Determinants of Repetitive Juvenile Delinquency in Malawi

MASTERS OF ARTS (ECONOMICS) THESIS

BY

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DECLARATION

I the undersigned hereby declare that this thesis/dissertation is my own original work which has not been submitted to any other institution for similar purposes. Where other people's work has been used acknowledgements have been made.

Full Legal name

Signature

Date

CERTIFICATE OF APPROVAL

The undersigned certify that this thesis represents the student's own work and effort and has been submitted with our approval.

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MA Coordinator

DEDICATION

To my wife (Monica) and son (Joy)

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ABSTRACT

This study establishes the determinant of repetitive delinquency among young people in Malawi, by answering two questions; why do juveniles commit crimes and become repetitive offenders? And what are the factors associated with this repetitive delinquency? An analysis of the risks associated with repetition of delinquency has been done which includes individual risks and family risks, according to Broemel classification (2010). Number of times the young person has been involved in contravention of the law has been used to determine this repetition of crime. The study used primary micro data gathered from 107 juveniles in three reformatory centers and one adult prison (Kachere, Bzyazi, Mikuyu, and Maula respectively), and adopted a heteroscedastic probit model in modeling repetitive juvenile delinquency. Results from the study indicate that youth repeatedly engaging into crime is largely due to high levels of youth unemployment and the growing up in families which have a criminal history. The study has therefore recommended the adoption of unemployment by the Ministry of Youth, Sports and Culture as a major problem affecting the youth in Malawi, and the promotion of vocational skills in primary and secondary schools by the Ministry of Education if repetition of crime by juveniles has to be reduced.

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LIST OF ACRONYMS AND ABBREVIATIONS

AID	-Africa Development Indicators
CSDD	- Cambridge Study in Delinquent Development
GoM	- Government of Malawi
IHS	- Integrated Household Survey
LDCs	- Low Developed Countries
LDV	- Limited Dependence Variable
MRDF	-Methodist Relief Development Fund
NSO	- National Statistical Office
PASI	-Paralegal Advisory Service Institute
TEVETA	- Technical, Entrepreneurial, Vocational Education and Training Authority
TVET	- Technical, Vocational Education and Training
UN	- United Nations
US	- United States
WMS	-Welfare Monitoring Survey

CHAPTER ONE

INTRODUCTION AND BACKGROUND

1.1 Introduction and Background

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Over the years there has been remarkable change regarding socialization, relationships, education and employment; the socialization functions of the family being replaced by institutionalized socialization especially school, relationships becoming more mechanical as societies develop, education prospects and choices becoming more uncertain, and unemployment and disguised employment/underemployment increasing. The United Nations (2003a) acknowledges that specifically, young people are challenged by traditional patterns guiding these relationships and transitions between family, school and work. From a labor market perspective, it is stated that there has been restructuring of the labor market and educational opportunities and choices, which have affected labor market participation, leisure activities and lifestyles. These have further led to the extension of the maturity gap (the period of dependence of young adults on the family).

The United Nations further notes that it is not only developed countries that are facing this situation. In developing countries as well there are new pressures on young people undergoing the transition from childhood to adulthood. Above the unemployment and underemployment which is also the case in developed countries, there is rapid population growth, the unavailability of housing and support services, poverty, the decline in the authority of local communities, overcrowding in poor urban areas, the disintegration of the family, and ineffective educational systems. With such changes and disillusionment among young people, the youth have resorted to crime as a means to getting what they want. The breakdown of social ties being replaced by social cliques, which are usually criminal in nature and further breaking the socialization process, buggery and robbery are an alternative to employment to supply what the youth want.

Statistical data indicates that in virtually all parts of the world rates of youth delinquents rose in the 1990s. In Western Europe, one of the few regions for which data is available, arrests of juvenile delinquents and under-age offenders increased by an average of around 50 percent between the mid- 1980s and the late 1990s. The countries in transition have also witnessed a dramatic rise in delinquency rates; since 1995, juvenile crime levels in many countries in Eastern Europe and the Commonwealth of Independent States have increased by more than 30 per cent (United Nations, 2003a).

Though many might be involved in crime as has been argued above, it has to be acknowledged afore per the argument of Bartol (2008), only a few become persistent offenders who commit numerous serious crimes, including crimes of a violent nature. This is a condition in which juveniles have been termed repetitive/ habitual/ chronic/ or persistent delinquents.

However Vachss (1983) further argues that when we are talking about habitual juvenile offenders we must have a good glimpse as to whom are we talking about? He further argues that the perception that politicians, televisions, and radios give is that of a new breed of juveniles but these have existed all along. The way to grasp habitual/repetitive juvenile delinquents is twofold: Firstly juvenile delinquency refers to crime committed by those below the adult age which is usually 18 years; secondly those committing crime have not to be entrants/ first offenders, but they have committed crime before or they have been committing crime as a career.

One thing to note is that despite the increased delinquency among youth, studies on crime have largely been associated with sociology, demography and criminology though increased attention has been given to economic variables. However, economic studies on crime have been scarce until the path breaking work of Gary Becker (1968) who extended the domain of microeconomic analysis to a wide range of human behavior and interaction, including nonmarket behavior like that of crime which had previously been dealt with - if at all - by the other social science disciplines mentioned above. In so doing, he stimulated economists to tackle new problems. He applied rationality to criminal behavior which was usually seen as irrational. This application of economics to crime and punishment has been an outstanding work for a Nobel Prize (Sveriges Riksbank, 1992).

A strong aspect of the demographic and economic variables is that they explain crime better than the other factors like genetics, and also estimates for the most part of crime conform to the economic modeling of crime. Based on this background, Becsi (1999) postulates a direct relationship between crime and economics in the sense that property crime might be thought of as most responsive to economic conditions and many violent crimes being committed as a by-product to crimes for economic gain. Beyond his writing, the common argument to the cause of crime is unemployment, poverty, and education, which are also economic in nature.

It has to be acknowledged afore that juvenile crime has gone beyond the three variables mentioned above to include what Broemel (2010) summarizes as, individual risk factors; a minor who has a lower intelligence and who does not receive a proper education is more prone to become involved in delinquent conduct and there is also inability to postpone gratification: Family risk factors; lack of proper parental supervision, ongoing parental conflict, neglect and abuse (emotional, psychological or physical). He argues that, parents who demonstrate a lack of respect for the law and social norms are likely to have children who think similarly: Mental health risk factors; largely attributed to conduct disorder *i.e.* "a lack of empathy and disregard for societal norms": Lastly substance abuse risk factors; this focuses on use of drugs.

1.2 Statement of the Problem and Significance of the Study

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The increasing trend in juvenile crime observed by United Nations on Commonwealth Countries in the preceding section, is so evident in Malawi despite that from 2005 there has been increased attention by law enforcement agencies on juvenile delinquency than ever before. Data from juvenile arrests records in Police indicates that between 2005 and 2009 there has been a 35 percent increase in juvenile crime, which is above the 30 percent increase in juvenile crime experienced in Commonwealth Countries since 1995. According to C. Panyani, (personal communication, January 10, 2011), it has further been noted that despite the affirmative action towards juvenile delinquents of sending them to the reformatory centers and related development of handling their cases, those who are still contravening the law are those released from reformatory centers i.e. they are repetitively offending.

The worrisome development with these crimes committed by repetitive delinquents is that they are criminal in nature. Criminal offences refer to all offences from the penal code CAP 7:01 of the Laws of Malawi ranging from house breaking to murder. This increasing contravention of the law by young people especially the penal code is therefore a threat to existence of society norms, enforcement of laws, and a potential source of poor ranking of Malawi on crime index. This therefore calls for a good understanding of the underlying causes of repetitive juvenile delinquency.

The most important aspect is that understanding these causes, forms an integral part of preventing a young person from involvement in inappropriate, harmful and illegal conduct. Illegal and destructive conduct by a young person can be stopped only if the underlying reasons for the behavior are identified and resolved. Secondly, the understanding forms a basis of designing proper programs for the juveniles both inmates and ex-convicts in an effort to break the repetitive delinquent cycle. For example, if a young person's delinquent behavior stems from illicit drug use, it is essential that the substance abuse be resolved before delinquent conduct can be stopped. Similarly, if the cause of juvenile delinquency is a mental health condition, that mental sanity must be restored first in order for illegal conduct to be brought under control and ended (Broemmel 2010). Therefore, designing of programs has to be aligned with the cause if crime has to be reduced. Thirdly, juveniles who are delinquent are a wave of crimes for the present society as well as the future society. Failing to resolve the problem when they are young, will lead to a societal decay where three things will happen: First the institutionalization of crime; the breeding of crime aging population; and lastly the increased number of criminals.

Sadly, it has been noted that though the increasing trend has clearly been observed in Malawi, the crime surveys that have been done, none has addressed the aspects that can help in combating crime especially among the young delinquents who are constantly contravening the law. Most surveys done on crime have been related to victimization and demand for protection. This bias has also been a resultant effect of data collected by National Statistical Office (NSO) in Integrated Household Survey (IHS) which considers the safety and security from the recipient of crime (offended) and not the offender. Among such crime surveys done in Malawi are, Crimes of Needs (2003), and Crime and Happiness Amongst Heads of Households in Malawi by Davies and Hinks (2010).

1.3 Objectives of the Study

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~~6.3~~1.3.1 General Objective

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The main purpose of the study is to investigate the reasons behind repetitive delinquency among the juveniles in Malawi. The questions the study is trying to resolve is why do these juveniles commit crimes and become repetitive offenders? And what are the factors associated with this repetitive delinquency?

1.3.2 Specific Objectives

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The specific objectives of the study are;

- To establish the effect of education, unemployment, and family risk on repeated contravention of the law by juvenile, and
- To determine the deterrence effect of punitive sanctions of reformation on juvenile repetitive delinquency.

1.4 Research Hypotheses

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To achieve the above objectives, the following hypotheses were tested;

- Parental and own education, youth unemployment and family risk do not influence juvenile crime.
- The punitive sanctions in reformatory centers can not deter minors from engaging in crime

1.5 Organization of the Study

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The study in the next chapter gives an overview of juvenile crime in Malawi and related developments; chapter three reviews related literature on repetitive juvenile delinquency, both theoretical and empirical, and also presents the foundation and merits of the rational choice theory that has been adopted in this study; chapter four presents the repetitive crime probit model which was used, the diagnostic tests, and modification and changes following the diagnostic tests; chapter five presents results and findings of the study; and lastly chapter six gives a conclusion of the study and recommendation on policy.

CHAPTER TWO

AN OVERVIEW OF JUVENILE CRIME IN MALAWI

2.1 Introduction

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This chapter presents an overview of juvenile delinquency in Malawi, more especially the development that have been there in the management and handling of this juvenile delinquency. It further provides the trends and the problems that are there in juvenile data management and finishes with the initiatives that are being done by other organizations apart from the government.

2.2 Developments on Juvenile Crime in Malawi

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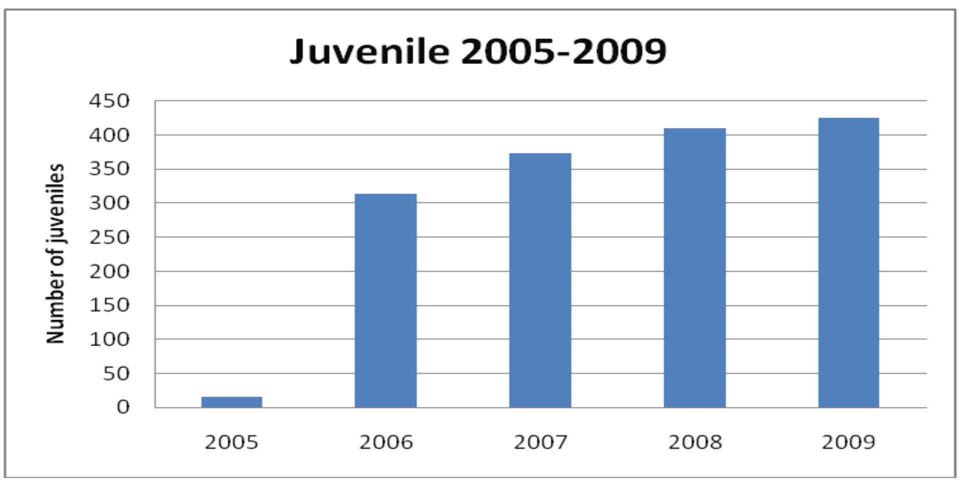
Worldwide there has been increased attention being given to the juveniles, regarding the offences they commit and the way to handle such offences. Similarly the Malawi Government established four Juvenile Reformatory Centers under Malawi Prisons Services in addition to those under Ministry of Women, Child Care and Community Development, namely; Kachere (1994), Bzyazi (1995), Bvumbwe (2000), and Mikuyu (2010), and the latter has three; Mpemba Reformatory Center (Boys Home) (1973), Chirwa Reformatory Center (1947), and Lilongwe Rehabilitation Center (2006). Before the establishment of these reformatory centers, children were being imprisoned together with older offenders.

In 2005, The Malawi Government established Child Justice Courts with the aim of offering children with a fair treatment not that of an offender. Before this establishment, as noted above, children were unfairly tried in higher courts, therefore violating the rights of children, and contravening section 42(2) (g) of the constitution which provided for the rights of children detained on alleged commission of an offence (Public Ear, 2010). Following this, several reforms have been instituted including the change in naming and the actual reformation where the crime has to be detached from the term young offender now being called the minor. Furthermore the children interaction was changed to have a chance of meeting other children from the community while in school this is specifically for the Juvenile Centers that are under the Ministry of

Women, Child, and Community Development. As with international juvenile crime handling procedures, all mechanisms are put in place to make sure that the reformation process is complete without attaching a criminal record on the minor or being discriminated in anyway within or after the reformatory process.

With these changes going on, the Malawi Police has also developed an initiative in addressing Juvenile Crime by training special officers to handle such cases and house them in the victim support unit instead of the usual prosecution office. From July 2010 it has further divorced juvenile data from the aggregated crime data. The police headquarters aggregates this juvenile data from all stations and the stations compile individual data per month. It has however been noted that monthly data is very stochastic than the yearly data as far as supply of crime is concerned. Data from 2005 in which the child courts became operational depicts an increased trend of crimes being supplied and prosecuted as depicted below (Figure 1).

