Global Social Sciences Review (GSSR)
URL: http://dx.doi.org/10.31703/gssr.2021(VI-I).14

DOI: 10.31703/gssr.2021(VI-I).14

A Cross-Tabulation Analysis of Socio-Economic Determinants of Crime: Evidence from Women Jail Multan, Pakistan

Muhammad Ramzan Sheikh [*] Muhammad Tariq [†] Sana Sultan [‡]

Abstract The crime rate in Pakistan has increased severely within the last decade. It may be because of high unemployment, increasing poverty, income, rising inflation and urbanized setups. Few non-economic constraints are also responsible for it. The study has been made with reference to Women Jail Multan. The 70 female prisoners are selected via a random sampling method. The data are collected by interviewing them. The study has used the type of crime as the dependent variable. Purely crime-related variables and socio-economic factors of crime have been used as explanatory variables. Both purely crime-related variables and socio-economic variables have found effect size with the type of crime.

- Vol. VI, No. I (Winter 2021)
- Pages: 130 – 147
- p- ISSN: 2520-0348
- e-ISSN: 2616-793X
- ISSN-L: 2520-0348

Key Words: Crime, Education, Jail

Jel Code: K10, K42

Introduction

There is no country in the world without crime, but it is the main issue in the less developing countries like Pakistan. The crime rate is rapidly increasing from 1951 to 2011in Pakistan (Khan et al., 2015). In the last decades, crime becomes a major issue in the world. Crimes are always harmful to society. Any illegal social activities that disrupt society is considered a crime. The crime was begun with humanity. The jealously of Cain results in the murder of Abel and become the first murder of the world. Crime and social welfare of the country are inversely related to each other, as the crime rate in the country increases, the welfare of the country decreases and vice versa (Gillani et al. 2009).

Day by day, crime becomes a most serious issue in Pakistan and all over the world. Backer (1968) explained the various fields of crime in economics, e.g., criminology, geography, sociology and demography. In 1938, Merton presented a social theory which states that most individuals commit the crime when they are not able to achieve their goals. In 2007, Brush analyzed that unequal distribution of rights encourages people to commit the crime (Khan et al, 2015). In 1966, Fleisher examined that major factors of crimes are unemployment and low wages. As middle-class families suddenly become rich, they commit more crime like murder, corruption and rape etc. (Anwer et al., 2015). Crime is a major problem in Pakistan that affects not only society but also the criminal, victims, and their families (Ashraf, Li, Butt, Naz, & Zafar, 2019). Different types of crimes are rapidly growing in Pakistan, which includes murder, robbery, kidnapping, property crime, sexual assault, hate crimes, violence and terrorism (Sultan et al., 2014). Crime is an act that is prohibited by the government and is against the laws and regulations (Jalil and Iqbal, 2010).

The crime rate increases in Pakistan due to the irregular and non-monitoring system of the government. This type of situation motivates the criminals, and they attempt more crimes. Owing

[*] Associate Professor, School of Economics, Bahauddin Zakariya University Multan, Punjab, Pakistan.
[†] Lecturer, Department of Economics, Bahauddin Zakariya University Sub Campus Vehari, Punjab, Pakistan.
Email: m.tariq_vcamp@bzu.edu.pk
[‡] MPhil Student, School of Economics, Bahauddin Zakariya University Multan, Punjab, Pakistan.

Citation: Sheikh, M. R., Tariq, M., & Sultan, S. (2021). A Cross-Tabulation Analysis of Socio-Economic Determinants of Crime: Evidence from Women Jail Multan, Pakistan. *Global Social Sciences Review, VI*(I), 130-147. https://doi.org/10.31703/gssr.2021(VI-I).14

to this, Pakistan's state is miserable in every field, whether it is political, social, cultural, socio-economic and environmental. There is a difference in Pakistan's society between rich and poor that enhance the chances of crime in Pakistan. The ratio of needy people is more than rich people (Ashraf, Li, & Mehmood, 2017). Political instability and inequality between rich and poor also cause the possibilities of crime. Family issues also cause an increase in the crime ratio in Pakistan. Many people commit crimes for their pointless needs and try to get those things in greed that belong to others. (Sultan et al., 2014).

As the poverty level has increased in Pakistan, the ratio of crimes has also increased. When the unemployment level is high in any country or society, it creates distractions and offences that decreases the opportunity cost of crimes and increases the chances of attempted crimes (Li et al., 2020). It also reduces the rate of return in legal activities while creates the potential of benefit in illegal activities. So, poverty and unemployment compel society to attempt more crimes for a better living standard (Khan et al., 2015). Pakistan is a developing country and will progress day by day, so the population of Pakistan is migrating from rural areas to urban areas. Urbanization also increases the ratio of crime. As people migrate, their needs and priorities also increase that induce them for different types of crimes. Some criminals attempt crime as an adventure and unintentionally habituate of this nature.

The crimes ratio has increased in Pakistan due to definite reasons, and this ratio is disturbing. Crimes will always attempt until the corrupted people, innocent victims and inequality exist in the society (Sultan et al., (2014). The rest of the research paper is planned as: Section 2 shows the review of the literature. Section 3 highlights the source and description of the data. Section 4 explains the cross-tabulation analysis of both purely crime-related variables and socio-economic variables linked with the type of crime. Section 5 is furnished with conclusions and policy implications.

