



Role of CCTV Camera Security Project on the Sustainability of Tourism Industry in Zanzibar: A Case of Old Stone Town, Urban West Region, Zanzibar

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Author's contribution

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ABSTRACT

This study reveals the less known role of CCTV camera security project on the sustainability of tourism industry in Zanzibar. This study attempted to answer the following three research questions: firstly what is the level of awareness of CCTV camera security project practices? secondly what are the impacts of CCTV camera security project on tourism industry? and thirdly what are the factors influencing the effectiveness of CCTV camera security project? The study applied a descriptive case study method of cross-sectional research design. Various data collection methods including observation, interviews and questionnaire survey were used to collect information from 120 respondents from the study area. The analysis of the collected qualitative and quantitative data was done through content analysis and descriptive statistics respectively. Based on the analyzed data, the findings revealed 33% of all 120 respondents were very much aware of CCTV camera security project practices in Zanzibar. Also the study revealed the presence of six major common types of crimes in the study area namely stealing, robbery, vehicles disorders, theft by servants, breaking

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and assault. The study findings further revealed the main impacts of CCTV camera security project on tourism industry including ensuring secured business environment, crime prevention, decline in private security costs and increase opening hours for business. The study finally concludes CCTV security project being of high usefulness in ensuring secured business environment. Finally the study recommends the use of public-private partnership model to enhance access and adoption of CCTV security cameras in many areas of Zanzibar.

Keywords: CCTV camera security project; tourism industry; Old Stone Town.

1. INTRODUCTION

Information and Communication Technology (ICT) is a widely defined term that has several meanings across different sectors supporting mankind. Though, essentially, it is used as an umbrella term to refer to the use of communication devices such as radio and cellular devices, satellite devices and channels, computers, cameras, amongst others and utilities (programs) to manage information (acquisition, dissemination, processing, storage and retrieval). Bello and Adeyinka [1] opined that, one of the most important features of the digital age is the use of new communications technologies to build digital civilization citizenships. The role of ICT in tackling crime in these modern times cannot be over-emphasized, going by the modern tactics deployed by the western world in tackling crimes. Thus, ICT has consistently been proven to be a powerful double-edged sword with a capability for both overwhelming good and devastating evils in the societies, all depending on the skills and abilities of the user(s) in harnessing its potentials [2,3].

According to Fletcher [4], Closed Circuit Television (CCTV) surveillance has become a prevalent crime prevention tool in the last three decades. 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 [5,6,7]. Among the latest prevailing wave of public safety tools in both developing and developed countries is the use of public surveillance systems, often referred to as Closed-Circuit Television (CCTV). CCTV surveillance cameras serve many functions and are widely used in both public and private settings which are mainly and primarily useful for prevention of personal and property crime [3]. While public surveillance systems including CCTV systems are widely employed in the business sector to improve security, they are also useful for controlling crimes in the public areas.

According to Ekblom [8], crime is an act or omission which constitutes an offence and is prohibited by laws of the land. On the other hand the term crime is well defined in [2] by deriving its meaning from the Latin root *crimen* which means charge, indictment, accusation, crime, fault or offence, the term was used in the mid 13th century to refer sinfulness and from the late 14th century the term crime started to be used to refer the offence which is punishable by the laws of the land. The use of CCTV systems as one of the public surveillance systems might also yield a secondary impact, serving to increase legitimate users' perceptions of safety and thus their presence in public areas, which in turn may increase guardianship, improve police-community partnerships and reduce the risk of crime and its consequences [3,9].

Zanzibar has been home to humans since the beginning of the later Stone Age, a notion supported by numerous bodies of evidence including ancient scriptures. It is believed that the Greco-Roman text, the *Periplus of the Erythraean Sea*, written between the 1st and 3rd centuries BC, mentioned the island of *Menuthias* which is probably the *Unguja* of today as it is revealed by many archaeologists. Autonomous African communities have existed in Zanzibar since ancient times. The first settlements of Zanzibar are believed to have been established by immigrants from various areas of the African Mainland [10].

