Prevention is Better than Cure:

Is CCTV Effective in Enhancing Crime Prevention

in Valletta?

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ABSTRACT

Matthew Vella

Prevention is Better than Cure: Is CCTV Effective in Enhancing Crime Prevention in Valletta?

In the last three decades, ‘Closed Circuit Television’ (CCTV) surveillance has become a prevalent crime prevention tool (Fletcher, 2011). The simplest form of a CCTV system consists of a video camera connected by a coaxial cable, fibre-optic cable or through wireless links to a central television monitor (Norris, 2009; Carli, 2008; Gill & Spriggs, 2005). This research study analyses the use of CCTV within the ‘Commercial Zone of Valletta’ (CZV). Valletta was selected as the location to carry out this study because it is a hub of commercial activity. Formosa (2013) and Spiteri (2012) stipulate that criminal behaviour is prevalent within the CZV. Spiteri’s (2012) study explores crime prevention in Valletta, and my study intends to extend Spiteri’s study by focusing solely on the use and effectiveness of CCTV surveillance. This qualitative study was carried out through semi-structured interviews with shop owners and business managers as to collect in-depth data on the use and perceived effectiveness of CCTV surveillance. The data collected illustrates that business owners and managers perceive CCTV surveillance as beneficial because it produces more control over their establishment. Participants considered that CCTV surveillance needs to be accompanied by other crime prevention measures, such as: electronic article surveillance, bulletproof glass, alarm systems, security guards and police foot patrol. In addition, this study explores the relationship between CCTV surveillance and privacy issues. The study concludes by giving a set of recommendations to shop owners and business managers that may be implemented as part of their security system to improve the way they curb crime and anti-social behaviour. Also, a set of recommendations is given for further in-depth research.

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Keywords: CCTV; CRIME; ANTI SOCIAL BEHAVIOUR; SURVEILLANCE; VALLETTA
Author’s Declaration

I hereby declare that this dissertation is my original work and I am the sole legitimate author.

_________________________  _______________________
Matthew Vella               Mr. Trevor Calafato
(Supervisor)
Author’s Dedications

To my parents, my family, my girlfriend Caroline and friends.

Matthew Vella
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I would like to take this opportunity to thank my supervisor Mr. Trevor Calafato for his continuous support, time and careful guidance throughout this whole experience. Thanks to him, this journey was not only enriching but also enlightening.

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Chapter 1

Introduction
1.1 Introduction

Closed Circuit Television Cameras (CCTV) have become a highly significant security measure in crime prevention (Gill & Spriggs, 2005). Recent literature illustrates the importance of CCTV that makes it possible for shop owners, business managers and the police to deter and respond to incidents of crime alerted by such technology (Fletcher, 2011; Gill & Spriggs, 2005; Welsh & Farrington, 2003; Beck & Willis, 1999; Shapland, 1995). A major function of CCTV surveillance is that of storing images of incidents of crime and anti-social behaviour as to facilitate post-incident analysis during investigations (Gill & Spriggs, 2005).

Whilst reading for the B.A in Criminology degree, my personal interest in CCTV prompted me to focus my research question on the use and effectiveness of CCTV. This research study was carried out in Malta’s capital city, Valletta, due to its high usage of CCTV surveillance within its commercial zone. Moreover, this study explored how CCTV affects crime occurrences in this zone. It explores the notion of whether “CCTV is a useful tool in reducing anti-social behaviour” (Fletcher, 2011, p. 4). Fletcher (2011), stated that even if “CCTV has been common place in society for more than thirty years” (p. 4), it is difficult to explore this issue without relating it to crime. Therefore, this research study analyses the use and effectiveness of CCTV from a criminological point of view.

After this introductory chapter, one finds the ‘Literature Review’ chapter that discusses the literature relevant to the research question. After defining criminology and crime analysis, this chapter discusses CCTV surveillance, and its role in crime prevention and detection. Chapter 3, the ‘Methodology’ chapter discusses in detail the qualitative methods and the utilised research tools. This chapter highlights the pros and cons that are associated with the selected research methods. This qualitative research study adopted the use of semi-structured interviewing method, which allowed me to conduct “intensive individual interviews with a small number of respondents to explore their perspectives”
(Boyce & Neale, 2006, p. 3). The use of semistructured interviews allowed the possibility to probe in more detail and achieve more complex, meaningful questions and answers.

Additionally, the fourth chapter illustrates the findings of the study and gives a detailed description on how the study explored the effectiveness of CCTV in preventing crime in the ‘Commercial Zone of Valletta’ (CZV). Such findings are presented through a discussion as well as pie chart illustrations. A comparison of these findings with secondary data ensues. Finally, recommendations and conclusions about the use of CCTV, other crime prevention measures and future research are found in the last chapter so that shop owners and business managers can follow to set up and maintain their CCTV systems. This will allow for a more effective use of CCTV surveillance within the ‘Commercial Zone of Valletta’ (CZV).
Chapter 2

Literature review
2.1 Introduction

This chapter intends to analyse the relevant literature that discusses the notion of crime prevention in relation to CCTV surveillance. The first part of this chapter aims at exploring existing definitions of criminology (Siegel, 2012; Sheley, 2000; Sutherland, Cressey & Luckenbill, 1992). It also illustrates the roots of criminology by examining the two main schools of thought, namely: the Classical school of thought and the Positivist school of thought (Padhy, 2006; Cohen, 2004). After that, a discussion about 'Problem Analysis' follows, where the discipline of information gathering is investigated as to better understand the systematic use of reliable data, the extensive progress of evaluation, and the undertaking of appropriate responses to crime (Arrington, 2006; Cherney, 2006; Laycock, 2005).

Subsequently, the discussion continues by outlined criminological theories that analyse criminal patterns and trends that lead to crime prevention techniques (Ratcliffe, 2012; Forst, Greene & Lynch, 2011; Clarke, 1997; Eck & Spelman, 1987). Crime prevention led to the strategies of 'Situational Crime Prevention' and 'Crime Prevention Through Environmental Design' (CPTED) (Siegel, 2012; Mackey & Levan, 2011; Zahm, 2007; Crowe, 2000; Newman, 1972). Then this chapter culminates by focusing on the use of CCTV surveillance and its effectiveness (McLaughlin & Muncie, 2013; Welsh & Farrington, 2008; Gill & Spriggs, 2005; Armitage, 2002). This chapter serves as a platform to understand the theory behind my research study.

2.2 Criminology and crime analysis

Criminology is an interdisciplinary scientific approach to study criminal behaviour (Siegel, 2012). It is a vast body of knowledge that considers crime and anti-social behaviour as a social phenomenon, focusing on the nature, extent, causes, control, and consequences of criminal behaviour within society (Siegel, 2012; Sheley, 2000; Sutherland et al., 1992). Criminology can be categorised into three main branches,
namely: the study of law making, the study of law breaking, and the study of reactions towards law breaking (Luckenbill & Miller, 2007; Sutherland et al., 1992). This unified sequence of interactions ensures that criminology acts as an integrated approach to the study of criminal behaviour that better analyses the true nature of crime, law and criminal justice systems (Siegel, 2012). Sutherland et al. (1992) sustain that such an approach is the subject matter of criminology.

According to Cohen (2004), there are “two scriptural beginnings to the history of criminology”, namely: the Classical school of thought and the Positivist school of thought (p.184). Given that criminology aims to elucidate the relationship between crime, the personal characteristics of the offender and the environment (Hurwitz & Christiansen, 1983), it is important that one discerns the main differences between these two schools of thought so as to understand the many debates and arguments in criminology (Padhy, 2006).

The classical school of thought in criminology was developed in the mid-eighteenth century as a reaction against the barbaric system of laws, justice and punishment (Siegal, 2012; Vito, Maahs & Holmes, 2007). This doctrine focuses on the making of laws and their administration (Williams & McShane, 1998). Also, it is based on the concept of free will and human rationality (Walklate, 2007; Cote, 2002). Likewise, Sutherland et al. (1992) suggest that this approach centres on the doctrine of psychological hedonism. Classical criminology is indebted to the Italian social philosopher Cesare Beccaria and to the British Utilitarian philosopher Jeremy Bentham (Siegel, 2012; Cote, 2002).

Beccaria applied a rationalist philosophy to the criminal justice system (Clear, Cole & Reisig, 2012). He believed that rational beings are intelligent beings who exercise free will and would take into consideration all possible consequences of their conduct before acting; preferring to achieve pleasure rather than to suffer pain (Siegel, 2012; Regoli, Hewitt & DeLisi, 2009; Vito et al., 2007). In fact, this is in line with the ‘Rational Choice Theory’, which states that rational beings choose to
commit crime after weighing the costs, benefits and risk of committing crime (Becker, 1968). So, the classical perspective to discourage criminal behaviour explains how the use of CCTV systems would prevent crime through general deterrence (Paterson & Pollock, 2011). Thus, the use of CCTV surveillance resonates Beccaria’s argument; increasing the cost of detection and apprehension would therefore outweigh the benefits of committing crime (Siegel, 2012).

Likewise, Bentham “attempted to arrange affairs into a harmonious unity and brought to bear on illegal behaviour a multiplicity of analytical concepts such as felicity calculus, greatest happiness, pain and pleasure, and utility” (Geis, 1972, as cited in Moyer, 2001, p. 25). Thus, Bentham’s philosophy of social control, which is based on the principle of utility, advocates the maxim: “the greatest happiness for the greatest number” (Hemmens & Walsh, 2010, p.73). Essentially, the main aim of this principle suggests that all human actions should be judged as good or bad by their consequences on the happiness of the larger community (Hemmens & Walsh, 2010). Hence, in this consequentialist approach, the use of CCTV is justified because the results of crime prevention and crime detection outweigh the loss of personal liberty. In other words “the end justifies the means” (Carper, McKinsey & West, 2007).

The Positivist school of criminology gained prominence during the late nineteenth century, where it introduced new methods for the studying of crime and delinquency (Williams, 2012; Paynich & Hill, 2011). Positivists aimed to study the criminal, and the immediate environment through the use of “scientific methods” (Siegel, 2012; Paynich & Hill, 2011). This positivist perspective had a deterministic view of the world, arguing that human conduct is primarily influenced by biological, psychological, and to a certain extent environmental factors (Burfeind & Bartusch, 2011; Paynich & Hill, 2011). Therefore, positivist criminology assumes the opposite of the classical school (Tibbetts, 2011). Positivists believe that human beings have no choice or free will in the commission of crime, because their behaviour is determined by other factors outside free will, such as poverty,
unemployment, low intelligence and physiognomic characteristics (Tibbetts, 2011). In fact, Cesare Lombroso, “the father of criminology” (Williams, 2012) believed that criminals could be identified through their “physical features and stigmata” (Tibbetts, 2011, p. 81). The Positivist school is still influential today (Walklate, 2007). Contemporary Positivists who believe that criminal behaviour has some biological basis also consider that environmental conditions influence human behaviour. Therefore, the term biosocial criminology can better explain the assumed link between mental and physical traits, the social environment, and behaviour (Siegel, 2012; Williams, 2012). Through environmental criminology, CCTV may help in the detection of offenders so as to help them overcome biological, psychological, and environmental risks of crime (Walklate, 2007).

2.3 Crime prevention

Given that, ‘Crime Prevention’ is a complex concept, there is “no universally accepted definition of crime and violence prevention” (Crime Prevention Victoria, 2002, p. 8). Still, the International Centre for the Prevention of Crime (2010), attempts at defining ‘Crime Prevention’ as a “living concept” which is highly dependent on factors such as “time periods”, “institutional frameworks” and “geographical regions” (p. 21).

The United Nations Guidelines for the Prevention of Crime (2002) state that crime prevention incorporates effective measures and strategies which seek to reduce the risk of crimes and victimisation on individuals and society “by intervening to influence their multiple causes” (p. 3). Furthermore, crime prevention can also be defined as “any public or privately based initiative or policy aimed at reducing or eliminating criminal behaviour, violence and fear of crime or violence in the community” (Crime Prevention Victoria, 2002, p. 8). Crime prevention strategies can also be implemented within “all levels of government” so as to address “social and environmental factors” which contribute to disorder, victimisation and higher rates of crime. Thus, the “physical environment” can be modified to lessen crime
opportunities while policies can deal with the “social and economic causes of crime” to minimise the provision of motivated offenders (Morgan, 2010, p. 55).

