

ECONOMIC RATIONALES OF CRIMES EVIDENCE FROM SELECTED CITIES OF PAKISTAN"

²Muqqadas Rehman, ¹Maqsood Ahmad Mughal, ³Chaudhary Abdul Rehman

¹Superior University, Lahore.

Contact #+92-0333-4293909, E-mail; maqsood_2279@yahoo.com

²Hailey College of Commerce, Punjab University, Lahore.

Contact; +92-042-9231274, E-mail; iluvnabi.saaw@gmail.com

³Business School, Superior University, Lahore.

Contact; +92-042-35530361-8, E-mail; ceo@superior.edu.pk

ABSTRACT: *This research article attempts to find the answer of the question, what are the rationales of committing crimes in Pakistan? Crime rate is increasing rapidly significantly from last two decades. The current available literature is failed to find out the rationales of crimes but this study provides the rationales of crime. For this purpose qualitative data from, 12 participants, three selected districts of Punjab are collected. By using the "NVIVO" Software spatially designed for the analysis of qualitative data explored significant evidences in the support economic rationales for committing crimes. In the end this study suggests the policy measures to eradicate criminal activities by improving the literacy rate and living standard of developing countries like Pakistan.*

Key Words: Crimes, NVIVO, Qualitative, Policy Measures, Economic Rationales, Pakistan

INTRODUCTION

1.1- Statement of the problem

Crime is defined literally as violation of government laws. Developing countries are facing dual economic issues, one is huge increase in their population and the second one is low productivity or low output level. These economic problems are further generating so many problems, among those problems inflation and unemployment are the most burning issues, which further stimulates the crime ratio in developing countries like Pakistan. The crime rate in Pakistan is increasing rapidly for last two decades. Social and economic disorders of Pakistan are accountable for this increasing crime rate. The burning issues which are being faced by Pakistan are, Inflation, unemployment, low wages rate, illiteracy, low capital accumulation, corruption and high birth rate. The socio-economic expenses related with high crime rates are potentially enormous yet this problem has possibly not been scrutinized in adequate detail spatially in Pakistan. Now the question is that either the crime has economic motives or not?

A lot of observers appear to take for approved that unemployment is a significant element of crime and that strategies cooperative in opposing unemployment have a direct side effect on unlawful bustle. Yet, the presented experiential indication proposes that the problems are less straightforward. "Unemployment is related to crime, but if your prior was that the relation was overwhelming, you were wrong. Joblessness is not the overwhelming determinant of crime that many analysts and the public a priori expected it to be." [1].

Heavy surge in crime in the United States throughout the 1960s and 1970s, and the 1990s globule in crime, Freeman pressures indicators like the incomes of less skilled workers and the authorizations compulsory by the justice system, and there is no indication of unemployment [2].

The relationship among corruption, crime and economic growth looks understandable to most people. In reality both crime and corruption stimulate improbability and discourage the business class. Further the relationship between crime, corruption and economic growth.

Purpose of the study

The purpose statement of this study is to explore the rationales of committing crime or in other words to find out the indicators of crime. The available studies on crime

highpoint only correlations between macro-economic indicators and crime after word their impact on economic growth. Some of the inadequacies in the literature that there is no literature on the determinants of crime, the rationales of this study is to find out the indicators of crime and then bang on some of the fresher literature that scrutinize the communication of indicators of crime. The concluding element of literature delivers the most precise opinion of rationales of crime and the cost of crime. Increasing rate of crime in Pakistan can destabilize the sanctuary of property rights and sureness in the rule of law in the society as well as in the economy. The action which is determine as crime in one civilization may not be a considered as crime in another culture, building it hard to evocatively associate numerous crime statistics crosswise countries.

1.2- Significant of the study

The study analysis the exact rationales of committing crime either they are economic or non-economic one. Most of the available literature on crime transmits to economic growth rather the motive of committing crime, modest economic models forecast that deteriorating labor market prospects are likely to modify the inducements for personages to partake in authentic (labor market) or unlawful (criminal) activities. This article will explore the indicators which stimulate the crime rate in Pakistan; this examines the degree to which growing crime is associated to the criminal actions. Some economic models also exhibit a relation between higher yields to crime and the supply of crime, some relations among crime and criminal returns, market imperfection which are the important indicator of crime are explored in this study.