Nevertheless the geographical and strategic location of Zanzibar has been widely opined to attract many visitors from many foreign nations, some of whom established their political bases in Zanzibar. Henceforth, the historical print of Zanzibar draws mainly from African settlers, Persians traders and invasion by foreign nations. Persians and Arabs are said to be the first foreigners who settled in Zanzibar prior to the coming of Sultan of Oman. Zanzibar has moved from cloves dependency to tourism during the mid-80s following the introduction of tourism industry in the islands. The tourism sector in

Zanzibar had been in existence for a long time but was not regarded as a key factor to the economy of Zanzibar [11]. It was not until the mid-eighties when tourism gained impetus. The main changes in the tourism sector in Zanzibar were facilitated by the enactment of Promotion of Tourism Act, 1991. This Act was made to promote and strengthen tourism and to provide for the procedures for better carrying out business in tourism and matters connected with tourism [12].

The recently adopted CCTV surveillance project in the Old Stone Town in the Urban West region has been widely reported to enhance community policing in Zanzibar. The matter of safety and security in the tourism industry and all forms of business operations has widely been opined in the [13,10], hence calling upon the engagement of all proactive crime prevention strategies. Subsequently, the adoption of CCTV project may benefit from this technology because public surveillance can enhance problem solving strategies, aid in arrests and investigations and ultimately increase offenders' perceptions that they will be both caught and prosecuted, hence increasing transparency in the execution of justice systems [10].

Tourism industry is currently promoted as the major sector of Zanzibar's economy as it generates high level of foreign exchange earnings, employment opportunities, stimulates local economy, supports other sectors such as agriculture, small scale handcraft industry and above all, a way of economic diversification, call for the vibrant safety and security systems [11,13]. Tourism is a fast growing sector in the Zanzibar economy contributing around 80% of foreign exchange earnings and about 27% of the Growth Domestic Product (GDP). Employment generated through the tourism sector is estimated to reach 12,500 out of whom 8,600 people are employed in hotels, lodges and guest houses sub-sector alone. The rest are employed in other tourist investments such as tourist shops and tour operators [13]. The CCTV project came in to sort out the problem of unreliable security systems in Zanzibar resulting to the responsibility of the government to ensure effective public safety interventions for curbing crime and improve the livability and economic well-being of their communities.

The fact that CCTV has recently undoubtedly become a highly significant security measure in crime prevention and control [14,7], plenty of

literatures illustrates the importance of CCTV surveillance camera in combating all forms of misconduct in the business operations, that makes it possible for shop owners, business managers and the police to deter and respond to incidents of crime alerted by such technology [14,4,7,15,16,17]. Since one of major functions of CCTV surveillance including storing images of incidents of crime and anti-social behaviour as to facilitate post-incident analysis during investigations, they are useful in protecting people from critical and threatening situations, building on their strengths [14].

Despite the widely known uses, significances and operational mechanisms of CCTV cameras in the public surveillance and public security as one of crime prevention strategies [14,4,7,9,3,15], less remains to be known on the roles of CCTV camera security project in the course of enhancing the sustainability of tourism industry in Zanzibar. The widely reported usefulness of CCTV security project stands as the panacea for all security related problems in Old Stone Town, Zanzibar. The high prevalence of tourism business activities in this area has made the CCTV camera security project be easily linked to the development of tourism industry in Zanzibar, since the existence of high level of crimes has been widely opined to result to intensive threat to the touristic industry in Zanzibar [18]. Taking the Old Stone Town tourism zone as case-study, this study among other things attempted to reveal the less known role of CCTV security project on the sustainability of tourism industry in Zanzibar. This study was attempted to specifically reveal answers for the following three research questions namely:

- i. What is the level of awareness of CCTV camera security project practices in Zanzibar?
- ii. What is the impact of CCTV camera security project on tourism industry in Zanzibar?
- iii. What are the factors influencing the effectiveness of CCTV camera security project in Zanzibar?

2. RESEARCH METHODOLOGY

2.1 Description of the Study Area and Target Population

The study was conducted at Old Stone Town, Urban West Region, Zanzibar one of the highly foreign tourists populated area in Unguja,

Zanzibar. The selected area was sought suitable for the study since it is the place where many tourists reside and make movement due to her historical architectures and various touristic features endowed in the area. On the other hand, the Old Stone Town area was easily accessible by a researcher due to limited time, cost for the data collection exercise hence the researcher was able to accomplish the data collection exercise on time. The study took place in four randomly selected streets in the Old Stone Town area. The four randomly selected study streets were meant to bring out the target population sampling units of analysis including all residents, business stakeholders, government and community leaders, community members, tourism business community leaders and security officers. The four study streets were randomly selected based on the high prevalence of CCTV camera security project.

