



Analysis of Trends of Incidence of Crime in Ilorin, Kwara State, Nigeria

¹Ajise, Olalonpe Oluwakemi and ²Adeniyi, Adedapo

¹Department of Crime Management, Kwara State Polytechnic, Ilorin

²Department of Geography, Kwara State Polytechnic, Ilorin

Abstract - Crime is one of the major challenges facing Nigeria today. The need to assess the patterns of incidence of crime rate is therefore essential for effective crime control and management. This paper examines the trends of incidence of crime in Ilorin, Kwara State, Nigeria. Data on reported cases of culpable homicide, armed robbery, grievous harm and wounding, theft and stealing, house breaking, false pretence and cheating, cultism, kidnapping, fraud/ forgery and assault from 2018 to 2022 were collected from Kwara State Police Command Headquarters, Ilorin. Mann-Kendall Statistic and Semi-Average Method were used to analyse the trend of the reported crime rates. The result of the analysis using Semi-Average method reveals that culpable homicide, armed robbery, grievous harm and wounding, theft and stealing, house breaking, cultism, fraud/ forgery and assault exhibit a downward trend while false pretence and kidnapping exhibit upward trend. This implies that the number of reported cases of culpable homicide, armed robbery, grievous harm and wounding, theft and stealing, house breaking, cultism, fraud/ forgery and assault reduces from 2018 to 2022. However, false pretence and cheating and kidnapping exhibit an upward trend which mean an increase in number of reported cases. Therefore, the study recommends that the government should encourage intelligence led policing, continue to allocate more fund for security agencies for the purchase of modern equipment and regular training of security agents so as to enable them to curtail the incidence of crime in the area to the barest minimum.

Keywords - Patterns, Armed robbery, Theft, Stealing, Kidnapping.

I. Introduction

Crime is any behaviour that is contrary to the rules and regulations of the society. It is an illegal act that is harmful to the society and punishable by the government or other authorities. Crime is any deliberate act that causes physical or psychological harm, damage to or loss of life and property in the society (Ajise and Adeniyi, 2024). Crime is described as an act or form of behaviour performed at a specific time in a specific place which goes against the rules and regulations of a specific society in a specific time. Crime denotes an offence of public nature, an unlawful acts committed directly or indirectly against the society (Ajise and Adeniyi, 2023). Crime is any act that goes against the norms of the society. It is any behaviour that is usually and socially dangerous. According to Gaur, (2000) crime is a public wrong which is defined as something that is done or something that is omitted that goes against a public law forbidding or commanding it. From sociological perspective, crime means an attitude or behaviour that is usually dangerous or that is believed to be socially dangerous by some individuals that has the ability to compel its beliefs and puts such an attitude under



prohibition of prescribe punishments. Also, morally, crime applies to those attitudes that negates social order and deserve strict reproof. Crime is an unethical and harmful act that is regarded as harmful by public opinion. It is a behaviour which no pleasant and comfortable society can fail to consider as criminal and are correctable by punishment. Crime is an act labelled as harmful by public opinion (Simon and Paul, 1998).

Crime has been classified into several types. Some of these includes, violent crime, white collar crime, organized crime, professional crime, victimless crime etc. Examples of violent crime includes murder, assault, rape, armed robbery, maltreatment and kidnapping. Victims of violent crime are usually threatened with physical injury; the victims also suffer psychological trauma. White collar crime includes bribery and corruption, stealing, and the production or selling of harmful goods. Prostitution, unlawful gambling, child and drug trafficking, and large – scale theft are examples of organized crime. Professional criminals are people who profit in their work by engaging in criminal act which harm those who receive their services. Examples includes murder of hospital patients by doctors and nurses, national assembly members using public money for vacation travel and to employ ladies for sexual exploitation (Ajise, and Adeniyi, 2023). Victimless crime such as gambling and prostitution on the other hand are acts in which individuals freely engage in without directly harming others but which are defined as illegal (Giddens, 2005).

Theoretical Framework

There are different theories that explain crime. Amongst these theories are sub cultural, anomie, critical theory, differential association, labelling, structural and conflict. However, for the purpose of this study, critical theories will be used to explain crime in the society.