The contemporary approach to crime prevention entails three interrelated and coordinated levels of crime prevention, namely: ‘primary crime prevention’, ‘secondary crime prevention’, and ‘tertiary crime prevention’ (Cronje & Zietsman, 2009; Pease, 1997; Weiss, 1987; Brantingham & Faust, 1976). Hence, these three approaches focus on either the prevention or the reduction of existing crime problems, leading to a comprehensive crime control result (Cronje & Zietsman, 2009). Each level of crime prevention addresses the problem of crime at different phases of crime development treating crime as a disease (Lab, 2010; Moore, 1995; Brantingham & Faust, 1976).

Primary crime prevention deals with circumstances “in the social and physical environment that could contribute to crime” (Cronje & Zietsman, 2009, p. 150). Through primary crime prevention methods, one can take the necessary precautions so as “to ensure that problems are less likely to arise” – without targeting any specified group, category or site (Cronje & Zietsman, 2009, p. 150). Brantingham and Faust (1976) believe that this is “the ideal objective” (p. 292). Primary crime prevention techniques can be set within the various sectors of social organisations (Lab, 2010). For instance environmental design, neighbourhood watch, general deterrence, private security, and education are all examples of primary crime prevention methods, which proactively address those individuals that had not been identified by the criminal justice system (Lab, 2010; UN, 2002).

Secondary crime prevention recognises and targets specified sites, individuals, groups and situations that are at risk. The focus is on “the early identification of potential criminals [aiming to] prevent them from committing crimes in the future” (Cronje & Zietsman, 2009). Lab (2010) defines secondary crime prevention as “the ability to correctly identify and predict [problematic] people and situations” (p. 29). Hence, it involves the attempt to alter social behaviours, physical
environments and surveillance. Secondary crime prevention targets deviant acts and behaviours such as alcohol and substance abuse, which increase the propensity of criminal and anti-social behaviour (Lab, 2010).

Furthermore, tertiary crime prevention deals with the actual environment that is directly involved with crime and criminals. Therefore, this notion deals with people who “have already committed a crime and the main aim is to prevent them from reoffending and committing crime again” (Cronje & Zietsman, 2009, p. 150). Lab (2010) states that tertiary crime prevention involves intervention in such a way that impedes criminals from committing further offences, thus avoiding repeat victimisation – that is “the recurrence of crime in the same place and/or against the same people” (Boba, 2005, p. 70). Hence, one may say that tertiary crime prevention “rests within the workings of the criminal justice system” (Lab, 2010, p. 29). In other words, tertiary crime prevention aims to incapacitate, reform and rehabilitate actual offenders – “so that they commit no further offences” (Fisher & Lab, 2010, p. 209).

According to Nuttall (2008), there are three important bases for crime prevention to be successful, namely: a functioning criminal justice system, involved communities, and individual crime prevention efforts. It is important to keep in mind that “repression and enforcement” are not always the most effective way to reduce crime, fear of crime and victimisation (Nuttall, 2008, p. 23). According to Linden (2007), practical implementations of crime prevention include five specific methods, namely: crime prevention through social development programmes, situational crime prevention, community crime prevention programmes, police programmes, legislative and administrative programmes.

Crime prevention through social development programmes intends to alter social conditions that lead to crime through educational, economic, social, health, and training programmes (Welsh and Farrington, 2012; Shaw, 2010; Linden, 2007; UN, 2002). The intention is to target at-risk children, youths and families by providing
them with adequate support and child rearing skills through “educational projects, recreation [and] skills training projects” (Shaw, 2010, p. 13). Crime prevention through social development programmes encourage pro-social behaviour that promotes the well being of people while focusing on the risks and protective factors associated with crime and victimisation (UN, 2002).

Community crime prevention programmes deals with active society members that participate in “neighbourhood watch” and “citizens on patrol” schemes (Linden, 2007). This enables each active citizen to become part of the crime prevention effort (Linden, 2007; Hope, 1995). It also identifies local priorities, implements the required responses and enhances the sense of safety and security within the community (Shaw, 2010). In other words, community crime prevention programmes “change the conditions in neighbourhoods that influence offending, victimisation and the security […] by building on the initiatives, expertise and commitment of community members” (UN, 2002, p. 3).

Police programmes enables police officers to work in a proactive manner as to deter crime (Linden, 2007). An example of proactive policing as a crime prevention measure would be an increase in “visible police patrols in high crime areas” (Linden, 2007, p. 141). Linden (2007) believes that such methods are not only effective in reducing crime but also in deterring anti-social behaviour. Additionally, ‘Police Programmes’ as a concept is one of the strongest findings in crime prevention literature, since the deployment of frequent and target specific police patrol is one of the most effective crime prevention strategies (Mackay & Levan, 2011).

According to Kappeler and Gaines (2012), legislative and administrative programs are intended to amend “administrative policies or statutes” (p. 348) so as to enhance crime prevention. Therefore, business practices can be changed through legislation so as to prevent crime. For instance, Linden (2007) refers to “zoning by-laws” which helps in keeping detrimental businesses away from residential areas.
so as to avoid certain predictable problems (Linden, 2007, p. 141). Hence, "zoning by-laws" would help in preventing crime by controlling the use of land and building within a particular community (Linden, 2007, p. 141).

All in all, crime prevention strategies aim at ensuring a safe and secure environment within the community (Linden, 2007). Still, it transpires that the safest communities are those that adopt a comprehensive approach towards crime prevention (Fisher & Lab, 2010, Welsh & Farrington, 2009). This means that such communities utilise a combination of crime prevention measures in order to tackle the ever-changing criminal world. Situational crime prevention will be discussed in further detail in the following section as it is considered more relevant to the use and effectiveness of CCTV, which fits the aims and objectives of this work (Clarke, 1997; Linden, 2007).

2.4 Situational crime prevention

Clarke (1997) defines situational crime prevention as practical crime prevention strategies aimed at addressing the problem of crime and anti-social behaviour. This systematic approach includes: environmental management, design and manipulation. These methods increase the risk of apprehension and reduce potential rewards for the commission of crime. Situational crime prevention does not rely upon the improvement of society or its institutions, but simply aims to reduce vulnerabilities that could become opportunities of crime (Clarke, 1992). In other words, situational crime prevention focuses on “place-specific crime problems” (Crowe, 2000, p. 5); and not on the criminal (Siegel, 2012; Linden, 2007). Likewise, Brantingham, Brantingham, and Taylor (2005), suggest that situational crime prevention strategies have to take into account all situational characteristics that provide motivated offenders with ample opportunities of crime.
Situational crime prevention is often related to Newman’s theory of defensible space (Siegel, 2012; Newman, 1996). This theory states that crime can be thwarted or displaced through better architectural designs (Siegel, 2012). The ability to create physical zones of territoriality can provide the necessary informal surveillance to portray to potential offenders that the place is protected and supervised (Newman, 1996; Newman, 1972). Similarly, Wilson and Kelling’s ‘Broken Windows Theory’, states that individuals are more likely to engage in crime if neighbourhoods show signs of decay since they will assume that no one cares (Maguire, Morgan & Reiner, 2012; Rupp, 2008). If minor incivilities, such as graffiti and vandalism are left unchecked, “decent neighbourhoods can tip into fearful ghettos of crime” (Maguire et al., 2012, p. 786). Uncontrolled behaviour will then produce a breakdown of community controls, whereby incivilities result in more serious crime (Maguire et al., 2012). Thus, “the proper design and effective use of the built environment can lead to a reduction in the incidence and fear of crime, and an improvement in the quality of life” (Crowe, 2000, p. 46).

Crime prevention through environmental design (CPTED) is another concept that supports Newman’s theory of defensible space (Siegel, 2012). CPTED is not a replacement to traditional approaches to crime prevention but it is a helping tool to reduce opportunities and fear of crime (Crowe, 2000; Crowe & Zahm, 1994). Zahm (2007) defines CPTED as a pro-active crime prevention strategy that “considers environmental conditions and the opportunities they offer for crime or other unintended and undesirable behaviours” (p. 5). ‘CPTED’ aims at reducing and eliminating opportunities of crime through better use of the environment to control access, enhance surveillance, define ownership and encourage the maintenance of the place (Zahm, 2007; Crowe, 2000). For instance, the use of CCTV may enhance crime prevention through the surveillance of a given space, making it more difficult for one to commit crime (Siegel, 2012; Mackey & Levan, 2011). The effectiveness of CCTV as a situational crime prevention measure is debatable because it may be argued that CCTV is more effective in detecting crime rather than preventing it (Wells, Allard & Wilson, 2006).
The handling of crime and anti-social behaviour goes beyond the simple enforcement of criminal codes (Mackey & Levan, 2011). To tackle the problem of crime, anti-social behaviour and repeat victimisation, Cornish and Clarke suggest twenty-five situational crime prevention techniques (Mackey & Levan, 2011). For instance, over the past 40 years, Electronic Article Surveillance (EAS) has been implemented in business establishments worldwide (Purpura, 2013; DiLonardo, 2011). EAS is an electronically detectable component, which is adhered to unsold items. These crime prevention techniques are categorised into five main headings and intend to “directly affect offenders’ perceptions of increased risks and effort and decreased rewards, provocations, and excuses” (Cornish & Clarke, 2003, as cited in Tonry, 2011, p. 140). Table 2.1 shows that these five different non-traditional crime prevention approaches serve as the foundation of a “highly detailed classification system of situational crime prevention” (Tonry, 2011, p. 140).

<table>
<thead>
<tr>
<th>Increase the Effort</th>
<th>Increase the Risk</th>
<th>Reduce the Rewards</th>
<th>Reduce Provocations</th>
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<tr>
<td>1 Target Harden</td>
<td>6 Extend Guardianship</td>
<td>11 Conceal Targets</td>
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<td>4 Deflect Offenders</td>
<td>9 Utilise Place Managers</td>
<td>14 Disrupt Markets</td>
<td>19 Neutralise Peer Pressure</td>
<td>24 Assist Compliance</td>
</tr>
<tr>
<td>5 Control Tools/Weapons</td>
<td>10 Strengthen Formal Surveillance</td>
<td>15 Deny Benefits</td>
<td>20 Discourage Imitation</td>
<td>25 Control Drugs &amp; Alcohol</td>
</tr>
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(Adapted from Cornish & Clarke, 2003)

“Some attempts at situational crime prevention efforts have proven highly successful while others have not met their goals” (Siegel, 2012, p. 118). Apart from the theories used to understand opportunities of crime and situational crime
prevention, it is essential to understand changes in crime phenomena (Boba, 2005). When implementing situational crime prevention techniques, there may be two distinct and opposing outcomes, namely: displacement of crime and diffusion of crime prevention benefits (Siegel, 2012; Tonry, 2011; Vito & Maahs, 2011).

Displacement of crime occurs when the implementation of situational crime prevention measures does not eliminate the problem of crime and anti-social behaviour but shifts it to other forms, times and places (Boba, 2005; Clarke & Eck, 2003). According Reppetto (1976, as cited in Tonry, 2011), there are five different forms of displacement, namely: ‘temporal displacement’, ‘tactical displacement’, ‘target displacement’, ‘territorial displacement’, and ‘functional displacement’. In addition, Tonry (2011) contends that displacement of crime occurs due to the implementation of target hardening measures such as physical barriers, together with other situational crime prevention measures. For instance, CCTV increase the perceived effort and risk to commit a crime.

Diffusion of crime prevention benefits can be defined as the complete opposite of crime displacement (Clarke & Weisburd, 1994). Sometimes, situational crime prevention efforts are successful in eliminated not just the intended crime and anti-social problem but also other problems (Boba, 2005). The diffusion of crime benefits is the result of successfully eliminated crime problems that unintentionally eliminates other related crime and anti-social behaviour problems (Clarke & Weisburd, 1994). This occurs because of a perceived increase of risk even in areas not targeted by such situational crime prevention measures (Ratcliffe & Makkai, 2004). Still, there is lack of data for one to form a clear conclusion about such opposing outcomes (Deisman, 2003).

2.5 Problem analysis

According to Cherney (2006), problem analysis is a core component of crime prevention strategies. Arrington (2006) upholds that problem analysis is an
“information-gathering discipline” (p. 30) that aims at problem solving. Goldstein (1990) defines problem analysis as an “in-depth probe” into the factors contributing to a particular crime problem and its characteristics. Three theories that analyse patterns of crime are: the ‘Crime Pattern Theory’, the ‘Crime Opportunity Theory’ and the ‘Routine Activity Theory’. The crime pattern theory aims to explain why crime is not random and why it occurs in particular areas (Boba, 2005; Felson & Clarke, 1998; Brantingham & Brantingham, 1990). In addition, the crime opportunity theory suggests that crime requires opportunity but not every opportunity is followed by crime (Felson & Clarke, 1998). Similarly, the routine activity theory specifically focus on situations of crime where crime is unaffected by social factors such as poverty and unemployment (Cohen & Felson, 1979). Hence, with an emphasis on theories, contextualities, and implementations, problem analysis involves the systematic use of reliable data and extensive progress evaluation (Cherney, 2006; Laycock, 2005).