2.2 Study Design

This study used a descriptive case study research design. Under this design both quantitative and qualitative approaches were applied to explore a real-life, contemporary bounded system or a case(s) over time, through detailed, in-depth data collection involving multiple sources of information in relation to the latest CCTV camera security project practices in the study area [18]. On the other hand case study methodology maintains deep connections to core values and intentions as it is widely envisaged to be "particularistic, descriptive and heuristic" such that data on the variables of interest were collected more or less simultaneously, examined once and the relationship between variables determined [19,20]. The chosen study design is advantageous as it was compatible to the nature of the study on hand, available time and resources.

2.3 Sampling Procedures and Sample Size of the Study

In the course of obtaining the reliable scientifically justifiable number of respondents to participate in this study as well as attaining heterogeneity of the views, the sample size determination formula adopted from [21], was employed to yield the reasonable number of respondents to participate in this present study. The 5% of all of the total number of the participants from the selected cohorts of touristic related businesses from study area was treated

as the total sample size. On the other hand the formula in the [21], recommended a sampling intensity of 5% of total number of sampling units from the study site. [22] further posits that the study sample size is considered adequate and able to fit statistical analyses if and only if it entails the reasonable proportion of the units from the sampling frame but being not less than 30 units per the selected study cohorts. For the purpose of this study, a sampling intensity of 5% was adopted as presented in the Table 1.

The sample size of this study was equivalent to the total of 120 respondents meaning that 30 respondents were randomly sampled from each of the four streets as presented in the Table 1. Under the randomly selected streets from the Old Stone Town area where the tourism business is highly practiced, the total of 120 respondents were randomly sampled to represent the units of interest which were identified in the target population which were drawn from the four selected streets from the Old Stone Town area respectively. The study sample size was envisaged to yield data and all variables of interest for the study. These respondents were selected randomly in order to get their views. Study used the sample size comprised of both male and female respondents, of who were picked from the touristic business shops from the four randomly selected streets from the Old Stone Town area in Urban West Region in Zanzibar.

2.4 Data Collection Techniques

The study employed diverse data collection techniques including questionnaires and two forms of interviews namely focus group discussions and key informant interviews during the process of collecting information from the study respondents. Questionnaires technique was used to gather data from all of 120 respondents who were mainly touristic-products-related businesses stakeholders from the four randomly selected streets from the Old Stone Town area in Urban West Region in Zanzibar namely Malindi, Vuga, Forodhani and Darajani. Most of the respondents were tourist products shop owners in the designated study area. On the other hand interview technique including key informants interviews and focus group discussions were used for the key informants including community and government leaders including Shehas, Community Development Officers and Security Officers including police and investigators from the police stations around

Table 1. Distribution of the number of respondents who participated in this study

Old Stone Town streets where respondents were drawn	5% of Total number of touristic shops	Total
Malindi	27	30
Forodhani	52	30
Mkunazini	38	30
Darajani	42	30
Total		120

Old Stone Town area in Urban West Region in Zanzibar namely Malindi Police Station and Madema Police Station. Both of qualitative and quantitative approaches were employed in this study for the purpose of having detailed information and ensuring triangulation and complementarily. Lastly the reviews on various literatures were made to supplement both collected primary and secondary data.

2.5 Data Analysis Procedures

Microsoft Excel and Statistical Package for Social Sciences (SPSS 20.0) computer programs were employed for data analysis. Only descriptive statistical analyses were employed to reveal the aspects relating to the roles played by the CCTV camera security project on the sustainability of Tourism industry in Zanzibar from the collected data. Analysis of data used both quantitative and qualitative data analysis approaches including simple percentages, descriptive analysis and explanations to establish relationships of the variables employed in the study. Simple codification was employed to extract relationships and associations among the population variables of the study. The simple qualitative classifications of data, distribution and the measures of dispersions were used in measure of the impact of the CCTV camera security project on the sustainability of Tourism industry in Zanzibar. Data analysis for each objective was rigorously performed, results presented and discussed in the sub-sequent sections hereunder.

