



Impact of Crimes on Economic Growth of Pakistan, Bangladesh and India using individual and Panel Data

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Abstract

The purpose of this research paper is to study the detailed dynamics of economic and financial crimes of Pakistan, Bangladesh and India. Our econometric modelling focuses on the impact of the vector of financial and economic crime proxies upon economic growth of Pakistan, Bangladesh and India using data of individual country and then Panel data. In accordance with the reviewed literature, for our sample of south Asian countries, Crime (corruption and shadow economy) have a negative effect upon the vector of development proxies (Economic growth). I have estimated the relationship between GRP and CRP, GRB and CRB and GRI and CRI. I have then estimated the relationship between CRP, with, YURP and INFP, Similarly I have estimated the relationship between CRB with INFB, YURB. Similarly, I have estimated the relationship between CRI, with INFRI, YURI. Finally, I have estimated GR with CR using panel data. Then I estimated CR with INFR and YUR. Governmental policies on economic prosperity and societal wellbeing should focus on reducing corruption and shadow economy, in order to favour benefits in the field of economic development. World bank data denotes crime rate as economic and financial crimes.

Keywords: *crime rate (CR), gross domestic product (GR), Inflation rate (INFR), Youth Unemployment Rate YUR), Panel Data.*



Introduction

The economic development of a country depends largely on the economic structure and its characteristics. Economic growth is defined as an increase in the real income of the population. The ratio of people's income with the prices of things they can buy is increasing. Goods and services will be cheaper, and poverty will be less. Economic planning enables the modern world to achieve the goal of self-development, self-determination and self-fulfillment. Economic development is a multifaceted process significantly influenced by the structural and institutional characteristics of a country (Siddiqui, 2020). A key aspect of development is economic growth, which is often defined as an increase in the real income of the population, leading to improved standards of living, reduced poverty, and enhanced access to goods and services (Chakraborty & Mukherjee, 2021).

The goal of poverty reduction can be achieved through economic growth, which creates the foundations for investment in economic growth. Proper investment in people and strategic plans play an important role, as is the status of society and the country for growth and development. The economic crisis is caused by poor social security and criminal activities. Crime exacerbates social inequality. Crime is something that cannot be tolerated in a civilized society. Economic crime is often associated with another concept - corruption. Corruption has different meanings. Each definition describes a different dimension of the phenomenon under study to facilitate monitoring and follow-up. Effective economic planning and strategic investment in human capital and infrastructure are crucial for achieving sustainable development and poverty reduction (Khan & Ahmed, 2022). However, economic growth in developing countries is frequently undermined by economic and financial crimes, particularly corruption and the shadow economy (Alam & Malik, 2021).

The first definition concerns public morality. Corruption is defined here as the underlying disorder in the public and private spheres. Another view links the problem of corruption to the lack of transparency of the state, either in the form of limiting access to public information or clarifying the contractual options of individual companies. Then came the goods and services, but we, as an organization, insisted on a third interpretation.

Corruption is one of the many aspects of economic crime, a complex and widespread crime. Therefore, we focus not only on crimes committed by the public sector, but also on crimes



committed by economic actors in the private sector. Economic crime is often confused with another concept - corruption. The concept of corruption has several definitions.

Each definition highlights different dimensions of the phenomenon under study that influence the analysis and subsequent actions to be taken. The first definition focuses on general ethics.

Corruption is defined here as the moral confusion between the public and private spheres.

The second point of view links the problem of corruption to the lack of state transparency, either in the form of restricting access to public information, or in the form of clarifying contractual options for individual companies. Corruption diverts resources from productive uses, undermines public trust in institutions, and creates an uneven playing field that discourages investment (Siddiqui, 2020). In South Asia, countries like Pakistan, Bangladesh, and India face significant challenges in combating economic crimes, which pose a substantial barrier to their economic development (Alam & Malik, 2021; Banerjee & Sarkar, 2022; Chakraborty & Mukherjee, 2021; Khan & Ahmed, 2022).

Then in the area of goods and services, there is also a third interpretation that we seek as an organization. Corruption is one of many aspects of complex and widespread economic crime. Therefore, we focus not only on crimes committed in the public sector, but also on crimes committed by economic actors in the private sector. Economic crime is often confused with another concept, corruption. The concept of corruption has different definitions.

Each definition highlights different dimensions of the phenomenon under investigation that influence the analytical and monitoring procedures to be performed. The first definition focuses on public morality. Here, corruption is defined as the moral confusion between the public and private spheres.