There are some prevailing conclusions that show that low wage rate matter for crime, it shows the connotation with wages to be much more vigorous than that with unemployment. It is detected that in so many developing countries especially, India and Pakistan, different studies recommend that panchayats, jirgas, police officers, lawyers and trial judges indorse restricted philosophies of dominion often infringement of legitimate law or even of the rule of law. Judicial cognitive then must calculate with custom, how usual observes may revoke rights of women and how such performs are established by the male-controlled politics of shame and honor which is the motivation for

more violent crime and it may be less connected to economic inducements.

The research question is to find out the economic rationales of crime in Pakistan, and other words the objective is to find out the economic incentive which stimulate the crime rate. This study points out the economic indicators which are responsible for increasing crime rate and with the help of the findings policy makers as well as law enforcement agencies in formulating policies which will be helpful in eradicating the crime rate in developing countries especially in Pakistan.

1.3- Theory or Theoretical Prospective

There are a lot of theories presenting in relation between crime and different macro-economic variables. Inflation rate caused high stimulation for committing crimes [1]. Literature is available on different macro-economic variables having relation with crimes yet there is no specific research conducted on the rationales of the crimes. This study provides theoretical base to find out the indicators especially economic one which stimulate the crimes in Pakistan.

1.4- Research method

This study is qualitative in nature so qualitative paradigm is used to find out the indicators of crimes and for the collection of data structured interviews from the selected sample of criminals in jails from selected cities of Punjab as District jail Sheikhpura, Lahore and Gujranwala by using thematic analysis.

1.5- Definition of key terms

The key terms which are used in this study are defined as,

1- Unemployment

In this study a person is considered to be unemployed who do not have any part time job. In other words only permanent job holders are considered employed.

2- Literacy

A person who know how to write and read his name is considered an educated one in this study

3- Wage rate

The standard wage rate is minimum wage level which is settled by Govt. of Pakistan.

4- Living standard

Living standard is measured by per capita income of Pakistan

5- Inflation

A persistent increase in general price level is considered as inflation

1.6- Limitation of the study

In the recent era of modernization the crime has become a universal social problem for the nations, all over the world. To obtain the accurate results from the study some sorts of limitation has to be determined; sample size is 12 out of total population, (criminals) from three different cities of Punjab. Only male criminals between the age limit 25 to 40 are interviewed for thematic analysis.

LITERATURE REVIEW

2.1- Background

Criminal activities are flourishing day by day in all over the world. There are the different reasons for committing crimes in different nations as their culture, tradition, law structure, law and order situations are different So there are different theories presenting different motives of crimes and have different impact on economic growth rate.

2.2- Subject of case Study

Crime rate is increasing day by day in all over the world in the current era. Crimes are deteriorating the social as well as economic life of countries especially the developing one. The increasing crime rate is also reducing the economic growth rate of developing countries especially the Pakistan, the image of these countries are declining in the eyes of the developed nations. So the main problem for developing nations is to determine the indicators of crime and then eradicate them to get the fruits of economic development.

2.3- Review of Related Research

Researchers [3] explored that most of people omit crimes for the sake of honor because of the complex legal rituals in Indo Pak. They had found two types of axes to explain the complex nature of the interaction between modernity and tradition. They had concluded that this difference caused high crime rate in this area. Researchers [4] investigated the role of economic benefits, especially changes in wages at the bottom end of the wage distribution which caused execution of crimes. They had further explored that low wage rate caused increasing crime rate by using the data from police force areas of England and Wales for the period of 1975 to 1996. Researchers [2] founded that unemployment of prime aged population was the main reason of increasing rate of crime. They had explored that there were a significant impact of unemployment on crime. There was no confirmation in the case of infancy's unemployment.

Researchers [5] explored that the rationales of corruption. He had explained that whenever it was essential to acquire approval from many entities for a venture and everyone had embargo power over sanction than the cost of corruption which was also a crime, would rise and it made the economic growth slower.

Researcher [6] debated that immoral executives used different guiles to get bribery. For example they might use their haphazard power to generate intervals and obstructions to accumulate more bribes.

Researcher [7] investigated a typical study of socially bungling rent-seeking through crooked trade constraint implementation. In cases of corruption such as these, the actual influential atmosphere would curb economic motion more than the de jure permitted limitations on the official books. Though, there was also object to believe that corruption could be good for economic growth. Researcher [8] explored that corruption was beneficial for economic growth. He had explained that corruption could boost economic growth by permitting personages to pay carrots to dodge disorganized rules and official suspensions. Researcher [9] founded that corruption could curtail waiting time in files that slower down business formation or restrictions that avoid businesses and consumers from manipulating probable additions from trade, corrupt officials who dodge wasteful rules could actually enhance economic growth.