3. RESULTS AND DISCUSSION

3.1 Socio-economic Characteristics of Respondents

Respondents’ characteristics were of high importance in providing a snapshot on the background of the respondents and their suitability for this inquiry namely; bring into

understanding the roles of CCTV camera security project on the sustainability of Tourism industry in Zanzibar. In the course of understanding the key parameters involved in this study, an attempt of firstly shedding light on the relevant social-economic characteristics of the 120 study respondents who were involved in this study was carried out. The respondents’ characteristics include age, sex, education and occupation as they are summarized in the subsequent sections below.

3.1.1 Age of respondents

The respondents involved in this study were of different ages as presented in the Table 2. The respondents involved in the study were of different ages. 37.5% of the respondents participated in this study villages were aged between 20 and 41 years of age, 60.8 % of all of the study respondents were aged between 41 and 60 years and 1.7% of all of the study respondents were aged above 60 years old. The fact that most (60.8 %) of all of the study respondents were aged between 41 and 60 years and 37.5% of all of the study respondents were aged between 20 and 41 years which is considered as the productive or active working age, it implies availability of the workforce in various economic, business and trade related activities in the tourism sector in Zanzibar. The revealed study finding concurs with [23] assertion that age is one of socio-economic characteristics playing a significant role in influencing sustainability of any economic activities. These study findings further concur with [23] that the population aged 15 to 64 years entails a working age population hence the study respondents were the proper group of the business community in the Old Stone Town Area in Zanzibar. Also this study finding suggests the availability of supportive workforce for effective and sustainable adaptation and adoption of sustainable tourism businesses practices in the Old Stone Town Area in Zanzibar.

Table 2. Socio-economic characteristics of respondents (n=120)

Characteristics	Distribution	n	%
Age	20-41 years	45	37.5
	41-60 years	73	60.8
	61 years and above	2	1.7
Sex	Male	72	60
	Female	48	40
Education levels	No formal schooling	37	30.8
	Primary education	50	41.7
	Secondary education	32	26.7
	Tertiary education	1	0.8
Main occupations	Government Related	22	18%
	Banking	8	7%
	Shopping	48	40%
	Accommodation	30	25%
	Forex Exchange	12	10%

Source: Study findings, (2019)

3.1.2 Sex of respondents

The study sample comprised of both male and female respondents. Results presented in Table 2 showed that, 60% of all respondents interviewed in the questionnaire survey were male respondents while the female respondents were 40% of all respondents interviewed during the questionnaire survey process. The study findings presented in the Table 2 imply prevalence of patriarchy kinship in the business operations which also mostly reflect Arabic traditions setting where majority of the main decision makers in various levels including households, business units and administrative institutions follow patriarchy kinship whereby men head almost everything. Furthermore the study findings of 60% and 40% of the total number of respondents are the male and female headed households respectively suggests the presence of encouraging level of men-women participation in various business operations. The study findings of 60% and 40% of total male and female respectively in the study area is widely supported by [24,23,25] as they are quite revealing and depicting usefulness of sex of a business actor towards adaptation of more efficient business model including application of CCTV in ensuring safety around their shops and nearby infrastructures in the Old Stone Town Area in Zanzibar.

3.1.3 Respondents' education levels

Education level of individuals within a particular community is an indicator of the level of community's human capital and ones' ability of adopting new technologies. Study findings in

Table 2 showed that the education levels of study respondents who were 30.8% with no formal schooling, 41.7% had acquired primary school education, 26.7% had acquired secondary school education while few (0.8%) of all respondents interviewed during the questionnaire survey process had acquired tertiary education. The revealed high number of people who had no formal schooling (30.8%) was due to the fact that the number included people with adult education in the study area which entails members of population who had indigenous knowledge and religious knowledge which equips them with basic life skills including the adoption of modern security systems in their business operations. On the other hand, according to [26,27,28], poverty level strongly relates to the education levels of the head of an individual. This implies that the more an individual lacks access to basic education, the higher the possibility he or she becomes poor since education is very important for acquisition of relevant information on skills related to livelihood strategies likewise to engagement to modern tourism practices. Furthermore, the study findings concurs with what was reported by [29,25] that higher level of education puts individual in a better understanding of existing livelihood challenges, better decision making ability to choose better alternative solutions to existing problems and undertake improved and modern business operational model and strategies.