Review of Literature

Many social and economic factors may affect the crime rate among women. Many studies in the empirical literature investigate the socio-economic determinants of crime among women in Table1

Table 1. Assorted Studies on Socio-Economic Determinants of Crime

Reference(s)	Country/Area	Time Period/Obs.	Methodology	Main Results
Umair (2019)	Pakistan	2006-2016	Correlation and regression analysis	Net income (-ve), Inflation (-ve), GDP (-ve), population (+ve)
Amin et al. (2019)	India	1971	Correlation	Literacy rate (-ve)
Hazra and Cui (2018)	India	1991-2015	OLS	Inflation (+ve), Unemployment (+ve)
Cerulli et al. (2018)	United State	2000-2012	REC (Random-Coefficient Regression)	Education (+ve), Number of police (-ve), Inequality (+ve), Wages (-ve), Foreign-born (+ve)
Ishak and Bani (2017)	Malaysia	1990-2008	Penal data	GDP (-ve), Number of police (-ve), Unemployment (+ve), Education (+ve), Population density (+ve)
Hassan et al. (2016)	Pakistan	1978-2011	ARDL	Poverty (+ve), Inflation (+ve), Economic growth (+ve), Urbanization (+ve)
Janko and Popli (2015)	Canada	1979-2006	Error correction model	Unemployment (-ve) significant
Khan et al. (2015)	Pakistan	1972-2011	Johansen Cointegration	GDP per-capita (+ve), poverty (+ve), Unemployment (+ve), Higher education (-ve)
Abbas and Manzoor (2015)	Southern Punjab, Pakistan	50	Chi-Square Tests	A significant relationship between crime and marital status, literacy rate, women age and economic issues

© 2021 The Author(s). This work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License

Reference(s)	Country/Area	Time Period/Obs.	Methodology	Main Results
Terand and Clement (2014)	Nigeria	1980-2011	cointegration model	Unemployment (+ve), Inflation (+ve),
Fougere et al. (2009)	France	95 departments, 1990-2000	OLS	Unemployment (-ve)
Omotor (2009)	Nigeria	1981-2005	Error Correction Model	Inflation (-ve), Literacy rate (-ve), unemployment rate (-ve), Population (-ve), Income (+ve)
Gilbert and Sookram (2009)	Jamaica	1978-2008	Vector Autoregressive Model	Clear-up rate (-ve), Size of police force (-ve), Social spending as percentage of GDP (-ve),
Buonanno and Leonida (2006)	Italy	20 Italian region 1980-1995	GMM	Education (-ve)
O'cinneide (2006)	America	2000	OLS	Police officers (+ve), unemployment (+ve), Gini coefficient (+ve), abortion (-ve)
Edmark (2005)	Swedish Counties	1988-1999	Fixed Effect	Unemployment (+ve)
Herzog (2005)	Israel and Palestinian	1982-1997	OLS	Unemployment (-ve), GDP (+ve), Car registered (+ve)
Luiz (2001)	South Africa	1960-1993	Restricted cointegration model	Per-capita income (-ve), Percentage of offences solved (+ve), Number of police (+ve), Political Instability (+ve)
Bechdolt (1975)	SMSAs states	1960,1970	OLS	Income (-ve), Crowding (+ve), Unemployment (+ve), Population density (+ve)

This section has been set out to review the socio-economic determinants of crime. Different studies have focused on different determinants of crime. Most researchers have pointed out that unemployment, education, poverty and per-capita income are the main factors of crime. According to the best of our knowledge, we have not found any study on Women jail Multan.

Data: Source and Description

To analyze socio-economic determinants of crime in district Multan in the Punjab province of Pakistan, we have used cross-sectional data for 2019-2020. The data have been collected from Women Jail Multan. A sample of 70 prisoners was taken from Women jail Multan by using a random sampling method. Data are taken through personal interviews.

Results and Discussions

In this section, socio-economic determinants of crime in Women Jail Multan have been discussed. This section is portioned into two parts; the first part discusses crime-related variables, and the second elucidates the socio-economic determinants of crime in Women Jail Multan.

Purely Crime Related Variables of Crime

There are seven variables: Now, we present the cross-tabulation analysis of purely crime-related variables of crimes.

Table 1. Number of Times Prisoners Commit Crime and Cross Tabulation

		Number of Times Prisoners Commit Crime			
Type of Crime		1-5	6-10	11 and above	Total
	Property Crime	19	4	12	35
	Violent Crime	29	1	5	35

	Total	48	5	17	70

Table 2. Chi-Square Test of Average Strength Length of Crime

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	6.766	2	0.034	0.036	---	---
Likelihood Ratio	6.996	2	0.03	0.075	---	---
Fisher's Exact Test	6.531	---	---	0.036	---	---
Linear-by-Linear Association	5.556	1	0.018	0.025	0.013	0.007
N of Valid Cases	70	---	---	---	---	---

Table 2 shows the relationship between variables, and the Pearson Chi-Square is 6.766, which is significant.

Table 3. Symmetrical Measures of Number of Times Prisoner Commit Crime

		Value	Approx. Sig.	Exact Sig.
Nominal by Nominal	Phi	0.311	0.034	0.036
	Cramer's V	0.311	0.034	0.036
	Contingency Coefficient	0.297	0.034	0.036
N of Valid Cases	---	70	---	---

The value of Cramer's V is 0.311, which is statistically significant.

Table 4. Average Strength Length of Crime: A Cross Tabulation Analysis

		Average Strength Length of Crime			
Type of Crime		0-5	6 to 10	21 to 25	Total
	Property Crime	31	3	1	35
	Violent Crime	14	1	20	35
	Total	45	4	21	70

Table 5. Chi-Square Test of Average Strength Length of Crime

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	24.613	2	0.000	0.000	---	---
Likelihood Ratio	28.702	2	0.000	0.000	---	---
Fisher's Exact Test	26.899	---	---	0.000	---	---
Linear-by-Linear Association	23.533	1	0.000	0.000	0.000	0.000
N of Valid Cases	70	---	---	---	---	---

The value of the first test Pearson chi-square is 24.613, which is highly significant.