Another view links the problem of corruption to a lack of government transparency, either in the form of limiting access to public information or in the form of clarifying the contractual terms of individual companies. Subsequently in the area of products and services, but there is also a third explanation that we support as an organization. Corruption is one of the many forms of crime and business violence. Our attention is therefore focused not only on crimes in the public sector, but also on crimes committed by business organizations in the private sector.

Business crime is often confused with another concept - corruption. The concept of corruption has many meanings. Each topic highlights a different aspect of the audit output that is relevant to the analysis and assessment of compliance requirements.



The first definition refers to public morals. Here, corruption is defined as a conflict between the public and private spheres. Another perspective linked the issue of corruption to the state without consent, even in the form of restrictions on access to public information, or in the form of clarity on the ability of private companies to contract. Then in the area of products and services, there is also a third explanation that we promote as an organization.

Corruption is one of many elements of complex and widespread economic crime. Our focus is therefore limited not only to crimes committed in the public sector, but also to crimes committed by commercial actors in the private sector.

Economic crime is often confused with another concept – corruption. The term "corruption" has various definitions. Each definition highlights different aspects of the phenomenon being studied that influence the analysis and subsequent actions that need to be taken. The first definition focuses on public morality. Corruption is defined here as moral confusion in the public and private spheres. Another view links the problem of corruption to the government's lack of transparency, either in the form of limiting access to public information or in the form of explaining the contractual possibilities of individual companies.

This study aims to explore the impact of economic and financial crimes on the economic growth of Pakistan, Bangladesh, and India. Using both individual country data and panel data analysis from 1990 to 2020, we investigate how corruption and the shadow economy influence economic growth. We specifically examine crime rates (CRP for Pakistan, CRB for Bangladesh, and CRI for India) and their interactions with youth unemployment rates (YUR) and inflation rates (INFR). Our goal is to provide empirical evidence on the detrimental effects of economic crimes and offer policy recommendations to mitigate these issues.

Literature Review

The literature on corruption and its impact on economic growth in developing countries presents different perspectives and findings. This section consolidates the existing research into thematic groups to provide a clearer understanding of how economic crimes influence growth, particularly in South Asia. The literature on corruption (Crime) and its impact on economic growth in developing countries presents different perspectives and findings. Mauro (1995) examines the relationship between corruption (Crime) and economic growth and suggests that higher levels of corruption are associated with lower economic growth. They support this position Gupta et al.



(2002), who argue that corruption exacerbates income inequality and poverty, thereby hampering global economic development.

Tanzi and Davoudi (2001) provide information on the relationship between corruption, public finance and economic growth. They believe that corruption changes the priorities of public spending, harms revenue and lowers investor confidence, which has a negative impact on economic growth. Similarly, Ades and Di Tella (1997) highlight the negative impact of corruption on business, showing its significant impact on business, investment and productivity.

In contrast, Rose-Ackerman (1999) presents a nuanced view of corruption, noting its harmful effects on management and the economy, but also its role in lubricating the process and including training activities. However, Rose-Ackerman emphasizes the importance of distinguishing between "coarse" and "fine-grained" corruption, because the former can contribute to economic growth under certain circumstances. Overall, the book presents the complex relationship between corruption and economic growth, highlighting the need for targeted policy measures to prevent corruption and promote good governance in developing countries. By addressing school weaknesses, increasing awareness and accountability, and promoting a culture of integrity, policymakers can reduce the negative effects of corruption and create an enabling environment for economic development.

The literature on corruption and its impact on economic growth and development provides valuable insight into the multifaceted nature of this phenomenon. Mauro (1995) finds a negative relationship between corruption and economic growth, showing that corruption harms investment, changes the allocation of capital, and undermines confidence in businesses. Similarly, Gupta et al. (2002) shows the negative effects of corruption on income inequality and poverty, which increases socioeconomic inequality and efforts to reduce poverty.

Tanzi and Davoudi (2001) discuss the complex relationship between corruption, public finance and economic growth, and show how corruption can divert important financial resources, reduce to government revenue and undermine financial stability. Ades and Di Tella (1997) provide more information on the economic impact of corruption, emphasizing its negative impact on investment, productivity and market competition.