3.1.4 Respondents' main occupations

The main occupations of the respondents who were involved in this study are classified into main four forms of occupations government

related occupations who were involved 22(18%) of all of the study respondents, banking related occupations who were 8(7%) of all of the study respondents, shopping occupation including restaurants, curio and gift shops who were 48(40%), accommodation occupation including lodges and hotels were 30(25%) and lastly forex exchange occupation who were 12(10%).

The occupations of the study respondents presented in the Fig. 1 posit the existence of many actors in the area who serve the role of shopping in the various scope of shopping including restaurants, gift shops, curio shops and small groceries in the Old Stone Town streets. On the other hand, the 40% of those who were widely engaged in the shopping occupation, 25% were engaged in accommodation business including lodges and hotel services. The respondents occupations captured above were quite useful for providing insights for the study. The study findings were in line with [30,31] assertion that for the respondents to be able to articulate the usefulness of the Closed circuit television (CCTV) cameras they should be quite familiar with urban architecture and business operations in contexts organised around cultures of consumption and risk. However notwithstanding the complex historical and cultural factors that explicate their rise to prominence the cameras installed in the special business zones principally act to symbolise a watching authority and to cast a gaze upon the streets in a bid to deter and detect disorderly behavior in the various business operations including the Old Stone Town of Zanzibar.

3.2 The Level of Awareness of CCTV Camera Security Project Practices in Zanzibar

This study strove to reveal the level of awareness of CCTV camera security project practices in Zanzibar. Following the survey of 120 study respondents who were involved in the questionnaire survey, this study sought to reveal the prevailing level of awareness of CCTV camera security project practices in Zanzibar and the findings are presented in the following subsequent section.

3.2.1 The level of awareness of CCTV camera security project practices in Zanzibar

In the course of understanding the level of awareness of CCTV camera security project practices in Zanzibar, various respondents were consulted in the study area. Of all of 120 respondents from the study area, 33% of all respondents who were government employees were very much aware of CCTV camera security project practices in Zanzibar. The findings presented in the figure 2 reflects high level of understanding and awareness due to the fact that over the last two decades, [32] posits the high prevalence of violent crimes such as armed robbery, murder, mugging, carjacking, housebreaking, physical and sexual assault and other forms of violent crime have been on the increase in the highly touristic cities including Zanzibar. The presence of many government officers, shopping attendants and many other

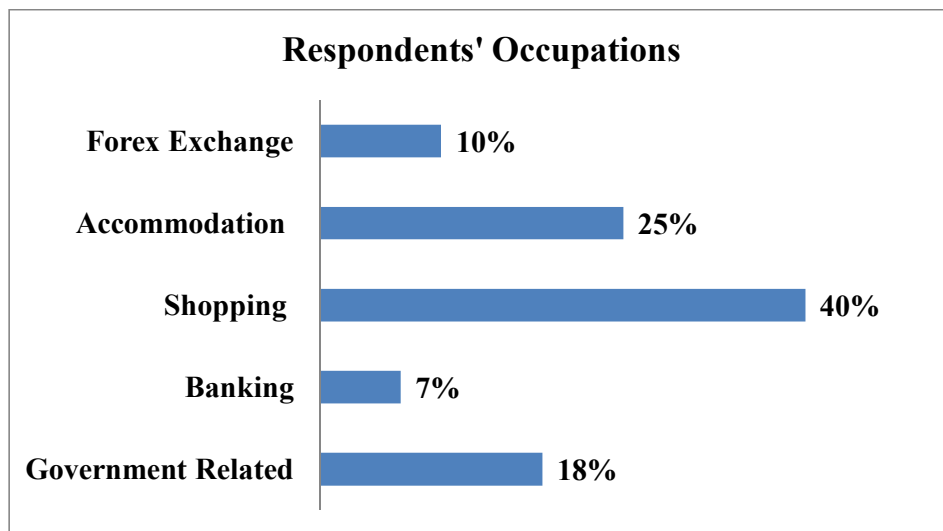


Fig. 1. Study respondents' occupations
Source: Study findings, (2019)

touristic activities result to the presence of many other forms of offences including commercial and property crimes such as burglaries.

