

## **Dilemma of Punishment Policies in Controlling Crimes in Pakistan: An Empirical Analysis**

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### **Abstract:**

*The main objective of this study is to analyze the impact of the use of punishment policies in controlling crime in Pakistan. The study uses ARDL approach on annual time series data for the period 1981-2016. The results of the study reveal that punishment policies particularly the use of torture, extra judicial killings and disappearances incite more crime rather than controlling them. Furthermore, political imprisonments are found to be helpful in reducing crime and judiciary has no significant impact on crime in Pakistan. This brings up the need to address the root cause rather than symptoms of crime. The study suggests that the accountability of politicians and reforms of judicial system may be helpful in reducing crimes in Pakistan.*

**Keywords:** ARDL, Crime, Punishment Policies, Time Series

### **I. Introduction**

A persistent increase in crime over time has achieved alarming situation during the past few decades particularly in highly populated developing countries like Pakistan. A considerable debate has been observed among the politicians, policy makers, law enforcement officers and the general public related to appropriate approaches and optimal measures for controlling crimes. Several arguments have been advanced at time to time related to sociological and economic causes of criminal behavior. The studies on controlling crimes have highlighted different point of views regarding punishment policies. There is wide spread perception that crime can be tackled with the help of punishment policies which are directly and indirectly related to the reduction in crime. In most of the developing countries there is a tendency to punish the convicted severely and punishment policies have been widely used in controlling crime for a long time but these polices have failed to achieve the desired objectives.

In general, imprisonment is regarded as more effective way of controlling crime. The use of torture during trial is mostly used with the intention to make the accused to confess his crime or to make him explain some contradictions or to disclose his facilitators. A weird consequence of the torture is that the case of innocent appears to be worse than that of guilty. If an innocent confesses the crime which he has not committed

and torment a punishment which he does not deserve will result in autocracy. On the other hand, if the criminal bears the torture with determination and declared innocent he will gain, having exchanged sentence with torture. The death penalty is the extreme level of punishment and may be considered necessary only under severe circumstances like threat to the security of nation and the existence of criminals that may lead to dangerous revolution.

Becker (1968) explains that the criminal's behavior is based on simple cost and benefit analysis. The charge of several punishments to a criminal can be compared by converting punishments into monetary units. The criminal can be discouraged from committing crime by increasing its cost through setting high probability of punishment. The dilemma of punishment policies in controlling crime has been seen as a problem of allocation of resources where criminals try to maximize their benefits and the main objective of the authorities is to minimize social losses of crime. The criminals take into consideration the cost and benefits before committing crime and they are inclined towards committing crime if benefits are higher than the cost of committing crime and vice versa. However, the number of offenses is determined once authorities choose the optimal values of convictions and punishments.

Several studies are available in literature which highlight that the decrease in crime is causally linked with punitive policy, zero tolerance, high frequency of detention, increasing the tenure and putting tough conditions of imprisonments and capital punishment. On the other hand, a few studies have pointed out that punitive policies may not be helpful in reducing crimes as these policies are destructive in a number of ways. The punitive policies regarding controlling crime can be divided into two broad categories which are criminological and political. The criminological prerogative is that punitive policies may reduce crimes while, the political prerogative means that punishment policies are actually a response to rising crime rates. The impact of punitive policies on crimes requires a mix of other purposes like identifying the structure of political, economic, social and cultural forces.

The researchers are still not much clear about the impact of punishment policies in controlling crimes and, in general, their main objective is to bring up the intensity of different types of punishments like torture, fines, imprisonment, extra judicial killings and death sentence in controlling crime and to suggest appropriate ways helpful in controlling crime for a safe society. The policy makers stress that the punishment for controlling crime should have that degree of severity which may be sufficient to deter others from committing crime. In most the developing countries like Pakistan the probability of capturing and conviction of criminals are set deliberately at low level due to two reasons. Firstly, it reduces expenditure in combating crimes. Secondly, setting of high probability of conviction demands more resources in the form of government officials and infrastructure. Fines are regarded as more suitable than other punishments as they are helpful in reducing social loss; however, there are some other considerations which calls for the use of other punishments.