Critical Theory: Critical theory uses dialectical reasoning as method of analysis. This method identifies contradictions which is the basic building blocks of all dialectics. It tries to show how contemporary societies and its moments are shaped by contradictions. Contradictions result in the circumstance that society is dynamic and that capitalism assures the continuity of domination and exploitation by changing the way these phenomena are organized (Fred, 2004). In a dominative society, such as capitalism, contradictions cause problems and are to a certain extent also the seeds for overcoming these problems. If in capitalism an important contradiction is the one that exist between the owning class that exploits the non-owning class, then the goal of critical theory is the representation of the interest of oppressed and exploited groups and the overcoming of class society (Fuchs, 2011). The dialectical thinking argues that the foundations of a classless society develop already within capitalism, while capitalism on the one hand produces new forms of cooperation that are on the other hand forms of domination within class relations.

Critical theory is a critique of the political economy, domination and exploitation. It analyses how capitalism accumulation, surpluses value exploitation and the transformation of aspects of society into commodities work and what the contradictions of the capitalist mode of production are. It questions all thought and practices that justify or uphold domination and exploitation. Marx formulated the categoric



imperative of critical theory (Fuchs, 2011). It is the categorical imperative to overthrow all conditions in which man is degraded, enslaved, neglected, contemptible being. This theory wants to show that a good life for all is possible and that domination and exploitation alienate humans from achieving such a society. Critical theory also makes demand for a self-determined, participatory and just democracy.

In modern society, political communication regularly takes on ideological forms. Such ideologies try to advance specific interests by communicating in ways that present certain groups positively, opponents and enemies negatively, conceal negative realities about specific groups and invent negative dimensions of opponent and enemies. For Marx, critical theory is a normative realism. It argues that it is possible to logically provide reasonably grounded arguments about what a good society is, that the good society relates to conditions that all humans require to survive and that one can judge the existing societies according to the extent that they provide humane conditions or not (Fred, 2004).

Marx maintains that critical theory is connected to struggles for a just and fair society, it is an intellectual dimension of struggles. It provides a self-understanding of a society's self-understanding, struggles, and wishes.

This theory can be rightly applied to criminal behavior because of the contradictions, exploitations and dominations especially in the society, some people resulted in crime as a way of fending for themselves. Competition is everywhere and individual must provide and meet their needs in order to survive. Crime then stands as a rational answer to the competitiveness and unequal life in capitalist society (Ajise and Falusi, 2016). Members of each class use whatever advantage their class position gives them perpetrate crime. People in the upper class have access to the nation's resources and as a result, use it to get a larger portion of the nation's resources. In lower classes, e.g. the prostitutes, they use whatever they have to meet their needs.

Incidence of crime is one of the major problems facing Nigeria today. Ajise and Adeniyi, (2023) reported that crime is a distinctive challenge facing Nigeria and constitute a threat to National peace, socio political and economic development. Crime is an act that is eating deeper and wider into the fabric of Nigerian society. Crime rate in Nigeria is on the increase every day. Titilope, (2024) reported that in Nigeria over 51 million crime incidences were reported between May 2023 and April 2024. Furthermore, Nigeria has been labelled to be a country with a high level of crime (Michael, 2025).

According to Statista (2021) Nigeria is one of the countries in the world with high crime rates and ranked 17th among the least peaceful countries in the world and similarly ranked 19th among the least peaceful countries in the world in 2024 (please check the sentence, I think one should be in Africa while the other in the world. 17th in the world or Africa, 19th in the world or Africa) (Statista, 2024). Likewise, the Global Peace Index (2022) ranked Nigeria 143 among 163 independent nations and territories according to the level of peacefulness in the world and the sixth country most affected by terrorism based on Global Terrorism Index 2022. Many states in Nigeria including Kwara State have witnessed a rise in criminal activities. According to Nextier, (2022)



the Nextier Violent Conflict Database indicates that parts of the northwest and northcentral regions are the most troubled areas in Nigeria. Criminal activities such as kidnapping, rape, armed robbery and banditry have become a major problem facing the country and news of criminal activities are reported almost every day in Nigeria dailies (Ajise and Adeniyi 2023). Agboola, (1997) opined that urban crime has quantifiable spatial and temporal distribution that needs urgent attention of the government and the law enforcement agencies in order to maintain law and order. Therefore, there is need for security agencies to develop effective strategies to combat and reduce the incidence of crime in the country. According to Atanu, (2019) one of the fundamental techniques to combat criminal activities is the better understanding of the dynamics of crime.