In line to the study findings, the findings presented in the Fig. 2 reflecting more recent studies measuring public attitudes towards CCTV have been concerned mainly with public 'feelings of safety'. While some studies have concluded that CCTV makes people feel safer [33], and those who already feel safe, feel even safer, similar to local community and tourists in Zanzibar. In any event, in order to feel safe, people need to notice the cameras [34,35]. Similarly to the situation in Zanzibar, what studies have shown is that CCTV was successful on some criteria and unsuccessful on others. It is therefore important to understand the many potential benefits of CCTV when considering effectiveness. Understanding the different aims of CCTV, and the mechanisms by which those aims are to be realized, provides a theory of how CCTV should work, and a hypothesis for the evaluation. Moreover, precisely because CCTV systems differ, and contexts can be enormously complicated, comparing the findings of one study with those of another requires close attention to detail, which frequently does not appear in evaluation reports.

It was learned from the study findings from the government related activities and shopping activities that CCTV cameras have potentials of

creating unintended effects, good and bad. These good and bad effects have to be considered. The high level of awareness of the existence of CCTV camera security systems was due to the fact, today's Zanzibar CCTV video security system is necessary for all business types irrespective of whether it is a small business or multinational companies. The most frequent purpose for installing CCTV has been to combat 'anti-social behaviour'. The study findings are in line with [35,36] findings on the roles of CCTV systems which also argue that CCTV provides public reassurance and therefore reduces fear of crime, which may, in turn, increase the use of public spaces who suggests that CCTV may reduce crime as people are deterred from visiting CCTV-covered areas, believing them to be too dangerous. However CCTV has also fulfilled a broader function, and has been linked to urban rejuvenation efforts.

A common goal of most CCTV systems has been the prevention of crime and disorder through deterrence. It is also assumed that CCTV aids detection through its surveillance capability and the opportunity it may afford to deploy security personnel or police officers appropriately. CCTV is also used as a site management tool, for example, to observe traffic patterns or for crowd control at football matches. CCTV may even indirectly increase trade and protect substantial property investments [37,38]. This among other things was similar to situation in Zanzibar.

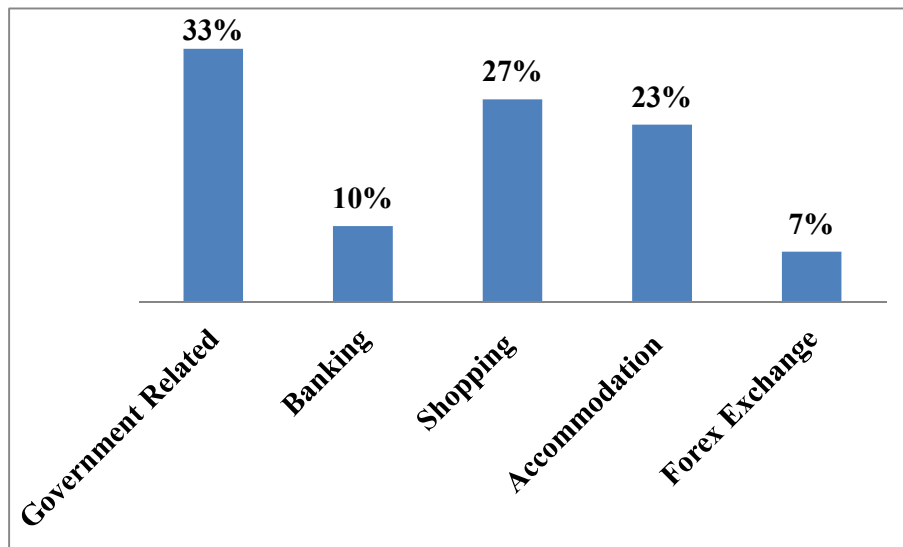


Fig. 2. Respondents who are aware of CCTV camera security project practices in Zanzibar
 Source: Study findings, (2019)