Table 6. Symmetrical Measures of Average Strength Length of Crime

		Value	Approx. Sig.	Exact Sig.
Nominal by Nominal	Phi	0.593	0	0
	Cramer's V	0.593	0	0
	Contingency Coefficient	0.51	0	0
N of Valid Cases		70		

Cramer's V's value is 0.593 shows a moderate relationship.

Table 7. Number of Times Prisoners Convicted Crime: A Cross Tabulation Analysis

		Number of Times Prisoners Convicted Crime			
		0	1 to 5	6 to 10	Total
Type of Crime	Property Crime	22	11	2	35

	Number of Times Prisoners Convicted Crime			
	0	1 to 5	6 to 10	Total
Violent Crime	11	24	0	35
Total	33	35	2	70

Table 8. Chi Squares Tests of Number of Times Prisoners Convicted Crime

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	10.495	2	0.005	0.004	---	---
Likelihood Ratio	11.457	2	0.003	0.004	---	---
Fisher's Exact Test	10.073	---	---	0.005	---	---
Linear-by-Linear Association	3.754	1	0.053	0.083	0.041	0.027
N of Valid Cases	70	---	---	---	---	---

The value of Pearson chi-square is 2.962, which is significant.

Table 9. Symmetric Measures of Number of Times Prisoners Convicted Crime

		Value	Approx. Sig.	Exact Sig.
Nominal by Nominal	Phi	0.387	0.005	0.004
	Cramer's V	0.387	0.005	0.004
	Contingency Coefficient	0.361	0.005	0.004
N of Valid Cases		70		

The value of each test shows the medium association between the variables and significance.

Table 10. The motivation of Crime: A Cross Tabulation Analysis

		Motivation of Crime				
		Economic Factors	Social Factors	Political Factors	Psychological Factors	Total
Type of Crime	Property Crime	16	18	0	1	35
	Violent Crime	4	30	1	0	35
	Total	20	48	1	1	70

Table 11. Chi-Square Tests of Motivation of Crime

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	12.2	3	0.007	0.002	---	---
Likelihood Ratio	13.514	3	0.004	0.002	---	---
Fisher's Exact Test	12.148	---	---	0.002	---	---
Linear-by-Linear Association	5.715	1	0.017	0.026	0.013	0.01
N of Valid Cases	70	---	---	---	---	---

The value of chi-square is 12.2, which is significant.

Table 12. Symmetric Measures of Motivation of Crime

		Value	Approx. Sig.	Exact Sig.
Nominal by Nominal	Phi	0.417	0.007	0.002
	Cramer's V	0.417	0.007	0.002
	Contingency Coefficient	0.385	0.007	0.002
N of Valid Cases		70		

Cramer's V's value is 0.417 shows the medium association between the type of crime and the motivation of crime.

Table 13. Repent: A Cross Tabulation Analysis

		Repent		
		No	Yes	Total
Type of Crime	Property Crime	26	9	35
	Violent Crime	29	6	35
	Total	55	15	70

Table 14. Chi-Square Tests of Repent

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	.764	1	0.382	0.561	0.281	---
Continuity Correction	0.339	1	0.56	---	---	---
Likelihood Ratio	0.768	1	0.381	0.561	0.281	---
Fisher's Exact Test	---	---	---	0.561	0.281	---
Linear-by-Linear Association	.753	1	0.386	0.561	0.281	0.159
N of Valid Cases	70	---	---	---	---	---

The chi-square value is 0.764, which is statistically insignificant, indicating that repent and type of crime are not related.

Table 15. Symmetric Measures of Repent

		Value	Approx. Sig.	Exact Sig.
Nominal by Nominal	Phi	-0.104	0.382	0.561
	Cramer's V	0.104	0.382	0.561
	Contingency Coefficient	0.104	0.382	0.561
N of Valid Cases		70	---	---

The value of Cramer's V is 0.104 out of 1, which is not significant, indicating that the strength of association of type of crime and repent is not significant.

Effect Size

Crime: A Cross Tabulation Analysis

Table 16. Interaction with other People in Jail Encourage Prisoners to Commit

		Interaction with other People in Jail Encourage Prisoners to Commit Crime		
		No	Yes	Total
Total Crime	Property Crime	30	5	35
	Violent Crime	26	9	35
	Total	56	14	70

Table 17. Chi-Square Tests of Interaction with other People in Jail Encourage Prisoners to Commit Crime

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	1.429	1	0.232	0.371	0.185	---
Continuity Correction	0.804	1	0.37	---	---	---
Likelihood Ratio	1.445	1	0.229	0.371	0.185	---
Fisher's Exact Test	---	---	---	0.371	0.185	---
Linear-by-Linear Association	1.408	1	0.235	0.371	0.185	0.119
N of Valid Cases	70	---	---	---	---	---

Table 17 is to examine whether the type of crime and other people in jail who encourages prisoners to commit crime are independent or not with the chi-square test 1.429, which is statistically insignificant.

Table 18. Symmetric Measures of Interaction with their People in Jail Encourage Prisoners to Commit Crime

		Value	Approx. Sig.	Exact Sig.
Nominal by Nominal	Phi	0.143	0.232	0.371
	Cramer's V	0.143	0.232	0.371
	Contingency Coefficient	0.141	0.232	0.371
N of Valid Cases		70		

The value of crammer's V is 0.143, which is statistically insignificant.