Researchers [10] investigated a division amongst the sorts of corruption that encourage the solidest moral barbarity and those that did the most wounded to economic development. He explained that transnational assistances gave too much consideration on the former, increasing their anti-corruption pomposity to the point of often creating political instabilities that form their own pecuniary hurdles. According to him it is also probable that the optimum level of corruption for growth might be trivial but positive

because as corruption decreases it became gradually expensive to eradicate it utterly, this was much like crime in general

Researchers [11] founded that corruption was helpful for economic growth in certain cases.

Researchers [12] explored a complex relationship between corruption and economic growth. They had further explained that this connection amongst bribery, crime and economic growth looks palpable to most people and both crime and corruption surge vagueness and the cost of doing business. So crime and corruption must discourage entrepreneurial activities that cause growth. In short crime has negative as well as positive impact on economic growth. Researchers [13] explored the correlation between crime rate trend and development of socio-economic background over time in underdeveloped countries. They had found that current research studies in the United Kingdom propose that the trade cycle impacts variations in both property misdemeanors and intense crime. However pre-1970 studies in the United States only hardly pointed up a positive relation between crime rate and unemployment. He had further explained the role of unemployment, prices and wages, wedding among men, and schooling on crime rate over the long term. Further unemployment of uneducated young people increases theft and violent crime.

Researchers [14] founded the impact of Inflation on crime rate. Accordingly a rebirth of research on the association amongst economic circumstances and crime has occurred in current years and most of them showed that crime rate increased during recession and decreased in prosperity or recovery of the economy. The crime rate increases throughout the current recession. Inflation had important effects on shooting, theft, and housebreak rates in numerous European nations and the United States from the period 1980 to 2010. He had explained the reasons of increasing crime rate as Inflation may be associated to crime through the subtleties of markets for pinched goods. Whenever the price level rise, the mandate for reduced price pinched goods raises, which reinforces motivations to enhance the supply of stolen products. Property and violent crime rates increase due to inflation and unemployment. Researchers [15] explored the positive relation between crime rate and recession than recovery. He further found that rates of burglary and property crime incline to upsurge during recessions and reduce throughout recoveries. so macro-economic indicators are responsible for change in the crime rate.

Researchers [16] founded a positive trend in between output level and crime rate in US states. He explored that as the level of output decline, crime rates upsurge and there was no correlation between unemployment and crime rate.

Researcher [1] explored that change in aggregative economic activities are positively correlated with crime. Researcher [17] investigated a reverse association between wages and adolescence crime in the United States. Researcher [18] discovered a relationship between crime and economic circumstances. He had further found that economic aspects causative more to the 1990s crime drop than to the former rise during the 1980s. Researchers [19] explored a direct relationship between inflation and crime rates. They had concluded their findings by using the data for the period 1960 to 2005 and explored that the underlying course of the connotation is from inflation to

crime in the study. Researchers [20] founded that life style of the community determine the crime rate. They had used of victimization in an ethnologically mixed inner city and concluded that the dispersal of crime indicate the lifestyle and motion sequence of a society. The, social structure and its spatial organization are both shown in the form of criminal activity, and caused by the fear. He had concluded that crime pervades a range of social, economic and political dealings. Researchers [21] investigated that crime was associated with low life expectancy, unequal income distribution and increasing death rate between the ages of 30 and 60. Accordingly the increased consumption is collected by criminal activities. Researchers [22] founded that economic crimes could be reduced through reforms. They had used the statistics of former USSR. According to their findings, changes in the legal and economics instruments were noted. The reform had transformed the typical types of economic crime. Researchers [23] investigated that crimes were caused by human tidal waves. He had proved his study on the behalf of the data from 1978 to 1982, from three police stations in different localities and found if it varied with the day of the lunar cycle. It resulted that an increased incidence of crimes on full moon days might be due to "human tidal waves" caused by the gravitational pulled of the moon.

Researchers [20] explored that the tendency of crime show the lifestyle and activity patterns of a society and the effects of crime, in chance, peruse to formulate these routine urban behaviors Thus, social structure and its altitudinal organization were both reflected in the form of criminal activities, and further affected by the fear that this behavior stimulates. Researchers [24] explored the role that economic incentives, mostly changes in wages at the bottom end of the wage distribution, played in decisive crime rates. He had used the data from the police force areas of England and Wales from the period 1975 to 1996 and founded that decline in the wages of workers lead to increases in crime rate. Researchers [25] founded that crime and economic development are argued as a part of a third major human version to a new form of civilized life that was called industrialism. Accordingly the majority people had lived as hunters and gatherers, while a smaller portion of people lived as members of the societies and based on agriculture and animal domestication. A smaller group of human is now boarded on version to urbanization, technology and industrialization. He had argued that the process of economic development as in this study could be sighted in stages, as recommended by researcher [25]. Researchers [26] concluded a positive relationship between urbanization and crimes rate in Pakistan. They had used three models to investigate the results and founded that urbanization is very important determinant of crimes rate in the case of Pakistan. They had used different variables with urbanization in all the three models and found no big change occur in value of the coefficient of urbanization and this strong analysis showed the very significant positive relation of urbanization with crimes rate in Pakistan.