Figure 1: Juvenile Crime Trend (2005 to 2009)



Source: Malawi Police (Southern, Central, and Eastern Region Headquarters)

This data was collected between November 2010 and January 2011 therefore the data of 2010 was incomplete to be incorporated into the study. It has to be further noted that the jump between 2005 and 2006 might be attributed to the special interventions into juvenile crime started in

2005, as indicated earlier. However the graph is giving a good picture that juvenile delinquency has steadily increased in Malawi.

As observed by the United Nations (2003a) that crime trend increased by 30 percent in Commonwealth of Independent States, for Malawi it has been higher in recent years. The increase has been calculated at 35 percent. Further to this the number of crimes associated with area development befits the development and crime argument that the more developed or the more the area is developing the higher the expectation of crime. A comparison of cities as per police stations indicates that the Capital City (Lilongwe) within the period of focus registered about four times the crimes committed in the other two regions *i.e.* the Eastern and Southern regions. The World Bank in May 2007 came to accept that crime and violence are developmental issues, such that as regions develop, they also face incidences of crime increase.

The study acknowledges that prosecution data would leave out some cases which were not prosecuted resulting to underestimation of the crimes being committed or the delinquent was either not caught or arrested or brought before the law enforcement agencies. It has therefore to be stated afore that effort was made to get data on the reported cases in order to capture all cases not only those prosecuted but it was not possible. However, it has to be accepted that such data is not readily available, such that the United Nations has resorted to use arrests as an indicator and this study adopted the same.

Krisberg (1995) in Bartol (2008) states that the amount of delinquent behavior, what are both reported and unreported to law enforcement agencies, is essentially an unknown area. We simply do not have complete data on the national incidence of juvenile delinquency, broadly defined. Although data is incomplete, we still have some statistics collected by law enforcement agencies, the courts, and juvenile correctional facilities which can be used.

Similarly Wickliffe (2000) when writing on juvenile crimes in California observed that despite the statistical data on juvenile behavior being available, there seems to be serious shortcomings in the validity of the analysis and understanding of juvenile crime. There are limitations in the "unknown relationship" between the numbers of crimes actually committed, the number of those reported to the police, and the number of those so reported actually recorded and reported by the police. Malawi shares the same situation.

Data on repetitive crime could have again given another good indication of repetitive delinquency among young people however as observed in the writings of Wickliffe (2008) and Krisberg (1995) it is a competence that law enforcement agencies must develop if interventions are to be encouraged.

Beyond the data handling problem by law enforcement agencies, it is worthy acknowledging that the majority of studies and programs dealing with juvenile delinquency have also had a biased view as far as crime is concerned. The studies have given much focus on the youth as offenders not victims of crime. Levit and Baker (1996), considers the receiving end of crime and reports that young people especially those below 16 years of age are also among highest victims of assault in any country. A similar trend has been reported in Malawi. Between 1st May 2002 and 1st May 2003, young people less than 16 years accounted for more than one third of the respondents to the Malawi National Crime Victimization Survey (2003) who were victimized in one way or the other, this also formed the largest number of all ages. Tembenu, Chief Magistrate for Child Court in Blantyre, in Public Ear (2010) emphasizes that children remain the biggest abused age group in Malawian society even in courts.

Besides the reformatory centers and law enforcement agencies, it is worthy acknowledging that there are some organizations that have also worked towards the reformation and adjudication of juveniles. The notable organization is Paralegal Advisory Service Institute (PASI). The institute was formed in 2000 following an initiative of Penal Reform International (PRI), to create an environment where justice is accessible to everyone, especially the poor and vulnerable (PASI, n.d.). In line with juveniles the organization has a special initiative of screening cases which require attention. Topping the list are those cases where legal time limits have been exceeded or bail is appropriate. They also target those cases which are dragging in older to push these cases quicker. The juvenile screening uses forms that are agreed upon by the police and social services, where the paralegals can recommend a course of action from bail to diversion from prosecution. Statistics from PASI office shows that between 2007 and 2010, 2188 juvenile cases were screened, 355 cases diverted, and 1612 cases released on bail (PASI Newsletter, January 2012). Since 2004, a year before the establishment of child justice court, the institute has managed to divert 77 percent of young persons who could have been imprisoned (PASI, n.d.). A question which may require an impact assessment of this diversion can be, *"How effective is the diversion in insuring that the justice is done without compromising reformation of the juveniles."*

The other organization which works towards post prison reformation is the Prisons Fellowship, which was established in 2005, with an aim of providing vocational training to ex-prisoners in order to economically empower them as well as equip them with skills for self development and sustenance. The fellowship has two modes of training; formal and informal, where the former takes the offenders/ ex-prisoners through institutionalised training. So far the latter has been the window through which most potential juveniles have benefitted from the Fellowship's programs. According to V.O. Kalawa (personal communication, March 19, 2012), the informal programs incorporates young people who are involved in crime and are at risk of being convicted. The two approaches that are used are counselling and vocational skills. The vocational skills are in an effort of addressing the economic challenge of unemployment, such that in the end they are given start-up capital and tools for them to get into an economic venture. However financial support is a challenge hence limiting the number of beneficiaries. So far almost seventeen young offenders have benefited from informal programs and ten from the formal sector, totalling to twenty five and representing 12 percent of the total beneficiaries of the programs. Despite this contribution no impact assessment of their programs has been done, but from follow up reports the success rate of reformation has been rated at 98 percent, where success rate considers none repetition of offence.

2.3 Conclusion

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It was the intention of this chapter to provide a detailed and good picture of the juveniles delinquency in Malawi, related developments and reforms that have taken place, however not much research and writing has been done as far as juvenile delinquency is concerned in Malawi. It is also worthy accepting that it is from the year 2005 when focus is being driven towards juveniles. Based on this overview, the next chapters will review related literature and later provide the basis for the methodology of the study.

CHAPTER THREE

LITERATURE REVIEW

3.1 Introduction

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This chapter reviews related literature on juvenile delinquency. In section 3.2 the chapter starts with providing theoretical basis under which studies on crime have been done and later examines the weaknesses and strength associated with the crime theories. In section 3.3, it provides an empirical basis on which this study is based, and lastly there is the conclusion of the chapter in section 3.4.

3.2 Theoretical Literature Review

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The impetus in trying to understand juvenile delinquency has raised several questions which have not been answered. One of the people who have raised such questions is Vachss. Vachss (1983) questions the ergo of trying to understand repetitive juvenile delinquency by pointing out that *"What do we do with the criminally insane, violent juvenile? The hospitals won't take him. Nobody will take him. So he ends up in a juvenile institution, doing time with others who are criminal, but not insane. What other profession does this?"*

However he is quick to write that we still need to care about the repetitive delinquents despite their miss-fitting behavior into the society because firstly they disproportionately impact on crime in any community, secondly each of these kids is a crime wave. A very good example of crime wave is Professor Wolfgang's famous "Cohort Study" (in Vachss, 1983) which found that about six percent of all juveniles in his study were responsible for sixty six percent of repetitive violent crime. Thirdly repetitive delinquents destroy every piece of mythology regarding juvenile reform and they do not fit into any program. He therefore calls for research and development to be of parallel track variety for prevention by intervention to better address repetitive juvenile delinquency. In researching this juvenile delinquency and in trying to explain it, most people have depended on crime theories which have been classified as either classical or neoclassical as is the case with most economic theories.

The classical approach to crime originated in the enlightenment and is evident in the writings of 17th century Philosophers, Thomas Hobbes, John Locke, Jean Jaques Rousseau, and others. According to this perspective, intelligence and rational thought are fundamental characteristics of people and the principal basis for their behavior. In other words, people have free will, make choices and pursue their own interests (McCarthy and Cohen, 2002). The principle behind the theory is that in the free will, the individuals try to maximize pleasure and minimize pain. Fear is the deterrence factor in committing crime and punishment is the principal method of operating to create fear. Therefore criminal justice is there to prevent crime through deterrence.

The major drawback of the theory is that it is utilitarian in its application. It does not consider the other factors that deter crime as well as contribute to crime. For example, somebody can get into crime as an effect of peer pressure and also refrain from it as a result of the same. Such being the case its application is so limited if we talk of fee will and self interest.

Contrary to the assertion of classical economists, neoclassical economists rest on Becker's premise of 1960. Neoclassical economic theory posits that there is a market for the supply of crime that behaves much like any other market. The analysis of McCarthy and Cohen (2002) describes the crime market very well by considering four aspect of the market: Firstly, crime markets experience periods of substantial growth (market boom), such as was the case in the United States (US) in the late 1980s and early 1990s, and periods of substantial decline (market slumps), as was experienced between 1992 and 2004. The primary mechanisms used by society to regulate this market are the police and prisons (market constraining factors), which are expected to deter and incapacitate potential criminals. Therefore, an increase in the number of police is expected to increase the expected probability an offender will be arrested for a crime, and an increase in prison populations increases the expected severity of the sanction therefore reducing the number of crimes being committed. Secondly, most policy discussions about interventions into the crime market focus on these two policy mechanisms. As a result, when crime rates change, speculation about the cause first turns to deterrence and incapacitation mechanisms. Thirdly, to those unsatisfied by deterrence and incapacitation explanations, exogenous shocks to the crime market specifically shocks that affect the supply of crime such as changes in economic conditions, demographics and cultural norms are generally the only alternative explanation. Lastly, they also recognize that often overlooked in the analysis of crime is the degree to which changes in the expected profits of a criminal transaction and changes in private precautions affect crime rates.

The advantage of the neoclassical theory is that it offers several challenges to alternative theories of crime. Firstly, it simplifies the search for motives by assuming that self-interest guides all behaviors, criminal and otherwise. Secondly, it removes distinctions between offenders and non-offenders. However psychological, sociological, and criminal decision theorists and researchers like Cornish and Clarke; Gottfredson and Hirschi, have doubted its accuracy and empirical application. The most prominent critics argue that a theory grounded too deeply in instrumental rationality misrepresents people's basic nature (McCarthy and Cohen, 2002).

Despite the criticism leveled against the theory, the neoclassical theory still better explains the supply of juvenile crime based on the premise that a variety of social and cognitive factors can help explain the rapid rise in age-specific rates of offending around mid-adolescence. From such a premise, it can be stated that generally teenagers lack strong bonds to conventional adult institutions, such as work and family. This can best be appreciated in the finding of United Nations (2003a) that life trajectories have changed and bonds between family and children as they grow older have weakened while they also face extension in the maturity age (the time that young people depend on their families). At the same time, teens are faced with strong potential rewards for offending: money, status, power, autonomy, identity claims, strong sensate experiences stemming from sex, natural adrenaline highs or highs from illegal substances, and respect from similar peers (Warr, Steffensmeier & Allan in Witte and Witt, 2000).

Alluding to peer pressure Warr (2006) believes that Gottfredson and Hirschi (1990) are too quick to dismiss sociological claims that peer pressure affect crime. Further analysis shows that delinquent friends tend to be “sticky” friends, and a certain amount of misbehavior is often seen as natural to youth and seen as simply a stage of growing up (Jolin and Gibbons; Hagan et al. in Witte and Witt, 2000). Bartol (2008) also shows that peer pressure on the other hand acts as an enforcement factor for juveniles to remain delinquent. He notes that children with delinquent behavior tend to be in the out groups (rejected by peers) and this rejection lasts during the school times. That being the case such children miss opportunities to develop normal interpersonal and social skills to enable them gain a living later in life. This therefore means that the only means for them to get their needs is through aggressive means and intimidation. This might also further explain the existence of low education among delinquents as an explanatory factor but also a contributing factor. It is therefore quite clear that in explaining juvenile crime, the sense of belonging and the effect of in-groups in form of peer pressure among juveniles as being argued by Warr have not to be ruled out. The ignoring of this element gives a challenge of over attribution of the cause of crime on other variables like family which greatly plays much role of deterring crime rather than promoting it.

The argument above does not rule out the fact that families where minors come from might in one way or the other have contributed to the crime especially when the crime deterrence function has scaled down, or crime has been institutionalized in the family *i.e*. the family has a history of crime. However this also does not mean that it is only families with criminal history that may have children engaging into crime. Bartol (2008) argues that children who are difficult to manage in the home grow up with such behavior even if they go into school. This continues through adolescence into their adulthood, and is one of the reasons for continued offending. On the other hand it is worth noting that the disciplining of these children by their families has also an effect on crime as observed by Wicliffe (2007). Disciplining aims at applying negative sanctions on the minor for him/her not to offend next time after committing the first offence. In other words, it a collective measure not a preventive measure. This complexity therefore makes the family an important factor to be considered as far as juvenile delinquency is concerned.

One of the aspects within the family that has been found to contribute to crime is abuse. Vachss (1983), Dishion & Bullock (2002), Dodge & Pettit (2003) and Mayfield & Widomv (1996) in Bartol (2008), acknowledge that the experience of physical abuse in early life significantly increases the risk of future antisocial conduct (On the other hand, warmth and appropriate behavioral management by parents have been found to have very positive outcomes on the developmental trajectories of their children. Subscribing to the same Kalb and Williams (2002), have argued that those families where children have more siblings they also face higher rates of arrest emanating from absence of desired attention (warmth) from their parents. It has to be accepted that with increased attention and warmth from parents the children develop contentment in the social relationship. More from economic perspective the provision of attention by parents has to be taken as a good or service that parents have to supply. If the provision is not adequate, the development is likely to be malnourished.

Another factor within the family to be considered is poverty. Many writers including Daniel Yu (2007), Bartol (2008), and L'Estrange (2011) they have identified poverty as one of the powerful risk factors for delinquency. The argument is that beyond the social cohesion above, poverty creates multiple barriers to health development of the child. The argument centers on social exclusion or deprivation. Families under financial strain are often plagued by inadequate educational and economic means for survival. When the families cannot provide for their children, the children might find their own means to obtain what they want which usually may culminate into crime. The above authors further argues that, similarly communities made up of such households have inadequate education, health systems and often have a large number of families experiencing disruption brought about by limited occupational resources and family breakdown. Therefore in the absence of the good and legal economic access to these resources for their well being, the only available alternative is the illegal means of obtaining the same. However Bartol (2008) argues that though such is the case, poverty does not forbid a health development of the child.

