IJBMAS

E ISSN 2349-4638

A STUDY OF IMPACT OF MACRO ECONOMIC FACTORS ON CRIME AGAINST CHILDREN IN INDIA

ANUPREET KAUR MAVI

Assistant Professor, UIAMS, Panjab University, Chandigarh

ABSTRACT

There is need to give specific importance to children in society. Importance of a child is well recognized since ages. Children are valued assets of a nation. On what concerns the focus of the empirical crime-literature, we must conclude that more than 90 per cent of all studies under investigation deal with questions concerning causes of crime. In contrast to that, the number of studies investigating the consequences of crime and/or its interactions with other variables is rather small. One possible reason (among others) why violence is an under-re-searched issue in development studies is the paucity of relevant data. But still keeping in mind the importance of analyzing the impact of changing dimensions of macro-economic factors on crime against children in a multi-dimensional country like ours, this paper is a modest attempt to capture some elements in its purview. Since the age of child varies as per the definition given in the concerned Acts and sections but we have taken into consideration age of child as has been defined to be below 18 years as per Juvenile Justice Act, 2000. Therefore an offence committed on a victim under the age of 18 years is construed as crime against children for the purpose of analysis in this chapter. The paper is divided into five sections: This paper, therefore, attempts to evaluate the impact of macroeconomic variables like Gross Domestic Product(GDP per capita), Urban Population as percent of Total Population and Unemployment Rate, on the crime committed against children in India. The rest of the article is organized into four sections: Section II contains the causes and trends of crime against children in India. The theoretical framework is present in section III. The methodology employed and estimation results are contained in section IV. Section V concludes with lessons for policy. The major findings are that increased urban population as percent of total population hs had a significant effect on certain types of crime against children in India-: Murder of Children, Rape of Children, Kidnapping and Abduction of Children, Abetment of Suicide, Procurement of Minor Girls and Buying of Girls for Prostitution. Also GDP per

capita PPP and unemployment rate have significant effect on ., Infanticide, Rape of Children, Foeticide, Abetment of Suicide and Buying of Girls for Prostitution & Infanticide and Exposure & Abandonment respectively. Availability of apt crime data is a major hurdle though National Crime Records Bureau makes available annual Crime Reports in India. But still due to problems of under-reporting etc any formal conclusion related to crime should be supplemented with primary survey as well.

Keywords: Crime against children, Infanticide, murder, determinants, components of crime.

INTRODUCTION

India is second most populous country in the world and latest Census 2011 reveals that it's a home to 17% of the world's population. Nearly nineteen percent of the world's children live in India, which constitutes 42 percent (more than one third) of India's total population and around 50 percent of these children are in need of care and protection. There is need to give specific importance to children in society. Importance of a child is well recognized since ages. Children are valued assets of a nation. Their importance can well be imagined and appreciated from what Winston Churchill said about them. He had said "that there is no finer investment for any community than putting milk into babies." The future, development and stability of a society depend on the quality of its children. Child welfare is of supreme importance to mankind. At present time the child is considered as an important social unit and is held to be entitled to all that makes for healthy living, sufficient recreation, schooling adopted to his natural living methods, intelligent home care and the right to develop his abilities to their fullest extent. Total well being of the child includes not only the care of maladjustment and delinquent children but also the development of child physical, mental, emotional and social faculties.**8** The area of crime and economic development has remained a little too far away from the purview of scholars and researchers in the sense that the first serious attempt at an econometric analysis related to this area was by the economist Isaac Ehrlich (1973). In his seminal paper, "Participation in Illegitimate Activities: A Theoretical and Empirical Investigation" the author had used sophisticated (i.e. multivariate) statistical methods about 41 years ago. On what concerns the focus of the empirical crime-literature, we must conclude that more than 90 per cent of all studies under investigation deal with questions concerning causes of crime. In contrast to that, the number of studies investigating the consequences of crime and/or its interactions with other variables is rather small. One possible reason (among others) why violence is an under-re-searched issue in development studies is the paucity of relevant data. Freedom from violence, as an aspect of the quality of life, is a neglected issue in development studies. Most people would rather avoid being mugged, beaten, wounded, or tortured, and it is also nice to live without fear of these traumatic experiences. Thus, protection from violence may be thought of as one of the "capability that contribute to the quality of life (Sen 1985). Violence also affects human well-being in indirect ways, as when armed conflicts undermine economic growth or the functioning of public services. If development is concerned with improving the quality of life, the issue of violence should be a major interest of the discipline. Yet, it tends to receive little attention outside specialized circles. There is another reason why protection from violence is a "capability" of much interest: it does not necessarily improve as income levels rise. Many other basic capabilities, such as nutrition, longevity, and literacy, are positively related to per capita income and tend to improve with economic growth even in the absence of direct intervention. Protection from violence, however, is not a convenient byproduct of economic growth, and indeed there are spectacular cases of violence rising against a background of rapid improvement in per capita income and other development indicators. Dealing with violence in a society is, therefore, intrinsically a matter of public action. The latter, in turn, calls for careful investigation of the causes of violence. War-torn zones are not the best site for a household survey, and even basic data on criminal violence in developing countries are seldom available in a convenient and reliable form. Thus this study is a trivial attempt to study the impact of certain macro economic factors on crime against one of the most vulnerable sections of society, i.e., children. classification of offences against children. Generally,

the offences committed against children or the crimes in which children are the victims are considered as crime against children. Indian penal code and the various protective and preventive special and local laws specifically mention the offences wherein children are victims. The age of child varies as per the definition given in the concerned Acts and sections but age of child has been defined to be below 18 years as per Juvenile Justice Act, 2000. Therefore an offence committed on a victim under the age of 18 years is construed as crime against children for the purpose of analysis in this chapter. The paper is divided into five sections: This paper, therefore, attempts to evaluate the impact of macroeconomic variables like Gross Domestic Product(GDP per capita), Urban Population as percent of Total Population and Unemployment Rate, on the crime committed against children in India. The rest of the article is organized into four sections: Section II contains the causes and trends of crime against children in India. The theoretical framework is present in section III. The methodology employed and estimation results are contained in section IV. Section V concludes with lessons for policy.