Such theories highlight the nature of problem analysis as to undertake the appropriate response to crime (Arrington, 2006). According to the crime pattern theory, crime occurs “where the activity spaces of offenders intersect with the activity spaces of potential targets” (Boba, 2005, p. 70). Thus, problem analysis allows one to determine particular crime patterns, crime trends and crime series (Arrington, 2006; Brantingham & Brantingham, 1990). Clarke (1997) and Goldstein (2003) regard problem analysis as a core element of any situational crime prevention project. Similarly, Ekblom (2003) maintains that problem analysis is an indispensable component for crime prevention planning to be effective. Consequently, a number of problem solving tools like the ‘SARA model’ and the ‘Problem Analysis Triangle’ have come to be associated with the problem analysis approach (Maguire, Morgan & Reiner, 2012).

The process for problem solving calls for a deliberate approach to achieve to prevent crime (Skogan, Hartnett, DuBois, Comey, Kaiser & Lovig, 1999). The SARA model is the best-known problem solving approach to reduce the impact of crime
and anti-social behaviour. It is derived from the initials of its four-stage process that makes up the model (Figure 2.1), namely: Scanning, Analysis, Response and Assessment (Cherney, 2006; Skogan et al., 1999; Clarke, 1997; Eck & Spelman, 1987). These four interconnected components are equally important because they allow the identification of the problems, examination of the underlying causes, the development of tailor made strategies that address these issues and the assessment of the outcomes of the chosen response (Ratcliffe, 2012; Walker, 2010). Each stage relies on the information derived from the previous stage and prepares further information for the succeeding stage. Hence, the best way to render the SARA model is in a circular process, so as to accordingly move back and forth among its four components (Ratcliffe, 2012).

*Figure 2.1: The SARA problem-solving process*

![The SARA problem-solving process](image)

*(Adapted from Clarke & Eck, 2005)*

The crime opportunity theory states that the chance of a crime to occur is greater in environments where attractiveness, accessibility and proximity of motivated offender are high and where supervision is low. This theory goes together with the
crime analysis triangle in understanding problem solving (Forst et al., 2011; Arrington, 2006). Figure 2.2 shows how each side of the triangle represents a distinct element in the occurrence of crime (Arrington, 2006). The three constituent elements that form this problem analysis tool are: a motivated offender, a suitable target and a location, in the absence of a capable guardian (Miller, Hess & Orthmann, 2010). Clarke and Eck (2005) expanded the routine activity theory by developing a problem analysis triangle (Figure 2.2) that includes the controllers, namely: the handlers, the managers and the guardians. The handlers act as formal and informal social control agents, that know and interact with motivated offenders. Managers are those persons who are responsible for the behaviour of persons within a particular location, such as shop owners; and guardians are people, police, private security personnel and security devices that keep a watchful eye on property and other people (Paynich & Hill, 2011; Siegel, 2009).

*Figure 2.2: Problem analysis triangle*
The problem analysis triangle prevents any wasting of time on matters that are irrelevant to the crime problem and provides a rational way of thinking about the problems of crime and anti-social behaviour (Arrington, 2006). Problem solving to be effective requires a good understanding of how locations, offenders and targets are being controlled (Paynich & Hill, 2011; Clarke & Eck, 2005; Cohen & Felson, 1979). Thus, the problem analysis triangle explains why and how crime occurs through a systematic analysis of “crime and disorder problems”, together with other related issues such as “socio-demographic, spatial, and temporal factors” (Boba, 2005, p. 6).

2.6 Closed circuit television

Situational crime prevention theories proved that surveillance and the perception of surveillance hinder the commission of crime. The contribution of closed circuit television has become more explicit in this field. To comprehend the concept of surveillance, CCTV became an “elementary building block of all human societies, a form of power” (Norris & Armstrong, 1999, p. 85). McLaughlin and Muncie (2013) define the concept of surveillance as “the ability to monitor public behaviour for the purpose of crime and population control” (p. 458). This concept goes back to Jeremy Bentham’s model of the panopticon prison. This prison design allowed “uninterrupted inspection, observation and surveillance of prisoners” (McLaughlin & Muncie, 2013, p. 458). Bentham’s vision was that to create an automatic mechanism of self-discipline and self-control through a system of perpetual surveillance, forming “a state of conscious and permanent visibility” (McLaughlin & Muncie, 2013, p. 458). Continual surveillance is directly associated with situational crime prevention measures since it aims to reduce opportunities of crime through improved design and techniques (McLaughlin and Muncie, 2013).

Notwithstanding the fact that there is a great deal of academic literature that focuses on crime prevention, “it is surprisingly difficult to find a definition of closed circuit television” (Goold, 2004, p. 8). Still, Clarke (1995) defines CCTV surveillance
as an intervention targeted at the problem of crime and anti-social behaviour. Likewise, Gill and Spriggs (2005) maintain that CCTV surveillance is an essential situational crime prevention measure that enables the police and other law enforcement organisations to respond to reported incidents of crime. Hence, CCTV surveillance is a powerful security and crime prevention measure that facilitates post-incident analysis through formal surveillance and video-imaging storing (Gill & Spriggs, 2005; Welsh & Farrington, 2002; Clarke & Homel, 1997).

Essentially, the simplest form of a CCTV consists of a video camera connected by a coaxial cable, fibre-optic cable or through wireless links to a central television monitor (Norris, 2009; Carli, 2008; Gill & Spriggs, 2005; Matchett, 2003). This type of video surveillance system was predominant in many retail outlets because it was considered as an “affordable, do-it-yourself, self-contained system” (Constant & Turnbull, 1994, p. 3). CCTV surveillance gained this prevalence after being promoted “as a panacea for a wide range of social and economic problems by a variety of state agencies and commercial organisation” (Fay, 1998, p. 316). In the 1990’s, CCTV surveillance systems were installed in the absence of a proper pre-installation evaluation on its use and effectiveness (Norris, Wood & McCahill, 2004). In the United Kingdom, politicians approved such public funding towards a widespread installation of CCTV because they “relied on the self-interested claims of practitioners and system promoters to justify its crime reduction potential” (Norris, 2009, p. 10). Similarly, this phenomenon occurred in the United States where CCTV funding does not require any crime related statistical data (Nieto, Johnston-Dodds & Simmons, 2002). Nonetheless, once CCTV surveillance was put into place, several research studies attempted to post-evaluate such systems.

Gill and Spriggs (2005) state, “despite the tendency within criminological literature to discuss CCTV as if it were a single measure, CCTV systems can differ quite markedly” (p. 1). Nowadays, apart from a static and fixed focal length CCTV cameras, CCTV systems incorporate more advanced technical facilities, such as fully functional Pan, Tilt and Zoom (PTZ) cameras that are linked to display monitors
and recording devices (Norris, 2009; Gill & Spriggs, 2005). PTZ cameras have the potential to alter their focal length while moving in either horizontal or vertical manner (Norris, 2009). Confounding factors such as the provision of better lighting are sometimes treated as part of the CCTV project since they are usually incorporated with the installation of CCTV systems (Gill & Spriggs, 2005). Gill and Spriggs (2005) sustain that such technical features may well have an impact upon the effectiveness of CCTV surveillance systems. Therefore, “technical considerations are an important element in the evaluations of [CCTV] systems”, which ensure that these technical specifications are consistent with the desired objectives of crime prevention (Gill & Spriggs, 2005, p. 2).

Nonetheless, CCTV surveillance is not all about technical sophistication. CCTV systems also depend upon its cultural and organisational setup (Norris, 2009; Gill & Spriggs, 2005; Hempel & Topfer, 2004). “If no one notices the camera, and nobody looks at either the monitor or the tapes, its social and criminological impact is zero” (Norris, 2009, p. 3). In other words, awareness of being under CCTV surveillance can never be assumed (Norris, 2009). For instance, evaluations of CCTV indicate that only 40% of shoppers are aware of CCTV surveillance (Norris, 2009; Helten & Fischer, 2004; Ditton, 2000). Furthermore, one cannot assume that CCTV systems are being monitored (Norris, 2009). Within European countries the “monitoring of images occurs only on irregular basis by one observer who often has to fulfil other parallel tasks” (Hempel & Topfer, 2004, p. 6). Hence, it is evident that CCTV surveillance is a socio-technical system since its effectiveness is highly dependent upon technical and organisational factors such as objectives, management, density, coverage and positioning of CCTV cameras (Norris, 2009; Gill & Spriggs, 2005). Similarly, Armitage (2002) states, “the extent to which CCTV can act as an effective crime prevention measure is very much dependent upon the context in which it is applied” (p. 2).

Research studies discuss the effectiveness of CCTV in different context in various countries all over the world, namely: the United Kingdom, United States, and
Canada (Norris, 2009). Nonetheless, there are diverse perspectives on the effective use of CCTV (Gill & Spriggs, 2005; Armitage, 2002; Welsh & Farrington, 2002; Phillips, 1999). According to Welsh and Farrington (2002), CCTV has a substantial “desirable effect on crime”, even if “the overall reduction in crime [is] rather small” (4%) (p. 42). Similarly, the CCTV scheme assessments carried out by Gill and Spriggs (2005) show an insignificant overall effect on crime in the United Kingdom. Welsh and Farrington (2008), show a small but significant increase in crime reduction (16%). However, this decrease in crime was mainly attributable to the overall result obtained from CCTV installations within car parks (51%) (Welsh & Farrington, 2008).

Similarly, Deisman (2003) states that the effects of CCTV in Canada are highly unpredictable. It is suggested that the impact of CCTV is not consistent because it varies over time, location and crime category (Gill & Spriggs, 2005). Deisman (2003) states, “the magnitude of deterrence effects appears to depend on location: the greatest effect appears to occur in car parks” (p. 2). In Los Angeles, studies report that the impact of CCTV is insignificant when it comes to reducing violent or property crime (Cameron, Kolodinski, May & Williams, 2007). Likewise, studies carried out in Philadelphia show a reduction of 13% in less serious disorder crime (Ratcliffe & Taniguchi, 2008). Furthermore, a statistical drop in property crime (13%) is evident in San Francisco but there is no such significant effect on violent crime (King, Mulligan & Raphael, 2008).

Gill and Turbin (1999) maintain that CCTV surveillance may not always function as desired and identified two negative effects (Gill & Turbin, 1999). The first negative effect is that CCTV cameras could actually increase the crime because shop personnel, security staff and law enforcement officials rely solely on such systems to deal with crime on their own. Thus, reliance on such technology increases the possibilities of crime and anti-social behaviour due to lack of staff vigilance, effective surveillance and intervention (Gill & Spriggs, 2005; Gill & Turbin, 1999). The second negative outcome is that CCTV surveillance might decrease sales if
customers dislike the idea of being under surveillance. Consequently, customers would alter their shopping behaviour and go to shop elsewhere, resulting in an overall reduction of natural surveillance (Gill & Spriggs, 2005; Gill & Turbin, 1999).

However, Armitage (2002) and Tilley (1993) state that the effective use of CCTV surveillance is mostly related to: deterrence, efficient deployment, self-discipline, presence of capable guardian and detection. Welsh and Farrington (2008), Armitage (2002) and Tilley (1993) argue that CCTV surveillance may deter crime because it makes potential offenders more aware of an increased risk of identification and apprehension. CCTV may deter crime due to an increase in the likelihood of offenders being caught (Tilley, 1993). In fact, this is in line with the rational choice theory, which states that rational beings choose to commit a crime after weighing its possible costs and benefits (Becker, 1968). With regards to efficient and effective deployment, CCTV surveillance enables better allocation and deployment of security staff and law enforcement resources to locations where offences are occurring (Welsh & Farrington, 2008; Armitage, 2002; Tilley, 1993). Awareness of CCTV surveillance may encourage potential victims to be more self-disciplined, being more security conscious and proactive in taking precautionary measures (Ratcliffe, 2006; Armitage, 2002; Tilley, 1993). With reference to the routine activity theory, CCTV surveillance may reduce crime and anti-social behaviour since it acts as a capable guardian (Welsh & Farrington, 2008; Armitage, 2002).

