

# The Socioeconomic Determinants of Crime in Pakistan

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**Abstract :** *Crime is one of the major issues in Pakistan. It not only affects our society but also our economy. The main purpose of this study is showing the effects of socio-Economic factors such as Inflation, Population, income and economic growth to crimes. For this purpose we use secondary data and collected from Pakistan Bureau of Statistics and World Bank over 2006 to 2016. Correlation and regression analysis use to check the socio-economic effects on crimes. Results show negative relation of crime and economic growth. Government strives on economic growth, because it improves, crimes reduce gradually.*

**Keywords :** *crimes; socio-economic factors; economic growth; correlation; regression*

## I. Introduction

Criminal activities have immensely affected on economic activities. Diaw, Lobonț, & Moldovan, [2014] shows the relationship between economic condition and crime. Crimes always create harmful disaster for society. In other sense, crime means simply anti-social activities which create disturbance in society. Financial crime started with Becker [1968] investigation, which create the link with criminology [Buonanno, 2003].

Merton [1938] proposed that crimes set the goals of financial satisfaction. Some researchers indicate that distribution of wealth unfairly leads the crimes [Brush, 2007]. The scenario of one country is differ to other country. So Alexandros [2010] say that crime consistently rise in develop and eurpion nations, the agenda behind are financial benefits by chosing the legal and antilegal stratgies.

According to above descussion we can say that illegal financial gain is one of the prominent factor of crime. It can be mediate by understanding the behavior of individual. This study shows the relationship of crimes with inflation and houshold income of Pakistan prospective.

According to Khan, Ahmed, Nawaz, & Zaman [2015] study, crime growth rate in 1958 was 6.02, in 1961, crime growth rate deciline at-1.51. but it increase positivly except in 1981 and 2000 where crime growth rate was -8.53 and -9.94 respectviely. Their findings show the negative relation of education but the education of over earning can lead to crimes in pakistan. Moreover there is direct relation between crimes and poverty. Now present study shows the relationship of crime with inflation, economic growth and houshold income over 2006-2015.

The debate on the relation of crimes with economic activies is limited due to some kinds of confusion [Ishikawa, 2009]. But the study of Kustepli, [2006] edovear to take more illegal financial activites with the context of crimes. Increasing crime rate has creates serious problem for all the stakholders in pakistan. So, the contentions points of this study are litratrue review, methodology, result and conclusion respectively.

## II. Review of Literature

There are immunesly litrature available for explaining the econominc factors leads to crimes in all over the world. Becker [1968] and Ehrlich [1973] work shows the more crime accur due to financial matters and unemployment. According to them, when individual income decrease financial situation is adverse over the ordinary time and this situation

adversally affect on the society and thus, crime increase. Corman [1987] studies the relationship among social, economic, administrative and personal related crimes. Result shows not as strong connection between unemployment and crimes. But, social variable is closely connected with crimes in new York.

Elliot [1992] conduct study by using primary data for checking British crime with respect to unemployment. Regratision analysis prove the positive relation of unemployment and crimes in British. Entrof [1998] shows the crime rate in germany and conclude that demographic factors contribute in crimes. According to study, East germany is more vulnarable than west germony due to income effect. Cerro & Meloni [2000] conduct research in argentina and conclude that, income level and unemployment have strongly associate with crime rate in argentina.

Fajnzylber, Laderman, & Loayza [2002] examine over 39 countries by taking income inequality as a variable and conclude that, income inequality and crime rates are strongly associated with each other. Gumus [2004] check the crime rate and its relation with urbanization by choosing simple correlation and regression. Analysis shows that, economic factors such as income and per capita income are play an important role in crime rates of United State of America. Buonanno [2003] check the relationship of education and crime in Italian religos and prove that there are adverse relationship of variables.

Saridakis [2004] say that there are no such a long relationship between socio – economic factor and crimes, but in short run, it can affect on crime. According to Edmark [2005] opinion, unemployment has vast contribution in crimes and show the positive connection between the variables. Buonanno & Montolio [2008] say that governament policies and ambasidors have positive link with crime rates in spanish. According to Baharom & Habibullah [2009] there is no such a long time relation between variables So, according to above studies, income is one of the more prominent factor which affect on crime.

Lobonț, Nicolescu, Moldovan, & Kuloğlu [2017] explain the inflation and economic growth are important ingrediants of crime.

Alexandros [2010] also show the inverse relation between economic crisis and crime rate. In case of Boom crimes rate are decrease, but in depression days the probability of crime increase as compare to ordinary days. So according to above studies, income is one of the more prominent factor which affect on crime. this study not only check the relation ship between income and crime but also investgate the relationship between inflation and economic growth with the context of crimes. Because when inflation increase, its affect on the purchasing power of individual so the new hypothesis generated that inflation has positive relation with crimes.

### III. Method

#### 3.1 Data collection

This study covers the data for the period of 2006-2016. Data collected from secondary sources which was available related to study. Data related to crimes is take from Pakistan beaur of Statistics, and data related to Inflation, economic growth, Population and National income take from world bank.