Rose-Ackerman (1999) takes a relational approach to corruption, distinguishing between 'fat' and 'corruption', and shows the complex relationship between corruption, governance and economic



activity. Bardhan (1997) provides a comprehensive analysis of corruption and development issues, exploring the socio-economic, political and institutional factors that lead to corruption and undermine development outcomes.

Lambsdorff (2007) provides an institutional economics perspective on corruption, examining the role of institutions in shaping corrupt behavior and the potential for institutional reform to effectively prevent corruption. Dreher and Gassebner (2013) analyze the impact of law and corruption on the integration of companies into the market and clarify the impact of the business environment on entrepreneurial activity.

Also, Swamy et al. (2001) examine the gender dimension of corruption, revealing how gender differences in access to resources and decision-making power are related to corruption. Treisman (2007) conducts a cross-national empirical study of the causes of corruption, identifying the social, political and institutional factors that contribute to corruption in the country.

In general, literature emphasizes the complex and multifaceted nature of corruption and its profound implications for economic development, governance and social equality. By addressing underlying institutional weaknesses, promoting transparency and accountability, and fostering a culture of integrity, policymakers can reduce the negative effects of corruption and create an enabling environment for development.

Svensson (2005) provides a comprehensive analysis of corruption and asks eight basic questions to increase understanding of this complex phenomenon. Drawing on empirical evidence and theoretical perspectives, Svensson examines the economic, political and social dimensions of corruption and presents its causes, consequences and potential consequences.

Building on Huntington's work on politics (1968), Banerjee and Sumanathan (2001) developed a simple voice model to shed light on the ways in which citizens can control governments in accountability and the fight against corruption. work and professional regulation to increase awareness and responsibility.

Pellegrini and Gerlagh (2008) study the effect of corruption on economic growth and its transmission and show that corruption reduces productivity, changes the distribution of resources and limits investment. They emphasize the need for policy measures to respond to economic weaknesses, promote good governance and create an active environment for sustainable development.



Paldam (2002) provides insight into the field of corruption, exploring the economic, social and organizational factors that contribute to the effects of corruption. Mocan and Azad (2003) extend this analysis to the sub-country level, examining the impact of corruption on foreign direct investment (FDI) in China and showing the responsibilities of good governance and the capacity to build capital.

Rose-Ackerman and Palifka (2016) provide a comprehensive analysis of corruption and governance, synthesizing theoretical insights, empirical evidence, and policy recommendations. Kaufmann and Wei (1999) examine the role of "grease of money" in facilitating trade transactions, and Wei (2000) examines the impact of corruption on international investors, emphasizing the importance of transparency and regulatory quality.

Finally, Shleifer and Vishny (1993) provide a groundbreaking analysis of corruption, examining its economic implications and the role of institutions in combating corruption. Their work underscores the importance of institutional reforms, law enforcement, and political accountability in fighting corruption and promoting economic development.

Taken together, the literature on corruption provides valuable insights into the causes, consequences, and policy responses to this pervasive challenge. By closing institutional gaps, promoting transparency and accountability, and promoting civic participation, policymakers can reduce the harmful effects of corruption and create an environment for sustainable development. The literature on corruption and its impact on economic growth and development provides valuable insight into the multifaceted nature of this phenomenon. Mauro (1995) finds a negative correlation between corruption and economic growth and emphasizes how corruption harms investment, distorts the allocation of resources and reduces public trust in institutions. Similarly, Gupta et al. (2002) points to the harmful effects of corruption on income inequality and poverty, increasing socio-economic inequalities and hindering efforts to reduce poverty.

Tanzi and Davoodi (2001) delve into the complex relationship between corruption, public finances and economic growth, explaining how corruption distorts fiscal priorities, reduces government revenues, and undermines fiscal stability. Ades and Di Tella (1997) provide deeper insight into the economic consequences of corruption, highlighting its negative impact on investment, productivity, and market competition. Several studies have established a negative correlation between corruption and economic growth. Mauro (1995) finds that corruption reduces



investment and economic growth by distorting the allocation of resources and undermining trust in institutions. Similarly, Gupta et al. (2002) argue that corruption exacerbates income inequality and poverty, thereby hindering economic development. Tanzi and Davoodi (2001) highlight the detrimental effects of corruption on public finance and economic growth, showing how it distorts fiscal priorities and reduces government revenue. Ades and Di Tella (1997) further emphasize the negative impact of corruption on business investment and productivity.