2.4- Theoretical construct

On the basis of the past studies it has explored that the literature available on crime just showing relation between different macro-economic variables there are hardly any theory or study which through light on the motives of crime. This theory attempts to fulfil this gap present in the past available literature.

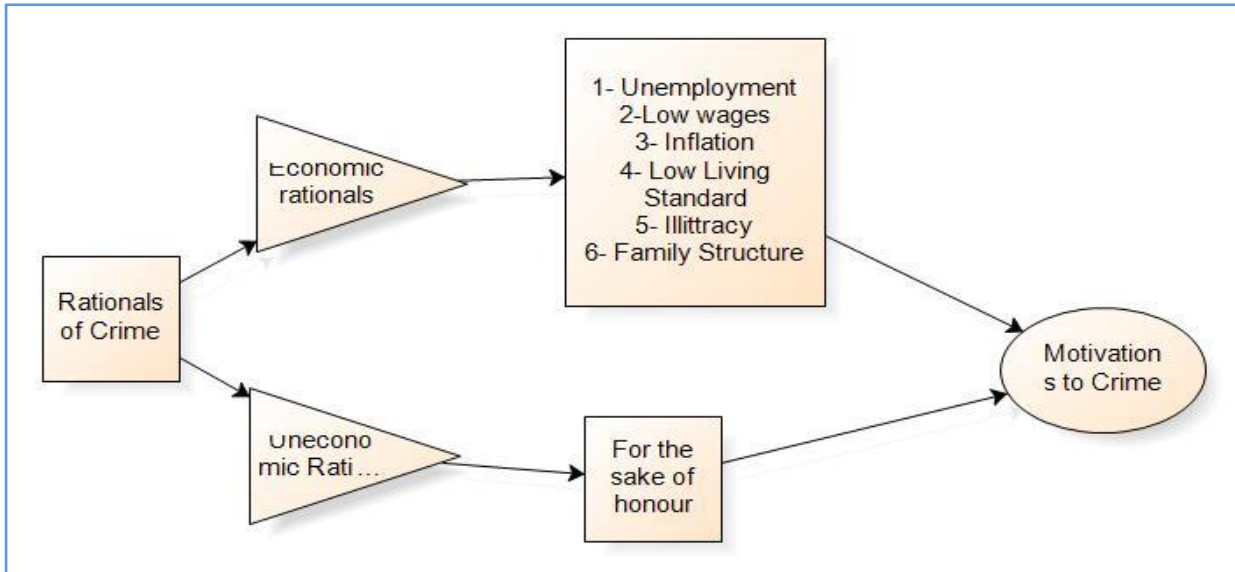
2.5- Research Question

The objective of the study is to find out the motives of crime the research question is, what are the motives of crime in Pakistan?

2.6- CONCLUSION

Crimes are motivated by economic rationales as well as non-economic one. A model is constructed to explain the result of the study.

Model



There are two main objectives of crime one is economic rationales which have 83% weightage from the data and the other one is noneconomic one whose weightage is 17%. The results show that in developing countries spatially in Pakistan 83% crimes are committed for the sake of wealth.

This study trough light on the main reasons of low income which further motivated people for crimes. The other variables which motivated or increase economic desires are illiteracy, low wage rate, and locality.