Effect Size

Odds of encouraged by other people in jail to commit property crime and do not encourage by other people in jail to commit crime =5/30 =1.67

Odds of encouraged by other people in jail to commit violent crime and do not encourage by other people in jail to commit crime = 9/26 =0.35

Odds ratio =4.77, the odds of their encouragement by other people in jail to commit the crime is 4.77 times greater than if they commit a violent crime.

Table 19. Revenge: A Cross Tabulation Analysis

		Revenge		
		No	Yes	Total
Type of Crime	Property Crime	25	10	35
	Violent Crime	12	23	35
	Total	37	33	70

Table 20. Chi-Square Tests of Revenge

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	9.689	1	0.002	0.004	0.002	---
Continuity Correction	8.256	1	0.004	---	---	---
Likelihood Ratio	9.929	1	0.002	0.004	0.002	---
Fisher's Exact Test	---	---	---	0.004	0.002	---
Linear-by-Linear Association	9.55	1	0.002	0.004	0.002	0.002
N of Valid Cases	70	---	---	---	---	---

The chi-square value is 9.689, which is statistically significant.

Table 21. Symmetric Measures of Revenge

		Value	Approx. Sig.	Exact Sig.
Nominal by Nominal	Phi	0.372	0.002	0.004
	Cramer's V	0.372	0.002	0.004
	Contingency Coefficient	0.349	0.002	0.004
N of Valid Cases		70		

The value of Cramer's V is 0.372 out of 1. This indicates the medium relationship between the type of crime and whether the prisoners take revenge or not, with significant values.

Effect Size

Odds of a property crime when prisoners prefer to take revenge and don't prefer to take revenge =10/25 =0.4

Odds of violent crime when prisoners prefer to take revenge don't prefer to take revenge =23/12 =1.92

Odds ratio= 0.4/1.92= 0.21. The value of the odds ratio is indicating that when prisoners commit property crime, the odds of their revenge is 0.21 times greater than if they commit violent crime.

Socio-Economic Determinants of Crime

There are 12 socio-economic variables. People never like you to be your friend and socially deprived.

Table 22. Type of Family: A Cross Tabulation Analysis

		Type of Family		
		Joint Family	Nuclear Family	Total
Type of Crime	Property Crime	19	15	34
	Violent Crime	14	21	35
	Total	33	36	69

Table 23. Chi-Square Tests of Type of Family

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	1.743	1	0.187	0.232	0.14	---
Continuity Correction	1.165	1	0.28	---	---	---
Likelihood Ratio	1.751	1	0.186	0.232	0.14	---
Fisher's Exact Test	---	---	---	0.232	0.14	---
Linear-by-Linear Association	1.718	1	0.19	0.232	0.14	0.081
N of Valid Cases	69	---	---	---	---	---

The value of the Pearson chi-square test is 1.743, which is statistically insignificant.

Table 24. Symmetric Measures of Type of Family

		Value	Approx. Sig.	Exact Sig.
Nominal by Nominal	Phi	0.159	0.187	0.232
	Cramer's V	0.159	0.187	0.232
	Contingency Coefficient	0.157	0.187	0.232
N of Valid Cases		69		

The value of Cramer's V is 0.159, this shows the weak association between type of crime and type of family is insignificant.

Effect Size

Odds of a property crime when prisoners belong to a joint family and belong to a nuclear family =19/15 =1.26

Odds of violent crime when prisoners belong to joint family and belong to joint family =14/21 = 0.67

Odds ratio = 1.26/0.67 =1.88. The value of the odds ratio points out that when prisoners commit property crime, the odds of their belonging to a joint family is 1.88 times greater than if they commit a violent crime.

Table 25. Area of Residence: A Cross Tabulation Analysis

		Area of Residence		
		Rural	Urban	Total
Type of Crime	Property Crime	9	26	35
	Violent Crime	15	20	35
	Total	24	46	70

Table 26. Chi-Square Tests of Area of Residence

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	2.283	1	0.131	0.208	0.104	---
Continuity Correction	1.585	1	0.208	---	---	---
Likelihood Ratio	2.301	1	0.129	0.208	0.104	---
Fisher's Exact Test	---	---	---	0.208	0.104	---
Linear-by-Linear Association	2.250	1	0.134	0.208	0.104	0.065
N of Valid Cases	70	---	---	---	---	---

The value of Pearson Chi-square is 2.283, which is statistically insignificant.

Table 27. Symmetric Measures of Area of Residence

		Value	Approx. Sig.	Exact Sig.
Nominal by Nominal	Phi	-0.181	0.131	0.208
	Cramer's V	0.181	0.131	0.208
	Contingency Coefficient	0.178	0.131	0.208
N of Valid Cases		70		

Cramer's V's value is 0.181, which is statistically insignificant and week association.

Effect Size

Odds of a property crime when prisoners live in a rural area and live in an urban area =9/26 =0.35
Odds of violent crime when prisoners live in the rural area and live in urban area =15/20 =0.75

Odds ratio =0.35/0.75 = 0.47. The odds ratio value exhibits that when prisoners commit property crime, the odds of their lives in rural areas are 0.47 times greater than if they commit violent crime.