Rose-Ackerman (1999) takes a nuanced approach to corruption, distinguishing between 'thick' and 'granular' corruption and emphasizing the complex interaction between corruption, governance and economic performance. Bardhan (1997) provides a comprehensive review of corruption and development issues, examining the socio-economic, political and institutional factors that promote corruption and hinder development outcomes. Lambsdorff (2007) provides an economic perspective on corruption, looking at the role of companies in creating corrupt behavior and the ability to change companies to effectively fight corruption. Dreher and Gassebner (2013) analyze the impact of regulation and corruption on a company's market entry, explaining the impact of corporate governance on business performance.

Also, Swamy et al. (2001) examine the gender aspects of corruption, showing how gender differences in access to resources and decision-making power interact with the dynamics of corruption. Treisman (2007) summarizes international empirical research on the causes of corruption, identifying socioeconomic, political and institutional factors that contribute to the prevalence of corruption in different countries.

Overall, the book highlights the complex and multidimensional nature of corruption and its long-term consequences for economic development, governance and social justice. By addressing institutional deficiencies, strengthening transparency and accountability, and promoting a culture of integrity, decision-makers can mitigate the negative effects of corruption and create an environment suitable for sustainable development.

Svensson (2005) provides a comprehensive analysis of corruption and asks eight basic questions to deepen the understanding of this complex phenomenon. Drawing on empirical evidence and theoretical perspectives, Svensson explores the economic, political and social dimensions of corruption, sheds light on its causes, consequences and possible remedies.



Building on Huntington's seminal work on political order, Banerjee and Somanathan (2001) develop a simple model of voice to illuminate the mechanisms by which citizens can hold governments accountable and fight corruption. Their model emphasizes the importance of civic engagement, collective action, and institutional reforms in promoting transparency and accountability.

Pellegrini and Gerlagh (2008) study the effect of corruption on economic growth and its mediation and show how corruption has a positive effect, hinders the allocation of resources and affects investments. They emphasize the need for specific interventions to address institutional weaknesses, promote good governance and create an enabling environment for sustainable development.

Paldam (2002) provides information on patterns of transnational corruption, exploring the economic, cultural and institutional factors that contribute to the dynamics of corruption. Mocan and Azad (2003) extend this analysis to the sub-country level, examining the impact of corruption on the location of foreign direct investment (FDI) in China and taking into account managerial accountability and business capabilities.

Rose-Ackerman and Palifka (2016) provide a comprehensive overview of corruption and governance, combining theoretical insights, empirical evidence, and policy recommendations. Kaufmann and Wei (1999) examine the role of "grease money" in facilitating commercial transactions, while Wei (2000) examines the impact of corruption on international investors and emphasizes the importance of regulatory transparency and quality.

24 Finally, Shleifer and Vishny (1993) provide a rudimentary analysis of corruption and examine its economic consequences and the role of institutions in the fight against corruption. Their work underscores the importance of institutional reform, law enforcement, and political accountability in fighting corruption and promoting economic development.

Taken together, the literature on corruption provides valuable insights into the causes, consequences, and policy responses to this pervasive challenge. By closing institutional gaps, promoting transparency and accountability, and promoting civic participation, policymakers can reduce the harmful effects of corruption and create an environment for sustainable development.



Data and Methodological Framework

The study implies annual observations for the period of 1972-2011. The data set of unemployment rate and GDP per capita is obtained from *World Development Indicators* published by the World Bank (2012). The series of crime rates which capture murders, kidnapping, dacoits, robberies, burglaries, theft, and attempted murders and the data set of higher education enrollment rates which is the outline of professional college enrollments, arts & science college enrollments and university enrollments are both taken from various issues of GoP reports. Base-line for poverty which is measured by head count ratio is derived from GoP (2012), where 2,350 Calories are mentioned as cut-off point. The latest estimate of inflation-adjusted poverty line is Rs.944.47 per adult equivalent per month, up from Rs.878.64 in 2004-05. Same parameter estimates are used for ready reference in this study.

Theoretical Background

Based on the related review of literature, our model for empirical analysis can be defined as:

$$CR = f(INF, \text{ and } YUR)$$

Were,

CR represents crime rates in numbers.

INF Inflation rate of Pakistan, Bangladesh and India

YUR represents youth unemployment rate of Pakistan, Bangladesh and India

Econometric Methodology

Comparable to all other techniques, which utilize time series data, it is essential to distinguish that unless the diagnostic tools used account for the dynamics of the link within a sequential 'causal' framework, the intricacy of the interrelationships involved may not be fully confined. For this rationale, there is a condition for utilizing the advances in time-series version.

