

BINDURA UNIVERSITY OF SCIENCE EDUCATION



FUCULTY OF COMMERCE

DEPARTMENT OF INTELLIGENCE AND SECURITY STUDIES

CCTV SURVEILLANCE SYSTEMS AND CRIME PREVENTION IN RETAIL

BUSINESS: A Case of Mt Darwin Urban Retail Businesses

BY

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APPROVAL FORM

TOPIC: CCTV SURVEILLANCE SYSTEMS AND CRIME PREVENTION IN RETAIL BUSINESS.
A CASE OF MT. DARWIN URBAN RETAIL BUSINESSES

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I certify that this dissertation meets the preparation guidelines as presented in the faculty guide and instruction for preparing dissertation.

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this dissertation is suitable for presentation to the faculty. It has been checked for conformity with faculty guidelines

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I certify to the best of my acknowledge that the required procedure have been fulfilled and the preparation criteria has been met from this dissertation.

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DEDICATION

This research is a special dedication to my wife and my kids Tafara, Tanaka and Taropafadzwa for their unwavering support throughout the entire project work. Without their involvement directly and indirectly, this project would not have been a success.

ABSTRACT

Retail business crime has been a concern globally with various strategies such as CCTV Surveillance systems being implemented to address the challenge. This study evaluates the opportunities for CCTV use in preventing retail business crime in Mount Darwin town, Zimbabwe. The study used the descriptive case study design. The sample of 52 constituting, police officers, retail employees and retail owners was selected using purposive and simple random sampling techniques. Interview guide and the questionnaire were used for data collection. Data was presented in form of graphs, tables and pie charts using the SPSS. The study identified, shoplifting, employee embezzlement and theft, return fraud, burglary and vandalism as prevalent crimes in retail businesses. The study highlights, increased retail crime, deterrence and detection, enhanced proactive response to emergencies, provision of visual evidence during legal proceedings and increased retail crime reporting as main opportunities for implementing CCTV surveillance systems in retail businesses. The study highlighted, poor location and placement of CCTV cameras, lack of skilled personnel, power outages and lack of electricity back up, equipment failure, vandalism and tempering as main challenges hindering implementation of CCTV for retail business crime prevention. Strategic location and placement of cameras, adequate staffing and employee training and complementing CCTV surveillance systems with electronic article surveillance were identified key strategies to prevent retail theft.

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CHAPTER I

INTRODUCTION

1.0 Introduction.

This chapter provides the background to the study, problem statement, and aim of the study, research objectives, research questions, research hypothesis, and significance of the study, research assumptions, and delimitations, limitations of the study and definition of key terms.

1.1 Background to the Study

Worldwide, issue of loss control and management has been a topical issue and retail crime is a significant concern for businesses and law enforcement agencies the world over (Weish and Ashby, 2017). According Clarke (2017), retail crime costs businesses billions dollars in losses annually. Weish and Farrington(2017) argued that, most retailers have now adopted and installed CCTV cameras in strategic positions and parts of their businesses to curb thefts, making off without payment cases and shoplifting as well as various other crimes perpetrated in retail businesses during the busy day to day operations of their businesses. This resulted in companies install CCTV cameras on the strategic positions of their retail outlets globally including Zimbabwean retailers

According to Vogel (2014) the use of CCTV cameras for crime detection and prevention can be traced back to Great Britain where three quarters of the Home Office budget was allocated to CCTV related projects from 1996 to 1998. Such policy decisions increased dramatically the number of CCTV system in Britain from approximately 100 to more than four million in less than two decades. In the past decades cities throughout the United States of America have likewise made substantial investments in CCTV (Willis, 2014).

The CCTV technology has found traction in most countries including Africa. According to Clarke (2017) in South Africa there has been substantial investment by companies and businesses including retail outlets in CCTV installation and use. According to most recent estimates 49% of local companies and police departments in SA report using CCTV with usage increasing to 87%. However, due to economic stagnation as a result of economic sanctions the use of CCTV technology in curbing crime is still minimum only a few government departments, private companies and retail outlets have embraced its use in Zimbabwe (Moyo and Mubango, 2020). Nagra and Kehoe (2020), posited that, CCTV cameras presents a lot of opportunities in curbing retail crime such as theft, shoplifting and making off without payment by employees and customers globally, with a significant reduction in operational costs, and loss in several retail supermarkets and shops. However, employees, suppliers and thieves are still involved in various thefts and related crimes that have been bedevilling the retailing business resulting in several losses and or sometimes closures through liquidation (Kooistra, 2018). So to this regard, the researcher is investigating the opportunities for CCTV surveillance systems in the prevention and reduction of crimes in the retail business in the Mt Darwin Urban Township Retail Businesses.

There is evidence of literature that recorded retail business related crimes causing stock and cash losses as a global, continental, regional and level and Zimbabwe is not an exception. Piza (2019) says 60% of retail outlets experience shoplifting and robbery with an average annual loss of \$16000 in profits and asserts. Lima (2017) says 43% of retail outlets in Africa experience money fraud and counterfeit cash, with an average annual loss of \$10000 in cash with Nigeria recording the highest percentage of money fraud and counterfeit cash. Ashkari and Ismail (2024) says 55% of Southern African retail outlets experience robbery and unauthorized intrusion and burglary with an average annual loss of R1200000 in cash and stock. Weish, Ashby and Lima (2017) supposed that 60% of Zimbabwean retail outlets report internal employee fraud and theft, check out fraud, robbery and burglary as significant concerns. To curb the escalating retail crime retail outlet owners resorted to the employment CCTV surveillance systems as a deterrent measure at their premises worldwide. Frost and Sullivan (2020) say installation of CCTV surveillance systems at retail outlets have presented a lot of opportunities in prevention and detection of retail business related crimes. Ekblom (2023) say 70% of African retail outlets use CCTV surveillance systems to contain the prevalent retail business related fraud. According to Frost and Sullivan (2022), the Southern African CCTV market is expected to grow at a rate of 15% from 2020 to 2025 whilst Awang (2020) propounded that 70% of Southern African retail outlets use CCTV cameras to contain retail crimes which has been causing losses. Awang (2020) posited that Zimbabwean retail businesses consider

CCTV surveillance systems installation at their premises an essential component for prevention and detection of retail business related crimes that have been crippling their businesses. Therefore this current sought to investigate the opportunities for CCTV surveillance use in detecting and preventing retail business in crime.

1.2 Statement of the problem

Retail crime has been a global, international, regional and local challenge as it causes inefficiencies and losses of various nature. Crime statistics has shown that 20% of theft related offenses in 2019 were related to retail theft and shoplifting in Harare (Moyo and Mubango, 2020). Despite an increase several retail outlets installing security cameras to deter retail theft and shoplifting, what is alarming is an increase in retail crime. Zimbabwe Republic Police statistics in the third quarter of 2024 indicated a sharp increase in theft which stood at 46% and retail related offenses stood at 36% (Nyathi, 2014). In light of these retail fraud statistics, little empirical research has been done to assess the opportunities for CCTV surveillance systems in detecting these crime. The researcher acknowledges that the retail businesses are struggling to deal with the problem hence, the current study sought to add to existing literature by investigating the opportunities for CCTV surveillance systems in reducing and preventing retail thefts in Zimbabwe.

1.3 Aim of the study

The overall aim of the study is to determine the opportunities of using CCTV surveillance systems on crime prevention in retail businesses in Zimbabwe so as to come up with possible solutions. To achieve this goal the study was guided by the following objectives.

1.4 Research objectives

The specific objectives of the study are to:

- i. To document crimes prevalent in retail businesses located in Mt Darwin town
- ii. To determine the opportunities of using CCTV surveillance systems in detecting and preventing retail business crimes
- iii. To assess the challenges faced by retail businesses in Mt Darwin town when implementing CCTV surveillance systems for crime detection and prevention.

- iv. To recommend possible solutions to enhance effectiveness of CCCTV surveillance systems in crime detection and prevention in retail businesses.

1.5 Research questions

In order to provide the basis for interrogating, observing and measuring specific aspects of the study, the study's main question is, What are the opportunities for CCTV surveillance systems on crime detection and prevention in retail businesses?

- i. What are the most prevalent crimes in retail businesses located in Mt Darwin town?
- ii. What are the opportunities for CCTV surveillance systems on crime detection and prevention in retail businesses located in Mt Darwin town?
- iii. What are the challenges faced by retail businesses in Mt Darwin town in Implementing CCTV surveillance systems for crime detection and prevention?
- iv. What are the possible solutions to enhance CCTV surveillance systems in crime detection and prevention in retail businesses?

1.6 Significance of the study

1.6. 1 Retail outlet owners

The successful completion of this study will benefit retail companies in curbing retail thefts, making off without payment crimes and inefficiencies in the loss control, risk and security management fraternity towards loss, risk reduction and increasing return on investment. This will built greater confidence to company investors and other company stakeholders as they feel that their interests are secured.

1.6.2Police and law enforcement agents

It will result in the database of literature to those who will be in working day in day out in fighting loss or risk related issues affecting the company as they will become aware of solutions to fight various retail businesses crimes.

1.6.3Security Managers, Risk Officers and Audit managers

Security managers, Risk officers, Enterprise risk and Audit managers, loss practitioners and various other titles meant to fight company losses. The economy at large is going to benefit as it will promote economic efficiency and enhances better living standards.

1.6.4 Bindura University

The Bindura University of Science Education (BUSE) will benefit from this research by having a reservoir of the data literature in loss control, risk and security management concepts.

1.7 Assumptions of the study

The study will be based on the following assumptions; -

- i. Respondents have adequate knowledge of the subject that is the opportunities of CCTV surveillance systems preventing retail crimes.
- ii. CCTV surveillance systems can enhance crime detection and prevention.
- iii. Respondents were truthful.
- iii. The sample size will be a true representation of the target population.
- iv. Crime is rising in the retail sector.

1.8 Delimitation/ scope of the study

Creswell (2014) defined study delimitations as the boundaries that the researcher sets for a study to define what will be included and excluded and help to contextualize and convey the focus of the study. The delimitations for this current study included geographical scope, focus on CCTV surveillance system use and crime detection on retail businesses.

Geographical scope

The study was geographically confined to the Mt. Darwin town in Zimbabwe. While retail crime is a nationwide concern, this research focused on this specific town to provide an in-depth analysis of local dynamics on opportunities of CCTV surveillance systems use in crime detection and prevention in retail businesses. This localized approach allowed for a detailed exploration of the unique factors pertaining CCTV surveillance systems use and crime detection and prevention in

retail businesses within this context. As a result, the findings were not directly generalizable to other towns in Zimbabwe or other countries with similar issues.

Focus on key stakeholders

The research was delimited to the perspectives and experiences of retail businesses owners, security personnel and retail business employees within the Mt. Darwin town. Other stakeholders, such as local government officials or national law enforcement agencies, were excluded from the primary analysis. This focus centered on the opportunities of CCTV surveillance systems on crime detection and prevention on retail businesses.

Timeframe for data collection

The study focused on data collected from incidents and developments related to retail crime within the past three years. This timeframe was selected to capture recent trends and perspectives on the opportunities for CCTV surveillance systems on crime detection and prevention, ensuring that the findings reflected current realities rather than historical data.

Methodological delimitations

The research employed qualitative methods, including interviews to gather data. This methodological choice limited the study to subjective experiences and perceptions rather than quantitative metrics, such as statistical data on pertaining the opportunities for CCTV surveillance systems use on crime detection and prevention. . While quantitative analysis provided additional insights, the qualitative approach enabled a deeper exploration of the lived experiences and opinions of individuals directly affected by retail crime. The study was specifically delimited to evaluating the opportunities of CCTV surveillance systems use in crime detection and prevention on retail business. While other issues, such as community development, broader socio-economic factors, or other types of crime, may intersect with the topic, they were not the primary focus. This narrow scope allowed for a detailed analysis aimed at generating actionable recommendations for enhancing opportunities of CCTV surveillance systems use on crime detection and prevention on retail businesses.

1.9 Limitations

Study limitations are shortcomings or flaws in the research study that can affect the research process and its findings (Moyo 2021). The limitations for this study were identified as, methodological, limited generalizability, financial and logistical and timeframe.

Subjectivity and bias in qualitative methods

The reliance on qualitative research methods, such as interviews introduced subjectivity and bias into the data collection process. Participants' responses were influenced by personal experiences, emotions, or perceptions, leading to potential biases that skewed results. Social desirability bias occurred, where respondents provided answers they believe are more acceptable or favourable to the researcher rather than their genuine opinions. This limitation impacted the accuracy of findings related to opportunities of CCTV surveillance systems use in retail crime detection and prevention on retail business. The researcher made up for this limitation through triangulation.

Limited generalizability

The study focused on the retail businesses in Mt. Darwin town and this restricted the applicability of findings to other regions. The unique socio-cultural, economic, and political factors in Mt. Darwin town were not reflected those in other towns or countries. While the study provided valuable localized insights, caution was exercised when attempting to generalize its conclusions to broader contexts.