Table 28. Relation with Head of Household: A Cross Tabulation Analysis

		Relation with the Head of the Household		
		Head of Household	Other Member	Other
Type of Crime	Property Crime	15	20	35
	Violent Crime	7	28	35
	Total	22	48	70

Table 29. Chi-Square Tests of Relation with Head of Household

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	4.242	1	0.039	0.07	0.035	---
Continuity Correction	3.248	1	0.072	---	---	---
Likelihood Ratio	4.316	1	0.038	0.07	0.035	---
Fisher's Exact Test	---	---	---	0.07	0.035	---
Linear-by-Linear Association	4.182	1	0.041	0.07	0.035	0.025
N of Valid Cases	70					

The value of the Chi-square is 4.242, which is statistically significant.

Table 30. Symmetric Measure of Relation with Head of Household

		Value	Approx. Sig.	Exact Sig.
Nominal by Nominal	Phi	0.246	0.039	0.07
	Cramer's V	0.246	0.039	0.07
	Contingency Coefficient	0.239	0.039	0.07
N of Valid Cases		70		

The value of Cramer's V is significant shows that the strength of association between type of crime and relation with the head of household is significant.

Effect Size

Odds of a property crime when prisoners are head of household and are other members of the household =15/20 =0.75
Odds of violent crime when prisoners are head of household and are not head of household =7/28 =0.25

Odds ratio =0.75/0.25 =3. The value of the odds ratio displays that when prisoners commit property crime, the odds of their relationship with the head of household is three times greater than if they commit a violent crime.

Table 31. Education: A Cross-Tabulation Analysis

		Education							
		Illiterate	Primary	Mddle	Matric	Intermdiate	Graduation	Master and Above	Total
Type of Crime	Property Crime	24	1	1	1	2	4	2	35
	Violent Crime	14	3	1	5	5	3	4	35
	Total	38	4	2	6	7	7	6	70

Table 32. Chi-Square Tests of Education

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	8.393a	6	0.211	0.21	---	---
Likelihood Ratio	8.772	6	0.187	0.28	---	---
Fisher's Exact Test	8.337	---	---	0.192	---	---
Linear-by-Linear Association	3.104b	1	0.078	0.087	0.044	0.009
N of Valid Cases	70	---	---	---	---	---

The Pearson Chi-square is 8.393, which is statistically insignificant, indicating that type of crime and education is not related.

Table 33. Symmetric Measures of Education

		Value	Approx. Sig.	Exact Sig.
Nominal by Nominal	Phi	0.346	0.211	0.21
	Cramer's V	0.346	0.211	0.21
	Contingency Coefficient	0.327	0.211	0.21
N of Valid Cases		70		

Cramer's V's value is 0.346, which is statistically insignificant.

Table 34. Think If Prisoners Have Good Friend, They Will Not Commit Crime: A Cross Tabulation Analysis

		Think If Prisoners Have Good Friend, They Will Not Commit Crime		
		No	Yes	Total
Type of Crime	Property Crime	27	8	35
	Violent Crime	17	18	35
	Total	44	26	70

Table 35. Chi-Square Tests of Think If Prisoners have Good Friend, they will not Commitcrime

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	6.119	1	0.013	0.025	0.013	---
Continuity Correction	4.956	1	0.026	---	---	---

Likelihood Ratio	6.24	1	0.012	0.025	0.013	---
Fisher's Exact Test	---	---	---	0.025	0.013	---
Linear-by-Linear Association	6.031c	1	0.014	0.025	0.013	0.01
N of Valid Cases	70	---	---	---	---	---

The chi-square value shows that the type of crime and think if prisoners have good friend, they will not commit crime are related, and results are significant.

Table 36. Symmetric Measures of think if Prisoners have Good Friend they will not Commitcrime

		Value	Approx. Sig.	Exact Sig.
Nominal by Nominal	Phi	0.296	0.013	0.025
	Cramer's V	0.296	0.013	0.025
	Contingency Coefficient	0.284	0.013	0.025
N of Valid Cases		70		

The value of Cramer's V is 0.296 shows the medium relationship, which is statistically significant.

Effect Size

Odds of a property crime when prisoners think do not think if they have a good friend, they will not commit a crime =8/27 =0.30
Odds of violent crime when prisoners think do not think if they have good friend, they will not commit the crime =18/17 =1.06

Odds ratio = 0.30/1.06 =0.28. The odds ratio value shows that when prisoners commit property crime, the odds of thinking they have good friends will not commit the crime, which is 0.28 times greater than if they commit a violent crime.

Table 37. Lack of Trust: A Cross Tabulation Analysis

		Lack of Trust		
		No	Yes	Total
Type of Crime	Property Crime	28	7	35
	Violent Crime	21	14	35
	Total	49	21	70

Table 38. Chi-Square Test of Lack of Trust

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	3.333	1	0.068	0.117	0.058	---
Continuity Correction	2.449	1	0.118	---	---	---
Likelihood Ratio	3.382	1	0.066	0.117	0.058	---
Fisher's Exact Test	---	---	---	0.117	0.058	---
Linear-by-Linear Association	3.286c	1	0.07	0.117	0.058	0.04
N of Valid Cases	70	---	---	---	---	---

The value of chi-square is statistically significant shows that the type of crime and lack of trust are related.

Table 39. Symmetric Measures of Lack of Trust

		Value	Approx. Sig.	Exact Sig.
Nominal by Nominal	Phi	0.218	0.068	0.117
	Cramer's V	0.218	0.068	0.117
	Contingency Coefficient	0.213	0.068	0.117
N of Valid Cases		70		

The value of Cramer's V is significant shows that the medium strength of association is significant.