Beyond poverty İmrohoroğlu, Merlo, & Rupert (2006) argues that countries also differ substantially in many dimensions that may matter for issues related to crime. For example, the number of police, the probability of apprehension, the probability of being sentenced, the duration of the jail sentence, as well as economic conditions such as the unemployment rate, age and distribution of the population.

Roman, and Chalfin (2008) points out that seminal works by Becker (1968), Erlich (1973, 1981), Vandaele (1978), Cook (1986), Cameron (1988), Dijk (1994) and Garoupa (1997) posits that the supply of criminal offending is a function of four factors: the probability (risk) of capture, the severity of the sanction if captured, the expected profit from a criminal transaction, and the opportunity cost of a criminal transaction. In this rational offender framework, a potential offender commits crimes when the expected benefits of offending outweigh the expected costs. Changes in any one of these variables will affect the crime rate. This follows that any public policy designed to reduce externalities associated with criminal offending typically seek to increase the probability an offender is captured and the severity of the sanction. In other words it increases the cost of production or supply of crime therefore less is supplied at each period. If offenders have to supply crime then there has to be larger investment but not beyond the expected gain, this then defines rationality. All this is basically the argument of Rational Choice Theory in crime economics. It has to be accepted that Rational Choice Theory, has gained support in economics; in explaining crime causation (Becker & Murphy, 1988, and Witte & Witte, 2001), time resource allocation in crime (Ehrlich, 1973, and Witte, 1980, in Witte & Witt, 2000) and in studying organized crime (Klaus von Lampe, 2003).

Beyond the offender the application also acknowledges that in crime usually the victims are in one way or the other hurt. Becker (1968) models the damage. He postulates that the amount of harm would tend to increase with the activity level.

$$H_i = H_i(O_i) \tag{1}$$

$$\text{With } H_i = {dH_i}/{dO_i} > 0 \tag{2}$$

Where H, is the harm from the ith activity and O, is the activity level.

Similarly, the social value of the gain to supply of crime, presumably tend to increase with the number of offenses.

$$G = G(O) \tag{3}$$

$$\text{With } G^{'} = {dG}/{dO} > 0 \tag{4}$$

The net cost or damage to society is simply the difference between the harm and gain and can be written as;

$$D(O) = H(O) - G(O) \tag{5}$$

He further postulate that from the supply of crime, offenders eventually receive diminishing marginal gains and cause increasing marginal harm from additional offenses, G" < 0, H" > 0.

From the cost side (demand), he considers apprehension and conviction which form part of incapacitation and deterrence factors as already allude to above.

$$C_p = \frac{\partial C(pO)}{\partial p} = C^{'}O > 0 \qquad (6)$$

$$\text{And } C_0 = C^{'} p > 0 \qquad (7)$$

This is the case if $pO \neq 0$.

Where *p* is the overall probability that an offense is cleared by conviction, the ratio of offenses cleared by convictions to all offenses, C is the cost allocation to police or prisons. An increase in either the probability of conviction or the number of offenses would increase total costs.

However, the rational choice theory has been criticized from its application to measurement of crime. Firstly the argument by rational theorists of risk calculation might be the case only for organized crime where the potential offender can weigh the costs and benefits. But as argued by Cohen and Felson (1979) most crime that is committed is unorganized. This therefore restricts its application to organized crime which is also rare. Routine Activity Theory a sub-branch of Rational Choice Theory argues from the offended side that most crime is not organized as may be thought but petty crime. It further argues that crime is normal and depends on the opportunities available for that crime to be committed not necessarily the constraints of crime being committed as argued by rational choice theory (Cohen and Felson, 1979). Subscribing to the same, Crime Prevention Theory also known as Situational Crime Prevention Theory proposed by Clarke (1995 & 1997) argues that in preventing crime, the major focus has to be on reducing crime opportunities rather than on the characteristics of criminals or potential criminals. In other words, these two theories simply argue that for crime to be committed it just needs an opportunity contrary to calculated rationality as proposed by the mainstream Rational Choice Theory.

McCarthy and Cohen (2002) further notes that there is no widely accepted definition of economic crime despite the increased contribution from rational choice theorists in crime studies. They further note that it is impossible to enumerate briefly the various definitions, theories, and offenses included in this category. Such being the case, in economics focus in theoretical work explores three aspects of economic crime: offender motivations, economic outcomes, and economic processes.

Lastly though the theory befits a typical description of a supply function in a rational sense, it over assumes the existence of perfect information for rationality calculation, which is not the case in the production and supply of crime. It also assumes availability of choices in committing a crime from which rationality can be calculated (one can choose).

3.3 Empirical Literature Review

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The rise in juvenile crime rates has called for an increased attention to juvenile delinquency. This has therefore forced economists to expand their thinking to incorporate such things as education, peer group effects, and the influence of family and community on the crime committed by the youth. It has to be accepted that the initial thinking was that direct economic factors matter more than the others and as seen in section 2.1 the major focus was on unemployment and poverty.

Drawing from the neoclassical theorists' tenets 3 and 4 above, *"exogenous shocks to the crime market specifically shocks that affect the supply of crime such as changes in economic conditions, demographics and cultural norms are generally the only alternative explanation, and the degree to which changes in the expected profits of a criminal transaction and changes in private precautions can affect on crime rates (McCarthy and Cohen, 2002),"* explaining the trend in criminal participation rates in most industrialized economies has been a difficult task. Many social scientists argue that crime is closely related to work, education, and poverty and that youth unemployment and crime are by-products or even measures of social exclusion, and that "blue-collar" criminals often have limited education and possess limited labor market skills. These characteristics therefore, partly explain the poor employment records and low legitimate earnings of most criminals. Such a premise led economists to examine the relationship between wages and unemployment rates on crime. More recently economists have also considered the benefits and costs of educational programs to reduce crime (Witte and Witt, 2000). However the debate as to what really causes crime between education and unemployment has not been resolved. Some think the latter is a result of the low education attainment and not a direct cause on its own.

Development research has therefore been instrumental in identifying enormous influence of multiple factors like school, peers, and family in the learning and continuity of delinquency and criminal behavior. Kalb and Williams (2002) have found that the linkage of these multiple factors from the role modeling that happens within and outside the families have a great effect on juvenile delinquency. However the results are so mixed.

Case and Katz (1991) found that negative role modeling from family members and peers have a positive significant effect on someone engaging in crime. Contrary to this finding, Grogger (1998) and Williams and Sickles (2002) found family criminal history has an insignificant effect on someone engaging into crime.

Estimating a treatment effect model using data from Delinquency in a Birth Cohort II study of Philadelphia Kalb and Williams (2002) found that the presence of the father has a negative effect on crime and it is significant. However Comanor and Phillips (1999), Williams and Sickles (2000) in Kalb and Williams (2002) found it to have an insignificant effect when it comes to adult offence. This can be seen clearly in that the social cohesion between the child and father when they are growing up tend to decline. Similarly Case and Katz (1991) in *ibid* found that the presence of both parents has an insignificant effect on the probability of participating in crime.

From education perspective Kalb and Williams (2002) have found that fathers with higher levels of education are better able to act as positive role models for their sons and provide information about legitimate opportunities available to them. However for mothers they found that their education had no significant effect on probability of juvenile offence and therefore was excluded from their model. Case and Katz (1991) also found that parents education has no effect on offending, however their study had a mixed view of who a parent was in one case used the older member of the household, in another the one who was most important in raising the minor up, and in another case the one who was contributing more money in raising the child up.

From own education perspective Witte and Tauchen (1994) and Grogger (1998) found that measures such as high school graduation or years of education do not significantly affect the probability of engaging into delinquent behavior. Witte (1997 in Net Industries 2011b) reviews the literature on education and crime and discusses models that suggest possible crime-reducing effects of education. However she finds that the empirical evidence regarding the effects of education on crime is limited. Contrary to these findings, Lochner (1999) using data from the National Longitudinal Survey of Youth and Uniform Crime Reports developed and estimated a dynamic model in which all three activities work, investment in human capital and crime are endogenized. He finds that education, training, and work subsidies can reduce criminal activity, suggesting a direct link of the three. This further suggests that investment in human capital has a positive effect in reducing crime.

Investigating relationships between race and sex, Kalb and Williams (2002) found that juvenile arrests are more likely for non-whites and for those who leave education early. Furthermore, males are more likely to be repeat offenders than females.

Grogger (1995) estimates a distributed lag model to allow arrests and prosecution to affect both current and future labor market outcomes. Using data from the California Adult Criminal Justice Statistical System, he finds that arrest effects on employment and earnings are moderate in magnitude and fairly short-lived. Not all early studies use aggregate time-series data to test the relationship between unemployment and crime. Thornberry and Christenson (1984) use individual level data from the 1945 Philadelphia cohort and finds that unemployment has significant effects on crime. Farrington (1986) using data from the Cambridge Study in Delinquent Development (CSDD), showed that property crime rates were higher when offenders were unemployed. Witte and Tauchen (1994) exploit the panel data dimensions of the Philadelphia cohort used by Thornberry and Christenson (1984). Instead of primarily focusing on crime as a function of unemployment, they use a richer set of controls, like deterrence, employment status, age, education, race, and neighborhood characteristics. Their results were consistent with the previous findings of Thornberry and Christenson and Farrington. Levitt and Witt et al. (1999 in Witte & Witt, 2000) use pooled time-series cross-section data and found, inter alia, positive associations between unemployment and property crime.

Nagin and Waldfogel (1995) consider the effects of criminality and conviction on the income and job stability of young male British offenders. Their analysis uses a panel data set assembled by David Farrington and Donald West as part of the Cambridge Study in Delinquent Development (CSDD). The authors present results which at first sight appear somewhat paradoxical. They find that conviction increases both the job instability and legal income of young offenders. To rationalize these results Nagin and Waldfogel (1995) outline a characterization of the labor market in which young men participate. The basic idea underlying the model is that young men have two types of jobs available to them skilled and unskilled where wage profiles are rising in the former (due to accumulation of human capital, training and experience) and flat in the latter (no training).

If discounted wages are equalized across jobs, the unskilled wage would start above and end below the skilled wage. The more one get skilled, the higher the wage one is supposed to get. This then suggests increased inequality from skill-income perspective *i.e.* based on the type of job one has, whether skilled or unskilled it determines the income s/he will get at the end of a specific period and the subsequent inequalities. With such inequalities and income differences, the youth resort to crime as a means of narrowing the existing income inequality. Further empirical research by Levitt and Witt (1999 in Witte & Witt, 2000), Witte and Tauchen (1994), and Thornberry and Christenson (1984) into the relationship between earnings inequality and crime found that more inequality is associated with more crime where inequalities act as a catalyst for young people to engage in crime.

Validating the argument of rational theorist in crime constraints, Levitt (1997, 1998) finds that juvenile crime is negatively related to the severity of penalties, and that juvenile offenders are at least as responsive to sanctions as adults. Interestingly, he finds that the difference between the punishments given to youths and adults helps explain sharp changes in crimes committed by youths as they reach the age of majority.

Finally Besci (1999) in his study of youth aged between fifteen and nineteen in the United States (US) found that imprisonment rates strongly suggests that punishment works to reduce crime, with the coefficient on the population share of prisoners always negative and strongly significant except for murder, for which it is weakly significant. Thus, a 10 percent increase in the prison population is estimated to be associated with a 0.5 percent to 1.9 percent reduction in crimes. It can therefore be argued that this remaining percentage from the reduction of crime is what accounts for repetitive crime as also observed by Panyani (2010) above in case of Malawi where released juvenile offenders are further engaging in crime.

3.4 Conclusion

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Having considered the available literature and its application, it has to be accepted that the chapter could have benefited more from African studies if were available. This would have helped in contextualizing the study and also have a better comparison because of cultural similarities. However not much has been done as is the case with Malawi. The next chapters will use the literature to provide the direction of the study and basis for argument of the Malawian context. Particularly the next chapter will present the methodology which will be followed by presentation of results and findings and lastly policy recommendations.

CHAPTER FOUR

METHODOLOGY

4.1 Introduction

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This chapter provides a modeling framework for the study in section 4.2, which is followed by modeling the rational choice theory in section 4.3, specification of the model and description of the variables in section 4.4, presentation of data sources in section 4.5, ethical consideration in section 4.6, and lastly conclusion in section 4.7. Basically the chapter looks at the econometric methodology which was employed in the study to establishing the determinants of repetitive juvenile delinquency and the relationship among the determinants. It extends further to define the variables that are used in the study; in estimation and justification of the Rational Choice Theory. It will also discuss on data collection and analysis, and stipulates the confidentiality aspects associated with the study.

It has to be acknowledged that the adoption of Rational Choice Theory in this study is with full knowledge of the criticisms leveled against it in the subsequent chapter. However, the flexibility of the theory in its application gives it an upper hand as far as explaining juvenile crime is concerned above any other existing theory. First the theory assumes the person committing crime is rational, not insane. For one to commit a crime, s/he weighs the means at his disposal and then plan carefully. The variables that affect that offending are the probability of being caught based on presence of people, or the police, and the availability of catalyst to offend. Catalyst includes the presence of chances to commit that crime.

The major criticism of the theory is from the choice perspective. The argument is that there is no set of choices in crime. However it has to be noted that for crime to be committed there is the availability of alternatives. The first alternative is whether to commit the crime or not. That decision alone to commit crime specifies the choice that one has. In crime studies this has clearly been shown by the separation of legal means from illegal means, which has mainly been applied on earnings.