In literature not many studies are available which have analyzed the impact of punishment measures in controlling crime in the context of Pakistan. The studies available on the subject matter have used less advanced estimation techniques and their results are questionable and are not close to reality. This calls for the need to analyze the

relationship between punishments polices and controlling crime using appropriate estimation techniques. The present study is an attempt to this end and the results of this study may be helpful for researchers and policymakers in formulating and implementing policies consistent with the prevailing economic, social and political conditions in Pakistan. Furthermore, the study may provide guidelines to the authorities for introducing institutional reforms in the country so that rising crimes can be tackled effectively. Rest of the study is organized as follows. Section II presents review of literature; section III deals with Model specification and results; the conclusion of the study is presented in section IV.

## II. Review of Literature

The literature on the effectiveness of different types of punishments in controlling crime began in 1970s. The early work by Ehrlich (1973, 1975) on the subject matter, pointed out that deterrence is significantly related to reduction in crime rates. The results of his study indicated the presence of negative relationship between punishment and crime. Friedman (1994) highlighted that severe punishments cannot be exercised because policemen cannot be trusted with too much power as severe penalties may permit the police to get huge bribes and terrorize the public. The study recommended that less harsh punishments would be optimal rather than severe punishments. Glaeser and Sacerdote (1999) investigated the factors responsible for high punishment exercised for murderers in the USA. The study concluded that the criminals who killed African Americans got smaller sentences and the criminals who murdered women were punished severely.

Needels (1996) examined a comprehensive survey of recidivism and found extremely high levels of sustained criminal activity of released offenders. The study pointed out that the tendency for crime did not fall with prison. Furthermore, imprisonment acted as training institute for criminals which reduced their inclination towards legal employment which revealed that imprisonment had produced criminals instead of reducing the criminal activities. The study suggested that the long imprisonment might be helpful in reducing crimes. Levitt (1998) tried to compare the relevancy of deterrence or incapacitation through observing the effects of arrest rates in different crimes. The results of the study showed that a higher rate of arrest in one crime would lead to enhance the other crimes if deterrence is important because criminals tend to substitute one crime to other cheaper form of crime. Alternatively, if incapacitation is important then high arrest rates in one crime would cause reduction in other crimes as long as some criminals of first crime are also involved in second crime. The study concluded that incapacitation is important than deterrence.

Levitt, (2004) was of opinion that four factors including enlarged imprisonment, larger number of police personnel, decline in crack cocaine and legalized abortion, were responsible for decline in crime rates during 1990's in the USA. The study concluded that some other factors like strong economic conditions, varying demographics, advanced policing tactics, gun laws and enlarged use of capital punishment had appeared helpless in controlling crime. Zimring *et al* (2010) tried to compare the homicide rates in Singapore in the presence of death penalty and Hong Kong in the absence of death penalty over the 35 years. The study failed to find any difference in homicide trends in both countries. Johnson and Raphael (2012) used panel data from 1978 to 2004 and estimated the elasticity of crime in relation to imprisonment. The elasticity for violent crime was -0.1 and for property crimes it was -0.2. The study supported the wide spread

perception regarding the existence of negative relationship between imprisonment and crime. Bushway and Owens (2013) pointed out that it is difficult to separate deterrence from incapacitation. The study concluded that there are two channels through which enlarged imprisonment may reduce crimes. Firstly, the detachment of criminals through locking up may make them impotent to commit further crime while incarcerated. Secondly, threats of severe punishment discourage criminals to commit crime.

Chalfin and McCray (2017) reviewed the research work conducted in the past twenty years related to impact of punishment, work and police on crime. The study concluded that there exists effective relationship between police, attractive labor market and crime and the severity of criminal sanctions have lesser impact on crime. From the review of literature it can be concluded that the existence of the relationship between punishment and crime is not much clear. The impact of punishment policies on criminals depends upon their background, regions, culture and effectiveness of the rule of law prevailing in a country. The present study is an attempt to observe the dilemma of punishment policies in controlling crime in Pakistan.