Effect Size

Odds of a property crime when prisoners think and do not think lack of trust motivates them to commit the crime =7/28 =0.25

Odds of violent crime when prisoners think and do not think lack of trust motivates them to commit the crime=14/21 =0.67

Odds ratio = 0.25/0.67 =0.37. The odds ratio value estimates that when prisoners commit property crime, the odds of their thinking that lack of trust motivates them to commit the crime is 0.37 times greater than if they commit a violent crime.

Table 40. Non-Observance of Religion: A Cross Tabulation Analysis

		Non-Observance of Religion is a Factor of Crime		
		No	Yes	Total
Type of Crime	Property Crime	27	8	35
	Violent Crime	18	16	34
	Total	45	24	69

Table 41. Chi-Square Tests of Non-Observance of Religion

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	4.453a	1	0.035	0.045	0.031	---
Continuity Correction	3.45	1	0.063	---	---	---
Likelihood Ratio	4.516	1	0.034	0.045	0.031	---
Fisher's Exact Test	---	---	---	0.045	0.031	---
Linear-by-Linear Association	4.389	1	0.036	0.045	0.031	0.022
N of Valid Cases	70	---	---	---	---	--

The value of Pearson Chi-Square is 4.453, which is statistically significant.

Table 42. Symmetric Measures of Non-Observance of Religion

		Value	Approx. Sig.	Exact Sig.
Nominal by Nominal	Phi	0.254	0.035	0.045
	Cramer's V	0.254	0.035	0.045
	Contingency Coefficient	0.246	0.035	0.045
N of Valid Cases		70		

The value of Cramer's V is 0.254, which is statistically significant.

Effect Size

Odds of property crime who think non-observance of religion is a factor of crime and not a factor of crime =8/27 =0.30
Odds of violent crime who think non-observance of religion is a factor of crime and not a factor of crime =16/18 =0.89

Odds ratio =0.30/0.89 =0.34. The value of the odds ratio represents that when prisoners commit property crime, the odds of their thinking non-observance of religion is the factor of crime is 0.34 times greater than if they commit violent crime.

Table 43. Lack of Support: A Cross Tabulation Analysis

		Lack of Support		
		No	Yes	Total
Type of Crime	Property Crime	24	11	35
	Violent Crime	22	13	35
	Total	46	24	70

Table 44. Chi-Square Tests of Lack of Support

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	.254	1	0.615	0.802	0.401	---
Continuity Correction	0.063	1	0.801	---	---	---
Likelihood Ratio	0.254	1	0.614	0.802	0.401	---

Fisher's Exact Test	---	---	---	0.802	0.401	---
Linear-by-Linear Association	.250	1	0.617	0.802	0.401	0.176
N of Valid Cases	70					

The chi-square value is 0.254, which is statistically insignificant, indicating that lack of support and type of crime are not related.

Table 45. Symmetric Measures of Lack of Support

		Value	Approx. Sig.	Exact Sig.
Nominal by Nominal	Phi	0.06	0.615	0.802
	Cramer's V	0.06	0.615	0.802
	Contingency Coefficient	0.06	0.615	0.802
N of Valid Cases		70		

The value of Cramer's V is 0.06 out of 1, which is not statistically insignificant.

Effect Size

Odds of a property crime when prisoners face and do not face lack of support from family and friends=11/24 =0.46.
Odds of violent crime when prisoners face do not face lack of support from family and friends =13/22 =0.59

Odds ratio =0.46/0.59 =0.78. The odds ratio value demonstrates that when prisoners commit property crime, the odds of face a lack of support from family and friends is 0.78 times greater than if they commit a violent crime.

Table 46. People Never like Them to Be Their Friend: A Cross Tabulation Analysis

		People Never like Them to Be Their Friend		
		No	Yes	Total
Type of Crime	Property Crime	26	9	35
	Violent Crime	17	18	35
	Total	43	27	70

Table 47. Chi-Square Tests of People Never Like Them to Be Their Friend

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	4.884	1	0.027	0.049	0.024	---
Continuity Correction	3.859	1	0.049	---	---	---
Likelihood Ratio	4.956	1	0.026	0.049	0.024	---
Fisher's Exact Test	---	---	---	0.049	0.024	---
Linear-by-Linear Association	4.814	1	0.028	0.049	0.024	0.018
N of Valid Cases	70					

The value of the Pearson chi-square test is 4.884, which is statistically significant.

Table 48. Symmetric Measures of People Never Like Them to Be Their Friend

		Value	Approx. Sig.	Exact Sig.
Nominal by Nominal	Phi	0.264	0.027	0.049
	Cramer's V	0.264	0.027	0.049
	Contingency Coefficient	0.255	0.027	0.049
N of Valid Cases		70		

The value of crammer's V is 0.264, which is statistically significant.

Effect Size

Odds of a property crime when prisoners think and do not think people never like to be their friend =9/26 =0.35
Odds of violent crime when prisoners think and do not think people never like them to be their friend =18/17 =1.06

Odds ratio =0.35/1.06 = 0.33. The odds ratio value directs that when prisoners commit property crime, the odds of thinking people never like them to be their friend is 0.33 times greater than if they commit a violent crime.

Table 49. Socially Deprived: A Cross Tabulation Analysis

		Feel Socially Deprived		
		No	Yes	Total
Type of Crime	Property Crime	25	10	35
	Violent Crime	17	18	35
	Total	42	28	70

Table 50. Chi-Square Tests of Socially Deprived

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	3.810	1	0.051	0.087	0.043	---
Continuity Correction	2.917	1	0.088	---	---	---
Likelihood Ratio	3.851	1	0.05	0.087	0.043	---
Fisher's Exact Test	---	---	---	0.087	0.043	---
Linear-by-Linear Association	3.755	1	0.053	0.087	0.043	0.03
N of Valid Cases	70	---	---	---	---	---

The chi-square value is 3.810, which statistically significant.

