. Economics, 7(1), 389-408.
- Edmark, K. (2005). Unemployment and crime: Is there a connection?. Scandinavian Journal of Economics, 107(2), 353-373.
- Ehrlich, I. (1973). Participation in illegitimate activities: A theoretical and empirical investigation. *Journal of Political Economy*, 81(3), 521-565.
- Farrall, S., Godfrey, B., & Cox, D. (2009). The role of historically-embedded structures in processes of criminal reform: A structural criminology of desistance. *Theoretical Criminology*, 13(1), 79-104.
- Tsai, L. C. F. (2014). Federal Bureau of Investigation. The Encyclopedia of Criminology and Criminal Justice, 1-10.
- Fougère, D., Kramarz, F. &Pouget, J. (2009). Youth unemployment and crime in France. Journal of the European Economic Association, 7(5), 909-938.
- Gould, E. D., Weinberg, B. A., & Mustard, D. B. (2002). Crime rates and local labor market opportunities in the United States: 1979–1997. Review of Economics and Statistics, 84(1), 45-61.
- Hagan, J., & McCarthy, B. (1997). Intergenerational sanction sequences and trajectories of street-crime amplification. Stress and adversity over the life course: Trajectories and turning points, 73-90.
- Holmlund, H., Hjalmarsson, R., & Lindquist, M. (2011). The Effect of Education on Criminal Convictions and Incarceration: Causal Evidence from Micro-data.
- Hooda, R. (2018). Effects of unemployment and its relationship with crime. International Journal of Law, 4(2), 301-303. Kelly, Morgan. "Inequality and crime." *Review of Economics and Statistics* 82, no. 4 (2000): 530-539.
- Lee K. (2017) Crime (Unemployment and). In: Marciano A., Ramello G. (eds) Encyclopedia of Law and Economics. Springer, New York, NY
- Maume, M. O., Ousey, G. C., & Beaver, K. (2005). Cutting the grass: A reexamination of the link between marital attachment, delinquent peers and desistance from marijuana use. *Journal of Quantitative Criminology*, 21(1), 27-53.
- Meghir, C., Palme, M., & Schnabel, M. (2012). The effect of education policy on crime: an intergenerational perspective (No. w18145). National Bureau of Economic Research.
- Machin, S., & Meghir, C. (2004). Crime and economic incentives. Journal of Human resources, 39(4), 958-979.
- Pakistan Times, (2013). Street crimes on rise. Retrieved from http://www.pstimes.com/
- Raphael, S., & Winter-Ebmer, R. (2001). Identifying the effect of unemployment on crime. The Journal of Law and Economics, 44(1), 259-283.
- Sampson, R. J., Laub, J. H., &Wimer, C. (2006). Does marriage reduce crime? A counterfactual approach to within-individual causal effects. Criminology, 44(3), 465-508.
- Savolainen, J. (2009). Work, family and criminal desistance: Adult social bonds in a Nordic welfare state. The British Journal of Criminology, 49(3), 285-304.
- Steffensmeier, D., & Allan, E. (1995). Criminal behavior: Gender and age. Criminology: A contemporary handbook, 2, 83.
- Theobald, D., & Farrington, D. P. (2011). Why do the crime-reducing effects of marriage vary with age? *The British Journal of Criminology*, 51(1), 136-158.