Table for thematic analysis

| Theme | Sub Theme | % | Concept |
|------------------------------------|-----------------|-------|---|
| Area of the Residence of Criminals | 1- Urban | 25% | The area of residence of criminals was dived in to two categories |
| | 2- Rural | 75% | |
| Education Level of Criminals | 1- Literate | 41.7% | The person who is primary pass was considered educated |
| | 2- Illiterate | 58.3% | |
| Employment level of criminals | 1- Employed | 66.7% | The person who got even part time daily wager was considered employed |
| | 2- Unemployed | 33.3% | |
| Family Structure | 1- Nuclear | 33.3% | There are two types of family structured prevailing in developing nations |
| | 2- Joint | 66.7% | |
| Father's Education Level | 1- Educated | 25% | The person who got even part time daily wager was considered employed |
| | 2- Uneducated | 75% | |
| Motives of crimes | 1- Economic | 83.3% | Two types of motivation of criminal activates |
| | 2- Non-Economic | 16.7% | |

This Chart indicating that increase in crime rate is affected 75% criminals residing in rural area, 75% by illiteracy of parents, 66.7% by low wage rate employed and 58.3% illiteracy of criminals. Illiterate villagers with low wages commit crime to enhance their income; illiteracy of parents is also affecting the crimes

The word frequency cloud is explored to see the most frequent variable reported by participants motivating economic rationales which further motivate criminal activities.

This frequency cloud shows that the common problem reports by all participant is illiteracy which is mean reason of low living standard and hurdle in the way of meeting economic needs.

RESEARCH METHODOLOGY

3.1- Research Question

This study is conducted to find out the circumstances which motivate the human beings to commit crime. The research question is what are the economic rationales of crime in Pakistan?

3.2- Settings

To acquire the data for analyze the study Structured interview protocol was preferred. The interview was structured containing 15 questions which satisfied the study requirements. With the permission of higher authorities 12 criminals from three district of Punjab were chosen. Questions were designed in a manner to investigate the rationales of crime.

3.3- Population

This study is conducted for the environment of Pakistan; all criminals are the population in this specific study

3.4- Data Source

Primary source of data is used to find out the economic rationales of crime as secondary data is not available on this type of circumstances. The sample size is 12 criminals of the age between 25-40 year from three districts jails, Sheikhpura, Lahore and Gujranwala.

3.5- Research Design

The objective of the study is to explore the economic rationales of crime in Pakistan. The behavior of criminals can never be measured by any kind of instrument as there is no tool available in the world so the research approach used here in my study is qualitative one rather quantitative. The philosophical assumption ontology is interpretivism used to find out the reality. Inductive style and formal language to enquire data regarding the study was used. Being the resident of such area where crime rate is on its extreme point this study is conducted under the assumption interpretivist paradigm, it allow me to be UN bias by using deductive method to explore the results.

3.6- Interview Instruments and Protocols

The data collecting technique is primary in nature. Three different district jails were selected from Punjab as District jail Lahore, Sheikhpura and district jail Gujranwala. For interview four different criminals randomly selected from each jail between the ages 25 to 40 year old. Separate room was arranged to improve the confidence level of interviewers and recording instrument is used to record the conversation with the permission of interviewers. Interview schedule was formulated; minimum time allocated to every interviewer was half an hour. This structured interview was completed in three days for all three jails from 12 participants. The primary interview’s question are prepared on the basis of literature reviewed afterword with the approval of supervisor the final draft was formulated to present in front of interviewer to inquire the answers

3.7- Data Analysis Strategy

The study is qualitative base research so the NVIVO. Software to extract themes is used from the data. In the first stage of analysis all interviews which were in recorded form, are described carefully to analyze the data as “transcription of data is considered a very critical step in the data analysis stages because the representation of data through transcription can affect the overall meaning and conceptualization of the phenomenon under study” [27]. Thematic analysis is used to identify themes within the range theoretical framework.

3.8- Summary

In this part of the study set of population, sample size, research design of the study, data acquiring technique, interview, and its protocols are presented in detail. After this data analysis technique which is suitable for this data NVIVO. Is explained

RESULTS AND DISCUSSIONS

4.1- Participants

The participants from whom the data were collected were 12 young criminals having ages between 25 to 40 years old from 3 selected districts jails of Province, Punjab. Structured interviews were conducted in per planed time framework

4.2- Data Analysis Strategy

Data analysis appropriate for this qualitative study is thematic one to bring out the results from the selected data. NVIVO-10 Software is used for this purpose,

4.3- Data Analysis and Coding

This study is purely qualitative in its nature NVIVO-10 software is used to analyze the data. By using this software 06 nodes are constructed to extract themes from data, according to the requirements of the topic the nodes are followed as,

Nodes

- 1- Area of the residence of criminals
 - a- Urban
 - b- Rural
- 2- Education level of criminals
 - a- Literate
 - b- Illiterate
- 3- Employment level of criminals
 - a- Employed
 - b- Unemployed
- c- Low wage rate
- d- Skilled laborer
- e- Unskilled laborer
- 4- Family structure
 - a- Nuclear
 - b- Joint Family System
- 5- Father’s education level
 - a- Educated
 - b- Uneducated
- 6- Motives of crime
 - a- Economic
 - b- Non-Economic
 - c- Demonstration effect
 - d- Low living standard

The relevant nodes are coded with the relevant answers of the participants to drive the rationales of crime from this study

4.4- Explanation with tables

Table 1
Motives of crime

| Sample Size | 12 | Percentage |
|---------------------|----|------------|
| Economic Motives | 10 | 83.3% |
| Un-Economic Motives | 02 | 16.7% |

This table shows crimes are motivated by 83.3% by economic motives and 16.7 by uneconomic motives.