On the other hand the level of application of CCTV cameras have been very high while the potentials of creating unintended effects, good and bad. Today, CCTV video security system in Zanzibar Old Stone Town has been necessary for all business types irrespective of whether it is a small business or multinational companies. While CCTV in some locations and car parks are the best example, show some success, it is typically introduced alongside other measures. CCTV cameras act as deterrent measures when visible and the images got from the CCTV's can also be used for successful prosecution of cases. CCTV can also cause displacement however its effect to other areas can either be positive or negative. CCTV cameras can also improve deployment of Police Officers in hotspot areas which can reduce crime levels. There is one aspect of CCTV that is important in any discussion about impact, and that is the cost-effectiveness of CCTV. For policy purposes, the ultimate test of a positive impact is whether it can be reproduced at a cost-effective price in relation to the cost of hiring private security company for the most of touristic companies in Zanzibar. This is another topic where there is a crucial gap in knowledge. The high level number of people who are aware of CCTV camera security project practices in Zanzibar.

3.2.2 Common type of crimes in Old Stone Town

It came to the understanding that the usefulness of CCTV camera security project among

business industry in Zanzibar has been attributed to the fall of crimes appearance in the memories and eyes of the majority of people in the area. The study went further seeking to underscore the common types of crimes in the Old Stone Town area where high interaction of touristic activities take place. Understanding of the common types of crimes in the Old Stone Town area contributed to the high level of awareness of CCTV camera security project practices in Zanzibar.

Since several crime prevention strategies have been put in place in Zanzibar with no major impact on reduction of crime incidents. These strategies include the introduction of police booths along strategic areas, removal of hawkers from the main business areas, use of plain clothes police officers and recently the use of CCTV. The revealed awareness of the common types of crimes which is a serious problem in cities all over the world including Zanzibar was as follows Stealing was revealed by 30% of all respondents, Theft by Servant in shops and homes was revealed by 10% of all respondents in the study, Robbery by 27%, Vehicle Disorders by 23%, Breaking by 7% and Assault related crimes were revealed by 3% of all respondents. The fact that the fear of crime is a serious threat to the stability of cities, sustainable economic development, the quality of life and human rights, the high prevalence of crimes in the Old Stone Town Area in Zanzibar called for the more sophisticated means of combating crime in the area, hence the adoption of CCTV camera security system.

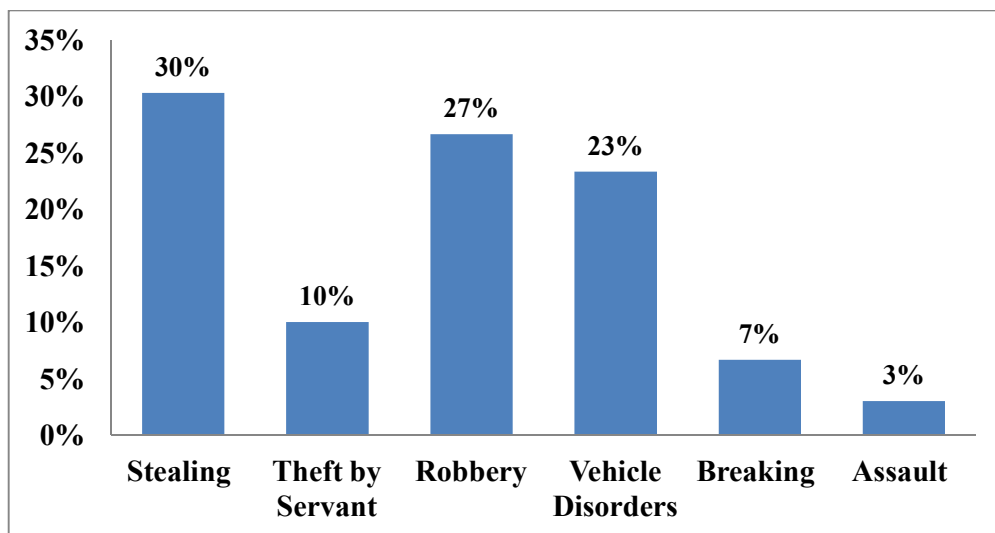


Fig. 3. Common type of crimes in Old Stone Town Zanzibar
 Source: Study findings, (2019)

The study also established that 30% of the respondents opined stealing as the most practices crime in the study area followed by 27% positing robbery and 23% vehicle disorders, 10% opining theft by servant, 7% positing breaking property, 3% opining assault related crimes in the study area respectively. The study further found out that property crimes are the most witnessed incidents by the respondents. This is evidence by criminal activities are still being committed within the Old Stone Town in Zanzibar. They include Robbery with violence (Mugging), Theft of Motor Vehicles, Robbery, Burglary, Stealing (Petty Thefts), Theft of Motor Vehicles Parts and Obtaining by pretences. This indicates that there is need for the city to come up with a comprehensive measure in order to manage crime within the most touristic areas of the Old Stone Town in Zanzibar.