A knowledge about the trend of incidence of crime is therefore fundamental in the assessment of crime rate, control and management. Adeniyi, (2020) define trend as a pattern of steady change in a data collected sequentially at equal spaced time interval. It is a change in the value of data over a period of time. Trend analysis is usually used to deduce any pattern in a set of data and to predict future consequence of an occurrence.

Trend could be upward, downward and horizontal. An increase trend is referred to as an upward trend; decrease trend is a decrease trend while horizontal trend is when the direction of the trend cannot be decided. Therefore, trend analysis of incidence of crime is crucial for crime management. Temporal data on incidence of crime is useful in providing law enforcement agents with information on the characteristic of individuals involved in crime and nature of crime in a particular location. This is because understanding crime patterns will provide a knowledge base for the incidence of crime, whether increasing or decreasing, and better crime management. Thus, the objectives of this study is to examine the pattern of incidence of crime in order to help in the formulation of crime reduction strategies or measures in Ilorin.

The Study Area

Ilorin is located on latitude 8024'N and 8036'N and longitude 4010E and 40 36'E. Ilorin is the state capital of Kwara state and situated in the North Central geopolitical zone of Nigeria. There are three local Government areas in Ilorin.

These are; Ilorin West, Ilorin East, and Ilorin South. Ilorin is positioned at a strategic point between the densely populated South-Western and the sparsely populated middle belt of Nigeria. The major occupations of the indigenes are farming, pottery making and weaving. In addition, some of the people living in Ilorin are civil servants and traders while others are self- employed. According to Ajadi, et. al. (2021) Ilorin is the "Gate way" between northern and southern Nigeria and also plays vital roles in the socio-economic development of the surrounding towns and cities. According to 2006 population census, in 2006 the population of Ilorin was 777,667 (NPC, 2006). The population is estimated at 1.099,960 in 2025 by the Word Population Review.

Figure 1 shows map of Kwara State and the study area.

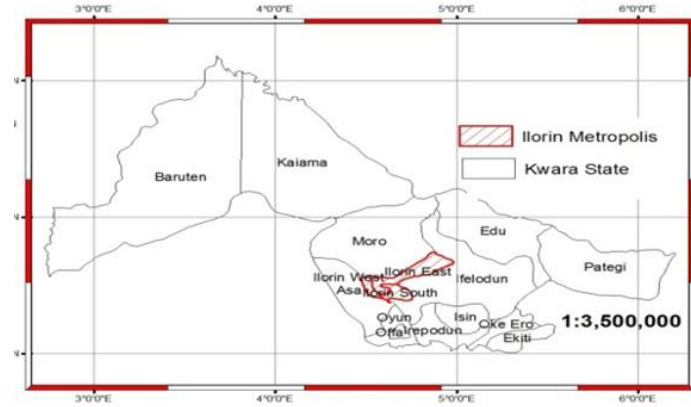


Figure 1: Map of Kwara State showing the Study Area.

II. Materials and Methods

Trend is one of the major component of time series. It is a method for removing an underline pattern of a behaviour in a data collected over time and the science of studying changes in pattern in a data set (Adeniyi, 2020). This study examines the trend analysis of incidence of crime with the view of determining the pattern of incidence of crime in Ilorin. Data for the study which was mainly secondary data was collected from Kwara State Police Command Headquarters, Ilorin. Ten offences, culpable homicide, armed robbery, grievous harm and wounding, theft and other stealing, house breaking, false pretence and cheating, cultism, kidnapping, fraud/ forgery and assault were selected.

These crimes were selected because they are the common reported crimes in Ilorin. Both descriptive and inferential statistics were used in the analysis of the data. Mean, standard deviation and coefficient of variation were used to describe the variation in the incidence of crime. Semi-Average Method and Mann-Kendall statistics were used to analyse trend (increasing or decreasing) of incidence of crime. Trend is usually used to deduce any pattern in a set of data and has become the most popular and frequently used method for identifying patterns in a data.