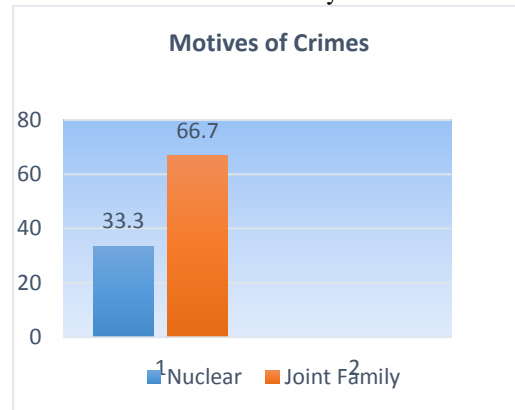


Table 2
Area of criminals

| Sample Size | 12 | Percentage |
|-------------|----|------------|
| Rural area | 09 | 75% |
| Urban area | 03 | 25% |

This table shows 75% criminals belong to rural areas whereas only 25% are from urban areas.

This table shows 66.7% criminals are found employed with low wages and 33.3% are employed

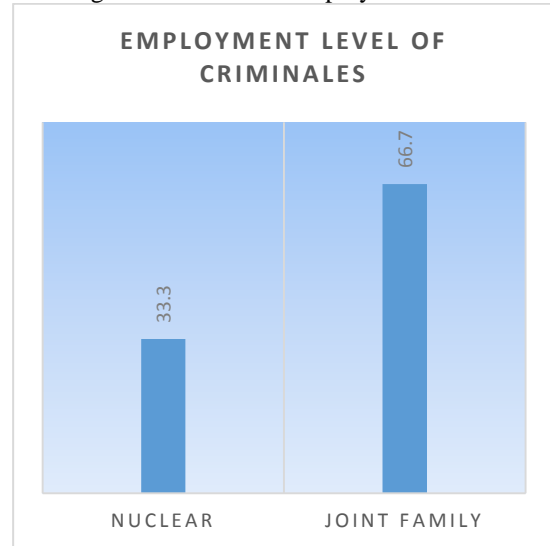
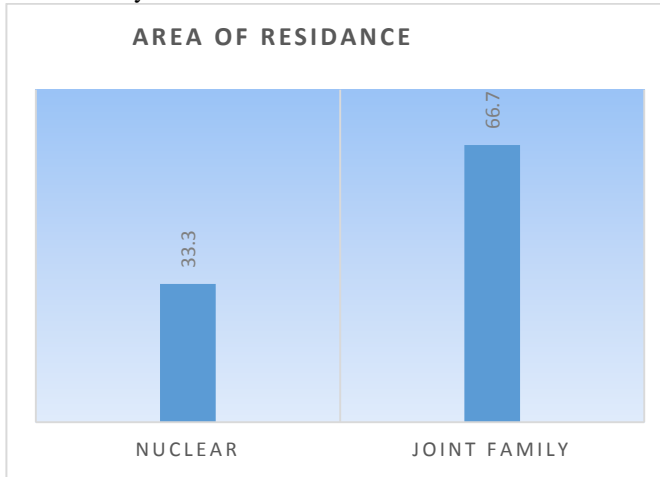


Table 3

Education level of criminal

| Sample Size | 12 | Percentage |
|-------------|----|------------|
| Educated | 05 | 41.7% |
| Un-Educated | 07 | 58.3% |

This table shows that 58% criminals are uneducated and 41.7% are educated.