Research Methods

This study employs econometric models to analyze the impact of economic and financial crimes on economic growth in Pakistan, Bangladesh, and India (Gujarati & Porter, 2009). We utilize panel data analysis techniques to estimate the relationships between the variables (Hsiao, 2003). The panel data analysis allows us to control unobserved heterogeneity across countries and over time (Baltagi, 2008). Using Econometric model, we have estimated the relationship between Crime Rate and Economic growth, using first individual data of Pakistan, Bangladesh and India,



and then, using panel data from 1990 to 2020.....Quantitative methods is the suitable method to estimate the model, using published data. Direct and Indirect relationships are being used. I established the relationship between Growth rate of GDP of Pakistan, Bangladesh and India, and Crime rate of the mentioned countries. Then I used indirect method, i.e., Crime rate depends on Inflation rate and Youth Unemployment rate of Pakistan, Bangladesh and India. GR is a function of Crime rate, and then Crime rate is a function of Inflation rate and youth unemployment rate.

Data Source

The data used in this study spans the period from 1990 to 2020 and are sourced from reputable international databases and national statistical agencies:

- World Bank: For data on GDP growth rates, foreign direct investment, trade openness, and inflation rates.
- Transparency International: For data on corruption perceptions and related metrics.
- National Statistical Agencies: For detailed crime statistics, youth

Data Analysis

Table 1:
 Dependent Variable: GRP
 Method: Least Squares
 Date: 01/17/24 Time: 09:15
 Sample: 1990 2020
 Included observations: 26.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.722597	1.915620	2.465310	0.0212
CRP	-0.136092	0.303295	-0.448712	0.6577
R-squared	0.008319	Mean dependent var		3.880500
Adjusted R-squared	-0.033001	S.D. dependent var		1.927493
S.E. of regression	1.959039	Akaike info criterion		4.256588
Sum squared resid	92.10798	Schwarz criterion		4.353365
Log likelihood	-53.33565	Hannan-Quinn criter.		4.284456
F-statistic	0.201343	Durbin-Watson stat		0.943194
Prob(F-statistic)	0.657665			

$$GRP = \beta_0 + \beta_1 CRP + \varepsilon$$

$$GRP = 4.7 - 0.13 CRP + \varepsilon$$

(-0.44) “t” value is in Parenthesis.



Table 2:

Dependent Variable: CRP

Method: Least Squares

Date: 01/17/24 Time: 09:17

Sample: 1990 2020

Included observations: 26.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	6.263175	1.159851	5.399981	0.0000
INFP	0.066774	0.039742	1.680202	0.1071
YURP	-0.305225	0.086012	-3.548634	0.0018
PGP	0.154078	0.380713	0.404709	0.6896
R-squared	0.663880	Mean dependent var	6.187692	6.187692
Adjusted R-squared	0.618046	S.D. dependent var		1.291837
S.E. of regression	0.798387	Akaike info criterion		2.528191
Sum squared resid	14.02327	Schwarz criterion		2.721744
Log likelihood	-28.86648	Hannan-Quinn criter.		2.583927
F-statistic	14.48429	Durbin-Watson stat		0.461959
Prob(F-statistic)	0.000020			

$$CRP = \beta_0 + \beta_1 INFP + \beta_2 YURP + \varepsilon$$

$$CRP = 6.26 + 0.06 INFP - 0.3 YURP + \varepsilon$$

$$(1.68) (-.03)$$

“t” value is in Parenthesis.

Table 3

Dependent Variable: GRB

Method: Least Squares

Date: 05/18/24 Time: 10:06

Sample (adjusted): 2000 2018.

Included observations: 19 after adjustments.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	9.902577	2.614805	3.787119	0.0015
CRB	-1.484049	0.986246	-1.504745	0.1507
R-squared	0.117537	Mean dependent var		5.980000
Adjusted R-squared	0.065627	S.D. dependent var		0.921665
S.E. of regression	0.890909	Akaike info criterion		2.706151
Sum squared resid	13.49322	Schwarz criterion		2.805566
Log likelihood	-23.70844	Hannan-Quinn criter.		2.722976
F-statistic	2.264258	Durbin-Watson stat		0.637520
Prob(F-statistic)	0.150742			

$$GRB = \beta_0 + \beta_1 CRP + \varepsilon$$

$$GRB = 9.9 - 1.48 CRP + \varepsilon \quad (-1.5)$$

“t” is – 1.5, which is less than 2, so it is insignificant as number of observations are less, i.e. sample size is small.