### III. Model Specification and Results

Annual time series data for the period 1981-2016 has been used in this study which is collected from Human Rights Dataset by (Cingranelli et al., 2014)<sup>1</sup> and Pakistan Bureau of Statistics. For analyzing the impact of punishment policies in tackling crime in Pakistan, the following model has been used:

$$Crime = \alpha + \beta_1 Torture + \beta_2 Extrajudicial Killing + \beta_3 Independence of Judiciary + \beta_4 Political imprisonment + \beta_5 Disappearances + \mu \quad (1)$$

#### A. Description of Variables

##### *Torture (TORT)*

Torture appears to be inhuman, cruel and degrading for a person who is deliberately put by the government officials in a situation to tolerate severe mental or physical pain during the process of investigation. A score of 0 indicates that torture has been practiced frequently in a given year; a score of 1 is assigned to occasionally; and a score of 2 means no torture in a given year. Torture is considered to be helpful in making confession by the criminals so that they can be convicted which helps in reducing crimes.

##### *Extrajudicial Killings (KILL)*

The government officials practice it without due process of law to get rid of unwanted prisoners, politicians and suspect criminals. A score of 0 means that the extrajudicial killings has been practiced frequently in a given year; a score of 1 indicates for occasionally and score of 2 is assigned for no extrajudicial killing in a given year. Extrajudicial killing may reduce or incite crimes depending upon retaliation of the confidants of criminals.

##### *Independence of the Judiciary (INJUD)*

The independence of judiciary means no interference of other institutions in judiciary system and it is expected to reduce crimes due to proper conviction of criminals. This variable lies between 0 and 2. A score of 0 indicates “not independent”, a

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<sup>1</sup> Data for some years was also extrapolated.

score of 1 indicates “partially independent” and a score of 2 indicates “generally independent”.

**Political Imprisonment (PIMPRSNT)**

Political imprisonment refers to the incarceration of politicians by government officials for avoiding acute social and political problems and unpleasant situation in the country. A score of 0 shows a lot of political prisoners in a given year; a score of 1 indicates that a few people has been politically imprisoned; and a score of 2 means that no person has been politically imprisoned in a given year. Political imprisonment may reduce or increase crimes depending upon aftermaths of the political imprisonment.

**Disappearance (DISAP)**

Disappearances are related to the victims who have been disappeared and knowledge of their whereabouts and circumstances are not known to the public. A score of 0 indicates frequent disappearances occurred in a given years; a score of 1 shows that disappearances occasionally occurred; and a score of 2 indicates no disappearances in a given year. Following Pesaran et al. (2001) equation 1 is expressed in the form of an Autoregressive Distributed Lag (ARDL) format as in Equation 2:

$$\Delta Crime_t = \beta_0 + \beta_1 Crime_{t-1} + \beta_2 Tort_{t-1} + \beta_3 Kill_{t-1} + \beta_4 Injud_{t-1} + \beta_5 Pimprst_{t-1} + \beta_6 Disap_{t-1} + \sum_{i=0}^n \delta_i \Delta Crime_{t-1} + \sum_{i=0}^n \theta_i \Delta Tort_{t-1} + \sum_{i=0}^n \eta_i \Delta Kill_{t-1} + \sum_{i=0}^n \gamma_i \Delta Injud_{t-1} + \sum_{i=0}^n \varphi_i \Delta Pimprst_{t-1} + \sum_{i=0}^n \Omega_i \Delta Disap_{t-1} + U_t \quad (2)$$

We may also get the ARDL representation of the error-correction model. It may be used to find the speed of adjustment in the model, the mechanism of this is that the lagged-level variables in the previous equation are replaced by  $ECT_{t-1}$  and this may be presented as given below:

$$\Delta Crime_t = \beta_0 + \sum_{i=0}^n \delta_i \Delta Crime_{t-i} + \sum_{i=0}^n \theta_i \Delta Tort_{t-i} + \sum_{i=0}^n \eta_i \Delta Kill_{t-i} + \sum_{i=0}^n \gamma_i \Delta Injud_{t-i} + \sum_{i=0}^n \varphi_i \Delta Pimprst_{t-i} + \sum_{i=0}^n \Omega_i \Delta Disap_{t-i} + r ECT_{t-1} + U_t \quad (3)$$

Before applying ARDL approach for estimating the model it is appropriate to know the order of integration of all the variables included in the model. The unit root test results are presented in Table.1 which reveal that the variables are either integrated of order I(1) or I(0) and no variables is integrated of order I(2). This suggests that ARDL approach is appropriate for estimating the model.