II. Review of Literature

The study titled 'Development and Validation of Scientific Indicators of the Relationship Between Criminality, Social Cohesion and Economic Performance' by Entorf and Spengler(2000) intends to contribute to a better understanding of the interactions between criminality, economic performance and social cohesion. The authors try to achieve this aim by evaluating the existing economic and criminological research (with a special focus on quantitative research) and by carrying out own empirical investigations on the basis of a panel consisting of national time series from the 15 EU member states, an international cross-section of nations and a unique set of regional panel data originating from eight EU member states.

Empirical results about causes of crime reveal the crime reducing potential of intact family values. A smaller number of divorces and earlier marriage significantly reduce delinquency. By the same token, less efficient child care as a consequence of lacking family cohesion might explain the crime enhancing effects found for increasing female labour force participation rates. Further evidence supporting the interdependence of crime and the labour market show up in significant parameter estimates for indicators of unemployment, fixed-term contracts and part-time working. Furthermore, we find that higher wealth is associated with higher property crime rates and more drug-related offences, and that in turn drug offences foster the incidence of property crime. Compared to studies assessing causes of crime, investigations on its consequences are rare. In order to contribute to the closure of this gap, a special focus of our analysis is to investigate the impact of crime on economic performance. Using highly disaggregated regional data we find evidence that employment as well as GDP growth rates are negatively affected by the incidence of criminality. Interestingly, this result does not show up when the analyses are performed with data from the national level. Regarding the importance of social cohesion on criminality and the strong evidence of reversal effects of crime on economics, one may conclude that fighting crime should not only be a matter of domestic policy, but also of social policy and of selfish economic interests, i.e. of economic policy. The study intends to contribute to a better understanding of the interactions between criminality, economic performance and social cohesion. The authors have made an attempt to achieve this aim by evaluating the existing economic and criminological research and by carrying out own empirical investigation on the basis of international panel data sets from different levels of regional aggregation. Empirical results with respect to the causes of crime clearly reveal the crime reducing potential of family cohesion and the link between crime and the labour market. Furthermore, it was observed that higher wealth is associated with higher rates of property crime and of drug-related offences. Drug offences themselves turn out to be robust factors of property crimes. Compared to studies assessing the causes of crime, investigations on its consequences are relatively rare. In our analysis, we investigate the impact of crime on economic performance. We find evidence that employment as well as GDP growth rates are negatively affected by the regional incidence of criminality.

The first empirical test of the social organisation theory was performed by Sampson and Groves (1989) using cross-sectional data from 238 localities in Great Britain constructed from a 1982 national survey of 10,905 residents. The authors also provide evidence based on 300 localities of 11,030 residents from a survey of 1984. Their (weighted-least-squares) regression estimates strongly support social disorganisation theory as can be inferred in a simplified form. The most important factors which foster crime (measured as the

community crime rates according to victimisation surveys) are family disruption, urbanisation and peer groups. Significant determinants of crime reduction are organisational participation and the density of friendship.

Hughes and McDowall (1991) carried out their estimations using cross-sectional time-series (or panel) data from 584 US cities for the years 1960, 1970 and 1980. Another difference lies in the use of official (police) rather than victimisation data and the simultaneous evaluation of social disorganisation and lifestyle/ routine activity theory (the latter will be discussed. It is striking that the disorganisation variables perform perfectly in accordance with theory. Ethnic heterogeneity and the home-overcrowding variable have a positive significant impact on homicide, robbery and burglary rates, whereas institutional control (degree of community supervision and attachment to or involvement in traditional institutions) has the expected negative signs. Residential mobility estimates – with exception of homicide - also support the theory.

In another study Warner and Pierce (1993) test the social disorganisation theory by means of 1980 cross-sectional data from 60 Boston neighbourhoods using calls to the police as dependent variable. In addition to the "classical" variables of the theory measuring low economic status, ethnic heterogeneity and residential mobility as well as family disruption and population density, Warner and Pierce investigate the impact of interaction effects between crucial independent variables. The results are not as appealing as those from the studies discussed before. Poverty performs in accordance with theory, but mobility has unexpected negative signs in the regressions for assault and is found insignificant in the burglary estimations.

Using data from the 55 largest U.S cities, Sampson and Wooldredge (1986) reported that crime rates were negatively related to the population change from 1970 to 1980. As a general conclusion based on studies assessing the interactions of crime and social cohesion, it can be recorded that "crime itself can lead to simultaneous demographic 'collapse' and a weakening of the informal control structures and mobilization capacity of communities, which in turn fuel[s] further crime" (Sampson 1995:203)

Certain lifestyle aspects like going out in the evening and routine activities which "involve greater or lesser amounts of time spend within the confines of the immediate household" (Messner and Blau 1987:1037) are supposed to have a significant impact on the incidence of crime by altering opportunities in the above mentioned context. Lifestyle/ routine activity theory is not a pure micro or macro theory, thus it can also be tested at either level. More recent tests at the macro-level have been performed by Messner and Blau (1987), Miethe, Hughes and McDowell (1991) and Roncek and Maier (1991). Corresponding micro-evaluations are presented by Miethe, Stafford and Long (1987), Miethe, Stafford and Sloane (1990), Osgood, Wilson,O'Malley, Bachman and Johnston (1996) and Tremblay and Tremblay (1998).