Table 51. Symmetric Measures of Socially Deprived

		Value	Approx. Sig.	Exact Sig.
Nominal by Nominal	Phi	0.233	0.051	0.087
	Cramer's V	0.233	0.051	0.087
	Contingency Coefficient	0.227	0.051	0.087
N of Valid Cases		70	---	---

The value of Cramer's V is 0.233 out of 1, which is statistically significant.

Effect Size

Odds of a property crime when prisoners feel and do not feel socially deprived =10/25 =0.4
Odds of violent crime when prisoners feel and do not feel socially deprived =18/17 =1.06

Odds ratio =0.4/1.06 =0.38. The odds ratio value indicates that when prisoners commit property crime, the odds of feeling socially deprived is 0.38 times greater than if prisoners commit violent crime.

Table 52. Job Status: A Cross Tabulation Analysis

		Job Status					
		Housewife	Government Service	Semi-Government Service	Private Service	Self Employed	Total
Type of Crime	Property Crime	26	3	0	4	2	35

	Violent Crime	22	3	2	4	4	35
	Total	48	6	2	8	6	70

Table 53. Chi-Square Tests of Job Status

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	3.000	4	0.558	0.663	---	---
Likelihood Ratio	3.786	4	0.436	0.597	---	---
Fisher's Exact Test	2.762	---	---	0.692	---	---
Linear-by-Linear Association	1.104b	1	0.293	0.327	0.164	0.03
N of Valid Cases	70	---	---	---	---	---

The chi-square value is 3, which is statistically insignificant.

Table 54. Symmetric Measures of Job Status

		Value	Approx. Sig.	Exact Sig.
Nominal by Nominal	Phi	0.207	0.558	0.663
	Cramer's V	0.207	0.558	0.663
	Contingency Coefficient	0.203	0.558	0.663
N of Valid Cases		70		

The value of Cramer's V is 0.207, which shows a weak association and also statistically insignificant.

Table 55. Chi-Square Tests of Bad Relation with Family

		Bad Relation with Family		
		No	Yes	Total
Type of Crime	Property Crime	28	7	35
	Violent Crime	19	16	35
	Total	47	23	70

Table 56. Chi-Square Tests of Bad Relation with Family

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	5.245	1	0.022	0.041	0.02	---
Continuity Correction	4.144	1	0.042	---	---	---
Likelihood Ratio	5.352	1	0.021	0.041	0.02	---
Fisher's Exact Test	---	---	---	0.041	0.02	---
Linear-by-Linear Association	5.170	1	0.023	0.041	0.02	0.015
N of Valid Cases	70					

The value of Pearson Chi-square is 5.245, which is statistically significant.

Table 57. Symmetric Measures of Bad Relation with Family

		Value	Approx. Sig.	Exact Sig.
Nominal by Nominal	Phi	0.274	0.022	0.041
	Cramer's V	0.274	0.022	0.041
	Contingency Coefficient	0.264	0.022	0.041
N of Valid Cases		70		

Cramer's V's value is 0.274, which is statistically significant.

Effect Size

Odds of a property crime when prisoners have not and have bad relationships with family =28/7=4
Odds of violent crime when prisoners have not bad have bad relation with family=19/16 =1.19
Odds ratio =4/1.19 =3.36. The odds ratio value implies that when prisoners commit property crime, the odds of their not bad relation with family is 3.36 times greater than if they commit violent crime.

Conclusions and Policy Implications

To explore the socio-economic determinants of crime in Women Jail Multan, purely crime-related variables and socio-economic variables was examined. Prisoners in this jail are mainly motivated by economic and social factors such as unemployment, money, conflicts and family issues. Mostly the prisoners of this jail do not regret or repent for doing crime.

Here, when prisoners commit property crime, mostly they do not prefer to take revenge, and when they commit a violent crime, they prefer to take revenge. In analyzing socio-economic variables, prisoners who belong to the joint family mostly commit property crime and prisoners who belong to the nuclear family mostly commit violent crime. The prisoners in this jail are females, and most of them are not the head of households, so we may conclude that in this jail, mostly the other member of the households are involved in the crime. The education level also affects the crime rate in Women Jail as mostly illiterate prisoners commit the crime. Some people think that if they have a good friend, they will not do wrong.

In this analysis, largely prisoners who are involved in property crime do not believe that if they have a good friend, they will not commit the crime but who are involved in violent crime, think that if they have a good friend, and also face lack of trust which commit the crime. Distance from religion is another fact of crime in Islamic countries, but most of the prisoners think that non-observance of the religion is not a factor of crime.

Some people face inferiority and think people never like them to be their friends, but most of the prisoners who are involved in property crime do not think people never like them to be their friend or they do not face inferiority, and those who are involved in violent crime feel inferiority. Most of them do not have a bad relationship with their family. Job status in every society also affects the crime rate; among women, mostly housewives are involved in crime. Most of the prisoners are not socially deprived.

Policies for Purely Crime-Related Variables

The government may have to implement the policies to reduce the number of times a person commits a crime and the average strength length of crime to reduce the country's crime rate. The policymakers have to implement the policies to reduce crime through economic motivation such as money, lower inflation, and unemployment etc. The government may increase the wage rate and may create new job opportunities, which may reduce the dependency burden and reduce the unemployment and money problem.

Social motivation such as inner satisfaction, to become rich, family issues etc., the government may implement the terms and conditions and make every citizen obey those terms and conditions—political motivations such as political issues. The government may implement policies to reduce political issues. Psychological motivation such as psychological issues. Policymakers may devise policies to build hospitals for psyche patients.