The second choice relates to the type of crime to commit. Despite being criticized that there is no set of crime from which one can choose. The argument in Rational Choice Theory is that not all people are exposed to the same menu of crime. Some have a wide menu others so limited. This has been likened to the restaurant menu; some have better menus than others. For example a person in the rural area and in urban area, have different menus on the crime that they can commit. The one in the urban area has a wider choice being sustained by the mechanical societies where social ties are minimal than in rural setting. Similarly the classes of people expose them to different menus though within the same urban. One can find a thing to steal at home while another cannot get anything to steal from home because of their economic wellbeing

4.2 Modeling Framework

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Besci (1999) argues that, as with all economic models, the economic model of crime assumes actors who try to make rational economic choices. The three sets of actors usually considered are the criminals, noncriminal households and legitimate businesses, and the government. In the simplest possible framework, criminals determine the supply of crime, the rest of society determines the demand for crime (protection), and the government affects both (directly on demand and indirectly through supply). Ehrlich (1981) posits that the demand for crime is the amount of crime that potential victims are willing to pay to avoid crime. In other words it considers the demand of protection. With this definition, demand for crime is a derived demand.

The supply of crime is modeled as a choice between legitimate activities and work on the one hand and criminal activities on the other. The choice depends on the net payoff to crime, which is the payoff of the criminal activity itself (or loot) above all other costs associated with the crime. Conditions that might cause a rightward shift of the supply curve include demographics (a higher proportion of youth), fewer employment opportunities at a given wage, and reductions in imprisonment. Education and welfare might also be thought to increase the opportunity cost of committing crime by increasing legitimate earnings (Besci, 1999).

However previous models did not consider education. The argument is that unemployment is the conduit through which other factors influence the crime rate. For example, poor educational attainment may be highly correlated with the incidence of crime. However, this may also be a key determinant of unemployment. This debate has not been resolved as seen in Chapter 2.2.

Gary Becker (1968) (in Gale Group 2008) describes an economic model of criminal offending. Becker's principle argument is that the decision by a potential offender to commit a crime is no different from any other consumer's decision to enter a market. In this way, the study of crime can "simply extend the economist's usual analysis of choice" rather than considering crime as a special theory. Becker models the offender's expected utility from an offense as:

$$E[U_j] = [p_j[U_j]([Y_j] - [f_j)] + (1 - [p_j])[U_j]([Y_j]) \quad (8)$$

Where; $E[U_j]$ =the offender's utility function.

$[Y_j]$ =the income (monetary plus psychic) from a criminal transaction.

$[f_j]$ =the monetary loss equivalent to the punishment.

$[p_j]$ =the probability of capture.

The offender's expected utility is equal to the benefits of the transaction (the utility associated with the income from the transaction) minus the costs (the loss of utility associated with punishment), weighted by the probability of capture. Becker models the total supply of offenses as the difference of expected payouts and expected costs, where expected costs include probability of punishment and cost of punishment and $[d_{ij}]$, a vector of other variables related to the decision to offend.

$$[0_{ij}] = f([p_{ij}],[f_{ij}],[d_{ij}]) \quad (9)$$

Ehrlich (1981) extends the Becker model of crime by considering the offender's decision to commit crime within a labor economics framework. He postulates that, potential offenders choose between legal and illegal activity under uncertainty, rather than simply responding to expected level and probability of punishment. The offender risk preferences determine whether criminal opportunities are pursued (for risk lovers) or legitimate activities are pursued (for risk avoiders), conditional on expected certainty and severity of punishment. Ehrlich's supply of crime model adds four variables to Becker's model in (9) above:

$[w_{ij}]$ =returns from legitimate work.

$[w_{ij}]$ =returns from illegitimate work.

$[u_{ij}]$ =probability of unemployment.

$[(pi)_i]$ =other variables that may affect offending including wealth, self-protection, self-insurance, other illegal activities that are close complements or substitutes to offending, and the form of the expected penalty.

$$[o_{ij}] = f([p_{ij}],[f_{ij}],[w_{ij}],[w_{ij}],[u_{ij}],[u_{ij}],[[pi]_i]) \qquad (10)$$

In (10), the total supply of offending $[o_{ij}]$ is a function of the probability of capture and the severity of the sanction in addition to the four variables above. Potential offenders are influenced by the availability of legal and illegal rewards, and dissuaded from offending by increases in the threat of punishment and the severity of punishment, depending on their risk tolerance as modeled by the supply function.

However there has been a debate if such a model which has usually been linked to employment can be used on juvenile crime since the youth usually are of that age which is not working. Levitt (1998), and Mocan and Rees (1999) in studying juvenile crime and education, provide evidence to show that the economic model of crime applies to juveniles as well as adults. They used juvenile crime as a dependent variable.

4.3 Modeling the Rational Choice Theory

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Becker (1968), İmrohoroğlu, Merlo,and Rupert (2006), and Erlich (1973, 1981), Vandaele (1978), Cook (1986), Cameron (1988), Dijk (1994) and Garoupa (1997) in Roman, and Chalfin (2008), have strongly contended for probability of being arrested, probability of apprehension, severity of sanctions as affecting delinquent behavior. The same probabilities of offending and apprehension can be used to determine the rationality of offending. Therefore to determine the application of Rational Choice Theory, the study adopts the probability to offend and probability of being arrested.

Probabilities in the study employs the beans game, where the minor has to rate one's probability of engaging into delinquent act by using beans on a scale of 1 to 10. The higher the number of beans signified the higher the probability of committing the crime. Similarly has to rate the probability of being caught bearing in mind all the means available for committing the crime and the chances of being caught/ constraints to committing the crime. In other words the risk that one is exposed to in the crime business.

The premise of the theory is that the offender is rational, in the sense that he is able to weigh the means and end of the action and plan accordingly. The study further accepts the variation in choices, some have limited choice and others have a wider choice. However the most basic choice that is usually not used is the choice to offend which can be modeled as follows.

$$\sum_{i=1}^{n} p_i(1/N) - \sum_{j=1}^{m} p_j(1/M) > 0 \qquad (11)$$

$$\sum_{i=1}^{n} p_i(1/N) - \sum_{j=1}^{m} p_j(1/M) < 0 \qquad (12)$$

Or

$$\sum_{i,j=1}^{z} (p_i - p_j)/Z > 0 \qquad (13)$$

$$\sum_{i,j=1}^{z} (p_i - p_j)/Z < 0 \qquad (14)$$

- ~~1.3~~ p_i , is the probability to offend/ commit the crime.
- ~~2.3~~ p_j , is the probability of being caught while committing the crime.
- ~~3.3~~ N , is the population of those who expressed the probability of offending.
- ~~4.3~~ M , is the population of those who expressed the probability of being caught.
- ~~5.3~~ Z , is the population under study

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Equation 11 and 12, 13 and 14 gives same result on one condition; *N*+*M*=*Z*, in other words when the reference population is the same.

From the equations specified it can be stated that when the difference is greater than zero, the minor is rational. That is to say when the probability to commit crime is greater than the probability of being caught (the means are greater than the constraints) and one commits a crime then the Rational Choice Theory is applicable. Similarly when the result is less than zero and the minor commits crime the Rational Choice Theory is not applicable. In simple terms when the potential offender is planning to commit crime and the possibility of committing the crime is so high that it allows him to commit crime without being caught, then that calculation is a rational calculation than when the person could have committed crime where he knew he was going to be caught.

This can be likened to market operation as argued by Becker (1968) that the crime market operates just like any other market, such that its operations have not to be disassociated completely from the operations of any market. When investing in a product, the investor expects the returns, and that the probability of gaining must be greater than the probability of getting a negative profit (loss), except in social welfare functions like those of the government or charity organizations. Similarly when crime is being committed on the condition of planning, the probability of being caught must be less than the probability of committing that crime.

4.4 Model Specification

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The study uses the Limited Dependent Variable (LDV) (Probit) model which is binary in the dependent variable, and adopts a modified Levitt (1998), and Mocan and Rees (1999) specification of the regressand (dependent variable) and modified regressors (independent variables) in equation (8) to include Broemmel (2010) classification described in chapter one above; family risk, and own risk which includes, education, peer effect, and history of offence for the family. The stated authors used the crime committed as the regressand while this study uses the repetitive contravention of the law without specifying the crimes.

$$Crime_i = \beta_0 - \beta_1 parentage_i - \beta_2 psex_i - \beta_3 pedu_i - \beta_4 e\cos t_i + \beta_5 abu_i + \beta_6 fam_i + \beta_7 pee_i - \beta_8 pun_i - \beta_9 oedu + \beta_{10} U_i + \beta_{11} y_i. \quad (15)$$

- ~~1.1~~ $Crime_i$, is whether the minor has been committing crime or not. It takes the value of 0 if the crime the minor is serving sentence for is the first crime and 1 if the minor has a history of offending. The history of offence established whether the minor has repeatedly been involved in criminal acts regardless of whether was apprehended or not. A crucial aspect as far as crime is concerned is that apprehension do not necessarily

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- ~~2.1~~ $parentage_i$, refers to whether the minor was brought up by both parents or not. It is the expectation of the study that if the minor grew up with both parents; the probability of one engaging into crime is lower than when one has a single parent or is an orphan. Due to such a relationship it is expected that the variable has to significantly influence negatively repetition of crime among juveniles.

- ~~3.1~~ $psex_i$, is gender/sex of the head of the household, where female takes the value of 0 and male takes the value of 1. Arguments related to parental sex have shown that female headed households have more delinquency than male households. The expectation therefore is that parental sex will have a significant deterrence effect on repetitive crime.

- ~~4.1~~ $pedu_i$, is the level of education of the parents. The levels are ranging from no formal education to tertiary education. Due to the positive relationship between education, income and role modelling, it is the expectation of the study that parental education will have a significant negative influence on repetitive delinquency of their children.

- ~~5.1~~ $e\cos t_i$, is the economic status of the family where the minor is coming from. The basic argument that has been put forward regarding juvenile engagement into crime has been poverty. Therefore the study adopts family economic status to capture the poverty of the family. The status has been computed using an asset index of the household ranging from durable goods to livestock. The purpose of including these items is to minimize the compromise on relative poverty. For example, some came from urban where livestock might not be a value than in the village where economic status can be measured by the livestock that the family has. The convention uses the average prices gathered from a market survey done as part of this study. It is expected that the economic status of the family has a significant negative influence on the minor to get involved into delinquent acts.

- ~~6.1~~ abu_i , is whether the minor had an experience of any treatment which is considered inhuman (abusive) at home. The minor was asked as to whether the environment within the household he was brought up was abusive or not. It is worthy acknowledging that there is no clearly defined universal measurement of abuse apart from self assessment. However it has strongly been contended that there is a positive association between engagement into crime and abuse (Vachss, 1983; Mayfield & Widomv, 1996; Dishion & Bullock, 2002; Dodge & Pettit, 2003, in Bartol, 2008). The basic argument is that abuse significantly increases the risk of future antisocial conduct, which has a potential of initiating a child into delinquency. It is therefore expected that abuse will have a positive but not significant effect on repetitive delinquency among juveniles, as a result of family obligation to punish child where need be.

- ~~7.1~~ fam_i , refers to the criminal history of the family as far as committing of crime is concerned. Socialization which begins in the family has a great bearing on the perception of the world and the way the child will behave. Such being the case past criminal history of family members has high potential of initiating a child into delinquency. The argument goes beyond self will to role modeling from the immediate family members. The study therefore uses the number of offences committed by immediate family members within the past three years. Due to the strong relationship between the socialization environment and one's behavior, it is the expectation of the study that family's criminal behavior should have significant positive effect on repetitive criminal behavior of the minors.

- ~~8.1~~ pee_i , is the effect from peers for the minor to engage into delinquency. The minor was asked to state whether he had an influence from peers to get involved into crime or not. The argument behind peer pressure is that delinquent friends tend to be sticky friends and they have a positive effect for a minor to get into crime. Similarly as with family history into criminal behavior, peer pressure is expected to have a positive significant effect on the minor's engagement into delinquent act.

- ~~9.1~~ pun_i , is the sentence the minor is serving. Punitive sanctions have always been thought to reduce crime. Several studies including the crime model by Becker (1968) have proposed that increased sanctions have a deterrence effect on crime. The study therefore adopts the sanctions as the number of years one was charged. It is expected that it will have a negative but significant effect on repetitive delinquency.

~~10.1~~• $oedu_i$, refers to minors own education. The specification of the education variable does not consider the success but the attendance. Similarly, as is the case with parental education, levels were used starting from no education to tertiary level. However since the education of the minor has no present benefits, it is expected not to be significant but still to negatively influence repetitive crime based on the opportunity cost of time.

~~11.1~~• U_i, is employment status of the minor. The study adopts the employment status variable to determine whether employment has an influence on repetitive juvenile delinquency. The study collected data on whether the minor was employed or not. Contrary to education whose benefits are accrued, it is the expectation of the study that employment has a potential to reduce repetitive juvenile delinquency significantly.

~~12.1~~• y_i, refers to expected income from criminal activity. Income from crime will be the prospective monetary value that the minor expected to get at the end of the crime. This income is what can also be termed illegitimate income. Where a value is hard to attach like a non-marketed good, no value was attached. As much as it can be appreciated that contingent valuation can be used to get the value for non-market goods, with some delinquent act like fighting one's parent because they are forbidding you to travel in a bad company, there will always be a bias. However due to the risk involved in obtaining this income it is expected not to significantly influence delinquency but still to have a positive effect on repetitive crime.

4.5 Data Sources and Study Design

The study is using micro primary data collected from three juvenile reformatory centers namely Mikuyu, Kachere, and Bzyanzi, and one adult center Maula. The target of the latter was for the juveniles that are in transit to juvenile reformatory centers and not the adult convicts.

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In the proposal, it was stated that the study would use stratified random sampling per Broemel (2010) classification. However, the prison security conditions like no use of electronic equipment and time available to have interviews done could not permit the use of the method. Therefore simple random sampling was used. The interview would start with one person who was called by the warden and the latter respondents had organised themselves on a queue without employing any method or a warden arranging them. They then took turns being interviewed

For computation of the economic status it would have been very good to inquire on the income or expenditure of the household. However children cannot be good respondents as far as income and expenditure of their parents is concerned. Though such is the case they know what is in the house and what is not in the house. Therefore an asset index has been employed as the best proxy for household economic status.