2.7 Conclusion

In essence this chapter analyses different notions, which are directly related to crime and strategies to its prevention (Arrington, 2006; Cherney, 2006; Laycock, 2005). After discussing how pioneer criminologists treated the offenders as rational, this discussion evolved into exploring the influences of the two main schools of thought in contemporary research and theories, with a focus on problem analysis that tackled different aspects of crime (Ratcliffe, 2012; Forst, Greene &
Upon exploring the diverse situational crime prevention methods and strategies, the discussion culminated on the use and effectiveness of CCTV in today’s society (McLaughlin & Muncie, 2013; Welsh & Farrington, 2008; Gill & Spriggs, 2005; Armitage, 2002). Before aiming to explore how effective are CCTV systems within the Commercial Zone of Valletta (CZV) and how its use affect diverse business sectors, the next chapter will explore the research methodologies and tools that will be used.
Chapter 3

Methodology
3.1 Introduction

This chapter intends to specify the purpose for this research study, explain in detail the research design, and describe the methodologies used for data collection and analysis (Creswell, 2012; Maxfield & Babbie, 2011). This chapter also discusses the used research tools, the data collection method, the participant selection and sampling, and any ethical considerations. This chapter also describes how the collected data was analysed and presented, following common themes identified in the gathered data. Finally, this chapter highlights strengths and limitations of the study that had affected the final results.

3.2 The aim of the study and research question

The main purpose of this study was to examine whether CCTV is effective in enhancing crime prevention in Valletta. When going through past research conducted by students at the University of Malta, one finds a vast body of literature that researches crime prevention measures in Malta, (Bayliss, 2012; Farrugia, 2012; Fenech, 2012; Locano, 2012; Vella, 2012; Bonnici, 2009; Azzopardi, 2008; Caruana, 2006; Zammit, 2004; Ellul Bonici, 1999; Lanfranco, 1999). However, none of these studies specifically focuses on CCTV as a crime prevention measure within the business sector, which kindled this exploratory study on the use and effectiveness of CCTV within Valletta’s retail sector.

When it comes to the use and effectiveness of CCTV within the local context, there is no available data. Still, Formosa (2007) addressed the issue of crime by indicating crime hotspots all over Malta through a spatio-temporal environmental criminology study. In addition, Spiteri (2012) addressed the issue of crime prevention by identifying the average aggregation of persons within the Commercial Zone of Valletta (CZV) during different days and times of the week so as to better understand why crime occurs and how it can be prevented.
This research was guided by a set of questions that served as an interview guide for respondents to share their experiences and opinions about the use and effectiveness of CCTV surveillance within their business establishments. The questions were designed to discover whether shop owners consider CCTV surveillance as a means of crime prevention or crime detection. Other questions aimed at exploring issues, such as: fear of crime, invasion of privacy, displacement of crime and diffusion of crime prevention benefits. Other questions looked at whether CCTV surveillance is effective on its own or in combination with other crime prevention measures. Shop owners and business managers were also asked whether they would recommend CCTV installations to other entrepreneurs.

3.3 Mind mapping and research design

After devising the research question, mind mapping was used to allow a continuous overview of such designed research structure (Buzan & Buzan, 2006). Connections were effectively established between existing knowledge, research material and new ideas. Mind mapping led to a logical organisation of thoughts, ideas, and information (Figure 3.1). The organisation of ideas and information through mind mapping is flexible, and was updated according to the changes applied in the research (Crebert, Patrick, Cagnololini, Smith, Worsfold & Webb, 2011).

Collins (2010) maintains that mind maps are advantageous as they help one to brainstorm key ideas without the use of long descriptive phrases. The use of a mind map helped to interpret, externalise, communicate and consolidate ideas in a non-linear manner (Hanington & Martin, 2012; Collins, 2010). Buzan and Buzan (2006) accentuate the significance of mind mapping, as it is a process of critical thinking that stimulates the generation of new ideas. It also enables a cohesive integration and association of such creative ideas (Hanington & Martin, 2012; Buzan & Buzan, 2006).
Figure 3.1: Mind map displaying the design and methodology of the study.
Figure 3.1 illustrates the two main research methods, namely: qualitative and quantitative approach. Dantzker and Hunter (2011), uphold that both qualitative and quantitative research methods are equally “appropriate and necessary to [...] criminology” (p. 56). The quantitative approach explores the phenomena in question by counting and measuring the collected data (Dantzker & Hunter, 2011). Quantitative studies focus on measuring amounts by using surveys with close-ended questions (Creswell, 2012; Murray, 2003). Researchers make use of this research method by asking identical questions with a limited number of responses, and they compare and contrast the collected data (Murray, 2003; Creswell, 2012).

On the other hand, qualitative approach entails in the examination of a research question through conceptual and symbolic descriptions (Dantzker & Hunter, 2011). Qualitative research aims to understand phenomena in specific contexts where exact responses that can be measured and compared are not expected (Denzin & Lincoln, 2011; Cresswell, 2012). Researchers who opt for qualitative research believe that the world is in a constant state of flux, and people tend to give different interpretations according to their beliefs and perspectives (Newby, 2010).

So the data collected through qualitative research is acquired through open-ended questions. Needless to say, the gathering of data is more complex but it results into relevant, in-depth accounts of real-life experiences (Cresswell, 2012). Therefore, qualitative research studies illustrate the attitudes, structures, opinions, interactions, beliefs and behaviours of the participating respondents (Delamont, 2012; Merriam, 2009). This study is mainly qualitative, however it is corroborated by a quantitative analysis as to support the results that emerged from the interviews. This combination of both qualitative and quantitative research methods facilitated triangulation of data as explained further on.

All in all, qualitative and quantitative research designs are the two most prevalent research methods (Formosa, Scicluna, Azzopardi, Formosa Pace, Calafato, 2011). These two methods have diverse objectives, utilise different data collection tools,
pose different types of questions and produce different forms of data through different levels of flexibility (Mack, Woodsong, MacQueen, Greg & Namey, 2005; Murray, 2003; Creswell, 2012).

For the purpose of this study, I chose to use a qualitative approach as it enabled the respondents to articulate their opinion, beliefs and understanding about the use and effectiveness of CCTV. This approach explored such notions in the natural environment where participants could feel comfortable and at ease (Houser, 1998). Although this approach did not require any specialised resources, it was flexible enough to adapt the flow of the interview according to the participants’ response (Houser, 1998). After considering various qualitative research tools, it emerged that semistructured interviews with open-ended questions were more appropriate for this study. The reason is that semi-structured interviews reserved the possibility to “[probe] for more detail”, since it is a flexible technique which can be easily adapted to collect new data (Dantzker & Hunter, 2011, p. 59).

Hence, this approach enabled me to ask additional questions and acquire more detailed explanations (Dantzker & Hunter, 2011), while the respondents were able to express their opinions in their own words (Jackson, 2011). This could be achieved since the interviews were not rigid and allowed for flexibility and adaptations according to the participants’ response. The interviews allowed the respondents to freely choose their preferred language since the questions were prepared both in Maltese and English. However, all sixteen participants felt more comfortable discussing this topic in English. During the interviews, I was also able to record “facial or bodily expressions or movements, such as grins, grimaces, or shrugs” (Jackson, 2011, p. 98). Therefore, as an interviewer, I acquired a greater insight into the participants’ true opinions through non-verbal responses (Jackson, 2011). Such responses were recorded using ‘pen and paper’ (Blaikie, 2010).

In-depth interviews led to a profound discussion that helped respondents freely share their views. The fact that the data was collected through ‘pen and paper’,
respondents felt more at ease in answering the designed questions. Still, there are some limitations to be considered. Even though, respondents were not digitally recorded, face-to-face interviews might have made the interviewees feel uncomfortable, and consequently some data could be missed (Boyce and Neale, 2006). Also, the presence of the interviewer tends to influence the respondents. Additionally, interviews were time consuming especially when the meeting were held at the respective head offices, outside Valletta, namely: San Ġwann and Birkirkara. Most of the time, the interviews took more than the stipulated time and consequently this affected the analysis process (Boyce and Neale, 2006). Also, there were other instances, where the participant was not articulate enough and had to be constantly probed by other questions. Another limitation could be related to the interviewing techniques of the interviewer, however I strived to establish credibility and ensured that relevant and meaningful data was gathered (Gubrium & Holstein, 2002).

The role of the quantitative research method within this study was intended to triangulate the results obtained through the qualitative approach (Denzin, 1978). This research method was utilised by designing three interview questions that had to be answered through Likert Scales. Such quantitative responses were used in order to quantify the given answers, by asking questions followed by response choices. Respondents indicated whether they “strongly disagree”, “disagree”, “neutral”, “agree” or “strongly agree” (Rubin & Babbie, 2009). Then the participants' responses were analysed and the resultant percentages were illustrated by using pie-chart representations. This was highly beneficial because such depictions could be analysed, compared and contrasted as to differentiate between participants’ qualitative and quantitative responses. A limitation that is tied to quantitative research is that sometimes results can be rather superficial and do not specify the respondents’ response in detail (Rubin & Babbie, 2009). This is the reason why both qualitative and quantitative research methods were used concurrently.
3.4 Data collection

Qualitative research methods are used to find out and understand the reasons why people take decisions and behave the way they do (Patton, 2002). The research targeted a purposive sample of 16 retail owners within the Commercial Zone of Valletta. The participants were purposefully selected from different business sectors so as to have different settings and different contexts that would enable comparison (Punch, 2009). The shops were selected according to six main categories (Table 3.1). All the respondents were given a code so as to protect their identities. Thus the interviewees remained non-attributable.

Data collected by means of the semi-structured interviews was then compared to foreign and local studies so as to triangulate data. After all, triangulation amalgamates the research findings that support and complement each other (Bryman, 2012). This research study targeted the Commercial Zone of Valletta and its outskirts because it is the capital city of Malta; a central place for commerce that attracts both foreigners and Maltese citizens. By focusing on the Commercial Zone of Valletta, the data collection gave indicative results on the effectiveness of CCTV in preventing crime.

**Table 3.1 Purposive sample: Businesses categories**

<table>
<thead>
<tr>
<th>Business Category</th>
<th>Code</th>
<th>Length of Interviews in minutes</th>
<th>Transcription in minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clothes Shop</td>
<td>CS1</td>
<td>30</td>
<td>150</td>
</tr>
<tr>
<td>Clothes Shop</td>
<td>CS2</td>
<td>40</td>
<td>200</td>
</tr>
<tr>
<td>Clothes Shop</td>
<td>CS3</td>
<td>25</td>
<td>125</td>
</tr>
<tr>
<td>Souvenir Shop</td>
<td>SS1</td>
<td>40</td>
<td>200</td>
</tr>
<tr>
<td>Souvenir Shop</td>
<td>SS2</td>
<td>55</td>
<td>275</td>
</tr>
<tr>
<td>Souvenir Shop</td>
<td>SS3</td>
<td>25</td>
<td>125</td>
</tr>
<tr>
<td>Jewellery Shop</td>
<td>JS1</td>
<td>50</td>
<td>250</td>
</tr>
<tr>
<td>Jewellery Shop</td>
<td>JS2</td>
<td>20</td>
<td>100</td>
</tr>
<tr>
<td>Financial Service Institution</td>
<td>FSI1</td>
<td>25</td>
<td>125</td>
</tr>
<tr>
<td>Financial Service Institution</td>
<td>FSI2</td>
<td>30</td>
<td>150</td>
</tr>
<tr>
<td>Service Type</td>
<td>Code</td>
<td>Distance</td>
<td>Crime</td>
</tr>
<tr>
<td>----------------------</td>
<td>------</td>
<td>----------</td>
<td>-------</td>
</tr>
<tr>
<td>Financial Service Institution</td>
<td>FSI3</td>
<td>40</td>
<td>200</td>
</tr>
<tr>
<td>Jewellery Shop</td>
<td>JS3</td>
<td>30</td>
<td>150</td>
</tr>
<tr>
<td>Cosmetic Shop</td>
<td>CoS1</td>
<td>35</td>
<td>175</td>
</tr>
<tr>
<td>Cosmetic Shop</td>
<td>CoS2</td>
<td>30</td>
<td>150</td>
</tr>
<tr>
<td>Food Outlet</td>
<td>FO1</td>
<td>25</td>
<td>125</td>
</tr>
<tr>
<td>Food Outlet</td>
<td>FO2</td>
<td>20</td>
<td>100</td>
</tr>
</tbody>
</table>

The area to carry out this research study was identified from the base data for the Commercial Zone of Valletta (CZV), as provided by preliminary research studies (Malta Environment & Planning Authority, 2013; Formosa, 2007; Spiteri, 2012). MEPA (2013) identified the CZV within these boundaries (Figure 3.2).