Semi –Average Method was used to identify trend in the incidence of crime because it is more objective than fitting a line by eye to the plotted series (Adeniyi, 2020). Similarly, Mann Kendal statistics was used because it is a non-parametric test which does not require the data to be normally distributed and also has low sensitivity to short breaks due to inhomogeneous time series (Tabari, et. al 2011). In addition, according to Ragata, et. al. (2018) Mann Kendal statistics is the most generally used methods and appropriate method of detecting trends. In Mann- kendall Statistics, the data are represented in series X_i ($i=1 \dots N$). The value of the first term of the series X_1 is then compared with values of all later terms in the series from the second (X_2) to the last term (X_n). The number of all later terms whose values exceed X_1 is counted and denoted by n_1 . Comparison is next made between the value of the second term X_2 and the value of all later terms that exceed X_2 is counted and denoted by n_2 . This procedure



is continued for each term of the series ending with X_{n-1} and its corresponding number $nN-1$. For this study the number of incidence of crime is represented in series $X_1 - X_{60}$.

A statistics P is then computed as shown in equation 1.

$$P = \sum_{i=1}^{n-1} n$$

And the Mann-Kendall statistics (r) is derived using equation 2

$$r = \frac{4p}{N(N-n)} - 1$$

For the test of significance using a desired probability level (tg), the statistics (r) is then compared with its theoretical value using equation 3

$$(r)_t = 0 \pm tg \sqrt{\frac{4N+10}{9N(N-1)}} \quad (3)$$

Using a two tailed test

Results and Discussion

Descriptive Characteristics of Incidence of Crime in Ilorin (2018-2022)

Descriptive analysis is one of the crucial methods of data analysis. It helps to describe or summarize data in order to identify the trend of the data and a deduction of the distribution of the data. Table 1 below shows the descriptive characteristics of incidence of crime in Ilorin (2018-2022). Yearly mean, standard deviation and coefficient of variation were analysed for the identified crimes reported from 2018 to 2022. The result of the analysis shows that theft and other stealing has the highest mean values in all the years under review. Fraud/forgery and kidnapping have the lowest mean values (0.67 and 0.00) in 2018 and 2019 respectively.

This reveals that theft and other stealing has the highest number of reported cases in Ilorin from 2018 to 2022. Fraud/Forgery and kidnapping have lower and no reported cases of crime in Ilorin in 2018 and 2019 respectively. Similarly, theft and other stealing has the highest standard deviation values in 2018 to 2022. This implies that number of reported cases of theft and other stealing varies significantly from the mean values from 2018 to 2022.

The coefficient of variation shows that the number of reported crimes in Ilorin from 2021 to 2022 were heterogeneous with values greater than 33% except kidnapping and theft and other stealing in 2019. This suggests that the number of reported crime cases of the identified offences in Ilorin from 2018 to 2022 exhibit considerably variations.

Table 1: Descriptive Statistical Measures of Incidence of Crime in Ilorin (2018-2022)

	2018			2019			2020			2021			2022		
Offences	X	SD	CV	X	SD	CV	X	SD	CV	X	SD	CV	X	SD	CV



Culpable Homicide	5.83	2.61	44.72	5.33	1.43	26.88	4.67	2.13	45.74	2.67	3.40	127.45	4.25	1.69	39.75
Armed Robbery	4.33	2.66	61.30	3.33	1.70	51.00	3.58	1.66	46.22	1.50	1.55	103.64	3.42	1.71	49.93
Grievous harm and wounding	3.58	1.19	33.13	3.50	2.60	74.23	2.33	2.17	93.13	1.92	2.63	137.15	2.50	0.76	30.55
Theft and Other Stealing	16.08	5.63	35.03	14.08	3.62	25.68	11.67	5.44	46.60	6.50	6.84	105.19	15.67	6.51	41.56
House Breaking and Theft	4.17	1.52	36.44	3.00	2.00	66.67	3.75	1.48	39.44	2.17	2.94	135.66	1.33	1.43	107.53
False Pretence and Cheating	2.08	1.66	79.50	1.33	1.11	82.92	1.00	1.35	135.40	0.83	1.21	145.60	4.50	1.89	42.07
Cultism	1.67	1.80	107.70	1.17	1.14	97.94	0.08	0.28	331.66	0.58	1.38	236.90	0.42	1.38	331.66
Kidnapping	0.83	0.99	118.32	0.00	0.00	0.00	0.92	0.76	82.82	0.58	0.86	147.77	0.83	0.99	118.32
Fraud/ Forgery	0.67	0.94	141.42	0.92	1.19	129.53	0.25	0.43	173.21	0.25	0.43	173.21	0.67	0.94	142.42
Assault	2.33	1.84	78.90	2.33	2.39	102.52	2.33	1.49	63.89	0.33	0.62	187.08	2.33	1.84	78.90

