TERM PAPER SUMMARY: -

"HOW CRIME RATES ARE AFFECTED BY THE FINANCIAL DEVELOPMENT AND INEQUALITY IN INDIA – A CASE STUDY"

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ABSTRACT

This study is an attempt to understand how crime rates are affected by the Financial development and Inequality in India. The study uses cross section data of all States and UT's for the year 2011. Ordinary least square method was used to study 2 Models that may affect crime rate in India which are Financial Development and Inequality. It has been found that both Financial Development and inequality increase the Crime rate in the Economy. The study is consistent in proving that Good Economic Condition leads to people committing more Crime and higher Income gap among them acts as a pull factor for committing crime. Thus, the government should implement such policies that increase the inclusivity of people in the system which will increase their opportunity cost of committing crime.

INTRODUCTION

India is a highly diverse country with people from different backgrounds, education and income levels. These differences in their income and socio-economic level makes them more prone to committing crime as they want to equalize themselves with the higher income class. Crime in a country happens due to a lot of reasons which are either Solely based on Income level or due to difference in opportunities between different groups in terms of Social Class, family organization, Education level etc. It has been argued and assumed that as this Inequality in terms of Income and Opportunities increase, the opportunity cost of Committing a crime falls and the Crime rate in an Economy whether Violent crime or Non-Violent Crime Increases. Financial development of a nation measured by the banking sector acts a Cushion and make people less vulnerable to Losses in the future which should increase their opportunity cost of committing crime but this may or may not be true, as increasing access to income, credit implies more money in hand for committing a crime which may lead to increasing crime rate in the economy. Though the effect may be different for different crimes.

DATA AND METHODOLOGY

The data has been collected from Census Data, Planning Commission, EPW research Foundation etc. for all states and UT's for year 2011 except Telangana due to missing data. The study uses a cross section analysis to study the impact of Financial development on Crime rates and impact of Inequality on Crime Rates in India.

The variables used in the analysis are as follows: -

1.Violent crime rate in India. 2. Non-Violent crime rate in India. 3. Number of Bank Branches of all Scheduled Commercial banks. 4.Credit outstanding by all scheduled Commercial banks per 1,00,000. 5.Deposits in all Scheduled Commercial banks per 1,00,000. 6.GINI Coefficient. 7.Urban Population. 8. Workforce Participation rate. 9. Police Force (Civil Policemen) 10. Number of literates. 11. Poverty rate. 12. Power (Electricity) Availability in all States.

Ordinary least Square method with control variables is used in the study with various test for *Heteroscedasticity, Multicollinearity and Normality test* is done to ensure that data does not give any faulty results and satisfies the assumptions required to run the regression.

To check the skewness in the data whether left skewed or right skewed Gladder command was used and the variables were changed to Log format, square or cubic to correct the skewness in the variables.

To test whether Control variables were necessary to be used in the analysis correlation matrix between the variables used in Model 1 and 2-

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. corr VIO CRED DEPOSIT OFF POLICE URB LIT
(obs=35)

                 VIO      CRED   DEPOSIT       OFF    POLICE       URB       LIT

      VIO     1.0000
     CRED     0.0543    1.0000
  DEPOSIT    -0.4919    0.0530    1.0000
      OFF     0.8630   -0.0051   -0.3252    1.0000
   POLICE     0.9029   -0.0713   -0.3323    0.9457    1.0000
      URB    -0.4284   -0.3277    0.3908   -0.1945   -0.2436    1.0000
      LIT    -0.0519    0.1463    0.0619   -0.0270   -0.0690   -0.1101    1.0000
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ANALYSIS

Model 1 &2: -Overall Effect of Financial Development on Violent and Non-Violent Crime Rate in India

$$Ln\,VIO = \beta o + \beta 1 lnCRED + \beta 2 lnDEPOSIT + \beta 3 lnOFF + \beta 4 lnPOLICE + \beta 5 lnURB + \beta 6 lnLIT + e$$

$$Ln\,NONVIOL = \beta o + \beta 1 lnCRED + \beta 2 lnDEPOSIT + \beta 3 lnOFF + \beta 4 lnPOLICE + \beta 5 lnURB + \beta 6 lnLIT + e$$