*Figure 3.2: Base map displaying the commercial zone of Valletta and crime hotspots*

*Source: Formosa (2007)*
Formosa (2007) indicated crime hotspots in the form of ellipsoids all over the Maltese Islands, including Valletta, while Spiteri (2012) studied the crime situation in Valletta’s commercial area and how it can be prevented. This study, utilises Spiteri’s (2012) study to identify potential respondents, but focused on CCTV and its effectiveness in preventing crime and anti-social behaviour.

It is important to note that, my study is not limited to the stipulated Commercial Zone of Valletta as indicated by the Malta Environment and Planning Authority (MEPA, 2013). I extended this area of fieldwork by a few streets as to have a broader view of the effectiveness of CCTV within the commercial zone of Valletta and further out (Figure 3.3).

*Figure 3.3: Base map displaying the extended area of fieldwork*
### Table 3.2: List of streets within targeted area

<table>
<thead>
<tr>
<th>City Gate</th>
<th>St. Dominic's Street</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freedom Square</td>
<td>St. George’s Square</td>
</tr>
<tr>
<td>Independence Square</td>
<td>St. John's Square</td>
</tr>
<tr>
<td>Melita Street</td>
<td>St. John's Street</td>
</tr>
<tr>
<td>Old Bakery Street</td>
<td>St. Lucy Street</td>
</tr>
<tr>
<td>Old Mint Street</td>
<td>St. Paul’s Street</td>
</tr>
<tr>
<td>Ordinance Street</td>
<td>St. Ursula’s Street</td>
</tr>
<tr>
<td>Republic Street</td>
<td>Strait Street</td>
</tr>
<tr>
<td>South Street</td>
<td>Treasury Street</td>
</tr>
<tr>
<td>St. Christopher’s Street</td>
<td>Zachary Street</td>
</tr>
</tbody>
</table>

### 3.5 Data analysis

When the preliminary interview guide was designed, a pilot study was carried out as to ascertain that the questions were appropriate and unbiased (Rubin & Babbie, 2010). This facilitated the data collection, particularly because this was my first research study. Piloting the interview guide was also essential in timing the interview. The pilot study ensured that the questions were clear and easily comprehended by the participants (Bryman, 2012). After the pilot interview, some questions were amended so that they could be understood. The interviews carried out during the pilot study were not included in the data analysis because they were intended to amend the questions as to have a series of smooth guiding questions. When this was achieved, I started selecting shops and businesses within the target area in Valletta. Owners and business managers gave their consent and signed the provided consent form (Appendix A) prior to every interview.

During the actual interviews, the raw data was collected by simple note taking in written format. Afterwards, such shorthand notes were transcribed and digitised.
using a word processor. The results acquired through the quantitative questions were processed into spreadsheets as to generate pie charts. Such illustrations depicted the results in a highly organised visual representation. This was done after every interview and transcribing was rather time consuming (Table 3.1). After I analysed the collected data, I realised that there are certain patterns in the participants’ responses even though their age ranged from 26 to 70. Still, there were some respondents who had different views and opinions about the diverse aspects of CCTV.

For this reason I chose to adopt a thematic approach to present the results so that they can be compared and contrasted in detail. Hence, when the sixteen interviews had been carried out and all the data was transcribed, I sketched a table to outline common themes that also emerged in the literature review chapter. Then results were categorised according to the themes. After this process, such findings were compared and contrasted with existing literature. The findings were presented in a descriptive, traditional approach as may be found in academic journals.

### 3.6 Ethical issues and limitations

There were no particular ethical issues in this research study. Before the interview, the participants were informed that the study did not intend to collect any sensitive information. The participants were clearly informed about the purpose of the study through an information letter (Appendix A). The respondents signed consent forms (Appendix A) giving permission to carry out an interview. The participants were informed that their contribution could be withdrawn at any time of the interview. This ensured a safe interviewing environment where all the data was “anonymous and non-attributable” (Walliman, 2011, p. 260). They were also informed that if they require a copy of the finished research, this could be easily provided to them on request. When a participant did not accept to take part in the study, I did not attempt to persuade the person into participating; but I recorded this in my data collection and resorted to another participant.
Researchers encounter various difficulties and limitations and this study is no exception (Conrad, 2006). Time constraints and low response rates in the primary data were just few of the encountered difficulties (Neuman, 2011). It was difficult to establish appointments that were mutually convenient to conduct the interviews, given that shop owners and business managers have a tight schedule due to the nature of their work. Yet, this weakness was tackled by having started the data collection as soon as I had a confirmation to proceed. Since this was my first research study, the interviewer bias might have led to weak judgements and human error (Seale, 2004). Another limitation, which is commonly associated with qualitative research, is that research results reflect only a group of respondents within a particular setting and cannot be generalised to broader contexts (Maxwell, 2005; Borg, Gall & Gall, 2003). Lastly, qualitative interviews produce an overwhelming amount of data and it is requires toil to sort it out before it could be analysed (Bernard & Ryan, 2010).

3.7 Conclusion

In essence, this chapter described the applied research methodology used in this study. It outlined how through mind mapping it was possible to identify the most feasible methods to reach the targeted objectives and aims. After selecting the research tools and designing the guiding questions, the next step was to identify a purposive sample of respondents that owned shops within the Commercial Zone of Valletta (CZV) and its outskirts. This chapter also acknowledges a number of limitations found in this study. The next chapter provides a presentation of the findings accompanied by their analysis.
Chapter 4

Data analysis and discussion of findings
4.1 Introduction

This chapter presents an analysis and discussion of the findings collected during the sixteen interview sessions within the Commercial Zone of Valletta (CZV). The findings aim at analysing, comparing and contrasting the respondents’ personal views on the use and effectiveness of CCTV surveillance. The interviews with sixteen respondents generated a considerable amount of data. The results from this data are presented and thematically analysed, highlighting similarities and discrepancies (Jupp, 2006). The findings acquired through Likert Scales, are presented using pie charts for a clearer visual understanding (Bernard, 2000). The analysis discusses the results with reference to literature review discussed in the second chapter of this dissertation.

4.2 Crime in Valletta

The first part of this section outlines the respondents’ perception of the concentration of crime in Valletta. It also outlines the streets that are more prone to crime as mentioned by respondents. For this purpose, this theme tackles the answers of interview questions 2 and 3. All of the sixteen participants recognised that the CZV attracts crime and each one of them specified which crime is most likely to occur.

I believe that shoplifting is a major crime problem in Valletta. (CS2)

In my opinion cases of snatch and grab are very common and they are very problematic. (JS3)

Considering the amount of businesses in Valletta, it is not that bad. Even if we have just suffered a break in, I would still say that petty crime is the main problem. (FSI3)
Such response indicates that respondents’ perception of crime in Valetta is mainly petty crime, namely: shoplifting and snatch and grab. Van den Berg (2006) asserts that European cities have a tendency to attract petty crime. However, JS1 stated “apart from shoplifting, counterfeit cheques are also an issue”. This is a common phenomenon that occurs in most cities and harms business clientele (Sennewald & Christman, 2011).

It transpires that small items are frequently stolen and there are occasional holdups and burglaries. JS1 stated that “burglaries are quite common”. There is a strong tendency that the concentration of crime occurs in specific places and in particular situations (Brantingham & Brantingham, 1993). Such places are often referred to as crime ‘hotspots’ which offer convenient situations where offenders can successfully commit crime (Boba, 2005; Maltz, Gordon & Friedman, 1990; Sherman, Gartin & Buerger, 1989). Formosa (2007) clearly states that crime within such hotspots is both place and time bound. Valletta holds higher crime rates when compared to other localities with less retail and recreational activities (Formosa, 2007). However, fifteen of the respondents believed that crime in Valletta is not a serious problem and stated:

Youngsters tend to shoplift for the thrill of it. Sometimes they do it due to peer pressure. Often they do the bulk of shoplifting. (CoS1)

Juvenile crime is prevalent especially vandalism. (FO1)

It appears that juvenile crime within Valletta occurs in an organised manner where three to four youths create distractions “as to commit shoplifting” (CoS1). This is in line with the crime opportunity theory, which suggests that crime requires opportunity (Felson & Clarke, 1998). Hence, the overall results show that petty crime is the most prevalent and it is often linked with young offenders. Moreover, Formosa (2007) identified a correlation between crime and spatial factors across the social, land use and crime scenarios, and indicated an increase in crime rates in
recreational and retail areas of particular localities. Bamfield (2012) corroborates this issue by stating that retail areas are more prone to attract crime. This also resonates with Formosa’s (2013) list of reported crime by street and by category of crime in Valletta. This list illustrates that theft was the commonest type of crime that occurred in Valletta in 2012 (Appendix C).

Question 3 asked the respondents to list which streets in Valletta are more prone to crime; their response was the following:

Republic Street and Merchant’s Street are the most prone. However, different areas in Valletta are prone to different types of crime. But mostly it occurs in the business area due to the high concentration of shops. (CoS1)

I think that crime is most likely to occur in City Gate, St. Dominic’s Street and St. Christopher’s Street. (SS2)

Well, I think it takes place in Merchant’s Street due to the market. (CS1)

I feel that crime occurs away from the commercial zone; the area known as Due Balle. (JS3)

Certainly, crime is more likely to happen in the Due Balle area. (FSI2)

All the respondents indicated two main contrasting points. The majority of the participants (12 out of 16) consider the CZV as the hub of criminal behaviour. CS2 states that “the commercial zone” is the area most prone to crime. The streets that were mentioned to be renowned for crime are those streets that are very hectic due to the shops and the market, namely: Republic Street, Merchants’ Street and City Gate. However, the other four respondents indicated the secluded streets of Valletta as the areas that mostly attract crime, namely: St. Dominic’s Street, St. Christopher’s Street, St. Nicholas’s Street and Old Hospital Street. These streets are commonly referred to as the Due Balle area (JS3, CS3, SS2, FSI2). In fact, in 2012,
from a total of 127 reported crimes in Valletta, 20 took place in Merchant’s Street, 81 occurred in Republic Street and 26 at City Gate (Formosa 2013). Since Formosa (2013) stated that outside the CZV, in St. Dominic’s Street there were 2 reported crimes, St. Christopher’s Street there were 6 reported crimes, in St. Nicholas’ there were 6 reported crimes and in Old Hospital’s Street there were only 3 reported crimes (total of 17), it transpires that the CZV is the hub of criminal activity since the discrepancy between the reported crimes within CZV is much higher than the reported crimes that occurred outside the CZV.

4.3 CCTV surveillance in Valletta

Question 8 asked the participants to rate the overall use of CCTV surveillance in this locality. Figure 4.1 illustrates that 38% of the responses show a ‘Fair’ overall use of CCTV in Valletta. Another 25% and 6% indicated a ‘Good’ and ‘Very Good’ use of CCTV, respectively. However, 31% (25% + 6%) of the respondents showed dissatisfaction, indicating a ‘Poor’ and ‘Very Poor’ use of CCTV within the CZV.

*Figure 4.1: Is there enough use of CCTV surveillance in Valletta?*
4.4 Types of security measures

In order to reduce the risk of crime and anti-social behaviour, there are several crime prevention strategies, namely: police presence, effective security devices, formal surveillance and informal surveillance (Fisher & Lab, 2010). When asked about the need felt for types of security measures, all the participants accentuated the implementation different crime prevention measures, especially CCTV. This issue was tackled in question 4 and 18 and the participants stated:

I feel that CCTV, tagging and human observation are imperative. (CS1)

Together with CCTV, one needs burglar alarms, locked displays and a sturdy shutter door. (JS1)

In the financial business sector, you definitely need CCTV, burglar and fire alarm, bulletproof glass and an attack switch prompter. (FSI3)

Together with CCTV, intruder alarm systems, tagging or Electronic Article Surveillance (EAS) were preferred as anti-shoplifting measures (Petersen, 2012; DiLonardo, 2011). EAS is the term that refers to retail antishoplifting for apparel and packaged consumer products (DiLonardo, 2011; Stewart, Tittel & Chapple, 2008)

Therefore it is clear that other crime prevention measures are essential. Shutter doors as well as locked displays were mentioned as important crime prevention measures within the participants’ premises. It was also emphasised the importance of having bulletproof glass and an attack switch prompter that is utilised in extreme cases of hold ups. With regards to human observation SS1 added that “even though [his] shop is rather small; [he] cannot afford to have less than three employees”. This will ensure an enhanced informal surveillance so as to increase apprehension.
However, FSI2 lamented that even if banks are renowned to have armed security guards at the entrance door, their bank “refrains from having one”. She stated that the reason behind this is, “not to instigate more serious crime such as armed robberies”. Yet, FSI2 confessed that employees do not feel safe without such a crime prevention measure. This issue ties in with the notion of ‘Fear of Crime’.