Logistical and accessibility challenges

Engaging with retail owners, security personnel and retail employees posed challenges, such as reluctance to share experiences due to fear of repercussions or mistrust in the research process. These barriers resulted in a limited sample size or incomplete data, affecting the comprehensiveness and reliability of the study's findings. Additionally, language barriers and cultural differences complicated communication and data interpretation, further constrained the research process. The researcher strived to create rapport during the interview process and interview guides were presented in different languages to overcome communication barriers.

Restricted timeframe

The study focused on retail crime incidents over the past three years and this limited its ability to capture long-term trends. Historical contexts and patterns that have influenced the current state of these relations were overlooked. A lack of consideration for these dynamics hindered a comprehensive understanding of the opportunities of CCTV surveillance systems use on crime detection and prevention on retail businesses.

Financial limitations

The research project will also attract some costs to cater for printing, photocopying and research materials; hence the researcher will have to use the available resources through use of internet and other information systems technology the likes of WhatsApp and electronic mail which will be relatively cheaper.

1.10 Definition of terms.

CCTV – Closed –circuit television

Opportunities refers to the benefits to which an organization achieves its goals and objectives, while also considering the impact on stakeholders and the organization's overall well-being, (Cameron and Quinn 2020). Porter and Heppelmann (2019)

Haggard (2019) defines the word prevention to impose limits or restrictions on the power or influence of individuals or groups while Barnett and Duvall (2020) say preventing refers to the exercise of power to limit or restrict the actions or behaviours of others.

According to Porter and Heppelmann (2019) crime detection and prevention encompass strategies to identify and prevent criminal activities, including both ongoing monitoring for existing threats and implementing preventative measures to discourage future attempts. Crime detection focuses on real-time identification of suspicious activities, while crime prevention aims to create a secure environment that makes crime less likely.

1.11 Chapter Summary

This chapter covered introduction, research background, problem statement, research aim, objectives, research questions, research hypothesis, significance of the study, research assumptions, delimitation, and limitations of the study and definition of terms.

CHAPTER II

LITERATURE REVIEW

2.0 Introduction

CCTV surveillance has become a fundamental component of security strategies in various sectors and countries significantly enhancing public safety and crime prevention in particular retail business related crimes. Chapter one provides the tone and overview of the research. This chapter covers literature review, conceptual framework, empirical evidence and research gap.

This will be the coverage basis for interrogating research objectives and questions.

2.1 Conceptual Framework

According to Polit and Beck (2019), a conceptual framework is a logical and systematic representation of key concepts, assumptions, and relationships that underlies a research study. The research key concepts were explored based on the research objectives. Key concepts of the study are explained below

2.1.1 Conceptualisation of CCTV surveillance systems.

According to Welsh, Ashby and Lim (2017) CCTV surveillance system is a closed circuit television surveillance system that uses cameras to transmit a video signal to a limited set of monitors, primarily for security and monitoring purposes. Baygan and Anguilon (2023) argues that, these systems are commonly used for surveillance in areas that require additional security or ongoing monitoring such as retail businesses. Examples of CCTV cameras include, dome cameras, bullet cameras, pan-tilt-zoom cameras and infrared night-vision cameras. Therefore the current study seek to analyse the opportunities of CCTV surveillance in detecting and preventing retail crime.

2.1.2 Defining crime detection and prevention.

According to Ashkari and Ismail (202) crime detection and prevention is the process of identifying and preventing suspicious activities that could indicate criminal behaviour. Crime detection and prevention focuses on implementing policies, procedures and safeguards to minimize the risk of crime occurring in the first place (Vogel and Sloot, 2021). Nagra and Kehoe(2020) argues that crime detection and prevention is a crucial process for protecting individuals and organisations such as retail outlets from financial losses from criminal activities such as making off without payment, counterfeit notes, shoplifting and internal theft by employees. Bennet and Gelsthope (2019) argues the most commonly adopted mechanism of crime detection and prevention by retail business is the CCTV surveillance system.

2.1.3 Prevalent retail business related crimes

2.1.3.1 Shoplifting

According to Adhikhari and Hamal (2024) shoplifting remains a persistent crime for retail businesses committed by individuals, groups and organised retail criminals causing financial losses. It involves stock being stolen by a thief posing as a customer. According to Schliemann (2018) businesses without adequate security measures such as CCTV surveillance systems or anti-theft devices are at greater risk of shoplifting. Investing in retail security cameras to monitor shoppers and implementing anti-theft policies can help reduce shoplifting accidents.

2.1.3.2 Vandalism

Moyo and Mubango (2020) argues that, vandalism is also a risk commonly encountered by retail businesses. Vandalism might include graffiti, property damage and destruction of business asserts. It can negatively impact a company's reputation and leads to costly repairs. Vandalism can also deter potential customers and clients if the premises appear unsafe and neglected (Kooistra, 2018). CCTV surveillance systems, routine monitoring and proper lighting can help deter vandals from targeting business properties.

2.1.3.3 Return fraud

Check out fraud includes cases where criminals avoid paying in full for goods at the tills. This might include swapping barcodes and price stickers for a less expensive item or deliberately not swiping a product at a self-checkout point (Nagra and Kehoe, 2023). In the same vein money fraud

involves criminals can use illegal method to pay for goods. This may include counterfeit cash, stolen credit cards or fraudulent cheques and making off without payment. CCTV surveillance can help deter and prevent crimes such as check out and money fraud (Schliemann, 2018). CCTV footage can be helpful in tracking such fraudulent activities and can be used for investigation and evidence during legal proceedings.

2.1.3.4 Burglary

Mc Kee (2023), burglary and theft are the most common crimes retail businesses face. It includes break-ins after hours usually when the shop is closed. Burglary involves forcing entry and burglars target physical asserts, cash, equipment and merchandise which can result in significant financial losses. According to Moyo and Mubango(2020) retail stores and warehouses are the prime targets and thieves capitalizes vulnerabilities such as weak locks, outdated alarm systems and poorly lit areas making it easier to break in without detection. CCTV camera footages can be instrumental in tracking and capturing of burglars and can be used as evidence to secure early guilty pleas during legal proceedings and imprisonment.

2.1.3.5 Employee embezzlement and theft

According to Mc Kee (2023) one of the most prevalent retail crimes is employee embezzlement and theft. It occurs when employees misuse their position of trust to steal money and asserts from the business Employee embezzlement often goes undetected for long periods if a single employee controls financial accounts and the inventory. Establishing proper checks and balances, regularly auditing financial records and implementing clear reporting structures together with CCTV surveillance systems can help mitigate risk of embezzlement and theft.

2.1.4 Opportunities for CCTV surveillance use in the detection and prevention of retail business crime

2.1.4.1 Increased deterrence and reduction of retail business crime

Research consistently highlights that CCTV camera installation provides many opportunities for deterring and preventing retail crime. Weish, Ashby and Lim (2017) in their study aimed at testing CCTV effect by measuring crime level changes from pre to post camera installation found out that CCTV camera installation reduced retail theft by 36%. Similarly Vogel and Slood (2021) in their examination of the relationship between CCTV camera use and retail theft reduction in the Philippines found that CCTV camera installation in retail shops significantly reduced retail theft. This was also established by Guo (2018) in his meta-analysis of studies examining the opportunities

of video surveillance on shoplifting among retail outlets in South Africa and found out that video surveillance was associated with reduction in shoplifting.

2.1.4.2 Provides clear signal to shoplifters and criminals that they are being watched and that there is a higher danger of discovery and capture.

Nagra and Kehoe (2020) argued that CCTV cameras must be visible to the public to prevent and deter shoplifting and retail theft by customers and employees. Visible CCTV cameras provides more opportunities for deterring shoplifting and retail theft than hidden cameras. This is because visible cameras provide clear signal to potential shoplifters and thieves that they are being watched and this can be enough to prevent and deter some would be offenders. Bennet and Gelsthope (2019) CCTV camera installation has a deterrent effect, it deters retail crime by making potential perpetrators believe there is a higher danger of discovery and capture.

2.1.4.3 Early crime detection and enhance proactive and immediate response of personnel to emergencies

According to Piza (2019) one other opportunity for CCTV camera installation in crime detection and improves response of personnel to emergencies. McKee (2023) concurs that CCTV camera installation in retail outlets enhances a proactive and immediate response to crimes such as retail theft and shoplifting. Baygan and Anguillon(2023) CCTV enhances quick reaction time for instance when there is an incident of shoplifting or theft in the shop the CCTV Operator can quickly alert the security personnel with proper coordination by the use of radio to apprehend the shoplifter before they go out of store. Weish, Ashby and Lim (2017) echoed that CCTV installation is indeed an important tool in capturing shoplifting and theft in progress. Therefore retailers across the globe turned to security measures such as CCTV cameras to deter theft and protect their inventory.

2.1.4.4 Provides visual evidence for use in criminal investigations and securing early guilty pleas from offenders

Another opportunity associated with CCTV camera installation as a mechanism in prevention and detection of retail crime is that, it provides visual evidence for use in criminal investigations and securing early guilty pleas from offenders (Moyo and Mubango 2021). This was also confirmed by Askhari and Ismail (2024) that CCTV contributes to post crime investigations by providing visual evidence for legal proceedings and encouraging early guilty pleas by accused individuals. Philips

(2020) noted the opportunities of CCTV use which includes preventing theft, vandalism and providing video camera proof giving visibility to the entire retail complex and property

2.1.4.5 Inadvertently increases crime reporting as it capture offenses that might remain unnoticed by the authorities

Another opportunity for CCTV surveillance systems it increases reporting of retail crimes. According to Lim and Hyungjin (2018) CCTV presents opportunities in crime prevention and detection for it might also inadvertently increase crime reporting cases as it captures offenses that might remain unnoticed by the authorities. Moyo and Mubango (2021) argued that in most Zimbabwean retail outlets CCTV cameras evidence has been instrumental in revealing theft by dishonesty employees whom employers trust. Baygan and Aguillon (2023) confirmed that, CCTV records previous incidents and if recorded and properly stored is useful evidence for future reference. This can promote an increase in unreported crime as operators can avail evidence and pinpoint among players in the footage as to who exactly committed the crime. This has been critical in apprehending dishonesty workers and employees involved in retail theft.

2.1.5 Challenges faced by retail businesses in implementing CCTV surveillance systems for crime detection and prevention.

However, literature surveyed also highlighted some challenges hindering CCTV use in preventing and detecting retail crime. This section covered challenges faced by retail businesses in implementing CCTV surveillance for crime detection and prevention.

2.1.5.1 Poor location and placement of CCTV surveillance systems leaving blind spots.

Huang (2018) concurred with Baygan and Aguillon (2023) that, the main challenge hindering CCTV use in retail outlets relates poor location and placement. Awang (2023) confirmed that, shoplifters, thieves and dishonesty are committing unlawful actions at blind spots or camera dead zone areas. These spots are commonly used by retail employees who are usually aware about the internal system challenges hence engage in theft unnoticed. This have seen retail crime escalating with security features such as CCTV in place. Therefore poor location and placement of cameras has been highlighted by literature as one factor limiting the opportunities of CCTV surveillance systems in detecting and preventing retail crime

2.1.5.2 Lack of skilled personnel

Another challenge hindering implementation of CCTV use in crime detection and prevention is lack of skilled personnel (Ekblom 2023). Lim 2018 echoed that, most individuals working as CCTV Operators lack appropriate training and necessary skills needed to monitor retail crime which is very complex and multifaceted. Based on the by Engleton (2017) on the “Impact of insufficient Personnel on Organizational Performance.’ It was established that having insufficient and untrained staff causes stress and tiredness levels to rise. Lim (2018) confirmed that, the job of a CCTV camera Operator is difficult and needs high alertness and tolerance. Moyo and Mubango (2021) echoed that most small retail outlets have inadequate and poorly trained staff that implementing CCTV strategy for retail crime reduction has remained an uphill task.

2.1.5.3 Power outages and lack electricity back up to sustain CCTV surveillance systems.

Moyo and Mubango (2021) in their study pertaining prevalence of retail crime in Harare highlighted power outages and lack of electricity as one factor limiting the opportunities of CCTV surveillance systems in crime prevention and detection. Shoplifting and retail theft by employees and customers can happen at a quick notice. Customers and workers can utilize moments of power outages to steal because most CCTV systems depended on the national power grid which is not reliable and most of them lack power back up systems. This has limited the opportunities of CCTV surveillance systems in crime deterrence and prevention (Moyo and Mubango 2021).