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. regress VIO CRED DEPOSIT OFF POLICE URB LIT, robust

Linear regression                    Number of obs  =      35
                                     F(6, 28)       =   41.29
                                     Prob > F       =  0.0000
                                     R-squared      =  0.8865
                                     Root MSE       =   .1065

                    Robust
    VIO      Coef.   Std. Err.      t    P>|t|    [95% Conf. Interval]

   CRED   .1349723   .1180365    1.14   0.263   -.1068145   .3767591
DEPOSIT  -.0366294   .0185882   -1.97   0.059   -.0747055   .0014468
    OFF   .0011529   .0028286    0.41   0.687   -.0046412   .0069469
 POLICE   .0060138    .001623    3.71   0.001    .0026892   .0093384
    URB  -.0761381   .0372567   -2.04   0.051   -.152455    .0001788
    LIT  -.0179954   .0273341   -0.66   0.516   -.0739868   .037996
  _cons   1.287449   .1154382   11.15   0.000    1.050985   1.523914
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. regress NONVIOL CRED DEPOSIT OFF POLICE URB LIT, robust

Linear regression                    Number of obs  =      35
                                     F(6, 28)       =   41.96
                                     Prob > F       =  0.0000
                                     R-squared      =  0.8773
                                     Root MSE       =  .10794

                     Robust
 NONVIOL     Coef.   Std. Err.      t    P>|t|    [95% Conf. Interval]

   CRED    .0977859    .079131    1.24   0.227   -.0643067   .2598785
DEPOSIT   -.0175375   .0091616   -1.91   0.066   -.0363042   .0012293
    OFF    .0023283   .0023229    1.00   0.325    -.00243    .0070865
 POLICE    .0057532   .0015775    3.65   0.001    .0025219   .0089845
    URB   -.0281847   .0395291   -0.71   0.482   -.1091565   .052787
    LIT   -.0562843   .0362065   -1.55   0.131    -.13045   .0178814
  _cons    1.458116   .1410783   10.34   0.000    1.169131   1.747102
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Result -The results for Table 1and 2 indicate that increasing deposit has a significant effect on declining Violent crime and Non-Violent Crime though the effect is more for Non Violent Crime proving the economic theory that as people achieve a certain Income class, they start to save money

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and presence of Formal Institutions acts as a safe storage for their money and the Crimes committed by them falls. The Relationship between Urban Population and crime rate is negative and is significant for violent crime not for Non-Violent indicating that as more and more people move to Urban areas their income level increases making them less vulnerable to Commit Violent crime. Other variables that have significant effect on Violent and non-Violent crime is Number of Civil Police forces in the opposite direction which is a contradiction to Economic Theory.
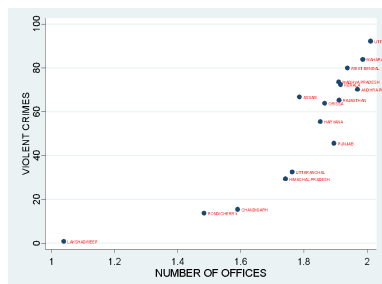
Left graph shows the relationship for Violent crimes and number of offices for **High Inequality states** and Right Graph shows the scatterplot matrix for relationship between Non-Violent crimes, Bank offices and deposit in **Low Inequality States.**
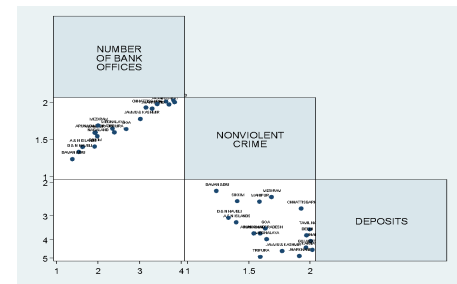
Model 3 & 4: -