4.5 Fear of crime

After discussing a number of situation crime prevention measures, questions 5a, 5b and 5c aimed at finding whether the implementation of CCTV cameras reduced the perceived fear of crime. Figure 4.2 shows that CCTV surveillance makes 81% of the respondents (56%+25%) feel safer.

*Figure 4.2: Does CCTV make you feel safer?*

Yes, a lot. It gives me peace of mind. Without CCTV I would be more hassled. (SS1)
I fully agree that CCTV reduces my fear of crime. It provides me with the necessary recording in case of theft. (JS1)

Yes, because CCTV monitors and records everything in a centralised control room. There are specialised people who observe everything through our CCTV system (FSI 2).

No not, really because I consider bulletproof glass more reliable in saving my life in case of an armed robbery (FSI 3).

Although the majority (81%) of the respondents ascertain that CCTV reduces the fear of crime, there were 6% of the respondents who claimed that they could not really rely upon CCTV because they believe that human presence is very important. In fact, CS1 put forward that in a small shop “there must always be at least two sales persons”. Moreover CoS1 agreed that CCTV is a deterrent but he admitted that within his premises there are certain ‘blind spots’ that he is aware of and “if the criminals are professional enough, they can easily steal without being noticed”. As stated by Crowe (2000) a reduction in the perceived fear of crime can be tackled by the proper design as to effectively use the built environment.

4.6 Effective use of CCTV

After establishing that CCTV is an essential security measure to mitigate crime and fear of crime, question 14 inquired about how often owners check CCTV and its recordings. Six of the participants pointed out that they frequently monitor and check the recordings on a daily basis. SS1, FSI1 and FSI2 stressed the fact that they adopt a system of continuous monitoring. FO1 together with FSI1 and FSI2 stated that they have a centralised monitoring system. In contrast, CS1 and CS3 admitted that they never check the monitors because they prefer to observe the people themselves. However, CS22 and FO2 confessed that they only check the monitors in cases of suspicion. CoS1 claimed that his sales persons also have to randomly check the monitors whilst attending the cash points. Table 4.1 illustrates the responses of all sixteen participants.
Table 4.1: How often do you check your CCTV monitor and its recordings during one day at work?

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Random</th>
<th>Continuous</th>
<th>In case of suspicion</th>
<th>Rarely</th>
<th>Never</th>
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<tbody>
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<td>CS1</td>
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<td>CS2</td>
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<tr>
<td>CS3</td>
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<td>JS1</td>
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<td>CoS1</td>
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<td>FO1</td>
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<td><strong>Total</strong></td>
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<td><strong>4</strong></td>
<td><strong>1</strong></td>
<td><strong>2</strong></td>
<td><strong>4</strong></td>
</tr>
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</table>

According to Hempel and Topfer (2004), the monitoring of CCTV systems occurs “only on an irregular basis” (p. 6) by an observer who has to fulfill other tasks. Table 4.1 clearly shows that 9 of the respondents (5 + 4) claimed that they monitor CCTV monitors and their recordings on a daily basis. The rest of the respondents (6) admitted that for some reason they refrain from checking the CCTV monitors on a daily basis. Norris (2009) asserts this by stating that CCTV is effective if it is monitored, otherwise its criminological impact is insignificant.

After observing that the trend of CCTV monitoring, question 6 aimed at finding whether CCTV detects or deters crime. Thirteen of the participants highlighted that CCTV cameras are an effective deterrent they asserted:
In my case CCTV is a preventive measure. Through CCTV I prevent four to five cases of theft every day. Since I continuously monitor my CCTV system, I can detect any suspicious individuals. Hence I can immediately thwart off any criminal behaviour. (SS1)

I think that CCTV is more of a preventive measure. In fact I signposted my establishment with CCTV warning signs to maximise such preventive measure. (JS1)

I think that CCTV is more effective in deterring crime. We had instances where criminals could not be identified. Thus CCTV was not able to detect crime. (FSI2)

In my opinion CCTV can have two outcomes; that to prevent and that to detect crime but still, I would say that it is more of a deterrent. (CS1)

Nowadays, those who commit crime are very much aware of CCTV surveillance. Hence, when crime is committed the perpetrators cover their face. That is why I think CCTV is not effective to detect crime (FSI 3).

Fennelly (2012) agrees that CCTV surveillance acts as a deterrent as long as the cameras are installed in prominent areas within the shop with the correct signposting. This is similar to the opinion of JS1 where he stated that he “signposted [his] establishment with CCTV warning signs to maximise such preventive measure”. SS1, SS2 and SS3 added that CCTV surveillance is so much of a deterrent that shoplifters avoid entering business establishments that have proper signposting and visible cameras. Even more so, JS3 accentuates the deterrent effect of CCTV by stating that: “even if you have fake cameras, they can still be effective”.

On one hand, FSI2 believes that CCTV is more effective to deter crime rather than detect crime because criminals are more conscious of the possibilities of being identified through CCTV surveillance. On the other hand, FSI1 described, CCTV as effective in detecting crime because CCTV cameras are mostly unnoticed; but it
does not mean that they are not effective in preventing crime. Moreover CoS2 revealed that he considers CCTV surveillance as useful in detecting crime, as well as “to check on [his] employees”. Figure 4.3 depicts that 81% of the respondents agree that CCTV surveillance reduces the actual risk of being targeted by criminals.

*Figure 4.3: In your opinion, how much did CCTV surveillance within your establishment reduce the actual risk of being targeted by criminals?*

Only 19% (13% + 6%) of the participants were not convinced that CCTV cameras have a great effect on reducing crime and anti-social behaviour. They sustained that:

Not that much. I would say that other crime prevention measures such as bulletproof glass are more effective to reduce the actual risk of being targeted. (FSI3)

It’s not effective to detect vandalism, especially in rest rooms. (F01)
Matchett (2003) claims that CCTV may be ineffective especially if the cameras might not record the incident in question as it would have been recording in another direction. Still CS1 admitted that CCTV can never reduce the risk by 100%. This statement justifies why respondents refrained from selecting ‘Always’ as an answer. Brownsworth and Goodwin (2012) state that a 2009 internal report by London’s Metropolitan Police Service, CCTV is considered as ineffective in detecting crime since, “only one crime being solved per 1000 cameras, and only 8 out of 269 suspected robberies per month being caught by the cameras” (p. 325).

4.7 Benefits and detriments of CCTV

This section will present the results gathered from question 10a and 10b and 13a and 13b, and it will analyse the perceived benefits and detriments of CCTV camera and will proceed by portraying the real effectiveness of CCTV surveillance when offenders target these shops. Six of the participants believe that CCTV surveillance serves as a benefit since it gives them control over the activities within their establishments. Without CCTV participants feel to be more vulnerable to crime. This technology gives them peace of mind.

Control over my shop. I’ m sure that without CCTV I will be more vulnerable to crime. (CS1)

It gives me peace of mind. (JS1)

It keeps a record of everything that happens in my shop. It gives me peace of mind. (JS2)

It gives me satisfaction and control over my shop. (SS1)

Participants feel that without CCTV they would be more vulnerable to crime. It gives them peace of mind to know that they have access to the happenings that occur within their premises even when they are not present in their establishment
(CS1). They feel empowered because they can go back in time by checking the recordings, which might detect and identify the culprit (CS2).

I can monitor and have a record of those who enter my premises so as to check and identify certain routines such as frequency and suspicious behaviour. (FSI3)

CCTV is not only able to prevent crime and anti-social behaviour, but it can also detect minor offenses such as littering. (FSI1)

Harwood (2007) ascertains that the knowledge that CCTV surveillance is in place is highly beneficial to the employees, customers, shop owners and business managers as it gives them peace of mind. CCTV does not only ensure the wellbeing of the staff and customers but it also increases the owners’ return on investment (Harwood, 2007). FSI 2 sums up the benefits of CCTV by stating, “it can be used both to deter and to detect crime [but] it depends on the needs that may arise”. Still, he pointed out that its main strength is its deterrent effect. It also acts as a safeguard for mistakes since it is used to double check hand movements while counting money. This would easily verify if the mistake is genuine or not (FSI2). CS2 asserted the benefit of preventing shoplifting. He stated that “it helps [him] avoid having customers buying something and stealing something else; it also prevents more serious crime such as hold-ups”.

Twelve of the participants were unable to identify detriments tied to CCTV but CS1 found CCTV surveillance rather time-consuming. CS1 believes that it is time-consuming to continuously monitor the system as well as going through the recordings. In fact, CS1 lamented that “it is rather time consuming to go through the recordings, especially when something happens outside the shop and the police come to see our recordings; they use our resources even when we are not involved”. JS1 stated that CCTV surveillance could be considered as a strain to the employees. Similarly, SS2 feels that “the only downside of CCTV is that one is not free in one’s own shop.” Furthermore, FO2 mentioned, “CCTV might negatively
affect [one’s] business [as] those who feel uncomfortable might avoid entering [one’s] premises”. Gill and Spriggs (2005) and Gill and Turbin (1999) assert this by stating that CCTV surveillance might drive customers away if they dislike the idea of being surveilled.

In continuing the search on the benefits and detriments of CCTV, question 13 asked whether the respondents had ever been targeted by criminals, and whether CCTV has helped in in some way. Clothes shop owners declared that sometimes they find merchandise tags that have been removed from the items in the changing rooms. Thus, they feel that CCTV is “not the ultimate solution” (CS1). They are of the opinion that staff must observe the clients as soon as they enter the establishment up until they leave. However, CCTV footage has helped CS3 when the owner identified a perpetrator by checking the recordings. JS1 admitted that before the installation of CCTV, he suffered from shoplifting but once he decided to refurbish his shop and install a CCTV system, he has never been subject to victimisation. JS3 and JS3 also claimed that they have never been targeted. Nevertheless, one may say that the owner of JS3 replied to this question with hesitation as if he did not want to reveal any details with regards to his vulnerabilities.

Once I identified a perpetrator by checking the recordings.  
(CS3)

CCTV was always very useful in identifying the perpetrators.  
(FSI1)

SS2 claimed that due the fact that his establishment has CCTV surveillance; criminals do not attempt to steal. Nowadays, “criminals are aware of everything especially CCTV” (SS2). FSI1 stated that CCTV was always a very useful tool in identifying the perpetrators. Moreover, FSI3 suffered a break-in but in his case, CCTV did not help since the perpetrators wore a balaclava. Coleman and McCahill (2010) support this by highlighting that a hooded jacket or a balaclava can be extremely effective to protect one’s identity against CCTV surveillance.
4.8 Crime displacement and diffusion of benefits

As discussed in chapter 2, situation crime prevention measures are closely linked to displacement of crime and diffusion of crime prevention benefits. Questions 11a, 11b, 12a and 12b aimed at eliciting the respondents' viewpoint in the matters. CS1 admitted that after installing their CCTV system they noticed a reduction in crime and so they feel that there is the possibility that crime has been displaced. Others have declared the following:

Once we installed the CCTV system we experienced a reduction in crime but this does not necessarily mean that it did not displace. So yes, displacement is possible. (CS1)

Crime decreased for sure especially by known criminals. Displacement is also very possible. After we have installed CCTV cameras, a particular well-known criminal who used to pass by very often was later caught stealing from Sliema. (JS1)

I think that determination is a strong factor when it comes to committing crime. Thus I would say that crime is displaced because who want to commit crime will do it anyhow. (JS3)

CS2 stated that “from [his] experience, [he] think[s] that crime was displaced since [he has] been in business for thirty-four years and [he has] always noticed that known offenders are still on the streets”. The reason for this could be that such known criminals “commit petty crime and they always tend to target vulnerable places and people” (CS2). It may be that when crime is reduced, crime would have been displaced (Tonry, 2011; Boba, 2005; Clarke & Eck, 2003). After all, “if someone wants to steal he will definitely target someone else” (CS3). Likewise, FSI1, FSI2 and FSI3 agreed on the fact that through CCTV surveillance crime is displaced because banks and exchange bureaus are difficult places to target so crime is displaced to other vulnerable places. Due to outdoor cameras, crime has also decreased from the surrounding areas since criminals know that for instance, “police come to see footages for cases of snatch and grab” (FSI 2).
With regards to the diffusion of benefits, FSI2, and CS3 disagree that this occurs because the latter believe that since nowadays, everyone has a CCTV system, they do not see why their system can affect crime in surrounding areas. However, JS2 thinks, “neighbouring shops will benefit as well from [his] CCTV system especially due to outdoor cameras” (JS2). However SS2 and SS3 have opposing opinions about diffusion of benefits.