Source: Authors' Computation, 2025

Trend in Incidence of Crime Using Semi-Average Method

Semi-Average Method is a simple and easy to know statistical technique that is used to calculate trend by dividing the data into two equal parts and then calculating average of each part. In this study, Semi- Average Method was used to analysed the trend of the monthly cases of selected reported crimes from 2018 to 2022. The result of the analysis is presented in Table 2. The result from the table shows that culpable homicide, armed robbery, grievous harm and wounding, theft and other stealing, house breaking, cultism, fraud/ forgery and assault exhibit a downward trend. This implies that the number of reported cases of these crime reduces from 2018 to 2022. However, false pretence and cheating and kidnapping exhibit an upward trend which means an increase in number of reported cases. Similarly, Temitope, (2025) reported that kidnapping was one of Ni-geria's most disturbing crimes in 2024.

Table 2: Trends in Incidence of Crime in Ilorin Using Semi-Average Method (2018-2022)

Offences	First Part Average	Second Part Average	Trend
Culpable Homicide	5.3	3.8	Downward Trend
Armed Robbery	3.7	2.7	Downward Trend
Grievous harm and wounding	3.0	2.5	Downward Trend
Theft and other Stealing	13.8	11.8	Downward Trend



House Breaking and Theft	8.2	2.4	Downward Trend
False Pretence and Cheating	1.5	2.4	Upward Trend
Cultism	1.4	0.3	Downward Trend
Kidnapping	0.5	1.1	Upward Trend
Fraud/ Forgery	1.0	0.7	Downward Trend
Assault	2.3	1.2	Downward Trend

Source: Authors' Computation, 2025

Trend in Incidence of Crime Using Mann- Kendall Statistics

The Mann Kendall test, a non-parametric statistic, was used to detect the trend of the incidence of crime in the study area. The result of the trend of incidence of crimes in Ilorin using Mann-Kendall test is presented in table 3. From the table, the result of the test shows that all the selected reported crimes have a negative value which shows a decrease in the trend of incidence of crime. This implies that the incidence of culpable homicide, armed robbery, grievous harm and wounding, theft and other stealing, house breaking, false pretence and cheating, cultism, kidnapping, fraud/forgery and assault in Ilorin decreases from 2018 to 2022. Similarly, the Semi- Average method also reveals that culpable homicide, armed robbery, grievous harm and wounding, theft and other stealing, house breaking, fraud/forgery and assault have a decrease trend. This shows that both the Semi- Average method and the Mann Kendall Statistics give similar results. Nevertheless, false pretence and cheating, and kidnapping show increase trend in Semi-Average Method, while they show a decrease trend in Mann Kendall Statistics. However, the values of the decrease in false pretence and cheating, and kidnapping in Mann Kendall Statistics, -0.056 and 0.189 respectively, is so insignificant that it may have no effects. Therefore, resulting in no tangible decrease in variation of the incidence of crime.

Table 3: Trends in Incidence of Crime in Ilorin Using Mann Kendall Statistics

Offences	R
Culpable Homicide	-0.374
Armed Robbery	-0.360
Grievous harm and wounding	-0.324
Theft and Other Stealing	-0.199
House Breaking and Theft	-0.586
False Pretence and Cheating	-0.056
Cultism	-0.702
Kidnapping	-0.189
Fraud/ Forgery	-0.325
Assault	-0.372

Source: Authors' Computation, 2025

III. Conclusion



The analysis of temporal pattern of incidence of reported crime rate in Ilorin from 2018 to 2022 shows that culpable homicide, armed robbery, grievous harm and wounding, theft and other stealing, house breaking, cultism, fraud/forgery and assault exhibit a downward trend which show a decrease in the incidence of these crimes from 2018 to 2022.