2.1.5.4 Equipment failure and poor image quality

Equipment failure and poor image quality is one other challenge hindering the use of CCTV Surveillance systems in detecting and preventing retail business related crimes (Moyo and Mubango,2021).According to Ekblom (2023) CCTV cameras can malfunction, lose power or have recording issues leading to incomplete and unusable footage as evidence during legal proceedings. Equipment failure can result in poor quality footage making it difficult to identify individuals and details crucial for criminal investigations (Moyo and Mubango, 2021)

2.1.5.5 Vandalism and tempering

According to Moyo and Mubango (2021) time constraints, delayed identification, tempering and vandalism are some challenges hindering use of CCTV surveillance systems in detecting and preventing retail business crime. Reviewing hours of footage can be time consuming and require significant resources. In the same vein, even with quality footage identifying perpetrators can be

delayed hindering immediate response for apprehension. Vogel and Slood (2021) argues that, retail employees can vandalise and temper with CCTV surveillance systems rendering them less useful. Therefore addressing these challenges is crucial for maximizing the benefits of CCTV surveillance systems in retail crime detection and prevention. This includes investing in high quality equipment, strategic placement of cameras and ensuring proper maintenance (Vogel and Slood, 2021).

2.1.6 Strategies to enhance CCTV surveillance systems for retail business crime detection and prevention

2.1.6.1 Strategic location and placement of CCTV surveillance systems

Strategic location and placement of CCTV cameras was found out to be one strategy key in improving CCTV use in retail crime reduction and prevention. Awang (2020) argued that location of the cameras is pivotal to cover dark areas and blind spots which can be utilized by shoplifters and thieves to commit crimes. Ekblom (2023) concurred with Vogel (2021) that CCTV cameras must be visible to the public and must capture extensive footage and optimize deterrence altering the behaviour of potential retail criminals. CCTV cameras should be evenly distributed and strategically installed throughout the shop to maximize their utility and ensure coverage (Vogel 2021). Therefore literature has indicated that strategic location and placement of cameras is critical in improving CCTV surveillance systems in deterring retail crime.

2.1.6.2 Adequate staffing and training of employees

Studies also revealed that adequate staffing and training of retail workers such as shop floor workers, managers and supervisors and security guards is critical in enhancing CCTV use in preventing and deterring retail businesses crimes (Cho and Lee 2019). Baygan and Aguilon (2023) also confirmed that training employees can improve CCTV surveillance systems by increasing the likelihood of employees reporting suspicious behaviour and improving responses time. Additionally training employees to identify and report suspicious behaviour reduces retail crimes such as theft, making off without payment and shoplifting.

2.1.6.3 Complementing CCTV surveillance with mirror, signage and uniformed security guards.

Complementary CCTV surveillance systems is one other strategy which can be used in retail crime prevention (Cho and Lee 2019). One of such strategies is using mirrors and signage to create the perception of being watched known as the “Big Brother Effect.” The Big Brother effect complemented with CCTV surveillance can reduce retail business related crimes. It creates a sense

of being monitored and increases the perceived risk of being caught (Piquero 2017). Studies have also shown that adding uniformed security guards to CCTV system can increase retail crime prevention and deterrence. Security guards not only serve as a deterrent to potential thieves but can also provide an immediate response to suspicious behaviour (Kroosta and Johnson 2018).

2.1.6.4 Electronic article surveillance systems

Literature surveyed indicated that using electronic article surveillance(EAS) systems , which use tags or labels to trigger an alarm if they are not deactivated at the point of sale can complement CCTV use in retail outlets deterring and discouraging retail crimes like making off without payment(Nagra and Kehoe 2020). Therefore EAS systems can be used with CCTV systems to improve detection of thefts and deter potential thieves. Cho and Lee (2019) argued that CCTV systems are effective in preventing and reducing retail crime such as theft, making off without payment and shoplifting however complementing CCTV surveillance with other retail crime reduction strategies increase crime prevention.

2.2 Theoretical Framework

Creswell (2020) argued that, a theoretical framework guides the research design, ensuring alignment with the research questions. This study was informed by Cohen and Felson 1979 routine activity theory and Caesar Beccaria's deterrence theory. These theories are explained in the following subsections.

2.2.1 Routine activity theory

The routine activity theory of criminology was propounded by Cohen and Felson in 1979 and was popularized by Clarke and Felson in 1993. It stipulates that, crime can only occur in the absence of a capable guardian as it leaves a suitable target unprotected against a motivated offender when they come together in time and space (Clark and Felson, 1993). According to Miro (2014) the theory posits that crime prevention strategies should aim to limit the availability of appropriate targets and increase the presence of capable guardians, thereby minimizing the chances of criminal activity taking place. The theory emphasizes the role of the convergence of a motivated offender, suitable target and the absence of a capable guardian in facilitating crime (Weish and Farrington, 2022). CCTV surveillance systems can act as a capable guardian by increasing surveillance and reducing opportunities for crime to occur in specific in retail businesses. According to Miro (2014) the structure of routine activities influences criminal opportunity and affects trends in direct physical contact either with the person or their property. In this way, guardians can be viewed as control

agents in the routine activity theory of crime (Miro, 2014). The theory has relevance to the current study as strategic placement and installation of CCTV cameras can act as the capable guardian detecting and preventing retail crimes. It suggests that the presence of CCTV surveillance systems can deter and prevent retail crimes. Therefore, the presence of CCTV surveillance systems has impact on retail business crime prevention as it instils fear of being detected and arrested by motivated offenders such as shoplifters. The routine activity theory was deemed relevant for the current study as it informed the key objectives of this study pertaining opportunities for CCTV surveillance in preventing retail businesses crime.

2.2.2 Deterrence theory

The deterrence theory is associated with the work of criminologist Ceasare Beccaria around 1764 (Masuka and Motlalekgosi, 2021). The theory has since been further developed and refined by other scholars in the field of criminology. Beccaria argued that, punishment should be swift, certain and proportionate to the crime committed, and that the threat of punishment would deter individuals from engaging in criminal behaviour (Welsh, 2022). The theory posits that potential offenders are likely to be deterred from committing crimes if they perceive a high risk of detection, apprehension and punishment (Bunei, 2021). Thus, the increased presence and visibility of CCTV surveillance systems instil fear of being detected among potential shoplifters thereby deterring and ultimately prevent retail business crimes.

The deterrence theory was deemed highly relevant for the current study because it suggest that, the threat of being detected and arrested for punishment can deter and prevent retail business crimes. In the context of CCTV surveillance systems the installation of CCTV cameras can serve as a visible and practical form of deterrence, signalling that potential shoplifters will not be tolerated and that there is high risk of being detected, arrested and punished. This theory informed the study in developing measures to deal with stock theft addressing the key objectives of the study.

2.2.3 Rational Choice Perspective

The SCP approach is strongly grounded in in the Rational Choice Perspective which views crime as a deliberate behaviour intended to fulfil the offender's every day needs (Clarke 2017). According to this theory, offenders weigh various choices structuring properties such as potential gains associated and risks when deciding whether to commit a crime. In case the potential offender can

be influenced by fear of being detected on camera thereby choosing not to offend. Therefore the primary purpose of CCTV cameras in retail outlets is to influence these properties altering an offender's decision making process to discourage retail related criminal acts. In this case both the SCP approach and the rational choice theory are relevant to this study as they concur that, CCTV cameras help in crime prevention and detection. However, what is worrisome is the prevalence of retail business related crime in Zimbabwe. This prompted the need for this study to investigate the opportunities of CCTV in crime prevention and detection with retail outlets in Mount Darwin Township as a case study.

2.3 Empirical Literature

Moyo (2020) posited that empirical evidence is information or data obtained through direct observation, experience, or experimentation, used to support or refute a hypothesis or theory while Ncube (2019) defines empirical evidence as tangible proof or facts about a research problem or question. Empirical literature shall be reviewed using a thematic approach informed by the research questions and objectives

2.3.1 Crimes prevalent in retail businesses

Schliemann (2018) conducted a study titled, "Early Detection and Prevention of Retail Financial Fraud in Nigeria," to examine retail financial fraud in Nigerian retail outlets. The study employed the qualitative methodology. The study found out that, fraudulent crimes such refund fraud, checkout fraud, use counterfeit cash and online scams including cyber security breaches were common among retail business. The study recommended retail business to invest in high quality surveillance systems to help detect and deter fraudulent activities which are causing financial and assert loses

The study, "Opportunities for CCTV Surveillance in Crime Detection and Prevention in South Africa," by Adhikari and Hamal (2024), analysed the retail business crimes prevalent among big retail shops in South Africa. The study utilized the quantitative methodology. The study, identified shoplifting, checkout fraud, money fraud including illegal methods to pay for goods , counterfeit cash , stolen credit cards and fraudulent cheques as the most prevalent retail business crimes among large retail shops .The study recommended retail owners to intensify surveillance systems in order to deter and prevent retail theft in their businesses.

Mc Kee (2023) conducted the study titled, "Security Cameras and Retail Thefts," explored the prevalence of retail business crimes in Namibia. The study employed the quantitative methodology.

The study identified, employee embezzlement, robbery, vandalism, burglary and shoplifting as the most prevalent crimes associated with retail business. The study recommended retail businesses to put in place adequate security measures such as CCTV cameras, anti-theft devices, alarms and panic buttons to deter potential criminals.

2.3.2 Opportunities of CCTV surveillance systems on fraud detection and prevention in retail businesses.

Piza and Welsh (2019) conducted a study titled, ‘Opportunities CCTV surveillance for crime prevention. A 40 year systematic review with meta-analysis in South Africa,’ evaluates the opportunities of CCTV surveillance systems for crime prevention.” The study employed the qualitative research design and most data was obtained from document analysis. The study found out that, CCTV camera installation in retail outlets enhances a proactive and immediate response to crimes such as retail theft and shoplifting. It enhances quick reaction time for instance when there is an incident of shoplifting or theft in the shop the CCTV Operator can quickly alert the security personnel with proper coordination by the use of radio to apprehend the shoplifter before they go out of store. CCTV installation is indeed a technology or tool in capturing shoplifting and theft in progress

The study, “Framework for Assessing the Impact of CCTV surveillance systems on Crime Prevention in India,” by Ashikhari and Ismail (2024) assessed the impact of CCTV surveillance on crime detection and prevention focusing on property theft. The study used the qualitative research design. The study found that, CCTV surveillance systems provides clear signal to shoplifters and fraudsters that they are being watched and that there is a higher danger of discovery and capture. The study recommended that, CCTV cameras must be visible to the public to prevent and deter shoplifting and retail theft by customers and employees. Visible CCTV cameras deter shoplifting and retail theft than hidden cameras. This is because visible cameras provide clear signal to potential shoplifters and thieves that they are being watched and this can be enough to prevent and deter some would be offenders.

Similarly the study, “Trends and Issues in Crime and Criminal Justice in USA,” by Morgan and Dawling (2019) examines the opportunities of CCTV surveillance system footage in the investigation of criminal offenses. The study utilized the qualitative methodology. The study found out that, CCTV surveillance system footage can be used as part of criminal investigation, identify offenders, secure early guilty pleas, identify witnesses and verify witness’s statements. CCTV

contributes to post crime investigations by providing visual evidence for legal proceedings and encouraging early guilty pleas by accused individuals. The study recommended that, retail outlets to improve the quality of CCTV footage for use as evidence during legal proceedings.

2.3.4 Challenges faced by retail businesses when implementing CCTV surveillance systems for fraud detection and prevention

The study, “Challenges on the Application of Fraud Detection and Prevention Instruments in Retail Businesses in Ethiopia”, by Ammuna (2020) explores the challenges of CCTV surveillance systems in retail fraud detection and prevention. The study used the qualitative research methodology. The study found out that, the main challenge affecting CCTV use in retail outlets relates poor location and placement allowing fraudsters to commit unlawful actions at camera dead zone areas. The study recommended strategic location and placement of CCTV surveillance system to enhance increased detection and prevention retail crime

Oter, Gaynor and Smith (2005) conducted a study titled, “Assessing the challenges of implementing Real-time Crime Detection Solutions on Retail Outlets in South Africa,” to assess the challenges of implementing real-time fraud detection solutions like CCTV surveillance systems on retail business. The study utilized the quantitative methodology and mainly employed questionnaire for data collection. The study established that, lack of technical capacity and inadequate personnel for hindered CCTV surveillance system use in crime detection and prevention. The study recommended retail business owners must offer CCTV Operators and employees appropriate training and necessary skills needed to monitor retail crime which is very complex and multifaceted.

Moyo and Mubango (2021) conducted a study titled, “A Review of CCTV Evaluation, Crime Prevention and Effects and Attitudes towards Use in Harare,” highlighted power outages and lack of electricity as one factor inhibiting CCTV use in crime prevention and detection. Criminals, can effectively utilize moments of power outages to steal because most CCTV systems depended on the national power grid which is not reliable and most of them lack power back up systems. The study recommended retail business owners to install power back up and extra security features to complement CCTV surveillance systems in cases of power outages

2.4.5 Strategies to enhance CCTV surveillance systems in fraud detection and prevention in retail businesses

Ekholm, and Armitage, (2023) conducted a study titled, “Crime Prevention through Environmental Design in the United Arab Emirates,” analysed the strategies to enhance CCTV surveillance systems in crime detection and deterrence.” The study utilized the qualitative methodology. The study found out that, strategic location and placement of CCTV cameras was one strategy key in improving CCTV use in retail crime reduction and prevention. The study recommended that, CCTV surveillance systems must be visible to the public and must capture extensive footage and optimize deterrence altering the behaviour of potential retail criminals. CCTV cameras should be evenly distributed and strategically installed throughout the shop to maximize their utility and ensure coverage.