**Table: 1 Unit root test (ADF)**

Variables	Level	First difference	Order of Integration
	Calculated Test Statistic	Calculated Test Statistic	
CRIME	0.942	-6.634	I(1)
TORT	-4.058	-	I(0)
KILL	-1.413	-6.099	I(1)
INJUD	-0.535	-12.041	I(1)
PIMPRSMNT	-5.916	-	I(0)
DISAP	-1.602	-7.117	I(1)

For observing the presence of cointegration among the variables Bound Test for cointegration has been used. The results of Bound Test presented in Table 2 indicate the presence of cointegration among the variables as the value of F-test is greater than upper bound and does not fall between the values of upper bound and lower bound.

**Table: 2 Bounds Test**

At 5% level of significance		10 % level of significance		Calculated F Statistics
Lower bound	Upper bound	Lower bound	Upper bound	
2.62	3.79	2.26	3.35	3.916

The long run results presented in Table.3 reveal that the coefficient of torture has negative sign which is statistically significant. Since the scale of torture is reverse (0 frequent torture and 2 represents no torture) it indicates that an excessive use of torture results in an increase in crimes. It may be due to the reason that after the use of torture most of the criminals become professional criminals which leads to further increase in crimes.

**Table: 3 Long run results**

Independent Variables	Coefficients	Standard Errors	T-Ratios	P Values
Torture	-0.481	0.089	-5.373	0.000***
Extrajudicial Killing	-0.069	0.053	-2.047	0.059**
Independence Of Judiciary	0.059	0.058	1.016	0.326
Political Imprisonment	0.526	0.172	3.041	0.008***
Disappearances	-0.240	0.053	-4.511	0.000***
Constant	0.790	0.108	7.258	0.000***

\*\*\*, \*\* represents 1 and 10 percent level of significance respectively, ARDL (2, 2, 0, 2, 1, 2) dependent Variable=Crime

Extrajudicial killings is itself a crime which is not acceptable in any society. The coefficient of extrajudicial killings has turned up negative and having reverse scale indicates that an increase in extrajudicial killings leads to more crimes. The coefficient of Independence of judiciary is statistically insignificant which means that judiciary has no important role in controlling crimes. The political imprisonment appears to be positive and statistically significant. Since, the scale of this variable is also reverse which indicates that more political imprisonments reduce crime as this type of criminals are politically motivated and have their roots in political parties. During the last two decades Pakistan has experienced it in its biggest city, Karachi where political parties were held responsible for heinous crime in the city.

**Table: 4 Short run Results**

Independent Variables	Coefficients	Standard Errors	T-Ratios	P Values
D(CRIMET(-1))	-0.554	0.146	-3.775308	0.0020***
D(DISAP)	-0.032456	0.016594	-1.955951	0.0707*
D(DISAP(-1))	0.014940	0.014149	1.055890	0.3089
D(PIMPRSNMNT)	0.111850	0.048497	2.306328	0.0369**
D(TORT)	-0.062547	0.028524	-2.192749	0.0457**
D(TORT(-1))	0.101759	0.041659	2.442696	0.0284**
D(INJUD)	0.073997	0.038548	1.919595	0.0755*
D(INJUD(-1))	0.042551	0.026391	1.612339	0.1292
D(KILL)	-0.019099	0.010879	-1.755626	0.1010*
ECM(-1)	-0.275732	0.151632	-1.818423	0.0905*

\*\*\*, \*\*, \* represents 1, 5 and 10 percent level of significance respectively, Dependent Variable: dCRIME, Selected Model: ARDL (2, 2, 0, 2, 1, 2)

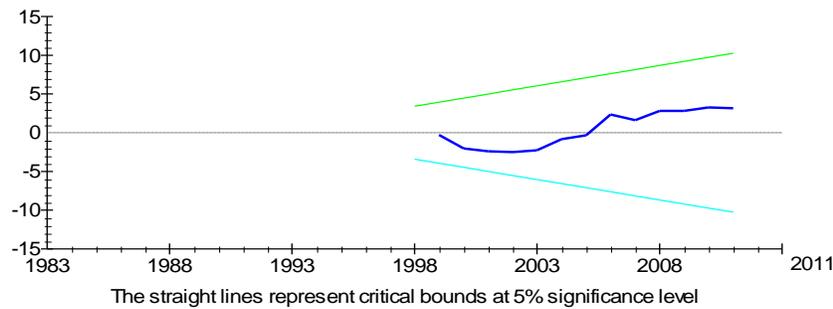
The coefficient of disappearances appears to be negative and statistically significant. As the scale of this variable is also reverse which indicates an increase in disappearances means more crime. Pakistan has experienced it during the past few decades as a lot of cases of disappearances of convicted or potential criminals has led to