“t” value is in Parenthesis.



Table 4:

Dependent Variable: CRB

Method: Least Squares

Date: 01/17/24 Time: 09:21

Sample (adjusted): 2000 2018.

Included observations: 19 after adjustments.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.917467	0.663752	5.902001	0.0000
INFB	-0.022632	0.030099	-0.751902	0.4637
PGB	-0.263959	0.210366	-1.254759	0.2288
YURB	-0.085544	0.032241	-2.653248	0.0181
R-squared	0.346789	Mean dependent var		2.643158
Adjusted R-squared	0.216147	S.D. dependent var		0.212918
S.E. of regression	0.188508	Akaike info criterion		-0.314693
Sum squared resid	0.533027	Schwarz criterion		-0.115863
Log likelihood	6.989579	Hannan-Quinn criter.		-0.281043
F-statistic	2.654496	Durbin-Watson stat		1.515555
Prob(F-statistic)	0.086274			

$$CRB = \beta_0 + \beta_1 INFB + \beta_2 PGB + \beta_3 YURB + \varepsilon$$

$$CRB = 3.9 - 0.02 INFB - 0.08 YURB + \varepsilon \quad (0.75) \quad (2.65)$$

“t” value is in Parenthesis.

“t” for YURB is 2.65, it is more than 2, so it is significant.

“t” for INFB is 0.75, which is less than 2, so it is insignificant.

Table 5

Dependent Variable: GRI

Method: Least Squares

Date: 01/17/24 Time: 09:23

Sample: 1990 2020

Included observations: 31.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.546901	2.943625	1.884378	0.0696
CRI	0.070862	0.708094	0.100075	0.9210
R-squared	0.000345	Mean dependent var		5.836774
Adjusted R-squared	-0.034126	S.D. dependent var		2.870495
S.E. of regression	2.919063	Akaike info criterion		5.042743
Sum squared resid	247.1069	Schwarz criterion		5.135259
Log likelihood	-76.16252	Hannan-Quinn criter.		5.072901
F-statistic	0.010015	Durbin-Watson stat		1.104228
Prob(F-statistic)	0.920973			

$$GRI = \beta_0 + \beta_1 CRI + \varepsilon$$

$$GRI = 5.54 + 0.07 CRI + \varepsilon \quad (0.10)$$

“t” value of CRI is 0.10, which is less than “2”, so it is insignificant.

t’ value is in Parenthesis.



Table 6:

Dependent Variable: CRI

Method: Least Squares

Date: 01/17/24 Time: 09:25

Sample: 1990 2020

Included observations: 31.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.045046	0.569961	-0.079034	0.9376
INFI	0.040256	0.007851	5.127600	0.0000
PGI	2.171243	0.211243	10.27844	0.0000
YURI	0.020692	0.014326	1.444369	0.1601
R-squared	0.974485	Mean dependent var		4.090645
Adjusted R-squared	0.971651	S.D. dependent var		0.752648
S.E. of regression	0.126726	Akaike info criterion		-1.173669
Sum squared resid	0.433604	Schwarz criterion		-0.988638
Log likelihood	22.19187	Hannan-Quinn critter.		-1.113354
F-statistic	343.7400	Durbin-Watson stat		1.448605
Prob(F-statistic)	0.000000			

$$CRI = \beta_0 + \beta_1 IFRI + \beta_2 PGI + \beta_3 IYURI + \varepsilon,$$

$$CRI = -0.04 + 0.04 IFRI + 0.02 YURI + \varepsilon \quad (5.12) \quad 1.44$$

t' value is in Parenthesis.

“t” value of INFRI is 5.12, which is more than “2”, so it is significantly related to CRI. “p” value is 0.00, it also verifies the significant relationship.

For Panel data: 1991—2020 of Pakistan, Bangladesh and India

Table 7:

Dependent Variable: GR

Method: Panel Least Squares

Date: 01/17/24 Time: 09:31

Sample: 1991 2020

Periods included: 30. Cross-sections included: 3.