The study, “Does Video Surveillance Deter Shoplifting,” by Guo (2018) examined the interventions to enhance CCTV surveillance system use in deterring shoplifting in Botswana.” The study used the quantitative methodology. The study revealed that, adequate staffing and training of retail workers such as shop floor workers, managers and supervisors and security guards is critical for improving opportunities for CCTV surveillance systems use in preventing and deterring retail business related crimes. The study recommended that, retail business owners must devote resources towards training employees to increase the opportunities for CCTV surveillance systems use through reporting suspicious behaviour and improving responses time. Additionally training employees to identify and report suspicious behaviour reduces retail crimes such as theft, making off without payment and shoplifting.

Kooistra and Johnson, (2018) in a study, “The Impact of CCTV, Fourteen Meta-Analysis of the Effects of CCTV,” evaluates the opportunities of complementing CCTV surveillance systems and other fraud prevention strategies in preventing retail business fraud. The study utilized the mixed methodology. The study found out that, the use of complementary strategies to augment the use of CCTV can increase retail crime detection and prevention. The study recommended that CCTV surveillance should be complemented by use of mirrors and uniformed security guards to increase retail fraud prevention and deterrence.

2. 4 Research Gap

Despite the growing emphasis on CCTV surveillance in detection and preventing crime in general, there is a significant gap in understanding the opportunities of CCTV surveillance systems in retail

fraud detection and prevention specifically in Mt Darwin town. While studies by Piza and Welsh (2019); Morgan and Dawling (2019) and Ashkhari (2024) have explored CCTV surveillance systems in general crime prevention, there is limited research specifically on the opportunities of CCTV surveillance systems in retail business crime detection and prevention. Therefore, there is need for a research that delves deeper into the contextual nuances and localized barriers constraining opportunities of CCTV surveillance systems in retail crime detection and prevention. Despite the increasing adoption of CCTV surveillance systems in retail crime detection and prevention there is a notable gap in research regarding tailored support required by retail businesses to curb retail fraud incidents.

While existing studies by Ammuna (2020), Oter, Gaynor and Smith (2015) and Moyo and Mubango (2021) stressed on the opportunities of CCTV surveillance systems in fraud detection and prevention using the qualitative methodology. However the studies used a single method. The current study employs a mixed methods to gather more insights on the opportunities of CCTV surveillance in retail fraud detection. While studies by Ekholm and Armitage (2023); Guo(2018) and Kooistra and Johnson (2018) acknowledged the general need for resources, training , there is a lack of in-depth investigation into the holistic support mechanisms necessary to improve the impact of CCTV surveillance systems in retail fraud detection and prevention. This study sought to close these gaps by identifying the factors influencing opportunities of CCTV surveillance systems in fraud detection and prevention. The current study also advances practical strategies to enhance CCTV surveillance systems in retail crime detection and prevention in Zimbabwe. Most studies analysed focused on the effectiveness of CCTV surveillance systems in preventing crime in general using either qualitative or quantitative methodology. This study has a specific focus on the opportunities of CCTV surveillance systems in the detection and prevention retail crime using the mixed methodology.

2.5 Chapter Summary

This literature review chapter provided a discussion on conceptual framework, theoretical framework and empirical evidence underpinning the study. This helped to identify the research gap which the current study seeks to cover. The subsequent chapter focuses on research methodology.

CHAPTER III

RESEARCH METHODOLOGY

3.0 Introduction

This chapter outlined the research methodology that was utilized during the study; it covers the research design, study population and sample size, sampling techniques and data collection instruments. It also scrutinized research instruments' reliability and validity.

3.1 Research philosophy

The research used mixed method (pragmatic) research philosophy. It comprises gathering examining and inferring quantitative and qualitative data in a single study or in a sequence of studies that explores similar basic phenomenon. Saunders, Lewis and Thornhill (2019) the pragmatic philosophy is based on the idea that triangulation of quantitative and qualitative methods will yield an enhanced understanding of the research problem than either method alone. The pragmatic approach involved complementing qualitative and quantitative data and appears very appropriate to the research problem and avoided the researcher being trapped in the philosophical arguments about which is the best approach. The researcher acknowledged that every technique has strength and limitations hence the need for a complementary approach. Creswell (2014) argues that, complementing qualitative and quantitative methods offers an improved comprehension of the study problems

3.2 Research design

According to Creswell (2014), a research design is the plan of action or blueprint for conducting a study, including the procedures and processes to be followed. Yin (2018) describes research design as the overall strategy for answering the research questions, including the data sources, procedures,

and analysis of evidence. Thus a research design is the overall framework and methodology for conducting a research study, including the methods and procedures for collecting and analysing data.

The descriptive case study design was appropriate for this research, as it allowed for an in-depth exploration of the specific context retail shop floor employees, managers, supervisors, security guards and police on the opportunities of CCTV surveillance systems on the detection and prevention of retail crime in Mt Darwin town.

3.3 Study Population

A population is defined by Creswell (2014) as the entire group that you want to learn about. A population is the entire group of individuals who are the focus of a research study, including all those who are relevant to the research question.

The population for this study was comprised of retail owners, retail employees, security guards and police officers in Mount Darwin town, Zimbabwe. This population included 20 police officers, 10 retail owners and 30 retail employees. Police officers, CCTV Operators and security guards were selected as key informants for this study for their understanding active participation in retail fraud detection and prevention. Retail business owners were considered because they were the victims of retail fraud. Security guards and retail employees were chosen for this current study because of their active participation in handling retail fraud incidents and their participation in this study promoted a nuanced understanding of effectiveness of CCTV surveillance systems on retail fraud detection and prevention. This allowed for a more accurate understanding of the opportunities of CCTV surveillance systems in the detection and prevention of retail crime.

3.4 Sample size

Gubrium and Holstein (2000) defined sample size as the number of individual cases selected from a larger population. This concept is also echoed by Creswell (2018), who defined sample size as the number of units included in the study. For this research, the researcher selected a sample size of fifty six including police officers, retail owners and retail employees who had experience in community policing using Krejcie and Morgan table as shown below:

Category	<i>N</i>	<i>S</i>
Police officers	20	18
Retail employees	30	28
Retail owners	10	10
Total	60	56

Table 1: Sample size Source Krejcie and Morgan table 1970

3.5 Sampling techniques

A sample is defined by Creswell (2018) as a subset of the population from which the researcher collects data. This study adopted convenience sampling and purposive sampling and these are explained in subsequent sections.

3.5.1 Purposive sampling

According to Pandey and Pandey (2023) purposive sampling is selecting a sample on the premise of one's insight into the populace and its components and the way of one's examination. The sampling technique unequivocally rejects undesired components the populace that may prompt the twisting and deception of information. This type of sampling enhanced the researcher to utilize judgement to choose components of the populace who were eminent suppliers of exact information pertaining effectiveness of CCTV surveillance systems on retail fraud detection and prevention. Participants selected for key informant interviews were chosen using purposive sampling, which involves selecting individuals who could provide comprehensive information on issues central to the research objectives. The method was deemed appropriate for gaining an in-depth understanding of the opportunities of CCTV surveillance systems in fraud detection and prevention. This view is supported by Pandey and Pandey (2023) as they stress that in this type of sample, researchers handpick the cases to be included in the sample on the basis of their judgment of their typicality or possession of the particular characteristics. In this case purposive sampling was used in selecting 10 retail owners who had experience in retail business.

3.5.2 Simple random sampling

Simple random sampling involves randomly selecting individual units from a sampling frame giving all units an equal chance of being selected (David and Sutton, 2005). The study employed simple random sampling to select retail employees who served as participants in the research. The method was relevant to the study because every member had a chance of being selected. The use of random selection was aimed at ensuring that the results could be generalized from the sample to a larger population. This technique was used to select 18 police officers and 28 retail employees who were respondents to the questionnaire.

3.6 Research instruments

According to Saunders, Lewis, and Thornhill (2016), a research instrument is any device used to collect data. This study utilized semi-structured interviews and questionnaires. These are explained in the subsequent subsections.

3.6.1 Semi-structured interviews

Semi-structured interviews were used to collect qualitative data from key informants for this study that is retail owners. They were considered key informants because they experience retail crime and have a clear appreciation of retail crime detection and prevention. According to Yang-Hein, Guo (2023), semi-structured interviews are a technique that combines both structure and openness. This means that the researcher has a general outline of the topics to be covered, but there is also flexibility to explore new ideas and directions that emerge during the interview. Miles, Huberman, and Saldana (2014) describe semi-structured interviews as a qualitative interviewing style where the interviewer poses general, open-ended questions.

One of the strengths of this instrument was that it allowed for flexibility and adaptability during the interview process. This ensured that the data collected was relevant and meaningful. Interviews provided rapport and enhance observation of non-verbal cues like voice intonation, gestures and facial expression, such extra sources of information improved the researcher's understanding of the situation at hand. One of the weaknesses of this instrument is that it was time-consuming and challenging to analyse the data collected. The researcher addressed this by using a coding system to organize and analyse the data. Once permission was granted and respondents were selected, the researcher arranged dates with the selected respondents. The respondents were made aware of some of the issues that were discussed during the scheduled interviews.

3.6.2 Questionnaire

The researcher used questionnaire to collect data from police officers and retail employees. Saunders (2012) defined as a method of data collection technique in which each person is asked to respond to the same set of questions in a predetermined order. The questionnaire was structured and structured questions enhanced the collection of quantitative data. The questionnaire was structured into sections and section A focused on the demographic information of respondents and questionnaire items from section B to E were guided by the research objectives. The questionnaire have a five-point Likert scale ranging from 1-5 as strongly disagree to strongly agree.

The researcher used the questionnaire due to financial problems, questionnaires are quick and cheap to conduct and allows large amounts of information to be collected within a short space of time. Because of its anonymity, a questionnaire was appropriate there was no interviewer bias involved respondents answered the questions without fear. However questionnaire has a low response rate, respondents read differently into each item and statistics gave no indication of how people felt. To make up for these limitations the researcher carried out a rigorous pre-test of the questionnaire dropping useless and ambiguous questionnaire items.

3.7 Data collection procedures

Reynolds (2003) described the data collection process as the method used to gather primary and secondary data. For this study, the researcher sought for authorization to conduct the study from Bindura University of Science Education. The researcher used the university authorization letter to seek permission from the Ministry of Home Affairs and Cultural Heritage to use police officers as key participants for the study. The researcher obtained permission from the Ministry of Home Affairs before delivering questionnaires to selected respondents in person. The respondents were informed that their participation was voluntary and that their data would be kept confidential. To avoid putting any pressure on the respondents, measures were taken to ensure their comfort and ease during the data collection process.

After (10) days, the questionnaires were to be collected. Follow-up calls were made to respondents to boost response rate, remind interviewees of the date and time of interviews, and the researcher explained the purpose of the interview to the interviewees. This was done to increase response rate. This also assisted the respondents to be engaged and to have deep thought of what kind of data is needed. In order to minimize disruptions the interviews considered the participants' business schedules. The interviews were conducted face-face and each session lasted approximately ten minutes. The interviews were recorded and transcribed for future reference during data analysis.

3.8 Data analysis procedure

For this study, the researcher used a thematic analysis approach for qualitative data. This involved organizing and analysing the data according to themes or patterns that emerge from the data. The themes were identified through a process of coding, where the researcher assigned codes to different pieces of data based on their common characteristics. The researcher identified and described the themes, and presented the findings in a way that answered the research questions and provided useful insights pertaining opportunities of CCTV surveillance systems on the detection and prevention of retail fraud.

Regarding the quantitative data analysis, The Statistical Package for Social Sciences (SPSS) program and Microsoft Excel was utilized to analyse the collected data and generate reports. The mean and standard deviation were used to evaluate the respondents level of agreement or disagreement with statements related to each variable. The research findings were presented using tables, pie charts and graphs generated through the use of SPSS.

3.9 Reliability and Validity

3.9.1 Reliability

Reliability is rooted in consistency, meaning that if a research design is reliable, and another researcher uses it, the same results are likely to be obtained (Gay, 2011). In order to guarantee consistency and compliance with the research objectives the Cocbach's Alpha value produced by Statistical Package for Social Sciences was used. Flick (2014) describes reliability as the degree of dependability with the tools which measure the characteristic. The less deviation the tool creates in repetitive measurements of a characteristic the higher the reliability (Polit and Beck, 2014). Thus the larger the reliability of a tool the less likely inaccuracies of measurement takes place In this case the reliability of the questionnaire was scrutinized through Cocbach's Alpha value produced by Statistical Package for the Social Sciences(SPSS)

3.9.2 Validity

According to Polit (2014), validity in research refers to the accuracy of research instruments, technique and report. Validity refers to the quality of the procedure or tool used in research, which needs to be accurate, meaningful and appropriate. According to Halloway and Wheeler (2013) validity means the researcher is measuring what they are supposed to measure. For this study, pretesting was done to eliminate errors and unclear items from the interview guide and the

questionnaire to achieve validity. The questionnaires and interviews were adjusted to meet the requirements of the study in the event of errors.