Considering macro-studies first, Messner and Blau (1987) investigate the influence of routine activities on 7 types of crime (homicide, rape, robbery, aggravated assault, burglary, larceny, auto theft) using 1982 cross-sectional data from 124 U.S. Standard Metropolitan Statistical Areas (SMSAs). Their routine activities variables are a nonhousehold index intended to represent the extent of leisure activities (measured by the supply of sports and entertainment establishments) and thus the extent of the exposure to potential risks and a TV viewing index (measured by the populations' mean TV viewing intensity). Apart from these variables, Messner and Blau control for poverty, race, population size, gender and age. In the regression analysis both routine activity variables perform in accordance with the theory, i.e. crime enhancing effects for the non-household index and crime reducing-effects for the TV viewing index are found. The coefficients are always significant at the 5% level with only two exceptions - TV viewing does not significantly influence homicide and non-household activities have no impact on auto theft.

Another macro study is the one by Miethe, Hughes and McDowall (1991), which has already been introduced in the previous section. Variables that can be interpreted in the sense of lifestyle/ routine activity theory are: Higher unemployment and mean household size increase guardianship, higher female labour-force participation reduces guardianship and more often exposes women to potential dangers, more workers using public transportation services mean more potential targets in dangerous places, retail sales from eat/ drink establishments say something about the extent of public leisure activities, and median family income represents a measure of attractiveness of targets. Considering estimated coefficients, only mean household size is in accordance with theory for all three crime types. Public transportation performs well for homicide and robbery and is insignificant for burglary, whereas the opposite applies to retail sales. Median family

income is always insignificant. Finally, unemployment and female labour participation rather contradict the lifestyle/ routine activity theory.

In another paper, using Montreal police data from 1992 and 1993, Tremblay and Tremblay (1998) support the lifestyle/ routine activity theory by showing that public transportation has an important effect on the incidence of interracial violent offences. According to the authors, the explanation of this phenomenon is that public transportation brings together social groups with unequal offending rates who usually are quite segregated. By these means a criminal potential emerges, which otherwise would be absent. Tremblay and Tremblay (1998:295) conclude that "such findings suggest that patterns in the circulation of people and property in social space [should] be added to the limited list of basic antecedent determinants of aggregate crime distributions".

The economist and noble prize winner of 1991 Gary S. Becker has added a very important and provoking theory to the understanding of crime. According to Becker (1968:176) "a person commits an offense if the expected utility to him exeeds the utility he could get by using his time and other resources at other activities". The innovative element of this assumption is that it can dispense with special theories of anomie, psychological inadequacies or inheritance of special traits. Instead criminals are regarded as normal persons who commit crimes not because their basic motivation differs from that of other persons, but because their benefits and costs differ (Becker 1968:170). It should be mentioned, however, that Becker's major intention was not the development of a new theory of delinquent behaviour but rather a guideline of how to minimise social losses from crime. The obvious prove for this claim is the fact that Becker developed the microeconomic theory of crime in a footnote. Nevertheless, it was this by-product which attracted the great attention of academia and influenced countless subsequent theoretical and empirical papers.

According to Becker's theory, individuals, form expectations about the utility that could be gained from committing a crime. The potential offender assesses the potential loot, the probability of being arrested and convicted and the severity of the punishment which would follow the conviction. If he4 comes to the conclusion, that the expected utility from committing the crime is higher than the known utility from using his time otherwise (e.g. for legal work), the crime will be committed, otherwise the possibility will be rejected. From this calculus Becker derives the so-called supply of offences function which is "relating the number of offenses by any person to his probability of conviction, to his punishment if convicted and to other variables, such as the income available to him in legal and other illegal activities, the frequency of nuisance arrests, and his willingness to commit an illegal act" (Becker 1968:177). The core of the theory is that state authorities may influence individual crime decision, and thus the supply or incidence of crime by increasing the probability of conviction (more police) or the severity of punishment (higher fines, longer terms of jail).

Earlier statistical analyses of Indian crime data are few and far between. A noteworthy contribution is Baldev Raj Nayar's Violence and Crime in India (Nayar 1975)." The author focuses on temporal and regional patterns in crime rates and how these might be explained. Unfortunately, his statistical analysis of the determinants of "murder and kidnapping" (pp. 121-122) produced little result, partly because it was based on a mere 18 observations (one for each state). Interestingly, "police strength" had a positive coefficient in this regression, but this finding has to be interpreted with caution, given the possibility of reverse causation.As far as the summary of the major contributions on socio-economic interactions and consequences of crime is concerned, the relatively low number of studies enables us to seek completeness.

III. **Determinants of Trend of Crime Against Children in India**

The time series data related to components of total all-India crime against children(from reports of various years compiled by NCRB) clearly reveals that there has been a steep rise in crime of all types committed against children in the past decade or so. It is also clearly observed from the data as well as the graph that the rise in crime against children in India is most heavily contributed by three components, namely, murder of children, kidnapping and abduction of children, rape of children and procuration of minor girls.(Table 1.1 and chart 1.1).