A market survey was done on the items that were on the household asset index. Four districts were targeted, Lilongwe, Blantyre, Salima, and Ntcheu, where the last two represent the areas which are not much developed/not cities and the first two developed areas/cities. The survey was followed by computation of averages which were used to value assets that the household has. This conversion is based on the premise by Filmer and Scott (2001), and Filmer and Pritchett (2001) in a World Bank (2002) study by Limin Wang on Determinants of Child Mortality in Low Developed Countries (LDCs) that the ranking of households by their economic positions based on the asset index are very close to that based on expenditure. However, to get this expenditure, there is firstly a need to know the assets/ goods that the household bought, which are better reflected on asset index, and secondly get the prices for the goods, which can be obtained from the market surveys which have goods that are on the asset index. All the analysis in this study has been done using Stata 10.

4.6 Ethical Considerations

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Juvenile data confidentiality: The focus on rehabilitation led to the importance of keeping juvenile records confidential. The maintenance of confidentiality of juvenile records is central to the rehabilitation process (Constance, 2010). This then means releasing these records to the public would inhibit rehabilitation by attaching the shame of a criminal record onto young offenders.

This being the case, permission had to be sort first from Ministry of Home Affairs, Malawi Police and Malawi Prisons before conducting this study. From the minor's perspective, firstly they were briefed and then personal consent was also asked if he was willing to be part of the study. Upon consenting, the minor had to sign on the provided space on the questionnaire. Beyond the interview data has been kept with all confidentiality.

The subsequent chapters will therefore analyze and discuss the data gathered, the findings of the study, the implications of changes in the variables, and provide policy recommendations in chapter 6.

4.7 Conclusion

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The chapter has provided a detailed description of the methodology used in the study and the expectation of the variables and their relationship. It has also provided the data sources and ethical consideration in this study. The next chapter provides an analysis of the data and interpretation.

CHAPTER FIVE

PRESENTATION AND INTERPRETATION OF RESULTS

5.1 Introduction

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This chapter presents results and findings of the study. In section 5.2 the chapter starts with the justification of the rational choice theory which is the backbone of the decisions in this study. Section 5.3 will present the descriptive statistics which have to give a picture of the whole study, followed by section 5.4 diagnostic tests, estimation and interpretation of the estimates in section 5.5, simulations in section 5.6 and lastly conclusion section 5.7.

5.2 Findings on the Application of the Rational Choice Theory

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The finding of the study is that some of the minors were alleged to have committed crime while some planned to commit the crime. With such a situation, the conditions specified in the equations 11, 12, 13 and 14 do not break, they still hold. The framework would only break if those who planned to commit crime their results would be less than zero, but if it is greater than zero, then the framework still holds. Therefore the study has divided them into two; those who planned to offend, and those who were alleged to have committed crime.

For those who planned the difference in the probabilities is greater than zero (+0.117), while for those who were alleged to have committed crime, it is less than zero (-0.174). These results are in line with the expectation of this study as provided in section 4.3, modeling the rational choice theory, and therefore they justify the use of the rational choice theory in this study.

5.3 Descriptive Statistics

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This section presents descriptive findings from the study, and will specifically focus on sex and juvenile crime, which will extend to consider the ages among the juveniles, and an analysis of factors behind repetition of juvenile delinquency based on the literature reviewed above.

~~5.1~~5.3.1 Sex and age of the minor, and involvement into delinquency

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The study has been done in three juvenile reformatory centers and one adult center as specified above. It has to be acknowledged afore that there is no female delinquent in the visited centers. This is in line with most crime studies, where females are not included. This does not mean that females do not offend, but several factors play a role. Bartol (2008) notes that juvenile system historically has supported differential treatment between males and females, in view of this, the cases for which they are arrested also differ. Secondly there has been a difference in numbers. Moffit (1993 in Bartol 2008) notes that less than 10 percent males show extreme antisocial behavior early in life while for girls Coid (2003) puts it at less than 2 percent.

The other thing for Malawi is that we do not have enough structures to house these young females under the Prison Service and the Ministry of Women, Child and Community Development. However it is not a situation to worry about on two premises; crime studies including that of Kalb and Williams (2002) have found limitations in studying female crime because of the lower numbers. They indicate that estimation of the model of juvenile delinquency for females is complicated by missing observations on the variable which links criminal justice arrest records and follow-up survey information. Secondly they state that males are more likely to repeat offend than females. Therefore our confinement to male juveniles is not worrisome. The table below presents a summary of the minors who were part of the study, the reformatory center where they are, the number interviewed, and total number of inmates in the reformatory center.

Table 1: Summary of Sampled Respondents

Reformatory Center	Number interviewed	Total number of juveniles in the reformatory center
Mikuyu	30	338
Kachere	34	179
Bzyanzi	37	37
Maula	6	N/A

Source: Own calculation based on the juvenile data

Considering the population of Bzyanzi Farm Prison, sampling was not done because it already had the smallest population compared to the rest. In addition, as earlier stated though Maula was visited is not a juvenile reformatory center but some juveniles occasionally might be found in the adult prison. Such being the case it was not possible to get the number of those in the prison. This comes also with a background that the human rights bodies have been condemning the act and it is not permitted by law to house these juveniles in adult prisons. Using the total number of inmates could have as well been biased because the comparison is not among the same age bracket of the prison population.

The ages of the minors ranged from 13 to 23, with the 42 percent below the age of 18, indicating a positive skewness of 5.4. However according to juvenile definition, minors are supposed to be those who are less than 17 years, this shows that there is a loophole in the justice system, such that young offenders are able to beat the system and get the services which they do not deserve. During data collection one of the minors was so honest to indicate that he has two ages one for the prison (*zaka zam'kati)* and for the outside (*zaka zakunja).* That signified a need for a further probing as far as age was concerned. About 23 percent admitted having cheated on the age for them not to be sent to an adult center for fear of being mistreated as wives of the adult offenders which is a common practice, but also the treatment in the juvenile center is better than in adult centers. It was also confessed that some connive with the police not to state their true ages. The confessing percentage would have gone higher if there was prior knowledge of such a conduct, however was known while some interviews were already done.

It might therefore be thought that those who cheated would have been left out to concentrate on those who are below the adult age. However three things must be noted; the critical thing is that the study was not to implicate anyone neither to bring back the minors to justice nor to evaluate how the prisons are carrying out their functions. Secondly the treatment of their case was not in any way different, they have been treated as minors and the reformation environment is the same. Finally from a statistical point of view if they were left out, the degrees of freedom would have been reduced.

~~5.2~~5.3.2 Factors behind juvenile crime

From education perspective of the minors, it has been found that the education background of these minors is so low; majority 86 percent have only gone up to senior primary school, out of which 8 percent have no formal education, and 14 percent have done some secondary education. Basing on the mean age of 18, holding other things constant and assuming all started school at 5 years of age, then 57 percent were supposed to have completed secondary school. However the study has only 5 percent who went up to senior secondary school, giving a difference of 52 percent. This therefore justifies the argument by Wicliffe (2007), Daniel Yu (2007), Bartol (2008), Broemel (2010), and L'Estrange (2011) that the minor who has a lower intelligence and who does not receive a proper education is more prone to become involved in delinquent conduct. Justifying this argument further is the observation on singling out of repetitive offenders who form 36 percent of the total sample. Their education shows that 89 percent have only basic education compared to 84 percent for first time offenders and 86 percent for the whole sample.

Further analysis indicates that crime is negatively correlated to minor’s own education, which is similar to the finding of Lochner (1999). The argument for the negative correlation can be justified from Human Capital Theories perspective that education (as well as job training) develops formal labor market skills, which raises the opportunity costs of crime commission. Alternatively, education may `socialize' individuals such that they prefer not to engage in crime anymore.

Beyond education it is also necessary to consider the family set up as observed in the literature review that it is one of the complicated factors in determining the delinquency of minors. It determines a child’s class, structure, and development. The family exerts the most influence on a human being, based on its structure, economic status, norms and values. Among these four, most crime studies have focused on the structure particularly the effect of broken homes, arguing that any severe disturbance in one or both parents can produce a devastating negative impact on a minor. Beyond the broken homes, family size has also been considered when studying family influence on juvenile delinquency.

This study has found that 66 percent of the minors did not grow up with both parents. Out of this percentage, 36 percent grew up with a single parent, 53 percent grew up with close relatives, and

Formatted: Indent: Left: 0.5", Hanging: 0.31", Numbered + Level: 1 + Numbering Style: 1, 2, 3, … + Start at: 5 + Alignment: Left + Aligned at: 0.25" + Indent at: 0.5" the rest by foster parents, other relatives, non-relative, and self. Further analysis shows that those who grew up with a single parent 83 percent were female headed households. Similarly from a general perspective which includes, growing up with relatives, foster parents, relatives, and non relatives, 57 percent were female-headed households. In economic studies female headed household's vulnerability argument has rested on material deprivation. However, though it may not be mutually exclusive, but child delinquency has not been looked at as part of female-headed household's vulnerability. From this study it has therefore to be appreciated that the vulnerability of female headed households is not only from economic deprivation (poverty) perspective as has always been argued, but also child delinquency.

A comparative analysis of male and female headed households shows a higher percentage of delinquency in female headed households than male headed households. The results show that 77 percent of those coming from female headed households planned to engage into crime compared to 47 percent coming from male headed households, and 87 percent and 46 percent respectively were alleged to have committed crime, which in both cases it is to the nearest half that of female headed households. From table 2 below, it can be seen that this vulnerability is in both planned and alleged crimes.

Table 2: Involvement into Delinquency against Sex of Households Head

Did the minor grow up with both parents	**Planned to commit crime**		**Did not plan to commit crime**	
	Male headed household	Female headed household	Male headed household	Female headed household
Percentage of minors who grew up with both parents	53	23	54	13
Percentage of minors who did not grow up with both parents	47	77	46	87

Source: Own calculation based on the juvenile data

It can therefore be seen that in houses where males are single parents, the likelihood of delinquency (both planned and unplanned) is far less than when females are single parents. However where males are heading the house and both parents are available the probability of delinquency is higher than in female headed households. This might be attributed to lack of ownership in males to discipline their children when the other partner is available. However the absence of one partner in male households has no much difference in delinquency compared to female households where it can be perceived that the absence of the other partner has a potential of increasing probability of delinquency by almost four times and unplanned crime by almost six times. However gender of the household head has not being conclusive when it comes to repetitive crime (they are giving equal percentage).

Another family characteristic that has been found to be of importance is abuse. The study has registered that in male headed households there is a lot of abuse than in female headed households, 40 percent and 29 percent respectively. Those who grew up with close relatives are the ones who experienced much abuse above anyone else (57 percent). However in-terms of education and abuse, the results are a little surprising. Further analysis shows abuse is so prevalent in female headed households who went up to senior primary than in any other home *i.e.* those whose education is low. Cross tabulating gender and abuse if a child is a repetitive offender, also shows that a great percentage is coming from female headed household than the male headed households, and has been calculated at 57 percent. This together with findings above, suggest a positive correlation between female headed households and repeated engagement into crime and probably further suggests a need for a study on the relationship between female headed households and probability of engagement into crime among juveniles.

Further analysis on the relationship between this abuse and crime indicates that those who planned to commit crime are largely the ones coming from a background of abuse. It has been found that 71 percent of those who planned to commit crime were abused within their household, 65 percent were abused outside their households, indicating that some were abused both within and outside the household, which has been calculated at 9 percent of the sample. For the same abuse within the household, it has been found that among those who are repetitive offenders, the majority (55 percent) were abused in one way or the other within their households compared to outside their households (39 percent). This therefore suggests that abuse within the home has high probabilities of initiating a child into repetitive delinquency. Many authors including those already mentioned above, Vachss (1983), Dishion & Bullock (2002), and Mayfield & Widomv (1996) and Dodge & Pettit (2003) in Bartol (2008) acknowledge that the experience of physical abuse within the family in early life significantly increases the risk of engagement into delinquent behavior in a child life time.

It is worthy while acknowledging that in a household setting, there is a thin line between abuse and punishment as a negative sanction being applied by the family on their children to discourage delinquency. The failure to manage such delinquent children according to Bartol (2008) usually leads to the development of repetitive delinquent behavior, and these children often face rejection from both homes and peers therefore this enforces the delinquency. This study has found that the families where these minors are coming from were able to apply negative sanctions as part of disciplining their children: 81 percent of the minors when they have done something wrong at home, they were being punished; 61 percent confess being whipped, 57 percent being denied food, 25 percent sleeping outside the house, and 33 percent other forms of punishment, which include, being taken to police for punishment. However 51 percent of the minors were perpetrators of the instability and violence in their own homes, *i.e.* they were being punished because of their own behavior.

A good picture on delinquency and minor's ill behavior can be found if the rational choice theory is considered on the minor's planning to engage into crime and the violence within the home. As can be appreciated from table 3 below, minors who were part of the violence in their homes, are the highest in planning to commit crime, 70 percent. In other words those who are trouble makers in the homes are also ranking highly in planning delinquent acts.

Table 3: Minors' Contribution to Violence in the Home and Involvement into Delinquency

Was the minor part of the violence in the home	Planned to commit crime	Did not plan to commit crime
Percentage of minors who were part of the violence in the home	70	30
Percentage of minors who were not part of the violence in the home	53	47

Source: Own calculation based on the juvenile data

An investigation of high-delinquency areas in New York City by Craig and Glick (1963), found three factors related to increased likelihood of delinquency: 1) careless or inadequate supervision by the mother or surrogate mother; 2) erratic or overly strict discipline; and 3) lack of cohesiveness of the family unit. However, Sheldon and Glueck (1950) (in Wicliffe, 2007) found that 4.1 percent of fathers use sound discipline practices; 26.7 percent, fair; and 69.3 percent, unsound. The division according to headship of the family shows a related trend. Families headed by females indicate having more problems of violence and planned delinquency than those of men. The female headed families have 71 percent of those who were part of the violence and planned to commit crimes compared to 70 percent in male headed households.