That is why I believe that everyone should install a CCTV system. Through unity, crime can be decreased. Perhaps there should be a law that obliges shop owners to install such systems. (SS2)

Since my CCTV is focused on my business, it is only beneficial for my own purposes. Others are not affected positively but rather negatively because crime is displaced to less difficult targets. (SS3)

Nowadays it a well-known fact, that where there is a bank, there is also a high concentration of surveillance, thus, diffusion of benefits occur. Furthermore, F01 and F02 maintained that since they do not have outdoor CCTV, in their opinion their CCTV system does not lead to a diffusion of benefits. Finally, CoS1 believed that “a professional shoplifter will go to places that have less crime prevention measures and a less probability of apprehension”. Similarly, CoS2 observed that crime substantially decreased but he cannot exclude that it increased in other places. With regards to diffusion of benefits, CoS1 maintained that most probably it increased after CCTV system was installed. He pointed out that it mainly depends on the quality of the CCTV (CoS1). In contrast, CoS2 stated that next-door shops are more vulnerable to crime if one’s CCTV is set to surveil the interior of the shop. On the other hand, it could also be that if the owner of a shop identifies someone committing crime in [his] shop, he or she will be dissuaded from committing crime altogether (CoS2). In essence, diffusion of crime prevention benefits is the complete reverse of crime displacement (Clarke & Weisburd, 1994). The diffusion of crime prevention benefits arises when successfully eliminated crime problems
unintentionally eliminate other related criminal behaviour (Ratcliffe & Makkai, 2004; Clarke & Weisburd, 1994).

4.9 Privacy issues

When CCTV was first installed, it was a debatable issue since some raised the issue of privacy. Nowadays, CCTV is more accepted as a crime prevention measure. When answering questions 9a, 9b, 17a and 17b, shop owners and managers viewed the issue of how security opposed to privacy matters. Furthermore, I wanted to question whether participants agree with the installation of covert CCTV cameras within their establishments. All of the sixteen respondents feel that it is their right and responsibility to protect their business establishment and they stated:

I have the right to observe and protect my own property. I don’t think that CCTV in such a public place is an invasion of personal privacy. (JS1)

No, because if it is used for security reasons there should not be such issues. After all, I can be beneficial not only for me but also for the police officials to investigate crime. (JS3)

No, it is not. It is our right and our duty to protect our business. Through CCTV I can monitor everyone without bothering them. In this way they would feel more comfortable. (SS1)

No, as long as it is used to combat and prevent crime and not for personal investigative purposes I don’t think there are privacy issues once it is used for business purposes. (FSI3)

CS1 stated that as long CCTV surveillance “is not installed in changing rooms, there are no privacy issues involved”. CS2 and CS3 reiterated that within their establishments, privacy issues are not affected, but CS2 feels that if his business was a restaurant or a cafeteria, “CCTV might pose some issue of personal liberty”. However, this point was negated by CS2 where he stated that there are no privacy issues for the “honest citizen, yet, for the dishonest there may be some”.

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Still, CoS1 believed that “if CCTV is not used for security reasons it is purely misuse”. Likewise SS2 maintained that “it depends upon who gets to monitor CCTV; if the unit of surveillance is an independent unit that caters only for security, there should not be any issue of privacy”. Additionally, FSI1 and FSI2 put forward that once an individual is in a public place such as a bank, there are no issues about an invasion of privacy since this preventive measure is adopted for the safety of the staff and also for the safety of the bank’s clientele. This issue is tackled by Doyle and Bagaric (2005) where they state that there is no invasion of privacy if people are recorded in public spaces.

Conversely, when the questions moved on to explore the issue of covert CCTV cameras, thirteen of the participants stated that they do not support such an idea. Those against the implementation of covert CCTV cameras had two main reasons.

No, I think it is against the law and it would not be effective as much as the visible ones. (JS2)

It is illegal and when your business is a well-known business, believe me, you would not compromise it in such a way. (CoS1)

No, I would rely on normal, visible cameras. Sometimes one may want to install hidden cameras to observe the staff. This may be a good reason but I still believe that there are other ways to check on staff. (SS2)

No, since I already have normal CCTV cameras and they are properly signposted. I would not find the need of covert CCTV. (FSI3)

On the other hand, FSI1, JS1 and JS3 firmly agree with covert cameras. In fact, when they are asked whether they are in favour or not they stated:

Yes, why not? I would signpost my shop anyway but the cameras would be hidden to increase the chance of detection. Therefore, it would work better in terms of crime prevention. Perpetrators would not be able to identify any blind spots. (JS1)
If it is legal yes, given that we have a continuous monitoring system, covert cameras would help in detecting crime at an early stage. Thus, crime would be prevented. (FSI1)

JS3 was the only respondent who admitted to “have hidden miniature cameras at eye-level”. He strongly ascertained that “there are no issues with hidden cameras as long as one has overhead visible cameras”. He also maintained that even though “overhead cameras are the best for crime prevention, they are not the best for face recognition [...] hidden cameras provide me with better footage” (JS3). The Office of Information and Data Protection Commissioner (2013) states that footage from covert cameras may only be used through the involvement of the police.

4.10 CCTV: How can it be improved?

The concluding questions 15a, 15b, 16a and 16b asked whether the participants are happy with their current CCTV system and how they would improve it. They were also asked to state any other crime prevention measures that enhance the work done by CCTV surveillance. It transpires that thirteen participants are totally satisfied with their current CCTV system; three out of the sixteen would improve the quality and compatibility with other devices such as smart phones. Still, twelve of the respondents suggested a number of ways to improve their CCTV system:

CCTV and tagging are very important. One should also install fire and burglar alarm. (CS1)

It is more beneficial to have CCTV as well as adequate police foot patrol. (FSI2)

Everyone should have a CCTV system. The most important thing is not to install cheap stuff but to install professional systems. (JS3)

CCTV can lead someone to think that it is the ultimate solution, but it’s not. One shall not only rely on CCTV to deal with crime. There is a lot to be done. For example, I would install display monitors in the streets that display CCTV footages around
Valletta. This will show everyone that Valletta is covered with CCTV surveillance. (SS2)

CS1, CS2 and CS3 are content with their current system because it is reliable, it is effective in deterring and detecting crime and they rarely experiences any technical problems. However, they added that CCTV surveillance functions better if tagging, burglar and fire alarm systems, and human observation are employed. In addition, JS1 and JS2 admitted that their CCTV systems give them 'peace of mind' because it is reliable in preventing crime. Still, they suggested that CCTV surveillance should be used along with good locking displays, tagging and mirrors as to increase visibility. Glass doors are also promoted so as to restrict easy access to exit points. JS3 maintains that “quality is very important; in fact in the last two years, [he] has made improvements for three times because quality matters”. Hence, the latter believes that “CCTV works well as long as it is a professional system, regularly updated and maintained” (JS3). This is substantiated by Fennelly (2012), stating that every CCTV system should be “tested and maintained to optimise system performance and allow for some expansion” (p. 18), since one’s requirements might change and the system reaches the end of its operational lifetime.

SS2 stated that his system is relatively new and that it is very similar to the ones installed by banks. He also maintained that for CCTV systems to be effective, such systems should be replaced or upgraded every two or three years so as to keep up with the continuous technological advancements, such as that of Pan, Tilt and Zoom (PTZ) cameras. Similarly, SS3 admitted that he intends to improve his CCTV camera’s positioning as to eliminate known blind spots. SS2 substantiated this issue.

FSI1 and FSI2 suggested quality CCTV cameras for better chance of apprehension. FSI1 recommended security personnel, however he stated that this could be highly expensive. This limitation can be addressed by “frequent police foot patrol” (FSI2). She added that a bulletproof glass door would “act as a barrier which security personnel can control because CCTV is not enough; it cannot prevent crime on its
own” (FSI2). FSI3 believed that bulletproof glass and attack switch prompters are the most essential crime prevention measures that can complement CCTV surveillance. All in all, CS1 summed up that CCTV surveillance is highly effective so much so that they “used to have two cases of shoplifting every month. Now [they] are having no cases at all”. Likewise, SS2 firmly believed that “CCTV is a must. Anything else is a plus”.

4.11 Conclusion

In essence, the results show that some areas in Valletta are prone to crime and this increases the demand and use of situational crime prevention measures. However, CCTV is not well exploited in the capital city of Malta. CCTV is an efficient deterrent that reduces both crime and anti-social behaviour, and works better in conjunction with other crime prevention measures, such as: tagging, human observation, bulletproof glass, and fire and burglar alarm systems. Though CCTV recordings facilitate detection, it is more difficult to deter potential offenders. Consistent CCTV monitoring will result in better deterrence, but requires a concerted effort. Besides that, it is very time consuming. The subsequent chapter suggests practical recommendations for shop owners, business managers and policy makers. It also proposes recommendations to improve research in this field.
Chapter 5

Conclusions and recommendations
5.1 Introduction

The results show that the use of CCTV surveillance within the ‘Commercial Zone of Valletta’ (CZV) enables shop owners and business managers to prevent and detect crime within their business establishments. However, CCTV surveillance has a number of limitations that need to be addressed. This last chapter intends to review the targeted aims and objectives of this research study and suggest a number of recommendations that strengthen the use and effectiveness of CCTV surveillance in business establishments within the CZV. The last part of this chapter gives a set of recommendations for future research on this subject.

5.2 Conclusions

This research study, titled “Prevention is better than cure. Is CCTV effective in enhancing crime prevention in Valletta”, aimed to find out whether CCTV is effective in enhancing crime prevention in the CZV and its outskirts. The objective of this study was that to explore issues such as: fear of crime, invasion of privacy, displacement of crime, diffusion of crime prevention benefits and whether CCTV is an effective on its own or in combination with other crime prevention measures. This research study offers several strengths, such as originality and usefulness to the local context. In addition, this research study can help any potential shop owners that intend to set up a new business in Valletta.

The obtained results show that CCTV surveillance is in fact an essential crime prevention tool that every shop and business establishment should acquire. If such crime prevention measure is well planned, continuously updated and integrated with other crime prevention measures, which are all properly maintained and upgraded, crime prevention success will prevail. These conclusions form the foundation for a series of practical recommendations on the use of CCTV and other crime prevention measures. Such recommendations would help entrepreneurs in selecting the most appropriate crime prevention measures according to their
business sector. They also suggest ways how to enhance criminological studies in the field of crime prevention and security measures.

5.3 Recommendations for the use of CCTV

CCTV cameras in business establishments can only be effective if they are installed in a strategic manner. There are a number of recommendations that have to be considered. Firstly, CCTV cameras should be installed in strategic places as to provide “remote eyes” for shop owners and business managers where they can monitor sensitive areas within their establishments (Kruegle, 2011). For instance, CCTV cameras covering cash points will not only deter and detect crime, but it will also monitor the goods that are being sold, the cash takings, the location where the money is placed and what change is actually being given. In turn, such crime prevention measure would help in regulating both the customers and the employees. Certainly, one has to install enough cameras that are able to cover the whole establishment without leaving any blind spots. Also, CCTV cameras should be of superior quality so as to provide stakeholders with quality footage (Kruegle, 2011).

Secondly, CCTV surveillance should always be equipped with the necessary data storage equipment as to facilitate post-incident analysis (Gill & Spriggs, 2005). Still, “a retention period of seven days is considered to be a sufficient and reasonable time for the keeping of CCTV camera recordings” (Office of the Information and Data Protection Commissioner, 2013). Thus, it is recommended that after the time lapse of this retention period, video images are either deleted or overwritten by new video images. Even if the law provides for exceptions in cases where CCTV systems are installed within the limits of private property, legitimate rights and interests of third parties should always be respected (Office of the Information and Data Protection Commissioner, 2013).
The third recommendation points out that overt CCTV cameras discourage individuals from committing crime (Kruegle, 2007). However, it is recommended that large establishments should have overt optical dome cameras so that people within such establishments would not be aware of the direction where the cameras are focusing. Shop owners and managers should be trained as to make full use of installed CCTV systems. They should also be able to exercise ‘remote monitoring’ when they are not on site. It should also be ascertained that systems are continuously updated as to keep up with emerging technologies that are designed to tackle new threats and priorities. Some owners may opt to use covert CCTV cameras, however “no person shall use covert cameras and assume law enforcement powers in an endeavour to uncover an illicit activity, such as theft or pilfering, without involving the Police” (Office of the Information and Data Protection Commissioner, 2013). Thus, CCTV surveillance should always be accompanied with other crime prevention measures so as to minimise opportunity of crime and maximise the possibility of deterrence and detection.