Table 1.1:Trend of Components of Total All India Crime Against Children

YEAR	TOTAL ALL IND INF	TOTAL ALL IND MURD	TOTAL ALL IND RAPE	TOTAL ALL IND KID AND ABD	TOTAL ALL IND FOET	TOTAL ALL IND ABET SUI	TOTAL ALL IND EXP AND AB	TOTAL ALL IND PROC OF MIN GIRL	TOTAL ALL IND BUY GIRL PROST	TOTAL ALL IND SELL GIRL PROST	TOTAL ALL IND PROHIB OF CHILD MARG ACT	TOTAL ALL IND OTHER CRIMES	TOTAL ALL IND TOT CRIMES AGAINST CHILDREN
2001	117	1482	2695	3335	50	20	167	198	12	16	281	5028	13401
2002	124	1305	2806	2575	39	33	153	204	27	118	475	4648	12507
2003	84	1531	3423	3035	39	24	161	174	31	121	224	4677	13524
2004	63	1685	4233	3863	47	52	138	187	35	25	335	6000	16663
2005	80	1506	4636	4049	55	58	158	154	43	53	411	6150	17353
2006	87	1725	5489	4888	77	52	192	298	67	131	305	7559	20870
2007	147	1849	5756	6104	41	34	196	287	66	69	221	7662	22432
2008	118	1822	6363	8066	44	28	163	292	47	60	287	8476	25766
2009	40	1943	6308	8112	62	57	141	337	45	31	2	8972	26012
2010	82	1981	6398	9085	51	65	97	684	97	166	204	8575	27403
2011	67	2095	8499	13994	70	113	135	982	60	156	329	8927	35427

Source: Crime Report of India, NRCB(Various Years)
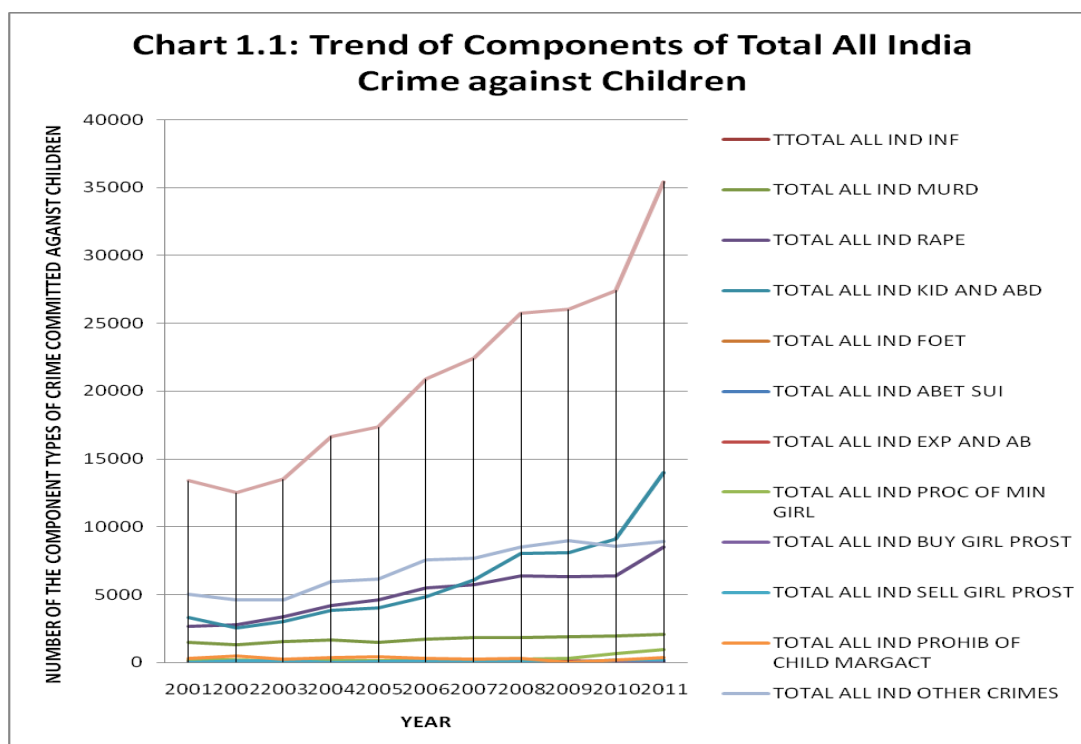
Source: Crime Report of India, NRCB(Various Years)

4. MODEL RESULTS AND DISCUSSION

Table 1.2:Descriptive Statistics of Total all-India Variables Under Consideration

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
TOTAL (ALL-INDIA)- TOTAL CRIMES AGAINST CHILDREN	11	12507.00	35427.00	2103.54	7189.60
URBAN POPULATION AS % OF TOTAL	11	27.98	31.30	29.5991	1.09
GDP PER CAPITA PPP	11	2540.00	3800.00	3107.37	454.60
UNEMPLOYMENT RATE	11	6.80	10.80	8.94	1.29
Valid N (listwise)	11				

Table 1.3: Descriptive Statistics of Components of Type of Crime against Children in India