Family criminal history has also been found to contribute towards engagement into crime. In this study 22 percent of the households have been found to have a criminal history, out of these households, 91 percent have a history of arrests and 27 percent have a history of more than one arrest. Further analysis shows that 87 percent of minors coming from that background have willingly (planned) engaged into delinquent act, compared to 55 percent from families without a criminal history. Witte and Tauchen (1994), Freeman (1991, 1996), Grogger (1998), & Williams and Sickles (2000), in (Kalb and Williams, 2002) states that past criminal history is a strong predictor of current criminality. They found family criminal history to have a positive effect on someone engaging into crime. The table below presents a comparative analysis of engagement into delinquent act of minors coming from those families with a criminal history and those without a criminal history in the past three years. The table clearly shows that the probability of willingly engaging into crime among those coming from families with a criminal history is almost seven times that of unwillingness.

Table 4: Family Criminal History vis-a-vis Engagement into Crime

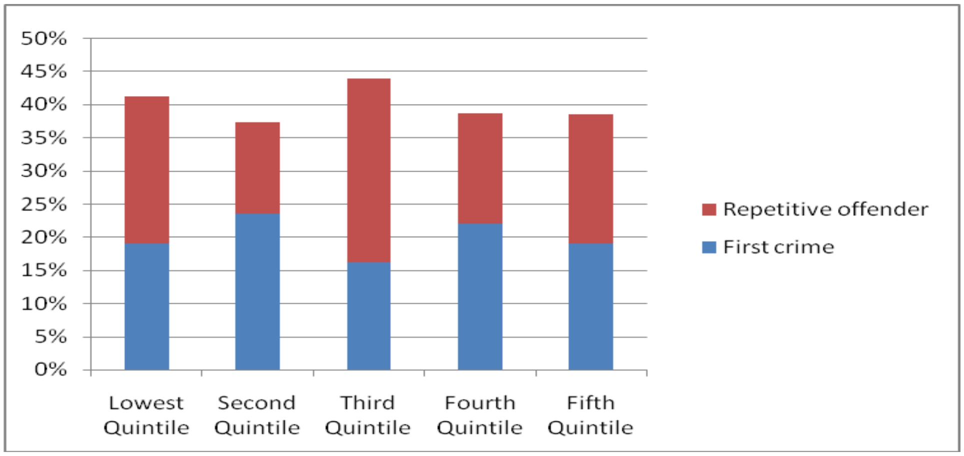
Was anyone in the household ever involved in crime in the past three years	Planned to commit crime	Did not plan to commit crime
Percentage of minors coming from families with criminal history	87	13
Percentage of minors coming from families with no criminal history	55	45

Source: Own calculation based on the juvenile data

Beyond the discussed family factors’ influence on repetition of delinquency among juveniles, the linkage of economic deprivation (poverty) and crime has not to be ruled out from the onset. This study makes a major assumption that the wealth status of the household determines the poverty levels of the minors. This is based on the premise that the minors directly depend on their household for provision. An analysis of the economic status shows that only 36 percent of households are below the mean income of MK868390.00; however the mean income for both households with repetitive offenders and first time offenders are not much different from the mean for the whole sample, MK864980.50 and MK870196.00. A further investigation into households' economic status influence on crime required the construction of quintiles. From this wealth ranking, it has therefore been established that in the lowest two quintiles, the majority are those who are first entrants into the crime market, however inclusion of the third quintile, shows that the majority are coming from repetitive offenders with a 6 percentage point difference which is a small difference. Using the two-sample t test with equal variance, the results indicate that the results are not conclusive as to which poverty levels determine repetition of crime (the means for the two groups are just the same).

Figure 2 shows the distribution of the minors per each quintile divided into first time offenders and repetitive offenders. The percentages represent the total percentage in that quintile. From this figure it can be observed that repetitive offenders are most coming from middle income families a distribution which is behind the change discussed in the preceding paragraph.

Figure 2: Wealth Ranking of Households and Repetition of Delinquency



Source: Plot based on the juvenile data

Further analysis on the willingness to engage into crime and economic status of the household, indicate that with low income households there is low willingness to engage into crime than higher income households, results which might seem paradoxical. However the difference is still small as shown in the table below. This therefore suggest that though economic status of the family might have impact in influencing delinquent behavior, but its influence is limited and dependent on other factors rather than poverty levels of the household. Similarly Bartol (2008) points out that poverty on its own, does not forbid proper development of children. Table 5 below therefore presents the distribution of household within the wealth index based on planning to engage into crime, and offending discussed above.

Table 5: Wealth and Engagement into Delinquency

Quintile	Percentage planned to engage into crime	Percentage not planned to engage into crime	Percentage of first offender	Percentage of repetitive offender
Lowest quintile	19	23	19	22
Second quintile	20	20	24	14
Middle quintile	20	20	16	28
Fourth quintile	16	28	22	17
Highest quintile	25	10	19	19

Source: Own calculation based on the juvenile data

Having observed that it is not conclusive to point at economic status of the household as a having impact in child involvement into delinquency, the study included economic activity on the assumption that the economic activity has a great influence on the welfare, income and wealth of the family. From this perspective, it has been found that 95 percent of the heads of the families where the minors are coming from are working. This working is from both self employment and being employed, ranging from casual laborer to professionals. It has further been found that the self willingness (planning) to commit a crime is associated with the occupation of parents. The table below shows that crime is prevalent in those families where the parents are involved in business and in agriculture, which are also the highly represented occupation in this study.

Table 6: Crime Prevalence and Household Head Occupation

Parents Occupation	Percentage of parents involved in the occupation	Percentage of minors involved in crime willingly
Clerical	6	5
Other	7	3
Ganyu/Casual Labor	12	9
Proffessional	16	17
Farming	29	31
Business	31	34

Source: Own calculation based on the juvenile data

It has however to be accepted that the results seem illogical because the conclusion from these results can be that since business, farming and professional occupations are among the high paying occupations, then those in higher income occupations have families infested by juvenile delinquency instead of the usual premise that minors coming from poor households are likely to be delinquents (similar to willingness to engage into crime and wealth status above). However, the economic status of families in this study indicates that professionals are the ones who are well to do, after which are those in businesses, then clerical duties, who are followed by farmers. It can also further be pointed out that there is bias towards these occupations in representation, such that crime can hardly be associated to occupation through poverty in this study. Though such is the case, the delinquency resulting from household's head occupation might be attributed to availability at home and social cohesion within the family as has been argued by Craig & Glick (1963), and Siegel & Senna (1988). However more research is needed to validate this.

From the minors own employment, 64 percent indicate having worked at one time in their life. The majority of those who have ever worked are those who went up to junior primary (43 percent), seconded by those who have gone up to senior primary (41 percent), and the average earning for the minors has been calculated at K13,053.00 and K13,335.00 per month respectively, suggesting that higher levels of education might have an effect of increasing personal income as argued by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) (2011) in their education studies, that every year added in education has potential to change the individual's earnings by 10 percent, though in this case it is less than the stipulated percentage.

The very important thing to note is that when dealing with such young ages and employment, the concern turns to child labor. From child labor perspective, where child labor refers to children who are economically active within the ages of 5 to 14, 33 percent have been found to have worked before. Their average earning is K6,000.00, slightly less than half of the average for the total sample (K12,737.87). It has to be accepted that sometimes child labor has been adopted as a means of complimenting family income or complimenting family labor. From the study, it has been found that child labor practice has been practiced in business. However the general picture that can be gathered from the entire minor population in the study, regardless of age, is that the highest child involvement in labor is in households that are in farming. These are also the two occupations with the highest involvement into delinquency as observed above. It has to be further noted that the finding of high involvement of child labor in agriculture, is in tandem with most child labor programs in Malawi where the first occupation to target as far as eliminating child labor is concerned is in commercial agriculture. Table 6 below shows the distribution of child involvement in labor, versus the household head labor as has been discussed.

Table 7: Minors' Involvement in Labor Vis-à-vis Household Head Occupation

Occupation of the parent/guardian	Percentage of minors who have ever worked
Ganyu/laborer	9
Clerical	6
Professional	13
Farmer	34
Business	27
Other occupations	8

Source: Own calculation based on the juvenile data

Further analysis indicates that 74 percent of those who are repetitive offenders have ever worked before being arrested. This may be a resultant effect of early drop out from school where it has been seen that 89 percent of repetitive offenders are those of primary school, above the 86 percent for the whole sample, but also an analysis of their crimes shows that they are work related. Some because they stole things from work, while some were alleged to have stolen. It has further been observed that there is a tendency in commercial agriculture areas to employ these children on a yearly pay later to allege that they have stolen something as part of running away from the payment. Just because these children cannot defend themselves in court, they end up being convicted.

Besides the family and own factors like education and employment, peers have also been reported to influence their friends to engage into delinquent behavior. The study has found that 57 percent had friends who were involved in delinquent behavior, with 53 percent reporting having been influenced by peers to be involved in delinquent behavior, suggesting a higher probability of engagement into delinquent act when one has delinquent friends and also fulfilling the premise of Jolin and Gibbons in Witte & Witt (2000) that delinquent friends tend to be sticky friends.. However, only 42 percent indicate having committed the delinquent act in the presence of their friends. Furthermore, cross tabulation of self willingness (planning) and peer influence is lower than that of the family, 68 percent and 87 percent respectively. It has to be further acknowledged that 76 percent of those who committed a delinquent act in the presence of peers had an influence from the same peers. However this is still lower than that of the family, suggesting a strong influence from the family members than peers. The argument put forward by Case & Katz (1991) and Kalb & Williams (2002) that the role modeling from the family and peers has a great effect on juvenile delinquency can then be validated with a slight moderation that the family members' role modeling plays a great role than that of friends.

The table below gives a summary of the influence of peers on delinquency of the minor and the minors' engagement into crime. From this table, it can be concluded that the probability of engaging into crime with the influence of delinquent friends is higher than self committing of delinquency, indicating that friends have got a potential of initiating a minor into crime though it is less than the influence of the family members as seen above.

Table 8: Peer Influence and Minors' Involvement into Delinquency

Has any of minor's friends influenced him to get involved into crime	Planned to commit crime	Did not plan to commit crime
Percentage influenced by friends	68	32
Percentage not influenced by friends	56	44

Source: Own calculation based on the juvenile data

Turning to crimes and prison distribution, the majority were charged with theft, 64 percent, seconded by violence, 12 percent. Theft comprise of actual theft, housebreaking, and robbery. Actual theft contributes 72 percent, housebreaking 25 percent and robbery 3 percent to the theft percentage. Violence and robbery might be thought to be in the same group because of the violence in the robbery, however violence in robbery is not an end in itself, it is just a means to an end, but the theft is a product of that violence and the combination of both makes robbery. The other violence comprises of fighting, and some physical abuse or property damage which is not necessarily followed by taking away of any property, therefore cannot be categorized as theft. The contribution of other crimes is so small with a total of 46 percent to the total crimes committed by minors. Such crimes include rape, defilement, drug abuse, violence, and murder.

One thing that has to be noted is that largely those who planned to commit the offences did it with full knowledge that they were contravening the law. Similarly the majority of those who were alleged to have committed a delinquent act were fully aware that the act was a contravention of the law, these have been calculated at 73 percent and 70 percent respectively. The majority of those who had knowledge that the act they were involved in, was in contravention of the law were those involved in theft, 78 percent. The least are from murder with zero percent. Such is the case because their intention was not to kill (they did not plan), but it happened as a result of violence and fighting, this is in accordance with their statement.

It has further been found that out of the total percentage of those with knowledge of the law and still contravenes against it, 37 percent are those who are repetitive offenders. Though the percentage might seem to be less, but the impact as argued by Vachss (1983) is so great that it cannot be undermined. To validate this, it has been observed that among these repetitive offenders, 30 percent are able to count at least three crimes that they have committed, and there is the presence of one outlier who has committed 58 crimes. It was thought that this might not be true. The matter was probed and he insisted that he has offended several times some of which he cannot count. This includes those crimes he was not caught and they are the ones topping his list. The crime sentence he is serving today was committed in 2002 but was apprehended seven years later. This therefore has to give the depth of how serious repetitive offenders are.

Worsening the situation is that their percentage also rank highly when it comes to planning crime. A comparative analysis shows that their percentage is at 82 percent, against 51 percent for the entrants. This befits very well the lamentation of Vachss (1983) that these repetitive offenders are a minority within a minority that does not respond to any form of intervention, and does not feet within any program.

It is also worthy accepting that it is not the case that in every crime that the minors commit they are arrested; there are times as well when they are not apprehended. In this study these times have ranged from one to forty two crimes, where the highest is still the outlier who has been arrested only sixteen times but never been convicted. The number of crimes have to be approached with the caution that the study included every crime that the minor had committed even at home, as far as he was aware it was amounting to a crime, and disregarded whether the minor was arrested/ convicted or not.

Turning to crime for which they were arrested, some have never been sent to a reformatory center before the current sentence they are serving. Among repetitive offenders 79 percent confess to have never been convicted before this conviction. It is therefore tempting to say most juvenile crimes end in the hands of the police or being acquitted, but this need proper research to be substantiated. It has further been noted that 85 percent of those who have ever been convicted were convicted on the same crime they are serving now, which is largely theft. This again raises a question as to what extent, are the reformatory centers able to reform the minors?

Lastly an assessment on whether they are willing to get into crime or not after being released from the centers, 74 percent completely refuse to get involved again in any crime, while the rest gives themselves lower probabilities of again engaging into crime. However as stated earlier, it was not easy for them to accept that they will again be involved in crime in the presence of their warden. Only one expressed higher probabilities of 60 percent of again engaging into crime. As has been observed earlier that largely repetitive offenders are from theft background, he is also from the theft background. This suggests a problem with reformation of those from this background.

Using Contingency Valuation (CV) technique, 5 percent of the minors indicated that they can be willing to sale their freedom at some monetary value ranging MK12000.00 to MK250, 000.00. The highest bidder is the one who is also among the highest offenders, has committed 20 crimes. The bidder of the list amount has also a history of offence; he has been involved in crime three times, and has been convicted once in the past three years apart from this time. It is worthy noticing that these minors despite their history of delinquency and sanctions they are still willing to get into crime. In such a case once again Vachss's (1983) claim of a group not fitting into any intervention is quite clear and evident in these minors.