Table 6

Family structure of criminal

| Sample Size | 12 | Percentage |
|----------------|----|------------|
| Joint Family | 08 | 66.7% |
| Nuclear Family | 04 | 33.3% |

This table shows 66.7% criminals belong to joint family system whereas 33.3% have nuclear structure

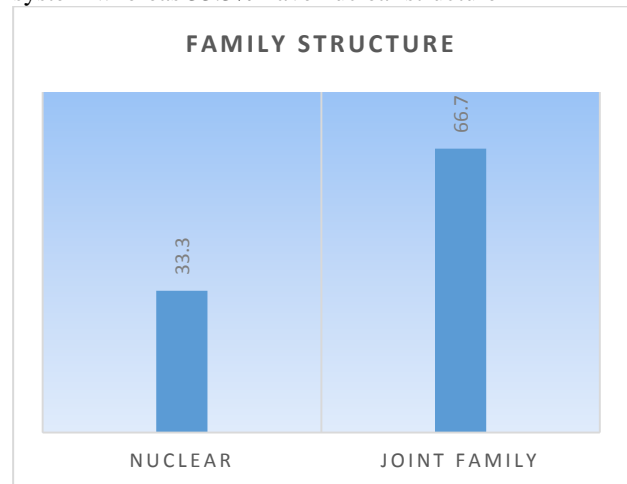
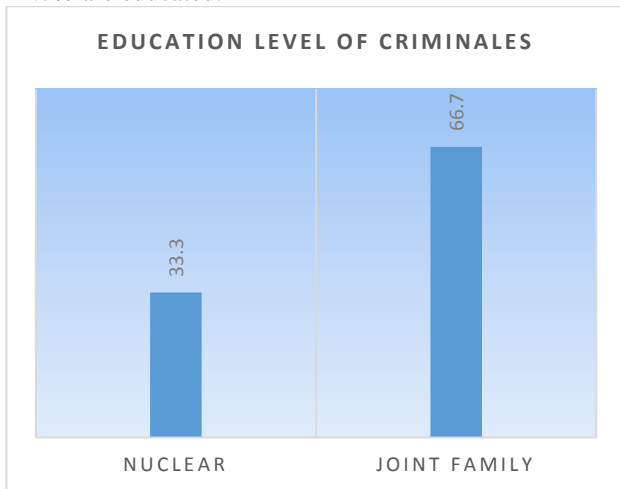


Table 4

Education level of criminal's Father

| Sample Size | 12 | Percentage |
|-------------|----|------------|
| Educated | 03 | 25% |
| Un-Educated | 09 | 75% |

This table shows that 75% Parents are uneducated which is also permutes criminality.

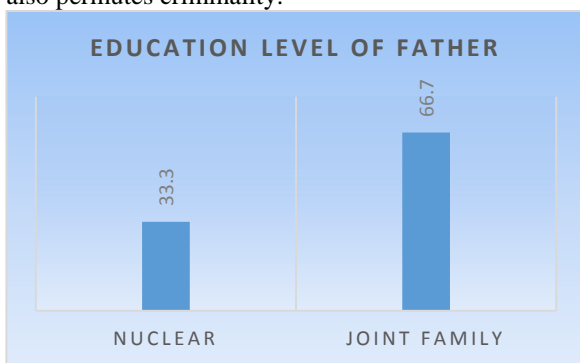


Table 5

Employment level of criminal

| Sample Size | 12 | Percentage |
|-------------|----|------------|
| Employed | 08 | 66.7% |
| Unemployed | 04 | 33.3% |

With the help of the NVINO software word chart was explored to see the frequently used words in the data. From the word length chart the most frequently used words are Education, Illiterate, Accusation, Unskilled, and unemployed.

4.4- Recommendation and implications for theory Research and Practice

This study is helpful in reducing crime rate in developing nations. The policy maker could use it as, if literacy rate of developing countries could be reduce it increases the productivity level of the people, helpful to enhance living standard and further reduce the crime rate. This study finds out the rationales of crime in Pakistan within age group in between 25-40 year. The same research may yields different results in developed nations as their motivation are different as that of in developing countries.

4.5- Summary

This section of the study contains results, conclusion, further policy recommendations and gap of the study, it is

concluded that the significant rationales of crime are that of economic rationales.