3.10 Ethical considerations

In adherence to ethical principles, the researcher ensured that appropriate procedures were followed during data collection, including obtaining permission from the University Research Ethics Committee to conduct the study. The study also obtained authorization from the ZRP and individual respondents, who were informed of the study's objectives and potential benefits, as well as their right to withdraw their participation from the study at any time. In addition debriefing ethics were applied after the data collection process with some participants being oriented with the researcher's identity, aims and goals as well as anticipated results. Participants were treated with fairness, respect and dignity. To protect the anonymity of participants the researcher concealed their real identity to avoid cases of victimization.

3.11 Summary

This chapter discussed the research design, data collection methods, and ethical considerations for this study. It outlined the procedures for analysing the data and presenting the findings. This chapter has laid the groundwork for the next chapter, which presented and discussed the findings of the research. The subsequent chapter focuses on data presentation and analysis

CHAPTER IV

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.0 Introduction

This chapter presented the findings of the study. The chapter unfolded by presenting the response rate and demographic characteristics of respondents. The data was presented in the sequence of the researcher's objectives using a thematic approach and tables; pie charts and bar graphs were used to illustrate the results.

4.1 Response Rate

Understanding the response rate of questionnaires is important to ensure the validity and reliability of the research findings.

Table 4.1 Response Rate

Frequency	
Questionnaires administered	50
Questionnaires respondent	42
Response rate	84%
Interviews Scheduled	10
Interviews conducted	07
Response rate	70%

Source *Primary Data 2025*

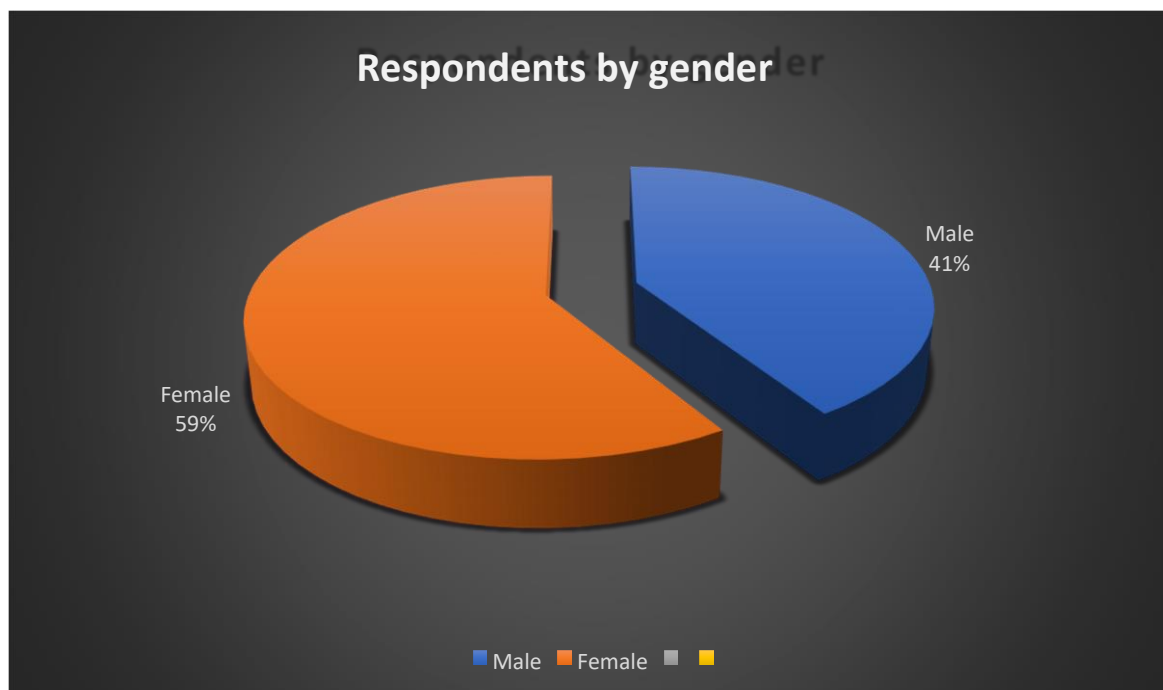
The table above shows the response rate of questionnaires and interviews in this study. Out of the 50 questionnaires administered 45 were returned resulting in a response rate of 90%. This indicates that the majority of the respondents were willing to complete the questionnaire and provide the

necessary data pertaining CCTV surveillance systems in the detection and prevention of crime among retail businesses. The response rate for key informant interviews stood at 70% out of 10 interviews scheduled only 7 were conducted. This implies that some key informants may have withdrawn their participation.

4.2 Demographic distribution of respondents

It is critical to consider the demographic characteristics of respondents when carrying out research. Demographic elements such as gender, age, educational level and work-related experience were considered for this current study. The demographics of respondents can influence individual perceptions and understanding these factors is critical in analysing the responses of the participants more accurately.

4.2.1 Respondents by gender



Source: Primary Data (2025)

Figure 4.1 Gender of respondents

Figure 4.1 above shows the distribution of respondents by gender. Gender of respondents is an important demographic factor to consider when analysing their views and perceptions. In this current study 41% of the participants were male while the remaining 59% were female. This gender disparity can be attributed to the fact that females tend to dominate the retail sector since some

retail jobs as till operators are considered feminine by the society resulting in fewer males serving as retail workers.

4.2.2 Respondents by age

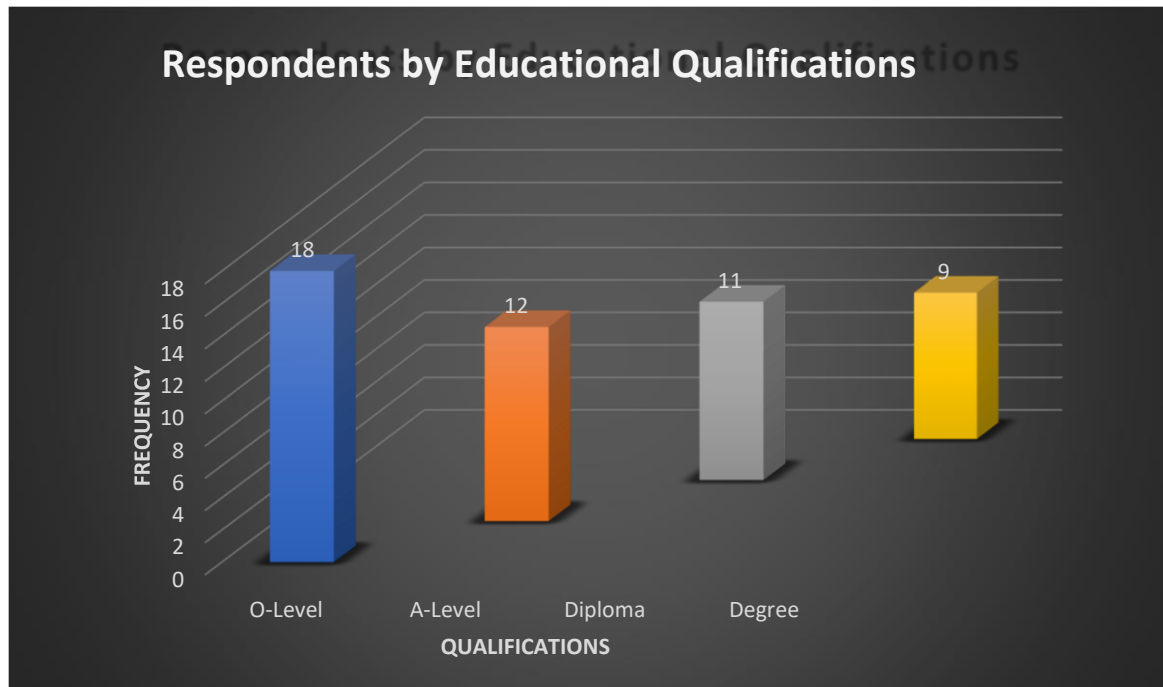
Table 4.2 Respondents by age

Age range	Frequency	Percentage
Below 20	6	12
21-30	15	29
31-40	10	19
41-50	9	17
51-60	7	13
60 and above	5	10
TOTAL	52	100

Source: *Primary Data (2025)*

Table 4.2 above shows the age of respondents and the distribution was as follows 12% were below 20 years, 29% were between 21-30 years, 19% were within age range 31-40 years, 17% were between 41-50years, 13% were between 51-60 years and only 10% were 60 years and above. The age range of respondents was found appropriate since most participants were mature enough to provide meaningful information pertaining the study at hand.

4.2.3 Distribution of respondents by educational qualifications.

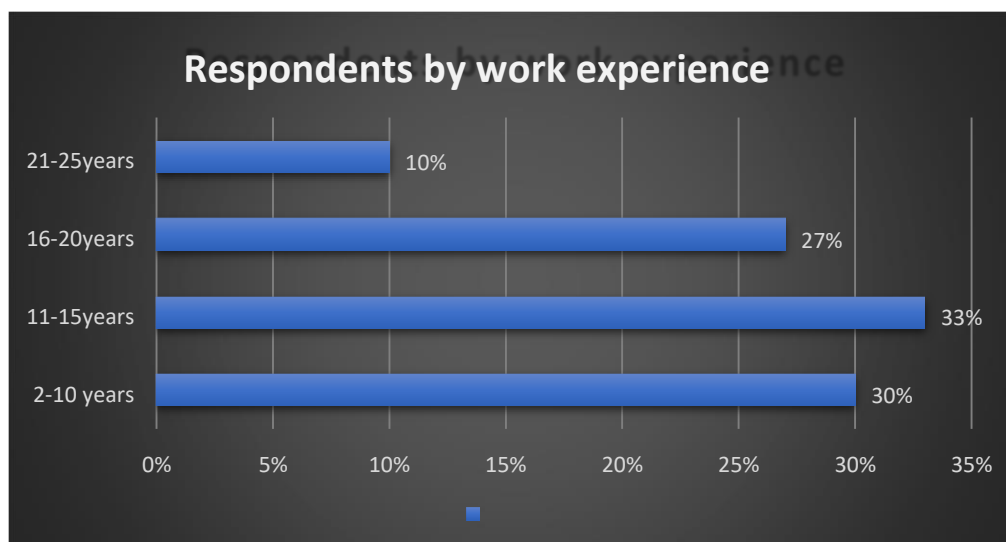


Source: Primary Data

Figure 4.2 Respondents by Educational qualifications

Figure 4.2 presented the demographic distribution of respondents basing on educational qualifications, 18 had completed O-level, followed by 12 who had completed A-level, 11 were diploma holders and 9 had degrees. The distribution of participants by educational qualifications was found relevant since most of the participants educated and literate enough to participate in the study

4.2.4 Distribution of respondents by work related experience



Source: *Primary Data*

Figure 4.3 Respondents by work related experience

Fig 4.3 presented the demographic distribution of respondents basing on work related experience and the distribution was as follows, 30% had work related experience of 2-10years, followed by 33% who were between 11-15 years' work experience. 27% of the respondents work experience ranged between 16-20years and 10 % of the respondents were between 21-25years work experience. The distribution of respondents by work related experience was appropriate since most of them had enough experience working in retail business and were better placed to give accurate information pertaining CCTV surveillance and crime prevention in retail businesses.

4.3 Participants' knowledge about CCTV surveillance system.

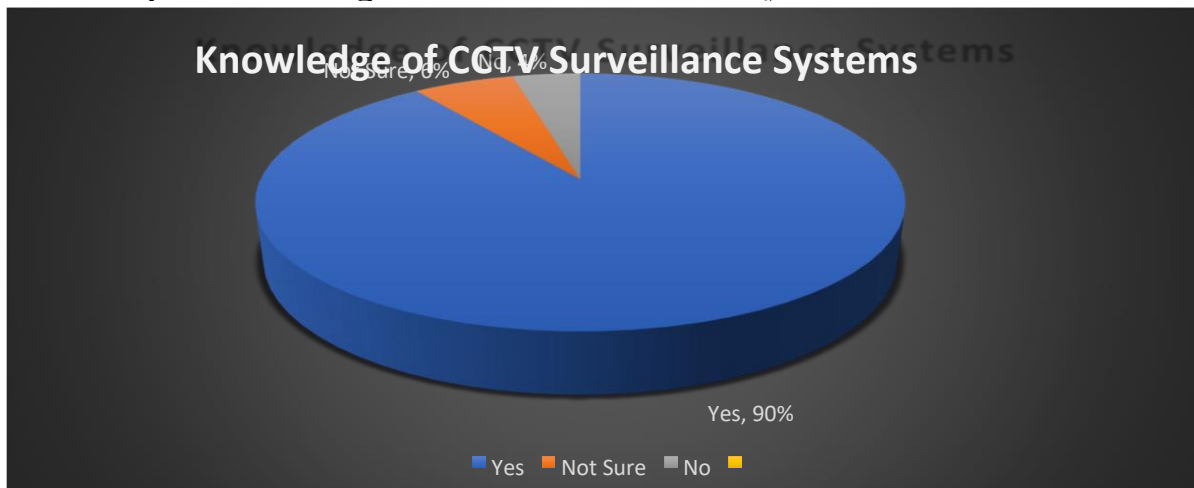


Figure 4.4 presents respondents' level of knowledge pertaining CCTV surveillance systems 90% of the respondents indicated that, they are knowledgeable of CCTV surveillance systems, 6% remarked that they are not sure about how the system works and needed training finally, only 2% revealed that they lacked knowledge about CCTV surveillance system use. This resonates with the previous studies that, most retail businesses have adopted CCTV surveillance system use to detect and prevent retail business crime (Moyo and Mubango, 2023).