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
TOTAL (ALL-INDIA)-INFANTICIDE	11	40.00	147.00	91.73	31.39
TOTAL (ALL-INDIA)- MURDER OF CHILDREN	11	1305.00	2095.00	1720.4	244.37
TOTAL (ALL-INDIA)- RAPE OF CHILDREN	11	2695.00	8499.00	5146.02	1779.79
TOTAL (ALL-INDIA)- KIDNAPPING and ABDUCTION OF CHILDREN	11	2575.00	13994.00	6100.5	3453.75
TOTAL (ALL-INDIA)- FOETICIDE	11	39.00	77.00	5227.27	12.69
TOTAL (ALL-INDIA)- ABETMENT OF SUICIDE	11	20.00	113.00	4872.73	26.27
TOTAL (ALL-INDIA)- EXPOSURE AND ABANDONMENT	11	97.00	196.00	1546.4	27.49
TOTAL (ALL-INDIA)- PROCURATION OF MINOR GILRS	11	154.00	982.00	345.18	257.16
TOTAL (ALL-INDIA)- BUYING OF GIRLS FOR PROSTITUTION	11	12.00	97.00	48.18	23.37
TOTAL (ALL-INDIA)- SELLING OF GIRLS FOR PROSTITUTION	11	16.00	166.00	86.00	54.11
TOTAL (ALL-INDIA)- PROHIBITION OF CHILD MARRIAGE ACT	11	2.00	475.00	279.45	122.87
TOTAL (ALL-INDIA)- OTHER CRIMES AGAINST CHILDREN	11	4648.00	8972.00	6970.4	1718.78
TOTAL CRIMES AGAINST CHILDRENTOTAL (STATES)	11	12052.00	34093.00	20080.0	6862.33
TOTAL CRIMES AGAINST CHILDREN TOTAL (UTs)	11	450.00	1499.00	952.91	409.68
TOTAL (ALL-INDIA)- TOTAL CRIMES AGAINST CHILDREN	11	12507.00	35427.00	21033.0	7189.60
Valid N (listwise)	11				

Table 1.4: Table of Correlation among Selected Variables

Correlations

		TOTAL (ALL-INDIA)-INFANTICIDE	TOTAL (ALL-INDIA)-MURDER OF CHILDREN	TOTAL (ALL-INDIA)-RAPE OF CHILDREN	TOTAL (ALL-INDIA)-KIDNAPPING and ABDUCTION OF CHILDREN	TOTAL (ALL-INDIA)-FOETICIDE	TOTAL (ALL-INDIA)-ABETMENT OF SUICIDE	TOTAL (ALL-INDIA)-EXPOSURE AND ABANDONMENT	TOTAL (ALL-INDIA)-PROCURATION OF MINOR GIRLS	TOTAL (ALL-INDIA)-BUYING OF GIRLS FOR PROSTITUTION	TOTAL (ALL-INDIA)-SELLING OF GIRLS FOR PROSTITUTION	TOTAL (ALL-INDIA)-PROHIBITION OF CHILD MARRIAGE ACT	TOTAL (ALL-INDIA)-OTHER CRIMES AGAINST CHILDREN	TOTAL (ALL-INDIA)-TOTAL CRIMES AGAINST CHILDREN	URBAN POPULATION AS % OF TOTAL	GDP PER CAPITA PPP	UNEMPLOYMENT RATE
TOTAL (ALL-INDIA)-INFANTICIDE	Pearson Correlation	1	-.365	-.328	-.316	-.540	-.581	.548	-.287	-.104	-.022	.372	-.299	-.317	-.359	-.661*	-.733*
	Sig. (2-tailed)		.270	.325	.344	.087	.061	.081	.392	.761	.950	.260	.372	.343	.279	.027	.010
	N	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
TOTAL (ALL-INDIA)-MURDER OF CHILDREN	Pearson Correlation	-.365	1	.936**	.901**	.467	.656*	-.338	.771**	.717*	.274	-.569	.932**	.942**	.942**	.549	.234
	Sig. (2-tailed)	.270		.000	.000	.148	.028	.310	.005	.013	.415	.068	.000	.000	.000	.080	.489
	N	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
TOTAL (ALL-INDIA)-RAPE OF CHILDREN	Pearson Correlation	-.328	.936**	1	.942**	.547	.758**	-.265	.800**	.710*	.367	-.344	.942**	.985**	.973**	.642*	.117
	Sig. (2-tailed)	.325	.000		.000	.081	.007	.431	.003	.014	.267	.300	.000	.000	.000	.033	.731
	N	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
TOTAL (ALL-INDIA)-KIDNAPPING and ABDUCTION OF CHILDREN	Pearson Correlation	-.316	.901**	.942**	1	.478	.785**	-.422	.918**	.589	.403	-.313	.858**	.981**	.925**	.536	.263
	Sig. (2-tailed)	.344	.000	.000		.137	.004	.196	.000	.057	.219	.349	.001	.000	.000	.090	.435
	N	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
TOTAL (ALL-INDIA)-FOETICIDE	Pearson Correlation	-.540	.467	.547	.478	1	.668*	-.004	.475	.350	.237	-.147	.527	.526	.468	.830**	.198
	Sig. (2-tailed)	.087	.148	.081	.137		.025	.991	.140	.291	.483	.666	.096	.097	.146	.002	.560
	N	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
TOTAL (ALL-INDIA)-ABETMENT OF SUICIDE	Pearson Correlation	-.581	.656*	.758**	.785**	.668*	1	-.482	.837**	.498	.452	.003	.592	.763**	.717*	.773**	.470
	Sig. (2-tailed)	.061	.028	.007	.004	.025		.133	.001	.119	.163	.993	.055	.006	.013	.005	.145
	N	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
TOTAL (ALL-INDIA)-EXPOSURE AND ABANDONMENT	Pearson Correlation	.548	-.338	-.265	-.422	-.004	-.482	1	-.527	-.295	-.287	.137	-.246	-.351	-.399	-.309	-.798**
	Sig. (2-tailed)	.081	.310	.431	.196	.991	.133		.096	.379	.392	.688	.465	.289	.224	.354	.003
	N	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
TOTAL (ALL-INDIA)-PROCURATION	Pearson Correlation	-.287	.771**	.800**	.918**	.475	.837**	-.527	1	.609*	.633*	-.134	.666*	.864**	.794**	.566	.405