This may likely be as a result of reduction in the crime rate among the people in Ilorin or improvement in the strategies employed by the security agencies to reduce, control and manage crime in the area. Therefore, the study recommends that the government should encourage intelligence led policing and continue to allocate more fund for security agencies for the purchase of modern equipment and regular training of security agents so as to enable them to curtail the incidence of crime in the area to barest minimum. In addition, security agencies should also adopt modern strategies of combating crimes in the urban area.

Acknowledgement

The Authors wish to thank TETFUND Nigeria for making available the grant for this research and the Management of Kwara State Polytechnic, Ilorin, Kwara state Nigeria.

Declaration of Interest Statement

The authors declare that there is no known conflict of interest or personal relationships that could have influence the result of the work reported in this study.

References

1. Author name Deleted. (2020) Trend Analysis of Temperature and Humidity in Kwara State. *Journal of Environmental Geography* 13 (3-4), 44-50)
2. Agboola, T. (1997) The Architecture of Fear: A Pilot Study of Planning Urban Design and Construction Reaction to Urban Violence in Lagos, Nigeria. Ibadan IFRA and African Builders. In: Adedokun, O. and Atere, A., Eds., *Crime Management in Nigeria*, Lagos State University, Lagos, ix-x.
3. Ajadi, B. S., Adeniyi, A., Abubakar, I. M. and Ibrahim, B. B. (2021) An Assessment of Solar Energy Potential in Ilorin Kwara State, Nigeria *Journal of Contemporary Studies* 13 (2): 282 – 294
4. Author name Deleted. (2024) An Assessment of Incidence of Crime in Ilorin Metropolis. *Harmony Journal of Science, Engineering and Technology Research*. 3 (2): 61-74
5. Author name Deleted. (2023) Statistical Analysis of Incidence of Crime in Kwara State. *Journal of Contemporary Studies*. 15 (1): 116-130
6. Author name Deleted. (2021) The Effect of Crime to peace and Sustainable Development. *Journal of Contemporary Studies* 13 (2) 258- 268.
7. Atanu, E. Y. (2019) Analysis of Nigeria's Crime Data: A Principal Component Approach using correlation matrix. *International Journal of Scientific and Research Publications*, (9): 1
8. Fred, R. (2004). *The Cambridge Companion to critical theory*. UK, Cambridge University press.
9. Fuchs, C. (2011). *Foundations of critical media and information studies*. New York, NY: Routledge



10. Gaur, H. (2000). The penal laws of India. (1)
11. Giddens, A. (2005). Sociology. 4th edition. England. Polity Press
12. Michael, C. (2024). "See how high Nigeria ranks on 2024 crime index". Business day NG. Retrieved 28 August 2025.
13. Ragatoa, D.S., Ogunjobi, K.O., Okhimamhe, A.A., Francis, S.D. and Adet, L. (2018) A Trend Analysis of Temperature in Selected Stations in Nigeria Using Three Different Approaches. Open Access Library Journal, 5: e4371
14. Tabari, H., Marofi, S., Aeini, A., Talaei, P.H., Mohammadi, K., (2011) Trend Analysis of Reference Evapotranspiration in the Western half of Iran. Agricultural and Forest Meteorology. 151, 128-136.
15. Titilope, J. (2024) High-Ranking Crimes of 2024 in Nigeria: Challenges, Solutions for 2025. INDEPENDENT, December 28, 2024
16. Nextier, 2020 Nigeria's Most Violent States - June 21, 2022
17. Simon, H and Paul, R. (1998). Thinking about criminology. London. UCL Press.
18. The Scottish centre for crime and justice research. (2008). University of Glasgow. Pgs. 1-2.
19. Statista, (2021) Crime in Nigeria, December 2021.
20. Statista. (2024) "Crime in Nigeria" Retrieved 28 August 2025.