Crime rates can be find by using following equation

$$\text{Crime Rate} = \frac{\text{T.C.R}}{N} * 10000$$

T.C.R = Total Crimes Reported

N = Population [10000 per]

**Table 1.** Data use in this study

	<b>Crime</b>	<b>Population</b>	<b>Net Income</b>	<b>Inflation</b>	<b>GDP per capita growth</b>
2006	33.36455	2.047845535	6.197956809	7.921084	4.025302468
2007	32.69496	2.040843253	3.323912392	7.598684	2.715027687
2008	35.285	2.044428121	4.708225462	20.28612	-0.356696773
2009	36.88887	2.05936331	-0.02874204	13.64777	0.735637493
2010	38.3022	2.079755347	6.077033111	13.88114	-0.484655809
2011	38.6803	2.102552508	3.113748187	11.91677	0.610616229
2012	36.36077	2.1172688	4.370521609	9.685053	1.338548629
2013	34.91249	2.113986943	2.729039553	7.689504	2.212692738
2014	33.79836	2.087792429	4.705752968	7.191671	2.511972625
2015	33.45645	2.045407255	6.114417354	2.539516	2.610728514
2016	35.06945	1.998562594	6.313411588	3.752596	3.384636674

### 3.2 Theoretical framework

In this study, according to Lobonț, Nicolescu, Moldovan, & Kuloğlu [2017] we use one dependent variable [crimes] and remaining are independent variables [Population growth, net income, inflation and economic growth].

Based on our data we can define as:

crime = f [Population, Net National Income, Inflation, Economic growth]

And for regression  $Y = a + bX$

### 3.3 Methodology

According to our purpose we use simple methodology which was adopted by Elliot [1992] and Gumus [2004].

So in this study we will use correlation and Regression analysis which are easily use and understandable. Following equations are use for correlation and regression respectively.

## IV. Discussion

**Table 2.** Correlation

	<b>Crime</b>	<b>Population</b>	<b>Net Income</b>	<b>Inflation</b>	<b>GDP per capita growth</b>
Crime	1				
Population	0.423441	1			
Net Income	-0.26626	-0.34427	1		
Inflation	0.53414	0.198655	-0.32639	1	
GDP per capita growth	-0.75953	-0.35968	0.298991	0.83678	1

Above table shows the correlation between all variables. According to analysis, there is positive correlation between crime and population growth. Net income and crime see to be negative correlation, there is also negative correlation between net income and population growth, according to analysis, we show positive correlation between inflation, crimes and population. GDP of per capita growth showing negative relation with respect to crimes and population. But, shows positive correlation net income and inflation rate of Pakistan.

**Table 3. Regression Statistics**

Multiple R	0.792593
R Square	0.628204
Adjusted R Square	0.380341
Standard Error	1.583293
Observations	11

Above table shows the Multiple R shows the data put on the regression line, so 0.628204 data come on the line. Adjusted R square show the result after adjusting all the probabilities. Standard error value shows 1.58 in the table of 11 observations.

**Table 4. Anova**

	df	SS	MS	F	Significance F
Regression	4	25.41384	6.353461	2.534474	0.148252
Residual	6	15.0409	2.506816		
Total	10	40.45474			

Anova table shows regression results and residual values with respect to degree of freedom, sum of square and Means Square. Moreover f test shows the 2-53 value 5f square of both regression and residual value are 40.45474.

**Table 5. Coefficients**

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	24.46571	33.9075	0.721543	0.497717	-58.5029	107.4344	-58.5029	107.4344
Population	7.001788	15.72936	0.445141	0.671827	-31.4866	45.49015	-31.4866	45.49015
Net Income	-0.03649	0.285629	-0.12775	0.902524	-0.7354	0.66242	-0.7354	0.66242
Inflation	-0.12112	0.189233	-0.64007	0.545779	-0.58416	0.341915	-0.58416	0.341915
GDP per capita growth	-1.29118	0.658747	-1.96006	0.097688	-2.90308	0.320715	-2.90308	0.320715

According to above table, crime and population shows the positive relation and net income, inflation and per capita growth shows the negative relation with respect to crimes. T test of all variables are less than 2 except GDP per capita growth and p value also show the significance relationship between GDP and crimes. So above result prove that there is negative relation between GDP per capita growth and crimes.

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## IV. Conclusion

The main purpose of this study is to find the relationship of socio-economic factors. In this study dependent variable was crime rate and independent variables were population growth, inflation, national income and economic growth.

So here we reject the [Cerro & Meloni 2000] and accept the Gumus [2004] and Saridakis [2004] results, because crime and economic growth has strong relation between them, population has positive relation with crime and inflation and income has negative relations in short run. Due to t value which is less than 1.9 and p value shows more than 0.05 of all variables except economic growth. So we can say there are no long run relationships of inflation, national income and population but economic growth. Economic growth shows the inverse relation with crime. So, when the crime increase economic growth declines this is unfavorable situation for the country.

So, we can minimize this curse by adopting appropriate strategy for economic growth.

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