TION OF MINOR GILRS	Sig. (2-tailed)	.392	.005	.003	.000	.140	.001	.096		.047	.036	.695	.025	.001	.004	.069	.216
	N	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
TOTAL (ALL-INDIA)-BUYING OF GIRLS FOR PROSTITUTION	Pearson Correlation	-.104	.717*	.710*	.589	.350	.498	-.295	.609*	1	.610*	-.259	.729*	.681*	.780**	.610*	.135
	Sig. (2-tailed)	.761	.013	.014	.057	.291	.119	.379	.047		.046	.441	.011	.021	.005	.046	.693
	N	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
TOTAL (ALL-INDIA)-SELLING OF GIRLS FOR PROSTITUTION	Pearson Correlation	-.022	.274	.367	.403	.237	.452	-.287	.633*	.610*	1	.167	.213	.379	.400	.480	.224
	Sig. (2-tailed)	.950	.415	.267	.219	.483	.163	.392	.036	.046		.623	.529	.250	.223	.135	.507
	N	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
TOTAL (ALL-INDIA)-PROHIBITION OF CHILD MARRIAGE ACT	Pearson Correlation	.372	-.569	-.344	-.313	-.147	.003	.137	-.134	-.259	.167	1	-.514	-.361	-.440	-.076	-.366
	Sig. (2-tailed)	.260	.068	.300	.349	.666	.993	.688	.695	.441	.623		.106	.275	.176	.824	.269
	N	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
TOTAL (ALL-INDIA)-OTHER CRIMES AGAINST CHILDREN	Pearson Correlation	-.299	.932**	.942**	.858**	.527	.592	-.246	.666*	.729*	.213	-.514	1	.934**	.955**	.561	.099
	Sig. (2-tailed)	.372	.000	.000	.001	.096	.055	.465	.025	.011	.529	.106		.000	.000	.073	.773
	N	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
TOTAL (ALL-INDIA)-TOTAL CRIMES AGAINST CHILDREN	Pearson Correlation	-.317	.942**	.985**	.981**	.526	.763**	-.351	.864**	.681*	.379	-.361	.934**	1	.970**	.593	.191
	Sig. (2-tailed)	.343	.000	.000	.000	.097	.006	.289	.001	.021	.250	.275	.000		.000	.055	.574
	N	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
URBAN POPULATION AS % OF TOTAL	Pearson Correlation	-.359	.942**	.973**	.925**	.468	.717*	-.399	.794**	.780**	.400	-.440	.955**	.970**	1	.616*	.245
	Sig. (2-tailed)	.279	.000	.000	.000	.146	.013	.224	.004	.005	.223	.176	.000	.000		.044	.467
	N	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
GDP PER CAPITA PPP	Pearson Correlation	-.661*	.549	.642*	.536	.830**	.773**	-.309	.566	.610*	.480	-.076	.561	.593	.616*	1	.336
	Sig. (2-tailed)	.027	.080	.033	.090	.002	.005	.354	.069	.046	.135	.824	.073	.055	.044		.312
	N	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
UNEMPLOYMENT RATE	Pearson Correlation	-.733*	.234	.117	.263	.198	.470	-.798**	.405	.135	.224	-.366	.099	.191	.245	.336	1
	Sig. (2-tailed)	.010	.489	.731	.435	.560	.145	.003	.216	.693	.507	.269	.773	.574	.467	.312	
	N	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 1.5:Table Showing Regression Model I Summary

Model Summary[b]

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.972[a]	.944	.920	2033.49705	.944	39.335	3	7	.000	

a. Predictors: (Constant), UNEMPLOYMENT RATE, URBAN POPULATION AS % OF TOTAL, GDP PER CAPITA PPP

b. Dependent Variable: TOTAL (ALL-INDIA)- TOTAL CRIMES AGAINST CHILDREN

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-166277.690	19203.229		-8.659	.000
	GDP PER CAPITA PPP	.117	1.850	.007	.063	.951
	URBAN POPULATION AS % OF TOTAL	6403.171	743.870	.979	8.608	.000
	UNEMPLOYMENT RATE	-288.880	530.202	-.052	-.545	.603

a. Dependent Variable: TOTAL (ALL-INDIA)- TOTAL CRIMES AGAINST CHILDREN

In order to have a deep rooted analysis of the impact of the macro economic variables on total crime committed against children in India, three regression models were run and observations made therein are being explained in ensuing paragraphs. In the first model the Total All India Crime Against Children was taken as the dependent variable and the GDP(per capita), Urban population as percent of total population, and unemployment rate were the predictors(Regression Model I).

TOTAL CRIMES AGAINST CHILDREN(India) = $\propto_0 + \propto_1$ GDP + $\propto_3$ URBANPOP + $\propto_4$ UNEMPRATE + Ut … 1.1

The results so obtained clarified that 92 per cent of the variations in the dependent variable are explained by the three predictor variables. But it is clear from the table of coefficients that only the variable urban population as percent of total population turns out to have a significant effect on the total all-India crime against children as calculated significance value is much less than 0.05.Even from among the individual components of crime, Murder of Children, Procuration of minor girls for prostitution, and all 'other' crimes against children are significantly impacted by the indicator 'urban population as percent of total population'. Unemployment rate affects significantly 'infanticide' and 'exposure and abandonment' only. GDP(per capita) does not affect any of the component of crime against children in India. Rest of the components comprising All India Crime against Children i.e., foeticide, abetment of suicide, buying of minor girls for prostitution, selling of minor girls and Prohibition of Child Marriage Act remain unaffected by any of the selected macro-economic indicators.