Policies for Socio-Economic Variables

This study found that the joint family mostly commit violent crime and the nuclear family commit property crime. The government may discourage the joint family system as it is also according to our religion. Moreover, policymakers may improve the documentation system in the country to reduce property crime. Mostly the head of the household commits both types of crime. So, the reason behind this, the burden on the head of the household. So, every household member must have to take part in work to divide the responsibilities. Education and residential are the factors for the development of society and to reduce illegal activities. So, the government may promote the level of education both in the rural and urban areas to reduce crime.

References

Abbas, R., & Manzoor, M. (2015). Socio-Economic Factors of Women's Involvement in Crimes in Southern Punjab, Pakistan. *Academic Research International*, *6*(2), 442.

Amin, R. (2019). Mathematical Model of Crime and Literacy Rates. *International Journal of Mathematics Trends and Technology*, *65*(9).

Anwer, M, Nasreen, S., & Shahzadi, A. (2015). Social and Demographic Determinants of Crime in Pakistan: A Panel Data Analysis of Province Punjab. *International journal of economics*, *3*, 440-447.

Ashraf, S. F., Li, C., Butt, R., Naz, S., & Zafar, Z. (2019). Education as Moderator: Integrative Effect towards Succession Planning Process of Small Family Businesses. *Pac. Bus. Rev. Int, 11*, 107-123.

Ashraf, S. F., Li, C., & Mehmood, B. (2017). A Study of Premium Price Brands with Special Reference to Willingness of Customer to Pay. *International Journal of Academic Research in Business and Social Sciences, 7*(7), 619-639.

Bechdolt Jr, B. V. (1975). Cross-sectional analyses of socio-economic determinants of urban crime. *Review of social economy*, *33*(2), 132-140.

Büttner, T., & Spengler, H. (2001). local determinants of crime and criminal mobility: an empirical study using german municipality data.

Buonanno, P., & Leonida, L. (2006). Education and crime: evidence from Italian regions. *Applied Economics Letters*, *13*(11), 709-713.

Cahill, M. E., & Mulligan, G. F. (2003). The determinants of crime in Tucson, Arizona. *urban geography*, *24*(7), 582-610.

Cerulli, G., Ventura, M., & Baum, C. F. (2018). The economic determinants of crime: An approach through responsiveness scores Report, Department of economics, Boston College.

Edmark, k. (2005). Unemployment and crime: is there a connection? *Scandinavian journal of economics*, *107*(2), 353-373.

Fougere, D., Kramarz, F., & Pouget, J. (2003). Crime and unemployment in France. Dostupné na: http://www. cepr. org/meets/wkcn/3/3519/papers/Kramarz. pdf. [cit: 2012-09-25].

Gillani, S. Y. M., Rehman, H. U., & Gill, A. R. (2009). Unemployment, poverty, inflation and crime nexus: Cointegration and causality analysis of Pakistan. *Pakistan Economic and Social Review*, 79-98.

Gilbert, K., & Sookram, S. (2009). The Socio-Economic Determinants Of Violent Crime In Jamaica. The United States. The University of Phoenix.

Hassan, M. S., Akbar, M. S., Wajid, A., & Arshed, N. (2016). Poverty, urbanization and crime: Are they related in Pakistan. *International Journal of Economics and Empirical Research*, *4*(9), 483-492.

Hazra, D., & Cui, Z. (2018). Macroeconomic determinants of crime: evidence from India. *journal of quantitative economics*, *16*, 187-198.

Herzog, S. (2005). The relationship between economic hardship and crime: the case of Israel and the Palestinians. *Sociological perspectives*, *48*(2), 189-211.

Ishak, S., & Bani, Y. (2017). Determinants of crime in Malaysia: evidence from developed states. *International journal of economics & management*, 11.

Jalil, H. H., & Iqbal, M. M. (2010). Urbanization and crime: A case study of Pakistan. *The Pakistan Development Review*, 741-755.

Janko, Z., & Popli, G. (2015). Examining the link between crime and unemployment: a time-series analysis for Canada. *Applied Economics*, *47*(37), 4007-4019.

Khan, N., Ahmed, J., Nawaz, M., & Zaman, K. (2015). The socio-economic determinants of crime in Pakistan: New evidence on an old debate. *Arab economic and business journal*, *10*(2), 73-81.

Li, C., Ashraf, S. F., Shahzad, F., Bashir, I., Murad, M., Syed, N., & Riaz, M. (2020). Influence of Knowledge Management Practices on Entrepreneurial and Organizational Performance: A Mediated-Moderation Model. *Frontiers in Psychology, 11*.

Luiz, J. M. (2001). Temporal association, the dynamics of crime, and their economic determinants: A time series econometric model of south Africa. *Social indicators research*, *53*, 33-61.

O'cinneide, (2006). An Econometric Investigation into the Determinants of Crime. *Student Economic Review*, 20, 41.

Omotor, D. G. (2009). Socio-economic determinants of crime in Nigeria. *Pakistan journal of social sciences*, 6(2), 54-59.

Sultan, R. S., Khan, T. H., & Akber, A. (2014). Socio-Economic Determinants of Crime Among Males with reference to Central Prison Karachi. *Journal of Social Sciences and Humanities*, *53*, 65-85.

Umair, M. (2019). The Socio-economic Determinants of Crime in Pakistan. Budapest International Research and Critics Institute (birci-journal): *Humanities and Social Sciences*, *2*(3), 1-6.