Effect of Overall Inequality on Violent Crime rate and Non-Violent Crime Rate in India.

$$Ln\,VIO = \beta0 + \beta1\,lnGINIC + \beta2\,lnPOVERTY + \beta3\,ln\,POW + \beta4\,lnWORK + \beta5\,lnURB + e$$

$$Ln\,NONVIOL = \beta0 + \beta1\,lnGINIC + \beta2\,lnPOVERTY + \beta3\,ln\,POW + \beta4\,lnWORK + \beta5\,lnURB + e$$

regress VIO GINIC POVERTY POW WORK URB

Source	SS	df	MS		Number of obs	=	35
					F(5, 29)	=	4.96
Model	1.28979065	5	.25795813		Prob > F	=	0.0021
Residual	1.5078631	29	.051995279		R-squared	=	0.4610
					Adj R-squared	=	0.3681
Total	2.79765375	34	.082283934		Root MSE	=	.22802

VIO	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
GINIC	.5643551	.2384203	2.37	0.025	.0767308	1.051979
POVERTY	.0008091	.000394	2.05	0.049	3.22e-06	.001615
POW	.0249171	.3765443	0.07	0.948	-.7452024	.7950367
WORK	-.4856882	.8563158	-0.57	0.575	-2.237051	1.265674
URB	-.1692909	.0972821	-1.74	0.092	-.368255	.0296732
_cons	2.263547	.5344307	4.24	0.000	1.170513	3.35658

. regress NONVIOL GINIC POVERTY POW WORK URB

Source	SS	df	MS		Number of obs	=	35
					F(5, 29)	=	2.72
Model	.849246416	5	.169849283		Prob > F	=	0.0391
Residual	1.81037545	29	.06242674		R-squared	=	0.3193
					Adj R-squared	=	0.2020
Total	2.65962187	34	.078224173		Root MSE	=	.24985

NONVIOL	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
GINIC	.6036288	.2612442	2.31	0.028	.0693245	1.137933
POVERTY	.0006254	.0004317	1.45	0.158	-.0002576	.0015085
POW	-.1064439	.4125907	-0.26	0.798	-.9502866	.7373989
WORK	.2219323	.9382905	0.24	0.815	-1.697087	2.140952
URB	-.0852338	.1065948	-0.80	0.430	-.3032447	.1327771
_cons	2.281188	.5855915	3.90	0.001	1.083519	3.478857

Result- The results for table 3 and 4 indicate that increasing income inequality measured by the Gini Coefficient has a positive influence on both Violent and Non- Violent Crime rate through the effect is more on Non-Violent Crime. Poverty level affects Violent crime more indicating that poverty-stricken states have higher cases of Violent crimes. Increasing Urban Population affects violent Crime more than Non-Violent crime at 10% level of Significance as Income of people tends to equalize.

CONCLUSION

The results indicate that financial development led to an increase in violent and nonviolent crime in Indian states. There is a positive effect on both violent and nonviolent crime. The impact on violent crime is higher than the effect on Non-violent crime. This may be due to the reason as Economic development takes place Financial development occurs which leads to more opportunities to commit crime.

The second channel that may be responsible is inequality. Inequality in terms of Income, Education level, availability and opportunities is one of the foremost factors that incite criminal behaviour and a positive relation are well supported, theoretically and empirically.

It is found that states with high levels of inequality witnessed an increase in violent and nonviolent crime rates as opposed to states with low inequality.

One of the main reasons why crime rate increased despite Increased Economic Development and Financial development is due to the reason that the Inclusivity of more and more people in the system is still a question. Though many schemes and policies have been introduced such as Pradhan Mantri Jan Dhan Yojna, Insurance Schemes, the penetration of these schemes for all individuals needs to be looked at more carefully by strengthening the existing policies and schemes.

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