The use of the contingent valuation technique is because there is no market for freedom. Therefore the study used the willingness to be involved again into some crime the day they are released from the reformatory center after being promised some money. The value started at the cost of crime they committed if it could be quantified and a base of MK1000.00 if could not be quantified. If they have denied committing crime at a specified amount, MK1000.00 was being added on top of that amount until they give in to the amount they think is worthy selling their freedom for.

5.4 Diagnostic Tests

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This section presents three test; multicollinearity test, heteroscedasticity test, and goodness of fit test on the model to be used. This is in an effort to make sure that the model satisfies econometrical analysis requirements and conditions.

~~2.1~~5.4.1 Multicollinearity Test

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The first test that has been done is that of multicollinearity. After computing correlation coefficients of the variables in the specified model, none of the variables has been found to be highly correlated, except parents' education status and economic status of the family which has a slightly higher correlation than the rest (0.5988). It has to be acknowledged that this is likely to be the case because generally education determines income on the market, which in turn influences economic status of the family. However, it is not so high to get worried as can be observed in Appendix II.

Despite the non existence of the multicollinearity problem, preliminary analysis dropped two variables; whether the minor witnessed some abuse within the household (abu) and whether any family member had engaged in crime in the past three years or not (fam). The abuse variable was looking at whether in the family there was abuse of any member, not specifically the minor, but the environment of abuse. Therefore the two variables have been changed to whether the minor himself was abused in the family or not (abu2), where abuse as indicated above refers to any form of inhuman treatment, and the number of times a family member has been involved in crime in the past three years (fam2).The results show that there is now a weak correlation among all variables as can be seen from the correlation results table in Appendix II.

Preliminary analysis drops none of the variables however the big drop (from 0.5988 to 2988) in the correlation coefficient of parents' education and economic status of the family is worthy investigating. Therefore partial correlation has been used for all the variables. So far there is no detection of multicollinearity even with partial correlation.

~~2.2~~5.4.2 Heteroscedasticity Test

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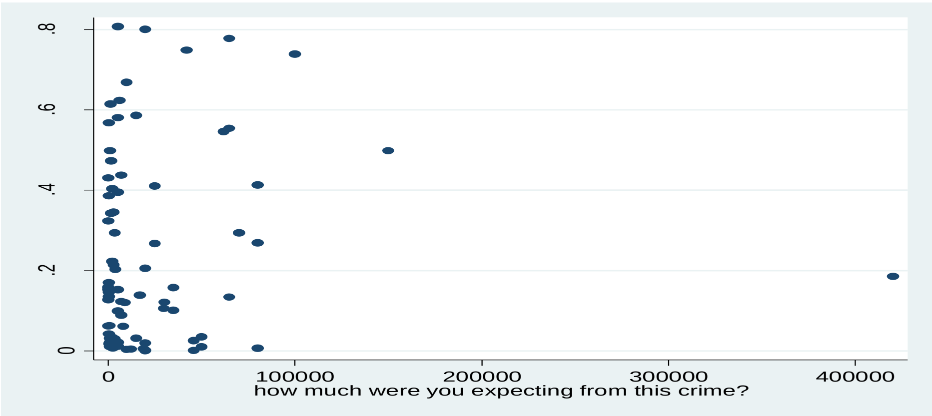
One of the possible causes of heteroscedasticity is skewness. This is usually the case with uneven distribution within the variables. The most given examples relate to income, wealth and education. The high possibility of the presence of outliers in these variables affects the symmetric distribution within the variables (Gujarati, 2003). It has similarly been observed in the study among all variables that expected income from the crimes being committed is positively skewed, while the other variables are evenly or almost evenly distributed as can be observed in Appendix III. Similarly the kurtosis of expected income from crime is way above three. Using the Jarque-Bera Test for normality, the results indicate that the variable is not normally distributed.

Using the graphical technique where the generated residuals after analysis are plotted against the income. It is so clear that the problem of heteroscedasticity is prevalent in the data. From expected income from criminal activity perspective, there are two groups, one clustered between MK0.00 and MK150,000.00 and the other which can be termed outliers above MK400,000.00.

Figure 3: Heteroscedasticity Test (Income)



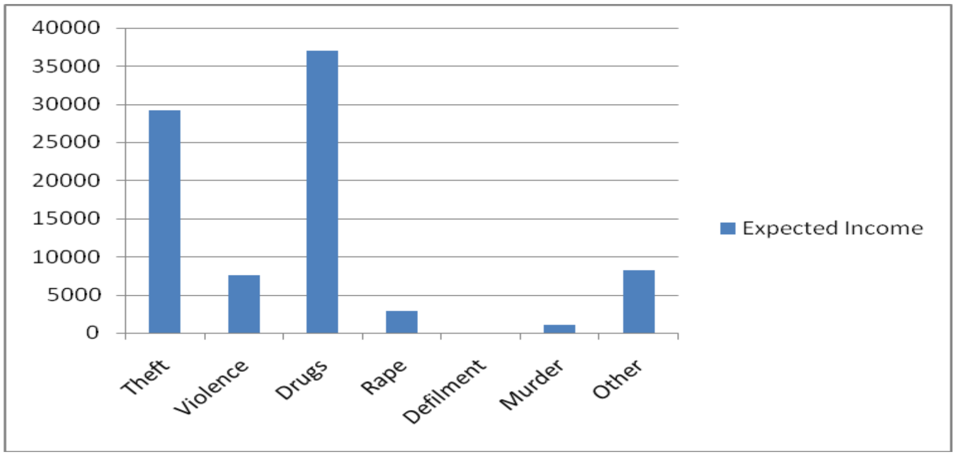
Source: Prediction based on the juvenile data

Yhat2 is the predicted squared residual.

As can be presumed, the crimes have different gains/returns/pays, which are in line with the Rational Choice Theory, and the argument of Becker (1968). Becker argues that the amount of harm would tend to increase with the activity level, and the social value of the gain to supply of crime, presumably tend to increase with repetitive offending.

Therefore in some crime one may expect no gain at all, while in some the expectation may be so high. Without considering the utility one gets from committing a particular crime, but considering only the expected monetary value after minors self assessment of the crime, it has been found that drugs are the largest paying crime than the rest with defilement being zero. It can therefore be seen that the majority (73 percent, almost three quarters) are below half of the income obtained from drugs. This can be stated as the reason behind the heteroscedasticity. A comparison of income obtained from crime portrayed in the graph below, vividly shows that drugs have high earning than the rest seconded by theft, while the rest are way below the two.

Figure 4: Comparison of Expected Income from Delinquency



Source: Plot based on the juvenile data

The study will therefore use a heteroscedastic probit model, instead of the proposed simple probit model. The use of heteroscedastic probit model has the following advantages;

- ~~4.2~~ Heteroscedastic probit model can yield insights into the effects of group characteristics (as well as other variables) that would be overlooked in mis-specified models.

- ~~5.2~~ Heteroscedastic probit model can easily incorporate continuous variables in the variance equation.

- ~~6.2~~ Above all solves the heteroscedasticity problem in the variable in question.

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Another way to solve the problem of heteroscedasticity is the use of robust standard errors. Using the robust standard errors in this model, the results only indicate a slight increase in standard errors, but the marginal effects and significance are not in any way different from just using the heteroscedastic probit model. Basing on Wald Chi-square the model is jointly significant at both 1 percent and 5 percent significant levels, and the probability of chi-square is so low (0.1401).

5.5 Empirical Model Estimation and Interpretation

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It is worthy reminding that the questions the study is trying to resolve is why do juveniles commit crimes and become repetitive offenders? And what are the factors associated with this repetitive delinquency? This section therefore presents regression results after analysis. From Bartol (2008) premise that the causes of crime and delinquency are multiple, complex, and probably result mostly from some complicated interaction of several influences, and his recommendation that it is important to avoid the temptation to seize on one cause or single explanation of crime (to be thinking of crime as unidimensional), therefore this study after discussion of results, simulations are employed to consider a combined effect of the variables under study. The table below presents marginal effects results after analysis. The significance has been calculated at 5 percent and the sex variable has used a sex dummy.

Table 9: Econometric Results for Repetitive Crime

Variable	Marginal effect	Z-Statistic	P>z
Parentage	-0.0421286	-0.29	0.769
Parental sex*	0.0499534	0.33	0.74
Parental education	0.0293647	0.48	0.632
Economic status	-1.10E-07	-0.83	0.406
Abuse	0.1011046	0.73	0.464
Family criminal history	0.2821344	1.87**	0.062
Peer pressure	0.2025699	1.27	0.202
Minors' Education	-0.0284718	-0.41	0.685
Punitive sanctions	-0.0093793	-0.64	0.52
Employment status	-0.339802	-2.15**	0.032
Illegal income	3.15E-07	0.19	0.85

Source: Estimation based on the juvenile data

(*) dy/dx is for discrete change of dummy variable from 0 to 1

** Significant at 5 %

The model in use has tried to include all the necessary variables to address the questions in focus. Beyond the inclusion of the variables, the study has found that all variables are not significant in influencing repetitive crime, except family criminal history and employment status of the minor. The prior expectation of these two variables has been met; it was expected that the two variables will be significant, and the growing up of a minor in a crime environment or a family which has a criminal record and the unemployment status of the minor would contribute positively to repetition of crime by the minor. It is worthy reminding at this point that the study had the following null hypothesis;

- Parental and own education, youth unemployment and family risk do not influence juvenile crime.
- The punitive sanctions in reformatory centers can not deter minors from engaging in crime

The rest of the discussion will therefore concentrate only on the two significant variables; family criminal history and employment status.

According to descriptive startistics above, it has been shown that there is a high probability of engaging into crime if one is coming from a family with criminal background. Despite that the families who have a criminal record for the past three years are only 22 percent of the whole sample, an isolation of these families shows that minors who are coming from these families 87 percent willingly participated into crime and 61 percent of those who repeatedly commit crimes are coming from the same "*criminal households*". On average family criminal history has the probability of increasing repetitive juvenile delinquency by 28 percent (*ceteris paribus*), which is the second significant and highest determinant of repetition of crime in this study. Writings by Witte and Tauchen (1994), Freeman (1991, 1996), Grogger (1998), and Williams & Sickles (2000), in (Kalb & Williams, 2002) have contended for the past criminal history of the family to be a strong predictor of current criminality in the children. As per their argument, the effect of family criminal history is so strong as can be obsereved from the marginal effects.

Three things have therefore to be noted; the presence of such families initiates a child into crime as part of the socialization process. Despite that the socialization partterns are changing as alluded to by the United Nations (2003a) in the introduction, the family still remains an institution which defines the norms and values of the society to the child, such that the socialization process into criminal behavior whether latent or manifest, will still form part of the socialization package to the child. Secondly such families can influence the institutionalization of criminal groups in the society bacause crime has become a career among the family members. And lastly they have a potential of breeding a group of juveniles that will not respond to any program as observed by Vachss (1983) above. It has to be noted that once the criminal conduct is taken as the way of living for that particular minor, programs to change this set up will usually not be effective because according to his rationality it is part of life. Based on rational choice theory, this minor will still be ragarded as rational economic agent who in his criminal venture will be maximizing satisfaction from crimes being repetitively commited.

Turning to employment, generaly unemployment has been a problem which governments have to solve as far as preventing the youth from crime is concerned. This study upholds the assertion that increasing youth employment has a significant negative influence to repetition of crime. Employment has been found to have the highest probability of deterring crime of 33 percent (*ceteris paribus*), indicating that the creation of a single employment opportunity can help reducing repetitive delinquency by the percentage. In other words unemployment increases criminal conduct among young people significantly.

According to the World Bank (2009) youth unemployment is the greatest challenge for the African continent which has a population of 200 million youths. Malawi herself according to Methodist Relief and Development Fund (MRDF) (n.d.), has the second highest youth unemployment in the world, with over 1.3 million youth unemployed. However the rating of Malawi by MRDF seems not correct according to two sources, African Development Indicators (ADI) by World Bank (2009) and Mundi Index. According to World Bank, Malawi is on the fourteenth position in Africa with 1.3 percent youth unemployment rate, not 1.3 million as stated by MRDF. Based on Mundi Index, she has the lowest rate in Central Africa. However, one drawback that has been noted in the World Bank rating is that several years have been used for countries, ranging from 1994 to 2005 which makes it inappropriate to compare countries based on 10 years difference.

It is worthy acknowledging afore that employment data on Malawi also faces two challenges. The first is the bias resulting from the definition of unemployment. In Malawi unemployment refers to that total population not working during the reference period, but has been looking for and ready to work during the last four weeks preceding the survey. This leaves out those in involuntary or disguised unemployment (those who stopped looking for employment because they are disgruntled), those underemployed or working just because they have no any other job at their disposal, and also includes everyone in agriculture because they have been doing something in the past weeks. Malawi being an agricultural country this bias has resulted in national unemployment rate being so low, between 1 and 6 percent and youth unemployment between 1 and 9 percent which can be stated to be under reporting. Secondly unemployment data was not constantly collected, giving gaps in other years. Though such is the case the introduction of welfare monitoring survey from 2006, has helped in filling the gap for the recent years, and data from these welfare monitoring surveys indicate that youth unemployment has been declining from 9 percent in 2006 to 4 percent in 2009. Despite this decline, the Malawi Government Millennium Development Goals Report of 2010 recognises youth unemployment as a most serious employment challenge facing the nation. The table below compares unemployment rates across age brackets. So far it can be seen that the youth unemployment rate, which is the unemployment rate for those between 15 and 24, has persistently been above the rest.

Table 10: Unemployment Rate in Malawi (2005 to 2010)

Age/ Year	**15-24**	**25-34**	**35-49**	**50-64**
2005	9	6	4	2
2006	9	6	4	3
2007	7.2	2.9	0.7	0.5
2008	4	1	0	0
2009	4	1	0	0

Source: WMS 2005, 2006, 2007, 2008, 2009

The United Nations (2003a) has argued that unemployment and underemployment are the contributors to youth criminal behavior. Thornberry and Christenson (1984), using individual level data from the 1945 Philadelphia cohort also found that unemployment has significant effects on crime. Farrington (1986) using data from the Cambridge Study in Delinquent Development (CSDD), also showed that property crime rates were higher when offenders were unemployed. The result is also coherent to several arguments related to welfare economics as well. Case and Katz (1991) though trying to compare races, crime and employment opportunities, one thing that stands out despite racial differences is that the deprivation to means of survival especially employment leads to increased idle time which in turn breeds a group of young people who are delinquents.