an increase in crime. It may be due to the reason that effected groups or some political parties retaliated against disappearances in Pakistan. Not much interpretations are assigned to the short run results presented in Table 4 as they represent only the adjustment mechanism. The negative and statistically significant coefficient is an indication of the convergence in the model and the magnitude of the error correction term tells us about the speed of convergence per period that is 27.5% per period. The diagnostic test results presented in Table 5 reveal the absence of heteroscedasticity, correct functional form of the model and verify that residuals are normally distributed. However, the problem of auto correlation has been observed in the model which is removed through coefficient covariance matrix of Newey West.

**Table: 5 Diagnostic Tests**

Test Type	LM Version		F Version	
	CHSQ value	P Value	F Value	P Value
A: Serial Correlation	3.853	.050	3.218	.087
B :Functional Form	.059	.808	.042	.838
C:Heteroscedasticity	.0733	.786	.068	.796
D :Normality	.168	.919	NA	-

**Figure: 1 Plot of CUSUM**



**Figure: 2 Plot of CUSUMSQ**

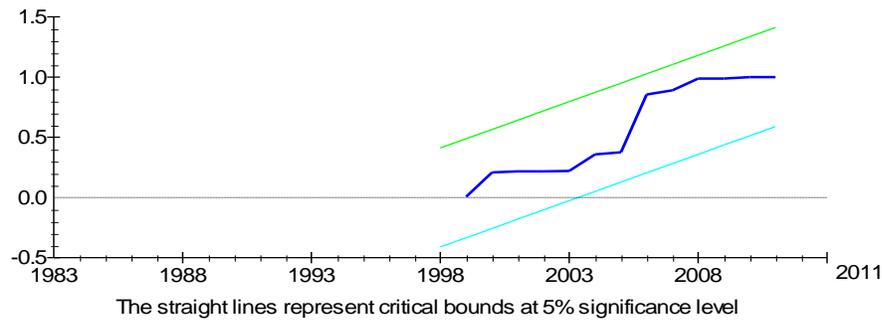


Figure 1 and 2 represent the coefficient stability tests based on cumulative sum of recursive residual and cumulative sum of square of recursive residuals. The plots of CUSUM and CUSUM SQ lie between the critical bonds at 5% level of significance which indicate stable existence of long run relationship between punishment policies and controlling crime in Pakistan.

#### IV. Conclusion and Policy Implications

Crime and crime policy have become the main ingredient of the public policy. There has been different kind of punishments inflicted on convicted criminals in the history of mankind like: death, torture, fines, imprisonment, banishment, restrictions on movement and occupation, and loss of citizenship are some of common punishments. The politicians, policy makers, law enforcement officers and the general public try to find the appropriate approaches for controlling crime. There is widespread perception that crimes can be decreased with the help of punishment policies, zero tolerance, increasing the tenure, putting tough conditions of imprisonments and high frequency of detention. This study is an effort to investigate the impact of punishment policies in controlling crimes in Pakistan using time series annual for the period 1981- 2016 by applying Auto Regressive Distributed Lag (ARDL) model.

The results of the study reveal very interesting feature of the punishment policies particularly use of torture, extrajudicial killing, and disappearances as they incite more crimes rather than controlling them. Furthermore, political imprisonments are found helpful in reducing crimes. Independence of Judiciary has no significant role in controlling crimes in Pakistan. This calls for the need to address the root cause of crime. For this purpose effective policy measures are needed for the accountability of politicians and the introduction of reforms in police department and judicial system on priority basis. The study suggests that government should discontinue extrajudicial killings and avoid torture policy in controlling crime.

The present government has realized that corruption in police department, lack of proper implementation of rules and regulations, interference of politicians in the functioning of system and introduction of inappropriate policies are the major root cause of most of the socioeconomic problems faced by Pakistan. The present government has planned to introduce the tremendous changes in the setup of the economy in near future. For making the institutions to work independently without influence of politicians, the government has prioritized to bring up reforms in bureaucracy and police department.

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