5.4 Recommendations for other crime prevention measures

In retail establishments, ideally CCTV systems are accompanied by other crime prevention measures such as electronic article surveillance (EAS). EAS compliments CCTV surveillance because it detects any tags on unsold items when passed through the exit points (DiLonardo, 2011). Another recommendation is that to make use of mechanical prevention measures such as heavy-duty locks, doors, grills and shutter doors for a more comprehensive locking system (Sennewald & Chistman, 2011). In addition, it is recommended that shop owners use locked cabinets and display cases so as to prevent shoplifting. For a locking system to be effective, one has to match the type of locks with the intended purpose. As stated by Sennewald and Christman (2011), a particular lock may be excellent for one purpose but unfit for another. Shop owners should maintain and upgrade their locking systems since technological advancements are continuously improving their design and reliability.
Increased guardianship through police foot patrol and human observation are other effective crime prevention measures. There is a relationship between foot patrol and a reduction in crime (Mackey & Levan, 2011). Consequently, it is recommended that security guards are stationed at the exit points of establishments and that there are more police on patrol within commercial zones. Business owners need to know about crime prevention strategies and become familiar with prevention tactics to be able to protect their businesses. This awareness can be also achieved when meetings are held between business owners, managers, police officers and security personnel. The police can provide shop owners with advice, feedback and tactics that help in preventing burglaries, shoplifting and credit card fraud (Palmiotto, 2000). Cooperation and communication between the police officers who are crime prevention specialists, and business people lead to a reduction in crime (Palmiotto, 2000).

Fire and burglar alarm systems provide protection against fire and intrusion. Intruder alarm systems are effective as they are highly sensitive and can easily identify break-ins and prompt for the necessary back-up personnel such as police officers (Fennelly, 2012). Silent panic alarms also play an important role during robberies as this crime prevention measure gives peace of mind to the staff working within an establishment, because they know that they can easily prompt police assistance with a touch of a button. It is also recommended that bulletproof glass is utilised in any business with “cash on hand” so as to provide employees with a secure work environment (Fennelly, 2012).

5.5 Recommendations for future research

After investigating the effective use of CCTV surveillance within the CZV, it is recommended that similar studies are conducted in other commercial zones in Malta such as in St. Julians, Sliema, Paola, Ħamrun, Birkirkara, Buġibba and Victoria Gozo. This would highlight localised problems with criminal behaviour and explore whether CCTV and other crime prevention measures are being utilised in an
effective way in other places than Valletta. Further research on this topic might also lead to policies related to the use of CCTV in Malta. Such studies might propose policies that promote the use of more CCTV cameras in public places such as public gardens, squares, playgrounds and other open spaces. In addition, this study can be conducted in residential areas as to see the effectiveness of CCTV surveillance for domestic use. One could compare the urbanised areas such as the central business district with the outskirts of a village. Studying the effectiveness of CCTV surveillance in different context would show where CCTV is more effective and which other situational crime prevention measures compliment best with its use.
References


Appendix A

Information Letters and Consent Forms
Appendix 1 – Information Letter – English Version

Prevention is Better than Cure: Is CCTV Effective in Enhancing Crime Prevention in Valletta?

Information Letter

Dear Participant,

I am Matthew Vella and I am currently reading for a B.A. (Hons.) Criminology Degree. As part of my course requirements, I am conducting a research entitled, ‘Prevention is Better than Cure: Is CCTV Effective in Enhancing Crime Prevention in Valletta?’ The aim of this study is to look at the past crime situation in Valletta and investigate whether CCTV is effectiveness to prevent crime and anti-social behaviour. Moreover, it will strive to propose methods that could be implemented to prevent crime from happening. In order to do this, I need to conduct some interviews with shop owners who will be sharing their experiences with regards to the problem of crime and anti-social behaviour.

I am inviting you to take part in this study. Your participation will be appreciated. If you agree to participate, you will be expected to take part in an interview with myself with regards to some experiences you might want to share. The interview will take approximately 30 minutes of your time and this can be carried out in a place that is most comfortable for you. I will need access to your telephone number in order to contact you to arrange for our meeting. I will be the only person having access to this telephone number. Once the study is completed, the telephone numbers will be discarded. Anonymity and confidentiality will be respected at all times.

You are free to withdraw from the study at any time during the research process. This will in no way affect you.

Thank You

______________________________

Matthew Vella
Appendix 1 – Information Letter – Maltese Version

*Prevention is Better than Cure: Is CCTV Effective in Enhancing Crime Prevention in Valletta?*

**Ittra ta’ Informazzjoni**

Ghażiż Partecipant/a,


Inti liberu/a li twaqqaf il-partecipazzjoni tieghek meta jidher lilek minghajr ma jithallew ebda’ effetti negattivi fuqek.

Grazzi

_________________________________

Matthew Vella
Appendix 2 – Consent Form – English Version

Prevention is Better than Cure: Is CCTV Effective in Enhancing Crime Prevention in Valletta?

Consent Form

I, the undersigned, give my consent to take part in this study conducted by Matthew Vella. I have been informed both verbally and in writing about the aims of this research study. I understand that I will need to take part in an interview with regards to the effectiveness of CCTV in enhancing crime prevention in Valletta. I understand that I am free to stop participating at any time I deem fit.

Participant: ____________________________
Signature: ____________________________ Date: ____________________________

Tutor: Mr Trevor Calafato
Signature: ____________________________ Date: ____________________________

Researcher: Matthew Vella
Signature: ____________________________ Date: ____________________________
Prevention is Better than Cure: Is CCTV Effective in Enhancing Crime Prevention in Valletta?

Formula ta’ Kunsens


Parteċipant: ______________________________
Firma: ______________________________
Data: ______________________________

 Tutor: Mr Trevor Calafato
Firma: ______________________________
Data: ______________________________

Riċerkatur: Matthew Vella
Firma: ______________________________
Data: ______________________________
Appendix B

Interview Templates
Appendix 1 - Interview Guide – English Version

1. Gender / Age

2. a What is your opinion concerning crime in Valletta?
2. b [What types of crime?]

3. Could you mention which parts of Valletta are more prone to crime?
[Mention street names]

4. a What types of security measures are employed in this work environment?

5. a Does CCTV make you feel safer?
5. b Why and how?
5. c Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree ☐

6. a How do you think CCTV is effective? [In detecting or in deterring crime?]

7. a In your opinion, how much did CCTV surveillance within your establishment reduce the actual risk of being targeted by criminals?
7. b Never ☐ Rarely ☐ Sometimes ☐ Most of the time ☐ Always ☐

8. a How would you describe the overall use of CCTV surveillance in Valletta?
8. b [Is there enough use of CCTV cameras?]
8. c Very Poor ☐ Poor ☐ Fair ☐ Good ☐ Very Good ☐

9. a Do you think that CCTV surveillance is an invasion of personal privacy?
9. b Why?

10. a What are the benefits of CCTV surveillance?
10. b What are the detriments of CCTV surveillance?
10. c [Does security benefits outweigh privacy issues?]

11. a What do you think happened to the crime and criminals after you installed CCTV system?
11. b [Decreased or displaced?]
12. a How do you think crime in surrounding areas is affected by your CCTV?
12. b [Diffusion of benefits: Did crime reduce or increase?]

13. a Have your business establishment ever been targeted by criminals?
13. b How did CCTV help in detecting crimes in your shop?

14. How often do you check your CCTV monitor and its recordings during one day at work?

15. a Are you happy with your current CCTV system? Why?
15. b How would you improve it?
   [Increase the number of CCTV cameras? Or quality?]

16. a In your opinion, are there more effective methods to deal with crime rather than the implementation of CCTV surveillance systems that a shop owner should consider?
16. b [To be effective, does CCTV need other crime prevention measures?]

17. a Would you consider the implementation of covert CCTV cameras?
17. b What are your thoughts on this?

18. What advice would you give to a person who has just opened a shop in Valletta with respect to crime prevention?

19. We are now at the end of the interview. Is there anything that we did not cover that you would like to add?

   Thank you for your participation.
Appendix 2 – Interview Guide – Maltese Version

1. Sess / Età

2. a X’inhi l-opinjoni tieghek dwar il-kriminalità fil-Belt Valletta?
2. b [X’tip ta’ kriminalità?]

3. Tista’ ssemmi jew tindika liema partijiet tal-Belt Valletta huma l-aktar suxxettibli ghall-kriminalità? [Semmi l-ismijiet tat-toroq]

4. a X’tip ta’ miżuri ta’ sigurtà huma implimentati f’dan l-istabbiliment?

5. a Is-CCTV iġġieghlek thossok aktar sikur?
5. b Ghaliex u kif?
5. c Ma Naqbilx Hafna ☐ Ma Naqbilx ☐ Newtrali ☐ Naqbel ☐ Naqbel Hafna ☐

6. a Kif tahseb li s-CCTV hija effettiva?
6. b [Din tidentifika jew tiskoraġġixxi l-kriminalità?]

7. a Fl-opinjoni tieghek, is-sorveljanza bis-CCTV fi ħdan l-istabbiliment tieghek, kemm tahseb li naqset ir-riskju attwal li jkun attakat mil-kriminali?
7. b Qatt ☐ Rarament ☐ Kultant ☐ Hafna Drabi ☐ Dejjem ☐

8. a Kif tiddeskrivi l-użu tas-CCTV fil-Belt Valletta b’mod ġenerali?
8. b [Hemm biżżejjed użu ta CCTV?]
8. c Hażin Hafna ☐ Hażin ☐ Msomma ☐ Tajjeb ☐ Tajjeb Hafna ☐

9. a Tahseb li s-sorveljanza bis-CCTV hija invażjoni ta’ privatezza personali?
9. b Ghaliex?

10. a X’inhuma l-benefiċċji ta’ sorveljanza bis-CCTV?
10. b X’inhuwa d-deteriment ta’ sorveljanza bis-CCTV?
10. c Il-benefiċċji tas-sigurtà jegħlbu l-kwistjonijiet ta’ privatezza?

11. a X’tahseb li ġara mill-kriminalità u l-kriminali wara li installajt is-CCTV?
11. b  [Tnaqset jew Spostat?]

12. a  Kif tahseb li l-kriminalità fil-madwar ġiet affettwata mis-CCTV?
12. b  [Diffużjoni ta’ benefiċċji: Il-kriminalità tnaqset jew żiedet?]

13. a  L-istabbiliment tiegħek ġieli ġie immirat mill-kriminali?
13. b  Kif ghenet is-CCTV fl-identifikazzjoni tar-reati fl-istabbiliment tiegħek?

14.  Kemm-il darba tiċċekkja s-CCTV tiegħek u r-recordings tagħha matul ġurnata waħda ta’ xogħol?

15. a  Inti kuntent/a bis-sistema attwali tiegħek? Ghaliex?
15. b  Kif tahseb li tista’ ittejjeb dan?
   [Iżżid l-ghadd ta’ CCTV? Jew kwalità?]

16. a  Fl-opinjoni tiegħek, hemm metodi aktar effettivi mill-implimentazzjoni tas-CCTV biex jikkumbattu l-kriminalità li sid ta’ ħanut ghandu jikkunsidra?
16. b  [Biex tkun effettiva, CCTV tehtieġ miziżuri ohra ta’ prevenzjoni?]

17. a  Tikkunsidra l-implimentazzjoni ta’ CCTV moħbija?
17. b  X’inhuma l-ħsibijiet tiegħek dwar dan?
17. c  Ghaliex?

18.  X’pariri taghti lil persuna li għadha kemm fethet ħanut fil-belt Valletta fir-rigward tal-prevenzjoni tal-kriminalità?

19.  Wasalna fl-ahhar ta’ din l-intervista. Hemm xi ħaġa li ma koprejniex u li inti tixtieq iżżid?

   Grazzi ghal-partecipazzjoni tiegħek.
Appendix C

Statistics
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<th>Street Name</th>
<th>Arson</th>
<th>Attempted Offences</th>
<th>Bodily Harm</th>
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Appendix 1 – Valletta Reported Offences 2012
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(Adapted from: Formosa, 2013)