From this study, it can therefore be argued that the ongoing debate in crime economics on whether education or unemployment leads to criminality, for Malawi, it is not education but youth unemployment that contributes to repetitive offending. This therefore rejects the hypothesis that unemployment has no influence on repetitive juvenile delinquency.

5.6 Simulations

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The reduction/ elimination of the effect of family criminal behavior on minors repetitive delinquency has to be targeted if the minors have to be stopped from engaging into delinquent act as a result of family criminal history. This therefore suggests that if we no longer have families involved in criminal conduct or young people growing in such families, then no minor will be involved in delinquent act. However this is an ideal situation, which can hadly be attained. It is therefore worthwhile to propose scenarios that can help in emancipating young people from the effect of such families.

Apart from the ideal situation proposed above, the second assumption can be that education of the parents gives them a chance of exploring other options for survival, such that the higher they go with their education, they no longer get involved into criminal conduct. The effect of parents' education on criminal history of the family suggests that if we get all parents with primary education stating from senior primary out of criminal conduct, then family criminal history will no longer be a factor that would influence minors' engagement into crime. However this is almost suggesting the total eradication of crime within families because families below senior primary school are just 22 percent of the whole sample.

An attempt to use family heads' occupation effect on criminal conduct of the family in influencing juvenile repetitive delinquency, indicates that it is worthy while to target the elimination of crime within families that are in business. If no family whose head is involved in business has criminal history, then the family criminal history seizes to be significant in increasing repetition of crime. From this premise, it can be assumed that when the family is becoming more economically sound, then it has to disengage itself from criminal activity, which in turn will affect minors view on delinquency. However using this assumption, the equation fails to converge if quantiles are determining the involvement into crime. The effect was tried from the highest quintile to the secong quintile, the equation has failed to converge, therefore yielding no results.

It can therefore be stipulated that since the highest number of minors who are repetitive offenders are coming from families whose occupation is business (32 percent), then there is need for programs targeting households heads who are in business and at least have gone up to senior primary with their education that they no longer get involved in criminal conduct. This therefore will require heavy investment in business opportunities which can be penetrated even with those with basic education and still earn income for survival. However with problem of non-convergency using quintiles, the effect of increased economic status of these families still remains dubious if it will be effective.

Turning to unemployment, the study has found that no any other variable has a joint influence on repetition of crime except age and education. It has been established that if all young people just above the age of 16 are employed, then unemployment will seize to be significantly contributing to repetition of crime in Malawi. According to labour laws and the definition of youth employment, the working age starts at 15, which then means the finding that those above 16 have to be employed to eliminate repetitive crime resulting from youth unemployment; it is just a call to reduced youth unemployment. However the age of 16 would still pose a challenge to the school retention rate if all of them are getting a job. This would therefore increase the dropout rate and in-turn increase the very juvenile delinquency it is meant to eliminate. The provision of jobs to such age has therefore to consider only those who dropped out and have no means for survival while making all initiative to increase the school retention rate.

A further analysis indicates that if those with who have at least some secondary school have a job then unemployment will also seize to be a determinant of repetitive crime among juveniles. As can be observed this then means the youth have to stay longer in school than their parents if the repetitive crime has to be dealt with. In other words there is need for the youth to get educated beyond their parents. However there is a paradox being shown by the Welfare Monitoring Surveys that the higher the youth are getting educated, the more prone they are becoming to unemployment. This therefore calls for integrated and diversified approach in employment creation opportunities by all concerned parties including the government.

5.7 Conclusion

The study has managed to answer the questions as to why the youth repeatedly engaging into crime and also what determines the repetition of that crime. It can therefore be stated that the youth repeated engagement into crime depends on family criminal history and youth unemployment.

It has further been observed that parental education and occupation have a combined effect in initiating a child into delinquency through family criminal background. However, targeting the creation of a good business environment for parents with at least senior primary education would reduce repetition of crime resulting from this family background. Similarly, the availability of ready employment to the youth aged above 16 and of those having at least junior secondary education would render youth unemployment insignificant in determining repetition of crime. Though such is the case there is need to insure that youths are still retained in school. The next chapter therefore draws policy recommendation from this discussion.

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CHAPTER SIX

CONCLUSION AND POLICY RECOMMENDATIONS

6.1 Summary

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This study aimed at establishing the determinants of repetitive juvenile delinquency. It has therefore been established that unemployment is the biggest challenge to consider. In Malawi though youth unemployment rate has been reported to be declining, the effect of a declining rate seems not to be pronounced because it still ranks the highest in the nation, therefore still threatening the fight against repetition of crime.

Another factor that is highly influencing repetitive crime is history of criminal activities within the household. It can be argued that since the child has first contacts with the family before anyone else, the right and wrong may not be rightly taught within the family as desired by the society such that it is hard to combat repetitive crime from such families unless the child is totally confined in another environment for brainwashing or family economic base especially business is given the necessary attention it deserves.

6.2 Conclusion and Policy Recommendation

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From this study it can be stated that the recent development in the way juvenile crimes are being handled and the changing of naming is not enough to bring the much desired change in young offenders. More has to be done beyond the justice system.

Currently the youth policy has been undergoing a review and the just finished policy has not yet been passed by the cabinet. However, both the new and old policy recognises poverty as a most serious condition affecting the youth. Though such is the case, poverty is just an effect of lack of employment which is a catalyst for most evils the youth are facing today in Malawi.

The new policy recognises that out of 300,000 youths that get into the job market, the formal sector only absorbs 30,000, indicating only 10 percent absorption rate. Similarly the informal sector the participation rate of the youth is only 9 percent with more females than males (GoM, 2010a). With such a background, it is threatening to note that youth unemployment is just being recognised as part of vulnerability among the youth not necessarily a major problem in the policy guiding the programs targeting these youths.

With unemployment, youth have been used in political circles since independence in Malawi. Unfortunately this again has bred a group of young people who are criminals. If the youth policy could change its focus from poverty to unemployment, and gain the consolidated effort of Ministry of Youth, Ministry of Education, and Ministry of Labour, then the youth would be given a chance to self actualization in gainful employment. The reduced idle time and acquisition of knowledge and skills resulting from school and employment would enable the young people to increase the opportunity cost of their time and gain necessary skills that can be brought on the market, thereby having no time for offending and reducing income inequalities which are resulting from skilled and unskilled labour force disparities. The creation of other avenues for employment would also instil hope for better employment in the youth that are in school, thereby increasing school retention rate. However there is also need to increase self employment forums, from which the young people who cannot be absorbed by the labour market or desire to start own enterprises can be able to gain meaningful capital without any political strings attached.

Initiatives from other organisation apart from the ministry responsible might not generate the same political will as those coming from the line ministry. Therefore the ministry should not focus on poverty but unemployment. If it may be felt that this is the business of Ministry of Labour, the ministry should at least recognise it as a most serious problem affecting the youth not poverty, and the activities of the ministry have to be geared towards the attainment of employment among the youth. Poverty should come in as a major thematic area in the strategic plan.

It has further been observed that though the first goal in the new policy is, "increase opportunities for young people's gainful employment, and effective contribution to the country's development," the Ministry of Labour has been left out as one of the responsible implementers. The study therefore calls upon the ministry responsible to consider the inclusion of the responsible ministry and offices in the Policy Areas that concern them.

Appreciating that not all youth can be given employment based on the age and employment opportunities, it is highly recommended that the Ministry of Education should consider introducing vocational skills in both primary and secondary school as agreed during Beijin Conference on "*The continuum towards a morden TVET system*" in 2006. This will help in that even when the youth have dropped out of school, they will be able to earn a living through skills, or get informal employment using the same skills, therefore earning income to meet what they need.

For those already in reformatory centers, there is a need to incorporate vocational education as part of the reformatory process of juveniles. Therefore the Ministry of Education and Ministry of Home Affairs and Internal Security should work hand in hand to look into the modalities and means of getting vocational education to reformatory centers. Beyond the ministries intervention, the reformatory centers themselves should have the capability of writing proposals for funding and also be able to initiate programs within their own means.

The study also calls upon the Ministry of Women, Child and Community Development to consider introduction of peer educators in schools, neighbourhoods and youth gatherings. The strategy will provide an environment in which the youth would see that their contemporaries are carrying on positive innovations and activities which they too can manage to do. This will bring practical aspect of life to limelight and encourage positive behaviour change than only being blamed and used on something bad. The youth will be encouraged that they can also be masters of their own destiny (they will be empowered).

The peer method in crime reduction is a new strategy as far as fighting crime is concerned, after appreciating much important role it has played in HIV/AIDS campaigns. The United Nations (2003b) has strongly recommended the method in crime fighting on nine premises; it is culturally appropriate (flexible to cultural setting), practically real with clear and realistic goals (based on real life, experimental learning, and practicing communication), accurate in information provided, peer led, fun and creative, availability of back up service, supported by the community, provides youth space and time for the youth to achieve their goals, and it is developmentally appropriate.

6.3 Limitations of the Study

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The study has been restricted to reformatory centers because of financial constraints. Such being the case, it cannot be used for those who are not in reformatory centers because the conditions in which they are living in are different. It could have been very elaborate to include those who were released from the reformatory centers, and those who have never been there over and above those who are in reformatory centers now. This inclusion could have helped in estimation of probabilities of offending and repetitive offending, and also asses the reformation that has taken place in those who were released from reformatory centers.

Secondly, as can be appreciated in Chapter 2, juvenile studies have mostly been done in the United States and United Kingdom such that there is an origin bias in literature. So far no reference has been made to crime literature in Africa; specifically Malawi as far as the offenders' side is concerned (usually known as the supply of crime).

Thirdly, the environment in which the interviews were done could not give room for the juveniles to freely express themselves, except that of Kachere Juvenile Reformatory Center and Maula Prison. The interviews were being done under full guard. The worst case was Mikuyu where in some instances though isolated the warden had to intervene for the minor to respond quickly. This can have two effects; the minor would respond just to get done with the interview, in other words, the rapport that was built between the interviewer and the minor would be broken and the interview was turned mechanical. Secondly the presence of the warden is believed to have compromised some responses especially regarding their probability to offend again after being released. If the minor would indicate a higher probability to offend in the presence of the warden, then that would indicate that he has not been reformed.

6.4 Areas for Further Study

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Crime economics is a new field in which much has not been done especially in Africa. Several studies can be proposed for further research to complement this study. There is need to understand the supply and constraints of criminal behaviour among young people. There is also a gap in understanding transitions of young delinquents to adult offenders in an African setting. Another area of study that has been recommended within the study is regarding the effectiveness of reformatory system and programs; which program or system can better combat repetitive delinquency.

This study has set the pace for crime studies in economics and only managed to establish factors related to repetitive offending. It is therefore a work up call. More has to be done.

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APPENDICES

Appendix I: Correlation results of the variables in the model

Correlation results 1: For the variables in the model to be estimated (equation 15)

	parent~e	psex	pedu	ecost	abu	fam	pee	oedu	pun	U	y
parentage	1.0000										
psex	0.1806	1.0000									
pedu	0.1889	-0.1889	1.0000								
ecost	0.3222	0.0364	0.5988	1.0000							
abu	0.3443	0.3873	0.0785	0.3823	1.0000						
fam	0.1273	0.1818	0.4586	0.1537	0.3099	1.0000					
pee	-0.1818	-0.1273	-0.2595	-0.0221	0.3099	-0.2143	1.0000				
oedu	0.0336	-0.4902	-0.0468	-0.1958	0.0312	-0.1846	-0.0352	1.0000			
pun	0.4117	-0.0793	0.4693	0.2909	-0.1746	0.3162	-0.0934	-0.5215	1.0000		
U	-0.0327	-0.2451	-0.0651	0.2565	-0.2025	-0.2568	0.1070	0.0474	0.0108	1.0000	
y	-0.3326	0.2963	0.0712	0.2521	0.0824	0.0436	-0.0355	-0.4972	0.0063	0.1321	1.0000

Correlation results 2: For the model after changing two variables; abusive environment in the household to the abuse of the minor and family criminal history to the number of times the family members have committed crime

	parent~e	psex	pedu	ecost	abu2	fam2	pee	oedu	pun	U	y
parentage	1.0000										
psex	0.3161	1.0000									
pedu	0.0407	-0.2427	1.0000								
ecost	0.0521	-0.0585	0.2988	1.0000							
abu2	-0.1330	-0.0508	-0.0614	-0.0085	1.0000						
fam2	0.0471	-0.0946	0.0267	0.0241	0.0256	1.0000					
pee	-0.0281	-0.2624	0.0898	-0.0852	0.1861	0.2657	1.0000				
oedu	-0.0022	-0.2353	0.0672	0.0830	-0.1082	0.1280	-0.0810	1.0000			
pun	0.0897	-0.0252	0.1217	0.0826	-0.0014	-0.2071	-0.0270	-0.0964	1.0000		
U	-0.2225	-0.1345	0.0053	0.2946	0.0173	0.0553	-0.1168	0.3117	0.1460	1.0000	
y	-0.1755	-0.0947	0.1122	0.3472	0.0628	0.0858	-0.0757	0.0900	-0.0073	0.2132	1.0000

Appendix II: Skewness and kurtosis of the variables of the model after changing family criminal history and abuse variables

stats	parent~e	psex	pedu	ecost	abu2	fam2	pee	oedu	pun	U
skewness	-.5060243	.2544621	.108358	-.0072987	-.0755255	-1.373246	.1133893	.4807426	1.74531	.5901671
kurtosis	1.256061	1.064751	2.167547	2.018162	1.005704	2.885804	1.012857	3.264027	5.96675	1.348297

stats	y
skewness	4.142651
kurtosis	24.35903