4.4 Frequency of retail businesses crime among retail shops per week.



Fig 4.5 showing respondents' views pertaining the frequency of retail crimes per week at their business premises 30 respondents indicated that they encountered retail crimes at least thrice per week, 10 participant reported that, they experienced retail crimes at least twice per week and 5 respondents indicated that they encounter retail thefts at least once per week. This resonates with previous research which also revealed that retail businesses are facing the challenge of crime such as return fraud, burglary, shoplifting and employee embezzlement and theft (Krooista and Johnson, 2023).

4.6 Types of crimes prevalent in retail businesses

The study explored the types of crimes prevalent in retail businesses in Mt Darwin Urban retail businesses and the results are shown on table 4.3 *Table 4.3*

Types of retail businesses crimes

Variable	Not Prevalent	Less Prevalent	Not Sure	Prevalent	Highly Prevalent
Retail business crimes					
Shoplifting	0	0	4%	3%	93%
Burglary	0	9%	11%	11%	70%
Vandalism	4%	9%	11%	7%	68%

Return fraud	0	0	8%	14%	78%
Employee embezzlement	0	0	5%	4%	91%

The results on table 4.3 revealed that shoplifting was viewed as the highly prevalent type of retail related business crime in Mt Darwin urban retail businesses. 96% of the respondents perceived shoplifting as the most prevalent crime in Mt Darwin Urban retail businesses. This aligns with previous research showing that, shoplifting remains a persistent crime for retail businesses committed by individuals, groups and organized retail criminals causing financial losses. It involves stock being stolen by a thief posing as a customer (Adhikhari and Hamal, 2024). According to Schliemann (2018) businesses without adequate security measures such as CCTV surveillance systems or anti-theft devices are at greater risk of shoplifting. Investing in retail security cameras to monitor shoppers and implementing anti-theft policies can help reduce shoplifting accidents.

Employee embezzlement and theft was considered the second most second most prevalent form of crime in retail businesses located in Mt Darwin Urban, this was supported by 95% of the respondents. This substantiate existing empirical evidence showing that, one of the most prevalent retail crimes is employee embezzlement and theft. It occurs when employees misuse their position of trust to steal money and asserts from the business Employee embezzlement often goes undetected for long periods if a single employee controls financial accounts and the inventory (Mc Kee,2023). Establishing proper checks and balances, regularly auditing financial records and implementing clear reporting structures together with CCTV surveillance systems can help mitigate risk of embezzlement and theft.

Return fraud was perceived the third most prevalent retail business related crime in Mt Darwin Urban retail businesses by 82% of the research participants. The respondents argued that, check out fraud, counterfeit cash, making off without payment were common forms of fraud in retail businesses. This aligns with the previous research that, return fraud involves criminals can use illegal method to pay for goods, including counterfeit cash, stolen credit cards or fraudulent cheques and making off without payment. CCTV surveillance can help deter and prevent crimes such as check out and money fraud (Schliemann, 2018). CCTV footage can be helpful in tracking such fraudulent activities and can be used for investigation and evidence during legal proceedings.

Burglary was ranked as the fourth most prevalent retail crime among retailers in Mt Darwin urban retail businesses by 81% of the study respondents. The respondents suggest that, burglary and theft are among common crimes they face in retail businesses. It includes break-ins after hours usually when the shop is closed. This resonates with the findings by Moyo and Mubango (2020) burglary involving forced entry by burglars targeting physical asserts, cash, equipment and merchandise is one crime common in retail businesses. Retail stores and warehouses are the prime targets and thieves capitalizes vulnerabilities such as weak locks, outdated alarm systems and poorly lit areas making it easier to break in without detection. CCTV camera footages can be instrumental in tracking and capturing of burglars and can be used as evidence to secure early guilty pleas during legal proceedings and imprisonment (Moyo and Mubango, 2020).

Vandalism was viewed as the least prevalent type of retail crime by 75% of the research participants. The respondents argued that, vandalism including include graffiti, property damage and destruction of business asserts is also common in retail business. This concurs with the previous studies which argues that, vandalism can negatively impact a company's reputation and leads to costly repairs. Vandalism can also deter potential customers and clients if the premises appear unsafe and neglected. CCTV surveillance systems, routine monitoring and proper lighting can help deter vandals from targeting business properties (Kooistra, 2018).

The study also solicited for retail crimes prevalent in retail businesses from retail owners who are key informant interviews. The responses concurred with the results obtained by the questionnaires One of the key informants reported that:

“Shoplifting, employee embezzlement and theft, burglary and return fraud and vandalism were among the prevalent crimes affecting retail businesses. CCTV surveillance systems have been very useful in detecting and preventing these crimes.”

Schliemann (2018) found out that, fraudulent crimes such refund fraud, checkout fraud, use counterfeit cash and online scams including cyber security breaches were common among retail business. Adhikari and Hamal (2024), also identified shoplifting, checkout fraud, and money fraud including illegal methods to pay for goods, counterfeit cash, stolen credit cards and fraudulent cheques as the most prevalent retail business. Mc Kee (2023) identified, employee embezzlement, robbery, vandalism, burglary and shoplifting as the most prevalent crimes associated with retail business. The study recommended retail businesses to put in place adequate security measures such as CCTV cameras, anti-theft devices, alarms and panic buttons to deter potential criminals.

The overall results indicate that, shoplifting, employee embezzlement and theft, return fraud, vandalism and burglary are perceived to be the prevalent crimes in retail businesses in Mt Darwin Urban and has been substantiated by existing literature from previous studies.

4.7 Opportunities for using CCTV Surveillance in crime prevention

The study identified the opportunities for using CCTV surveillance systems in preventing crime in retail businesses in Mt Darwin urban presented in table 4.4

Table 4.4 Opportunities for CCTV Surveillance on crime prevention

Variable	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Opportunities for CCTV use in preventing retail crime					
Increased deterrence	0	4%	7%	13%	76%
Early detection for proactive response	0	4%	8%	13%	69%
Provides clear signal to shoplifters	4%	11%	8%	8%	67%
Visual evidence for criminal investigations	2%	8%	22%	22%	44%

Increases crime reporting	7%	8%	22%	20%	42%
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The findings on table 4.4 indicated that, increased deterrence and reduction of crime was one of the opportunities for using CCTV surveillance systems in preventing retail crime in Mt Darwin Urban retail businesses and was supported by 89% of the research participants. The respondents indicated that camera installation can deter and prevent retail crime. Weise, Ashby and Lim (2017) tested CCTV benefits by measuring crime level changes from pre to post camera installation and found out that CCTV camera installation reduced retail theft by 36%. Similarly Vogel and Slood (2021) found that CCTV camera installation in retail shops significantly reduced retail theft.

Therefore, CCTV surveillance systems can be associated with reduction in retail businesses crimes.

Early crime detection and enhancing proactive and immediate response of personnel to emergencies in retail business was ranked as the second opportunity for CCTV surveillance systems use in preventing crime in retail businesses in Mt Darwin by 82% of the study participants. Respondents were of the view that, camera installation enhances crime detection and improves response of personnel to emergencies. This finding is consistent with the previous studies which confirmed that, CCTV camera installation in retail outlets enhances a proactive and immediate response to crimes such as retail theft and shoplifting (McKee, 2023). Similarly, Baygan and Aguilon (2023) argues that, CCTV enhances quick reaction time for instance when there is an incident of shoplifting or theft in the shop the CCTV Operator can quickly alert the security personnel with proper coordination by the use of radio to apprehend the shoplifter before they go out of store.

Provision clear signal to shoplifters and criminals that they are being watched and that there is a higher danger of being apprehended is one other opportunity offered by CCTV surveillance system use in preventing crime identified by 75% of the study respondents. The respondents argued that, visible CCTV cameras signals the potential criminals that they are being watched and this can deter and prevent them from offending. This finding confirms the existing literature which reiterated that, CCTV cameras must be visible to the public to prevent and deter shoplifting and retail theft by customers and employees (Nagra and Kehoe, 2020). Bennet and Gelsthope (2019) CCTV camera installation has a deterrent effect, it deters retail crime by making potential perpetrators believe there is a higher danger of discovery and capture.

Another opportunity for CCTV surveillance systems use is that, it provides visual evidence for use in criminal investigations and securing early guilty pleas from offenders. This was supported by 66% of the respondents who argued that, CCTV camera installation can provide visual evidence for use in criminal investigations critical for securing early guilty pleas from offenders. This finding aligns with existing literature which shows that, CCTV contributes to post crime investigations by providing visual evidence for legal proceedings and encouraging early guilty pleas by accused individuals (Askhari and Ismail, 2024). Philips (2020) noted that benefits of CCTV use includes preventing theft, vandalism and providing video camera proof giving visibility to the entire retail complex and property

The view that, CCTV surveillance systems, inadvertently increases crime reporting through capturing offenses that might remain unnoticed by the authorities was held by 62% of the study participants. They argued that, CCTV enhances crime prevention and detection for it increases crime reporting cases as it captures offenses that might remain unnoticed by the shop owners. This confirms the findings by Moyo and Mubango (2021) who argued that, in most Zimbabwean retail outlets CCTV cameras evidence has been instrumental in revealing theft by dishonesty employees whom employers trust. CCTV records previous incidents and if recorded and properly stored is useful evidence for future reference. This can promote an increase in unreported crime as operators can avail evidence and pinpoint among players in the footage as to who exactly committed the crime (Baygan and Anguillon, 2023). This has been critical in apprehending dishonesty workers and employees involved in retail theft.

The study also solicited using key informant interviews, the opportunities for CCTV surveillance systems in preventing retail crime in Mt Darwin urban retail businesses. All the respondents concurred that, increased detection and prevention of retail crimes, early detection for swift response to emergencies, provision of visual evidence for legal procedures and securing early guilty pleas were some of the opportunities for CCTV use in preventing crimes in retail businesses. One of the key informants reported that:

“CCTV camera installation enhances a proactive and immediate response to crimes, for instance when there is an incident of shoplifting or theft in the shop the CCTV Operator can quickly alert the security personnel with proper coordination by the use of radio to apprehend the shoplifter before they go out of store. CCTV installation is indeed an effective technology or tool in capturing shoplifting and theft in progress.”

This finding resonates with, Ashikhari and Ismail (2024) who argued that, CCTV surveillance systems provides clear signal to shoplifters that they are being watched and that there is a higher danger of discovery and capture. Morgan and Dawling (2019) found out that, CCTV surveillance system footage can be used as part of criminal investigation, identify offenders, secure early guilty pleas, identify witnesses and verify witness's statements. CCTV contributes to post crime investigations by providing visual evidence for legal proceedings and encouraging early guilty pleas by accused individuals.

4.8 Challenges hindering implementation of CCTV surveillance systems in crime prevention.

The study sought to determine the challenges hindering implementation of CCTV surveillance systems in crime prevention in retail businesses located in Mt Darwin urban and the findings are presented on table 4.4

Table 4.5 Challenges hindering implementation of CCTV surveillance systems in crime prevention

$$\text{Agreeing\%} = \frac{(\text{Agree} + \text{Strongly Agree})}{45}$$

45

Variable	Strongly disagree ¹	Disagree ²	Uncertain ³	Agree ⁴	Strongly Agree ⁵
Challenges hindering CCTV use in crime prevention.					
Poor location and placement of CCTV	0	7%	2%	4%	93%
Lack of skilled personnel	2%	7%	7%	11%	71%
Power outages and lack of electricity	2%	7%	16%	53%	20%
Equipment failure and poor quality	4%	11%	27%	24%	31%

Time constraints, delayed identification and vandalism	4%	13%	29%	22%	29%
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The results on table 4.4 indicated that, poor location and placement of CCTV surveillance systems leaving blind was considered by 97% of the respondents as the main challenge hindering CCTV surveillance systems use in preventing crimes among retail businesses in Mt Darwin Urban. The respondents were of the opinion that, despite CCTV installation at their premises retail theft has remained on the increase because of poor location and placement of the devices. This was confirmed by Awang (2023) who argued that, shoplifters, thieves and dishonesty employees are committing unlawful actions at blind spots or camera dead zone areas. These spots are commonly used by retail employees who are usually aware about the internal system challenges hence engage in theft unnoticed. This have seen retail crime escalating with security features such as CCTV in place. Therefore poor location and placement of cameras has been highlighted by literature as one factor inhibiting opportunities of CCTV in detecting and preventing retail crime

Lack of skilled personnel for implementation of CCTV use in crime detection and prevention has remained one constraining factor and was noted by 88% of the study participants. The respondents were of the opinion that, most individuals working as CCTV Operators lack appropriate training and necessary skills needed to monitor retail crime. This resonates with the findings by Engleton (2017) who argued that, insufficient and untrained staff is one factor negatively impacting CCTV use for crime prevention in retail businesses. Moyo and Mubango (2021) echoed that most small retail outlets have inadequate and poorly trained staff that implementing CCTV strategy for retail crime reduction has remained an uphill task.