Total panel (unbalanced) observations: 74

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.412289	0.768928	9.639774	0.0000
CR	-0.501311	0.164203	-3.053000	0.0032
R-squared	0.114618	Mean dependent var		5.209095
Adjusted R-squared	0.102321	S.D. dependent var		2.410262
S.E. of regression	2.283625	Akaike info criterion		4.516061
Sum squared resid	375.4760	Schwarz criterion		4.578333
Log likelihood	-165.0942	Hannan-Quinn critter.		4.540902
F-statistic	9.320806	Durbin-Watson stat		0.935634
Prob(F-statistic)	0.003173			

$$GR = \beta_0 + \beta_1 CR + \varepsilon,$$

$$GR = 7.41 - 0.50 CR + \varepsilon \quad (-3.05)$$



t” value is in Parenthesis.

t” value is in Parenthesis.

“t” value of CR is -3.05, which is more than “2”, so it is significantly related to GR. “p” value is 0.003, it also verifies the significant relationship between GR and Crime Rate, which is negative.

It implies, as crime rate increases, Growth rate of GDP declines and vice versa.

Table 8

Dependent Variable: CR

Method: Panel Least Squares

Date: 01/17/24 Time: 09:37

Sample: 1991 2020

Periods included: 30.

Cross-sections included: 3.

Total panel (unbalanced) observations: 74

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.478984	0.720629	0.664675	0.5084
INFR	0.122100	0.043018	2.838306	0.0059
PGR	2.030156	0.267476	7.590040	0.0000
YUR	-0.037745	0.020289	-1.860348	0.0670
R-squared	0.655658	Mean dependent var		4.394865
Adjusted R-squared	0.640901	S.D. dependent var		1.627732
S.E. of regression	0.975416	Akaike info criterion		2.840634
Sum squared resid	66.60060	Schwarz criterion		2.965178
Log likelihood	-101.1034	Hannan-Quinn criter.		2.890316
F-statistic	44.42880	Durbin-Watson stat		0.217907
Prob(F-statistic)	0.000000			

$$CR = \beta_0 + \beta_1 INFR + \beta_2 YUR + \varepsilon,$$

$$CR = 0.47 + 0.12 INFR - 0.03 YUR + \varepsilon \quad (2.83) \quad (-1.86)$$

t” value is in Parenthesis.

“t” value of INFR is 2.83, which is more than “2”, implies it is significantly related to CR, it is also verified with “p” value, which is 0.005.

“t” value of YUR is (-1.86), which is slightly equal to “2”, implies it is significantly related to CR, it is also verified with “p” value, which is 0.06.

Conclusion and Discussion

The criminal activities are hibernating day by day in the new millennium. Its basic aim is consistent to die out the social activities, spread over the terror, and kill the nourishing society.

The main objective of the study is to examine the factors or socio-economic variables which are more responsible for increasing and decreasing crimes rate in developing countries like,



Pakistan, Bangladesh and India. The foremost conclusion of the study induces a positive relationship between the crimes rate and unemployment. Higher unemployment diminishes the rate of return of legal activities and is more likely to increase return of illegal activities. Hence unemployment is one of the major contributing factors of the high crime rates in developing countries like Pakistan, Bangladesh and India. The other outcome is that there is a strong, significant and negative relation between the crimes rate and higher education. The pivotal outcome of the study evaluates that GDP growth rate leads to higher crimes rate. More income means that there are greater benefits for criminals as for thefts and robberies. It means that affluent areas attract more criminals due to the opportunities available to them. The last but not the least conclusion induce a positive relation between the crimes rate and poverty in the long-run but have negative relationship between both the variables in the short-run. In long-run, poverty can lead to high level of stress and mental illness which in turn causes individuals to adopt the criminal behavior.

From the above discussion, it has been acknowledged that socioeconomic factors are more likely to determine all types of crimes in Pakistan. In addition to that, results also suggest a main concern of policies for keeping crimes rate low, as well as a priority of policies for the improvement of economic conditions. In order to reduce the crimes rate, Pakistan government needs to create more job opportunities in urban and rural areas that may reduce the burden of unemployed people from the economy. Besides, the government of Pakistan should alleviate poverty through different projects and programs and also provide people with different opportunities of skill development. The government should focus on the security sector, notably police and law regulating authorities by enhancing their incentives, allowances and pay so they avoid bribery and perform their duties efficiently and sincerely. Law regulations and rules regarding crime punishment should be very strict and the implementation of these laws and regulations must be obligatory and very strict. The government of Pakistan should promote education in order to create awareness among people.



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