Measures which account for urbanity, like population density, often turn out to have a significant positive effect on crime. But it is not obvious why urbanity per *se* should directly affect crime. Glaeser and Sacerdote (1996) report that 27 per cent of the urban crime effect (i.e. the difference between rural and urban crime rates) in the United States is due to higher pecuniary benefits for crime in cities, 20 per cent is explained by lower arrest probabilities and lower probabilities of recognition, and the remaining 45-60 per cent of the effect can be related to observable characteristics of individuals in cities. Thus, according to Glaeser and Sacerdote the whole urban crime effect can be explained by other variables than by urbanity itself. However, Roncek (1981) provides an explanation of how urbanity (i.e. high population density) may directly affect crime. If the population density increases, the number of residents who do not know each other but share common living space becomes higher, and thus, residents are less able to recognise their neighbours, to be concerned about them or to engage in guardianship behaviours (Roncek 1981:88). There also exists evidence for a

reciprocal relationship between crime and urbanity (see the papers of Burnell 1988, Bursik 1986, Cullen and Levitt 1999, Frey 1979, Grubb 1982, Liska and Bellair 1995 and Sampson and Wooldredge,1986). The causal influence of "crime" is sequentially tested for the crime categories murder, assault, robbery, total theft, theft of motor vehicles and drug offences. For reasons of potential multicollinearity among several types of crime we have only used one crime category per regression, instead of including all of them in one single regression. According to the studies higher crime rates are an important cause of (white) population flight from central cities in the U.S. the following linear regression model was used to analyse the impact of urbanity on total crime(various components) against children in India by the author of the research paper as well:

TOTAL CRIME (VARIOUS TYPE)= $\propto$o + $\propto$1 URBANPOPt + Ut … 1.2

Further to know the impact of various types of crime composing the 'Total All-India Crime Against Children', regression was run taking each component of crime respectively with respect to the three macro-economic indicators chosen by us for this analysis. *The macro-economic indicator 'urban population as percent of total population' was having a significant impact on the following components comprising 'total All-India Crime against Children': Murder of Children, Rape of Children, Kidnapping and Abduction of Children, Abetment of Suicide, Procurement of Minor Girls and Buying of Girls for Prostitution.*

Empirically stating, the positive sign of this indicator suggests that GDP should be interpreted as a measure of illegal income opportunities. A higher GDP per capita means a higher number of lucrative targets. There is indication that higher wealth (measured by GDP p.c.) implies a higher propensity to commit property crimes, though the estimated coefficient becomes insignificant after including more specific labour market variables and the net reproduction rate.

TOTAL CRIME (VARIOUS TYPE)= $\propto$o + $\propto$1 GDPt + Ut …   **1.3**

GDP(per Capita) was observed to be significantly impacting not only the 'Total All-India Crime Against Children', but also some of the prominent components comprising it i.e., Infanticide, Rape of Children, Foeticide, Abetment of Suicide and Buying of Girls for Prostitution.

First, wealth (GDP p.c.) varies positively with crime against property and negatively with intentional homicides. Drug abuse very likely is a problem of wealthy societies. It becomes very clear that underemployment is a crucial reason behind crime in Europe. Taking a clue from the above mentioned study, a regression was run with unemployment rate as the independent variable and various components of type of crime against children as the dependent variable respectively.

TOTAL CRIME (VARIOUS TYPE)= $\propto$o + $\propto$1 UNEMPt + Ut …   **1.4**

'Unemployment Rate' was observed to significantly impact only two of the components of 'Total All-India Crime against Children', namely Infanticide and Exposure & Abandonment.

5.   POLICY MEASURES AND FUTURE RESEARCH

Results from our empirical analysis confirms that GDP per capita PPP, Urban Population as percent of total population and unemployment rate are significantly affecting the crime against children in India. Since it has been observed that urban population as percent of total population is contributing significantly to crimes under the IPC crimes category, i.e., mostly violent crimes, the legal provisions and their strict enforcement needs to be the call of the hour. Severe and timely punishment could act as a deterrant to the increasing trend of crime against the most vulnerable section of society-children. Policy intervention is also sought to provide for better infrastructural and other facilities in rural areas so that that segment of the society does not feel the need to look out for employment avenues, income generation sources and other basic amenities to the urban areas. This seems to be further analysed at district level, using not only secondary information which has a tendency to be under-reporting the numbers as social pressures could be restricting the affected to report the matter in the police stations, but also primary surveys conducted systematically at repeated intervals of time. Not only this, another aspect ought to be taken into consideration so far as future research and policy implications are concerned-the developmental perspective of crime. The developmental perspective points to the fact that "crime does not appear to be a permanent trait of the individual"! Crime can rather be split up in three clearly distinguishable phases: initiation, maintenance, and termination. This view is consistent with the generally observed incidence of crime in the life course, where offenders start their criminal conduct around the ages of 12 or 13, rapidly increasing their involvement to a peak around the ages of 16 or 17, and then terminating delinquency by the mid 20s (Thornberry 1996:200). In order to account for the developmental

aspect of crime longitudinal (i.e. panel) data is needed which should be made available in a standardized manner by reliable government sources on all types of crime.