Power outages and lack electricity back up to sustain CCTV surveillance systems was ranked as the third most constraining factor for implementation of CCTV surveillance systems in preventing crime by 73% of the study participants. The participants were of the view that, power outages and lack of electricity was one factor inhibits CCTV surveillance systems in crime prevention and detection. This aligns with the findings of the previous studies which stipulates that, shoplifting and retail theft by employees and customers can happen at a quick notice, customers and workers can utilize moments of power outages to steal because most CCTV systems depended on the national power grid which is not reliable and most of them lack power back up systems. This has limited the opportunities of CCTV as a retail crime deterrence measure (Moyo and Mubango 2021).

Equipment failure and poor image quality was considered by 56% of the respondents as the fourth most constraining factor limiting the opportunities for CCTV surveillance systems in preventing crime in retail businesses. This suggests that respondents viewed equipment failure and poor image quality is one other challenge affecting the use of CCTV Surveillance systems in detecting and preventing retail business related crime. This is consistent with the findings by, Ekblom (2023) who argues that, CCTV cameras can malfunction, lose power or have recording issues leading to incomplete and unusable footage as evidence during legal proceedings. Equipment failure can result in poor quality footage making it difficult to identify individuals and details crucial for criminal investigations (Moyo and Mubango, 2021)

Time constraints, delayed identification, vandalism and tempering with CCTV footages was identified as one challenge constraining implementation of CCTV surveillance systems for crime prevention by 52% of the study participants. The participants were of the view that, reviewing hours of footage can be time consuming and the quality of the footage can hinder identification of perpetrators, this can be delay hinder immediate response for apprehension. This resonates with existing literature which reiterated that, retail employees can vandalise and temper with CCTV surveillance systems rendering them less useful. Therefore addressing these challenges is crucial for maximizing the opportunities of CCTV in retail crime detection and prevention. This includes investing in high quality equipment, strategic placement of cameras and ensuring proper maintenance (Vogel and Sloot, 2021).

The results obtained from interviews also echoed the same position with the outcomes on table 4.4 One of the key informants narrated that:

“The main challenge hindering CCTV use in retail outlets relates poor location and placement allowing criminals to commit unlawful actions at camera dead zone areas.”

Awang (2023) confirmed that, shoplifters, thieves and dishonesty are committing unlawful actions at blind spots or camera dead zone areas. These spots are commonly used by retail employees who are usually aware about the internal system challenges hence engage in theft unnoticed. This have seen retail crime escalating with security features such as CCTV in place. Therefore poor location and placement of cameras has been highlighted by literature as one factor which inhibits CCTV surveillance system in detecting and preventing retail crime. Another key informant remarked that:

“We lack of the technical capacity and adequate personnel to implement CCTV surveillance system in detecting and preventing crimes at our premises. At times it takes days for us to discover that the

system is malfunctioning or has been tampered with. There is need for equipping employees with appropriate training and necessary skills needed to monitor crimes”.

Lim (2018) echoed that, most individuals working as CCTV Operators lack appropriate training and necessary skills needed to monitor retail crime which is very complex and multifaceted. Engleton (2017) established that having insufficient and untrained staff causes stress and tiredness levels to rise .According to Ekblom (2023) CCTV cameras can malfunction, lose power or have recording issues leading to incomplete and unusable footage as evidence during legal proceedings. Equipment failure can result in poor quality footage making it difficult to identify individuals and details crucial for criminal investigations (Moyo and Mubango, 2021). Vogel and Slood (2021) argues that, retail employees can vandalize and temper with CCTV surveillance systems rendering them less useful. Therefore addressing these challenges is crucial for maximizing the opportunities of CCTV in retail crime detection and prevention.

4.9 Strategies to enhance CCTV surveillance systems in crime prevention

The current study sought to recommend strategies that can be adopted to enhance CCTV surveillance in crime prevention in retail businesses located in Mt Darwin urban and the results are shown in table 4.5

Table 4.6 Strategies to enhance CCTV surveillance in crime prevention

Agreeing percentage= (Agree + Strongly Agree)

45

Variable	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
Strategies to enhance CCTV surveillance in crime prevention					
Strategic location and placement of CCTV	0	2%	2%	69%	27%
Adequate staffing and training of employees	0	8%	7%	31%	58%

Complementing CCTV with other crime prevention strategies	0	4%	8%	29%	49%
Electronic article surveillance systems	2%	4%	20%	22%	51%

Strategic location and placement of CCTV cameras was found out to be one strategy key in improving CCTV use in retail crime reduction and prevention by 96% of the study respondents. This indicates that, most participants were of the view that, location of the cameras is pivotal to cover dark areas and blind spots which can be utilized by shoplifters and thieves to commit crimes. This resonates with the existing literature which emphasized, that CCTV cameras must be visible to the public and must capture extensive footage and optimize deterrence altering the behaviour of potential retail criminals. CCTV cameras should be evenly distributed and strategically installed throughout the shop to maximize their utility and ensure coverage (Vogel and Slood, 2021). Therefore the current findings concurs with existing literature, that strategic location and placement of cameras is critical in improving CCTV surveillance systems in deterring retail crime. Adequate staffing and training of employees was also identified by 89% of the study participants as the second best strategy to enhance CCTV surveillance systems in crime prevention. Studies also revealed that adequate staffing and training of retail workers such as shop floor workers, managers and supervisors and security guards is critical for improving CCTV surveillance systems in preventing and deterring retail business related crimes (Cho and Lee 2019). Baygan and Aguilon (2023) also confirmed that training employees can improve the opportunities of CCTV surveillance systems by increasing the likelihood of employees reporting suspicious behaviour and improving responses time.

Complementing CCTV surveillance with mirror, signage and uniformed security guards was ranked as the third best strategy to enhance CCTV surveillance implementation in preventing retail businesses crimes by 78% of the participants to this current study. The respondent argued that, complementary strategies to augment CCTV can enhance retail crime prevention. Piquero (2017) argues that, complementing CCTV surveillance systems with mirrors, signage and security guards creates the perception of being watched known as the “Big Brother Effect.” The Big Brother effect can reduce retail business related crimes. It creates a sense of being monitored and increases the perceived risk of being caught (Piquero 2017). Studies have also shown that adding uniformed

security guards to CCTV system can enhance retail crime prevention and deterrence . Security guards not only serve as a deterrent to potential thieves but can also provide an immediate response to suspicious behaviour (Krooista and Johnson 2018).

Finally, 73% of the participants to the current study considered use of electronic article surveillance systems as another key strategy to enhance CCTV surveillance for crime prevention in retail businesses located in Mt Darwin town. The respondents were of the view that, electronic article surveillance can also complement CCTV surveillance systems. Existing literature indicated that using electronic article surveillance(EAS) systems , which use tags or labels to trigger an alarm if they are not deactivated at the point of sale can complement CCTV use in retail outlets deterring and discouraging retail crimes like making off without payment(Nagra and Kehoe 2020). Cho and Lee (2019) argued that CCTV systems can prevent and reduce retail crime such as theft, making off without payment, shoplifting however their effectiveness can be improved by using complementary retail crime reduction strategies.

Responses retail business owners who were key informants for the current study are consistent with the responses from questionnaire response in table 4.6 above. Most key informants highlighted , strategic camera location and installation, adequate staffing and training of employees and complementing CCTV surveillance systems with electronic article surveillance as the key strategies to enhance CCTV use in crime detection in retail businesses.

One key informant echoed that:

“There is need for retail owners to make sure that their CCTV cameras covers the whole business premise including dark sports, car parks and store rooms if they are to prevent theft.”

Ekholm, and Armitage, (2023) found out that, strategic location and placement of CCTV cameras was one strategy key in improving CCTV use in retail crime reduction and prevention. CCTV surveillance systems must be visible to the public and must capture extensive footage and optimize deterrence altering the behaviour of potential retail criminals. CCTV cameras should be evenly distributed and strategically installed throughout the shop to maximize their utility and ensure coverage.

Another key informant said:

“We are not devoting enough resources to train our employees on how the system operates. If we are to maximize the opportunities with CCTV use there is need to train all employees on its use.”

Guo (2018) revealed that, adequate staffing and training of retail workers such as shop floor workers, managers and supervisors and security guards is critical for improving CCTV effectiveness in reducing preventing and deterring retail business related crimes. One respondent weighed in saying:

“Given the technical challenges associated with implementing CCTV surveillance including power outages, system failure, poor footage coverage and picture quality, it is necessary to complement CCTV with electronic article surveillance to enhance the crime deterrence.”

Kooistra and Johnson, (2018) argued that, the use of complementary strategies to augment the use of CCTV can increase retail crime detection and prevention, CCTV surveillance should be complemented by use of mirrors and uniformed security guards to increase its opportunities for retail crime prevention and deterrence.

4.10 Chapter Summary

The chapter explored CCTV surveillance and crime prevention in retail business located in Mt Darwin town. The next chapter is going to present the study conclusions and recommendations

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presented the summary, conclusions, findings and recommendations of the study. The chapter presented the summary from the research topic, research questions, research design, population sample, research instruments and data collection procedure. The findings, conclusions and recommendations of this study were based and guided by the research objectives.

5.2 Study Summary

This study explored the opportunities for CCTV surveillance in preventing retail crime in Mt Darwin urban retail businesses. The study was guided four research objectives which are:

1. To document crimes prevalent in retail businesses located in Mt Darwin town
2. To determine the opportunities of using CCTV surveillance systems in detecting and preventing retail business crimes
3. To assess the challenges faced by retail businesses in Mt Darwin town when implementing CCTV surveillance systems for crime detection and prevention.
4. To recommend possible solutions to enhance effectiveness of CCTV surveillance systems in crime detection and prevention in retail businesses.

Cohen and Felson's Routine activity, Clarke's Rational Choice Perspective and Beccaria's Deterrence theories of criminology informed this study. These theories provided a systematic way to make predictions about the opportunities for CCTV surveillance systems in preventing retail business crime. The study utilized the descriptive case study research design. It was selected because it allowed for an in-depth exploration of the specific content pertaining the opportunities

of CCTV surveillance systems in preventing retail businesses crime. The population for this study was composed of 17 police officers and 28 retail employees and 7 retail business owners. Purposive and simple random sampling enabled the researcher to choose participants basing on specific criteria such as age, gender and socio-economic background. The Krejcie and Morgan table was used to determine the sample size taking into account factors such as confidence level, desired level of precision and the expected effect size. This enhanced the researcher to determine the minimum number of participants required to achieve meaningful results. Semi-structured interviews and questionnaires were used to collect data from the respondents. Data collection was done at the police station, retail shops for about 15 days. Interviews with retail business owners were conducted to gain deeper understanding of their experiences on the opportunities of CCTV surveillance systems in preventing crimes in retail businesses.

The study adhered to ethical considerations such as the right to informed consent from all participants, maintaining privacy and confidentiality of participants, transparency and avoiding harm to the participants, throughout the entire research process.

5.3 Summary of Major findings

Guided by the research objectives the major findings of this study were:

5. 3.1To document crimes prevalent in retail businesses located in Mt Darwin town. The study found that, shoplifting was viewed as the highly prevalent type of retail related business crime in Mt Darwin urban retail businesses. 96% of the respondents perceived shoplifting as the most prevalent crime in Mt Darwin Urban retail businesses. Employee embezzlement and theft was considered the second most second most prevalent form of crime in retail businesses located in Mt Darwin Urban, this was supported by 95% of the respondents. Return fraud was perceived the third most prevalent retail business related crime in Mt Darwin Urban retail businesses by 92% of the research participants. The respondents argued that, check out fraud, counterfeit cash, making off without payment were common forms of fraud in retail businesses. Burglary was ranked as the fourth most prevalent retail crime among retailers in Mt Darwin urban retail businesses by 81% of the study respondents. The respondents suggest that, burglary involving forced entry by burglars targeting physical asserts, cash, equipment and merchandise is one crime common in retail businesses. Vandalism was viewed as the least prevalent type of retail crime by 80% of the research participants. The respondents argued that, vandalism including include graffiti, property damage and destruction of business asserts is also common in retail businesses. The overall results indicate that, shoplifting, employee embezzlement and theft, return fraud,

vandalism and burglary are perceived to be the prevalent crimes in retail businesses in Mt Darwin Urban and has been substantiated by existing literature from previous studies.