REFERENCES

- 1- Messner, S. F., & Rosenfeld, R. Political restraint of the market and levels of criminal homicide: A cross-national application of institutional-anomie theory. *Social Forces*, 75(4), 1393-1416, (1997).
- 2- Öster, A., & Agell, J. Crime and unemployment in turbulent times. *Journal of the European Economic Association*, 5(4), 752-775, (2007).
- 3- Baxi, P., Rai, S. M., & Ali, S. S. Legacies of common law: 'crimes of honour' in India and Pakistan. *Third World Quarterly*, 27(7), 1239-1253, (2006).
- 4- Machin, S., & Meghir, C. Crime and economic incentives. *Journal of Human Resources*, 39(4), 958-979, (2004)
- 5- Shleifer, A., & Vishny, R. W. Corruption. *The quarterly journal of economics*, 108(3), 599-617, (1993).
- 6- Myrdal, G. *Objectivity in social research*. Pantheon, (1969).
- 7- Krueger, A. O. Foreign trade regimes and economic development: Turkey. *NBER Books*, (1974).
- 8- Leff, N. H. Economic development through bureaucratic corruption. *American behavioral scientist*, 8(3), 8-14, (1964).
- 9- Lui, F. T. An equilibrium queuing model of bribery. *Journal of political economy*, 93(4), 760-781, (1985).
- 10- Blumenthal, R., Clague, M. J., Durell, S. R., & Epan, R. M. Membrane fusion. *Chemical Reviews*, 103(1), 53-70, (2003).
- 11- Colombatto, D., Morgavi, D. P., Furtado, A. F., & Beauchemin, K. A. Screening of exogenous enzymes for ruminant diets: Relationship between biochemical characteristics and in vitro ruminal degradation. *Journal of Animal Science*, 81(10), 2628-2638, (2003).
- 12- Powell, B., Manish, G. P., & Nair, M. 13 Corruption, crime and economic growth. *Handbook on the Economics of Crime*, 328, (2010).
- 13- Tailleux, L., Schwartz, O., Herrmann, J. L., Pivert, E., Jackson, M., Amara, A., ... & Lagrange, P. H. DC-SIGN is the major Mycobacterium tuberculosis receptor on human dendritic cells. *Journal of Experimental Medicine*, 197(1), 121-127, (2003).
- 14- Jacquemont, S., Coe, B. P., Hersch, M., Duyzend, M. H., Krumm, N., Bergmann, S., ... & Eichler, E. E. A higher mutational burden in females supports a "female protective model" in neurodevelopmental disorders. *The American Journal of Human Genetics*, 94(3), 415-425, (2014).
- 15- Free, C., Phillips, G., Galli, L., Watson, L., Felix, L., Edwards, P., ... & Haines, A. The effectiveness of mobile-health technology-based health behaviour change or disease management interventions for health care consumers: a systematic review. *PLoS medicine*, 10(1), e1001362, (2013)
- 16- Defina, A., Carniello, L., Fagherazzi, S., & D'Alpaos, L. Self-organization of shallow basins in tidal flats and salt marshes. *Journal of Geophysical Research: Earth Surface*, 112(F3), (2007).
- 17- Gould, S. J. *The structure of evolutionary theory*. Harvard University Press, (2002).
- 18- Hendricks Franssen, H. J. Comment on "An unexpected pattern of distinct weekly periodicities in climatological variables in Germany" by Dominique Bäumer and Bernhard Vogel. *Geophysical Research Letters*, 35(5), (2008).
- 19- Tang, C. F., & Lean, H. H. Will inflation increase crime rate? New evidence from bounds and modified Wald tests. *Global Crime*, 8(4), 311-323, (2007).
- 20- Smith, S. J. Crime and the structure of social relations. *Transactions of the Institute of British Geographers*, 427-442, (1984).
- 21- Walberg, P., McKee, M., Shkolnikov, V., Chenet, L., & Leon, D. A. Economic change, crime, and mortality crisis in Russia: regional analysis. *Bmj*, 317(7154), 312-318, (1998).
- 22- Alexeev, M., Gaddy, C., & Leitzel, J.. Economic crime and Russian reform. *Journal of Institutional and Theoretical Economics (JITE)/Zeitschrift für die gesamte Staatswissenschaft*, 677-692, (1995).
- 23- Thakur, CP. Epidemiological, clinical and therapeutic features of Bihar kala-azar (including post kala-azar dermal leishmaniasis). *Transactions of the Royal Society of Tropical Medicine and Hygiene*, 78(3), 391-398, (1984).
- 24- Krashen, S. D. *The power of reading: Insights from the research: Insights from the research*. ABC-CLIO, (2004).
- 25- Fisher, S. Economic Development and Crime: The two may be associated as an adaptation to industrialism in Social Revolution. *American Journal of economics and sociology*, 46(1), 17-34, (1987).
- 26- Rostow, W. W., & Rostow, W. W.. *The stages of economic growth: A non-communist manifesto*. Cambridge university press, (1990).
- 26- Jalil, H. H., & Iqbal, M. M.. Urbanisation and crime: A case study of Pakistan. *The Pakistan Development Review*, 741-755, (2010).
- 27- Oliver, J. D.. The viable but nonculturable state in bacteria. *The Journal of Microbiology*, 43(1), 93-100, (2005).