REFERENCES

[1]. Becker (1968): 'Crime and Punishment: An Economic Approach'**,** *Journal of Political Economy*, Vol. 76, p. 169

[2]. Isaac Ehrlich (1973): 'Crime, Punishment and the Market for Offences', *Journal of Economic Perspectives*, Vol.10, No.1.Winter, pp. 43-67

[3]. Entorf and Spengler(2000): 'Socioeconomic and demographic factors of crime in Germany: Evidence from panel data of the German states'*, International Review of Law and Economics*, Volume 20, Issue 1,March, pp: 75-106

[4]. Nayar, Baldev Raj(1975): **Violence and Crime in India,** MacMillan Co. of India**.**

[5]. Frey, Wiliam H. (1979), 'Central City White Flight: Racial and Nonracial Causes,' *American Sociological Review,* Vol.44, June, pp. 425–448

[6]. Dennis W. Roncek, Ralph Bell and Jeffrey M. A. Francik(1981): Housing Projects and Crime: Testing a Proximity Hypothesis, *Social Problems*, Vol.29, No.2, December, pp.151-166.

[7]. Grubb, W. Norton (1982), 'The Flight to the Suburbs of Population and Employment, 1960–70,' *Journal of Urban Economics*, Vol.11,May, pp.348–367.

[8]. Sen (1985): Well-being Agency and Freedom- the Dewey lectures 1984, The Journal of Philosophy, Vol.82, no.4, April, pp. 169-221.

[9]. Bursik (1989):' Ecological Stability and the Dynamics of Delinquency', **Communities and Crime**, edited by A.J.Reiss Jr. and M.Tonry,Published by: The University of Chicago Press.

[10]. Miethe,Terence D., Stafford, Mark, C., and Long, Scott J. (1987) : 'Social Differentiation I Criminal Victimization-A Test of Routine Activities/Lifestyle Theories', *American Sociological Review,* Vol.52, pp.182-194.

[11]. Messner, S., and J. Blau (1987): 'Routine Leisure Activities and Rates of Crime: A Macro-level Analysis.' *Social Forces* Vol.65, pp.1035-1052.

[12]. Burnell, James D(1988): 'Crime and Racial Composition in Contiguous Communities as Negative Externalities: Prejudiced Household's Evaluation of Crime Rate and Segregation Nearby Reduces Housing Values and Tax Revenues, *American Journal of Economics and Sociology,* Volume 47, Issue 2, pages 177–193, April 1988

[13]. Sampson, Robert J., and W. Byron Groves(1989): 'Community structure and crime: Testing social-disorganization theory', *American Journal of Sociology,* Vol. 94, no. 4, pp.774-802. Reprinted in Frances Cullen and Velmer Burton, eds., Contemporary Criminological Theory. Dartmouth Publishing Co., 1994.

[14]. Miethe, T.D., M.C. Stafford & D. Sloane (1990):'Lifestyle Changes and Risks of Criminal Victimization', *Journal of Quantitative Criminology, vol.*6, pp.357-376.

[15]. Miethe, T.D., M. Hughes & D. McDowall (1991): 'Social Change and Crime Rates: An Evaluation of Alternative Theoretical Approaches'. *Social Forces,* Vol.70, pp. 165-185.

[16]. Roncek, D.W. & P.A. Maier (1991): 'Bars, Blocks, and Crime Revisited: Linking the Theory of Routine Activities to the Empiricism of' Hot Spots', *Criminology,* Vol. 29, pp. 725-753.

[17]. Warner, B.D. & G.L. Pierce (1993): 'Reexamining Social Disorganization Theory Using Calls to the Police as a Measure of Crime', *Criminology,* Vol.31, pp.493-517.

[18]. Liska, A.E. & P.E. Bellair (1995): 'Violent-Crime Rates and Racial Composition: Convergence Over Time" *American Journal of Sociology,* Vol.101, pp. 578-610.

[19]. Sampson, R.J. (1995): **The Community**, J.Q Wilson & J. Petersilia (Eds.), *Crime,* 193-216. Institute for Contemporary Studies: ICS Press Sacerdote (1996).

[20]. Osgood, D.W., J.K. Wilson, P.M. O'Malley, J.G. Bachman & L.D. Johnston (1996): 'Routine Activities and Individual Deviant Behavior', *American Sociological Review,* Vol. 61, pp.625-655.

[21]. Thornberry, T.P. (1996): 'Empirical Support for Interactional Theory: A Review of the Literature', In J.D. Hawkins (Ed.), **Delinquency and Crime,** pp.198-235,Tremblay and Tremblay.

[22]. Cullen, J.B. & S.D. Levitt (1999), 'Crime, Urban Flight, and the Consequences for Cities', *Review of Economics and Statistics,* Vol.81, pp.159-169.

[23]. Entorf, Horst & Spengler, Hannes, (2000): 'Development and validation of scientific indicators of the relationship between criminality, social cohesion and economic performance.' ZEW-Dokumentation, No. 00-05.

[24]. Siddhanta S, Nandy D and Agnihotri S. B.(2003): 'Sex Ratio and 'Prosperity Effect', What Do NSSO Data Reveal?' Economic and Political Weekly, Vol.38 (41), pp. 4381.

[25]. Soares, Rodrigo. (2004): 'Development, Crime and Punishment: Accounting for the International Differences in Crime Rates.' *Journal of Development Economics,* Vol.73, (1), pp. 155-184.

[26]. Robitaille, Marie-Claire (2013): 'Determinants of Stated Son Preference in India: Are Men and Women Different?' *The Journal of Development Studies*, Vol.49 (5), pp. 1-13.

[27]. Joshi, Vimal (2013): Juvenile justice in India: A Study of Legislative Policies, Judicial Trends and Social Perception, http://hdl.handle.net/10603/7809.