5.3.2 To determine the opportunities of using CCTV surveillance systems in detecting and preventing retail business crimes.

The study found that, increased deterrence and reduction of crime was one of the opportunities for using CCTV surveillance systems in preventing retail crime in Mt Darwin Urban retail businesses and was supported by 89% of the research participants. The respondents indicated that camera installation can deter and prevent retail crime. Early crime detection and enhancing proactive and immediate response of personnel to emergencies in retail business was ranked as the second opportunity for CCTV surveillance systems use in preventing crime in retail businesses in Mt Darwin by 82% of the study participants. Respondents were of the view that, camera installation enhances crime detection and improves response of personnel to emergencies. Provision clear signal to shoplifters and criminals that they are being watched and that there is a higher danger of being apprehended is one other opportunity offered by CCTV surveillance system use in preventing crime identified by 75% of the study respondents. The respondents argued that, visible CCTV cameras signals the potential criminals that they are being watched and this can deter and prevent them from offending. Another opportunity for CCTV surveillance systems use is that, it provides visual evidence for use in criminal investigations and securing early guilty pleas from offenders. This was supported by 66% of the respondents who argued that, CCTV camera installation can provide visual evidence for use in criminal investigations critical for securing early guilty pleas from offenders. The view that, CCTV surveillance systems, inadvertently increases crime reporting through capturing offenses that might remain unnoticed by the authorities was held by 62% of the study participants. They argued that, CCTV enhances crime prevention and detection for it increases crime reporting cases as it captures offenses that might remain unnoticed by the shop owners. The study also solicited using key informant interviews, the opportunities for CCTV surveillance systems in preventing retail crime in Mt Darwin urban retail businesses. All the respondents concurred that, increased detection and prevention of retail crimes, early detection for swift response to emergencies, provision of visual evidence for legal procedures and securing early guilty pleas were some of the opportunities for CCTV use in preventing crimes in retail businesses.

5.3.3 To assess the challenges faced by retail businesses in Mt Darwin town in implementing CCTV surveillance systems for crime detection and prevention.

The study found that, poor location and placement of CCTV surveillance systems leaving blind was considered by 97% of the respondents as the main challenge hindering CCTV surveillance systems use in preventing crimes among retail businesses in Mt Darwin Urban. The respondents were of the opinion that, despite CCTV installation at their premises retail theft has remained on the increase because of poor location and placement of the devices. Lack of skilled personnel for implementation of CCTV use in crime detection and prevention has remained one constraining factor and was noted by 88% of the study participants. The respondents were of the opinion that, most individuals working as CCTV Operators lack appropriate training and necessary skills needed to monitor retail crime. Power outages and lack electricity back up to sustain CCTV surveillance systems was ranked as the third most constraining factor for implementation of CCTV surveillance systems in preventing crime by 73% of the study participants. The participants were of the view that, power outages and lack of electricity was one factor inhibits CCTV surveillance systems in crime prevention and detection. Equipment failure and poor image quality was considered by 56% of the respondents as the fourth most constraining factor limiting the opportunities for CCTV surveillance systems in preventing crime in retail businesses. This suggests that respondents viewed equipment failure and poor image quality is one other challenge affecting the use of CCTV Surveillance systems in detecting and preventing retail business related crime. Time constraints, delayed identification, vandalism and tempering with CCTV footages was identified as one challenge constraining implementation of CCTV surveillance systems for crime prevention by 51% of the study participants. The participants were of the view that, reviewing hours of footage can be time consuming and the quality of the footage can hinder identification of perpetrators, this can be delay hinder immediate response for apprehension.

5.3.4 To recommend possible solutions to increase the opportunities of CCTV surveillance systems in crime detection and prevention

Strategic location and placement of CCTV cameras was found out to be one strategy key in improving CCTV use in retail crime reduction and prevention by 96% of the study respondents. This indicates that, most participants were of the view that, location of the cameras is pivotal to cover dark areas and blind spots which can be utilized by shoplifters and thieves to commit crimes. Adequate staffing and training of employees was also identified by 89% of the study participants as the second best strategy to enhance CCTV surveillance systems in crime prevention. Complementing CCTV surveillance with mirror, signage and uniformed security guards was ranked as the third best strategy to enhance CCTV surveillance implementation in preventing retail

businesses crimes by 78% of the participants to this current study. The respondent argued that, complementary strategies to augment CCTV can enhance retail crime prevention. Finally, 73% of the participants to the current study considered use of electronic article surveillance systems as another key strategy to enhance CCTV surveillance for crime prevention in retail businesses located in Mt Darwin town. The respondents were of the view that, electronic article surveillance can also complement CCTV surveillance systems.

5.4 Conclusions

In conclusion, this study provides important insights into the opportunities of community CCTV surveillance systems in retail business crime prevention in Mount Darwin urban retail businesses. Shoplifting, burglary, vandalism, return fraud and employee embezzlement were found to be the most prevalent retail businesses crimes in Mt Darwin retail businesses.

The study also underscores various opportunities for CCTV surveillance systems in preventing retail crimes. Increased retail crime deterrence, early detection of criminal activities for swift and proactive response, provision of clear signal to shoplifters, provision of visual evidence for criminal investigation and increased crime reporting were identified as key opportunities for using CCTV surveillance systems by retail businesses in Mt Darwin urban.

However, the study also highlights several challenges that hinder CCTV surveillance system use in preventing retail crimes, including poor location and placement of CCTV surveillance cameras, lack of skilled personnel for implementing CCTV surveillance technology, power outages and lack of electricity back up to sustain the system, equipment failure and poor quality footage and vandalism and tempering with CCTV surveillance systems. Addressing these challenges through appropriate resource allocation and training programs could maximize the opportunities of CCTV surveillance systems in preventing retail business crime.

Finally, this current study provides strategies to maximize the opportunities and benefits of CCTV surveillance systems in preventing retail business crime. The study identified, strategic location and placement of CCTV surveillance systems, adequate staffing and training of employees on CCTV surveillance systems use, complementing CCTV surveillance with other crime prevention strategies and use of electronic article surveillance systems as the key strategies to maximize the opportunities of CCTV surveillance systems in preventing retail business crimes in Mt Darwin urban retail businesses.

5.5 Recommendations

In the view of the findings and conclusions of this study, it was recommended that:

5.5.1 Retail business owners. Should ensure that, CCTV surveillance systems are strategically located and placed and must be visible to the public capturing extensive footage and optimize deterrence altering the behaviour of potential criminals.

5.5.2 Training programs should be developed to equip retail employees such as shop floor workers, supervisors, managers and security guards with necessary skills to effectively participate in CCTV surveillance systems. This could include training on reaction to emergencies, technical issues and information sharing to maximize CCTV surveillance in preventing retail business crimes

5.5.3 Retail owners to constantly and regularly monitor CCTV surveillance systems to check for system failure, cases of vandalism and tempering by employees and criminals. This might include system updates, checking for blind spots and dark areas which could be utilized by criminals to commit retail offenses.

5.5.4 Complement CCTV surveillance systems with other crime prevention strategies like mirror, use of electronic article surveillance and uniformed security guards to maximize their utility and coverage and increase deterrence.

5.5.5 Retail owners should put in place power back for example use of generators and installation of solar systems to sustain CCTV surveillance systems during power outages hence maximizing its benefits.

5.5.6 Retail owners to work with the Zimbabwe Republic Police, share information on retail crimes and collaborate in using CCTV footage in tracing and apprehension of criminals and use of video surveillance during legal proceedings to secure early guilty pleas.

5.6 Area of further studies

Based on the findings of the study, the following areas for future research are suggested:

Opportunities for CCTV Surveillance systems in preventing white collar crime in Zimbabwean public sector.

Further research could focus on the opportunities for CCTV surveillance systems on different types of crime such as property crime. This could help identify areas where community policing is most effective and inform the development of targeted crime prevention approaches

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Appendix I

Questionnaire

My name is Innocent Chari, I am an undergraduate student at Bindura University of Science Education pursuing Bachelor of Business Administration Honors Degree in Police and Security Studies. I am required to carry out a research project in partial fulfilment of the requirements for the Degree. As such I am carrying out a research titled **“CCTV Surveillance Systems and Crime Prevention in Retail Businesses, A case of Mt Darwin Urban Retail Businesses.** “I am kindly asking for your assistance as a respondent to the research under study by filling in the questionnaire. Your participation in this study is voluntary and you can withdraw at any given time. The responses you will provide will be treated with utmost confidentiality and will be used solely for academic purposes. Your cooperation will be greatly appreciated.

Instructions

Your identity is not required.

Please answer all the questions honestly

Please kindly indicate your answers by ticking where appropriate.

Section A

General Information

Gender	Male () Female ()
Age of respondent	20-29 () 30-39 () 40-50 () Above 50 ()
Educational Level	Secondary Level ()
	Undergraduate Level ()
	Masters Level ()

Others ()

1. Do you have any knowledge about CCTV surveillance systems?

Yes () No () Not Sure ()

2. How often do you experience retail crime at your premises

Once a week () twice a week () thrice a week ()

Section B

The table below shows the prevalent retail businesses crime. Indicate the level of retail crime prevalence among retail businesses in Mt Darwin town

Not Prevalent=1 Less Prevalent=2 not sure=3 Prevalent=4 Highly Prevalent=5

	Retail businesses crime	1	2	3	4	5
1	Shoplifting					
2	Vandalism					
3	Return fraud					
4	Burglary					
5	Robbery					
6	Employee Embezzlement and theft					

Section C

The table below shows some of the opportunities of CCTV surveillance systems on retail crime detection and prevention. Rate the opportunities of CCTV surveillance systems use by retail owners by ticking the options 1-5.

Strongly Disagree=1 Disagree=2 Uncertain =3 Agree=4 Strongly Agree=5

	Opportunities of CCTV surveillance on detecting and preventing retail crime	1	2	3	4	5

1	Increased deterrence and reduction of retail business crime					
2	Provision of clear signal on criminals alter their behaviours					
3	Effective crime detection enhancing proactive responses					
4	Provides visual evidence for criminal investigations					
5	Increased reporting of retail crimes					

Section D

The table below shows the challenges faced by retail businesses in implementing CCTV surveillance systems for crime detection and prevention. Indicate the extent to which you agree or disagree on the challenges faced by retail businesses in implementing CCTV surveillance on crime detection and prevention.

1 Strongly Disagree 2-Disagree 3- Neutral 4-Agree 5- Strongly Agree

	Challenges faced by retail businesses in implementing CCTV use	1	2	3	4	5
1	Poor location and placement of CCTV surveillance systems					
2	Lack of skilled personnel					
3	Power outages and lack of electricity back up to sustain CCTV					
4	Equipment failure and poor footage quality					
5	Time constraints, delayed identification, vandalism and tampering					

Section E

The table below shows some of the strategies to enhance effectiveness of CCTV surveillance systems on retail business crime detection and prevention. Please indicate the extent to which you agree or disagree with the strategies to enhance effectiveness of CCTV surveillance systems on retail business crime detection and prevention

Strongly Disagree =1 Disagree=2 Uncertain=3 Agree=4 Strongly Agree=5

	Strategies to enhance CCTV surveillance in crime prevention	1	2	3	4	5
1	Strategic location and placement of CCTV surveillance systems					
2	Adequate staffing and training					
3	Complementing CCTV with other crime detection strategies					
4	Use of electronic article surveillance systems					

Appendix II

Interview Guide for Key Informants

My name is Chari Innocent undergraduate student at Bindura University of Science Education pursuing a Bachelor of Business Administration Honors Degree in Police and Security Studies. I am required to carry out a research project in partial fulfilment of the requirements for the Degree. As such the student is carrying out a research on, **“CCTV Surveillance Systems and Crime Prevention in Retail Businesses, A Case of Mt Darwin Urban Retail Businesses.”** The researcher is kindly asking for your assistance as a respondents to the research under study by responding to the interview questions. The responses you will provide shall be tape recorded and will be treated with utmost confidentiality and will be used solely for academic purposes. Your cooperation will be greatly appreciated

- 1) What is your knowledge of CCTV surveillance systems?
- 2) What is your understanding of retail business crime?
- 3) Which are most prevalent retail business crimes experienced by your business in the past three years?
- 4) How often do you experience retail crime in your business?
- 5) What are the opportunities for using CCTV surveillance systems in detecting and preventing retail crime in your business?
- 6) How effective is CCTV surveillance use in preventing retail business crime?
- 7) In your own opinion, what challenges are you facing in implementing CCTV surveillance systems in detecting and preventing retail crimes in your business?
- 8) What strategies do you think can be employed to enhance CCTV surveillance in detecting and preventing retail crimes in your business?