Based on the study findings in the Fig. 3, it is vividly that crime within urban areas is complicated by the rapid urbanization in Zanzibar, increase in urban population and density which is associated with increased crime. Poor urban planning, design and management have been increasingly cited as shaping the urban environment and putting citizens and property at risk [39]. The physical fabric and layout of urban areas have a bearing on the movements of offenders, victims and opportunities for crime. This is quite similar to the situation in Zanzibar where the Old Stone Town with a lot of historical buildings which cannot be changed since it has been declared as the UNESCO historical town. It has been estimated that 10 to 15 per cent of crimes have environmental design and management component and effective urban planning, design and governance should seek to manipulate the built environment in ways that are intended to reduce or even eliminate the opportunity to commit crimes [40]. Therefore fact that current environmental design in Zanzibar cannot be

altered, there should be a means solving problems that arise out of a variety of environmental conditions related to the building, the site, and the location and how the place is used.

3.3 The Impact of CCTV Camera Security Project on Tourism Industry in Zanzibar

The study sought to reveal the impact of CCTV camera security project on tourism industry in Zanzibar. The highly growing tourism industry in Zanzibar has been in the great risk due to low level of safety and security. It has been widely posited in various literatures including [40], that the impact of crime and violence has significantly worsened in most cities over the recent years. These impacts include: increased fear among urban residents; increased fear among tourists and visitors; falling income resulting from the destruction or flight of businesses from affected areas; growth of the private security industry and of urban gated communities; and the diversion of development resources towards investment in public and private security. This has been a problem for a long time in Zanzibar such that the tourism industry fails to obtain a sustainable operational framework for existing such that the availability of security systems to ensure safety and harmony during the visitors and tourists' stay in Zanzibar. This among other things posed a rationale of ascertaining the impact of CCTV camera security project on tourism industry in Zanzibar. The revealed impacts of CCTV camera security project on tourism industry in Zanzibar presented in the Table 3 below are reflecting the responses from the respondents in the study area.

Based in the study findings presented in the Table 3, secured business environment was mentioned as the main impact of CCTV camera security project on tourism industry in Zanzibar

Table 3. Impacts of CCTV camera security project on tourism industry (n=120)

Impacts	N	%
Secured Business Environment	28	23%
Building Trust	20	17%
Improved Police Visibility	14	12%
Decongestion of Streets	12	10%
Crime Prevention	24	20%
Decline in Private Security Costs	11	9%
Increase Opening Hours for Business	6	5%
Attract Customers due to Security	5	4%

Source: Study findings, (2019)

which was suggested by 28 respondents equally to 23% of all respondents who participated in this study. Others being building trust 20(17%), improved police visibility 14(12%), decongestion of streets 12(10%), crime prevention 24(20%), decline in private security costs 11(9%), increase opening hours for business 6(5%) and attract customers due to security 5(4%) in the study area respectively.

The study findings presented in the Table 3 reflect the real situation in Zanzibar currently since there have been a massive flow of tourism business investors in line with the CCTV project in place. It is undoubtedly that majority of the respondents said the cameras were effective in crime prevention while 14.3% said they were not. On the other hand majority of the key informants involved in this study indicated CCTV Cameras were effective where it was installed as a deterrent measure. The police also arrested and took to court several suspects arrested using their system at the designated control rooms. Respondents who doubted the effectiveness of CCTV cameras were of the opinion that tracing of criminals using the images captured is not easy.

From the study findings it could be argued that majority of businesses within the earmarked streets namely Malindi, Forodhani, Mkunazini and Darajani where data were drawn which have embraced the use of security guards and CCTV surveillance. These findings can be evidenced by the ever increasing number of private security and CCTV cameras hence business incurring extra costs in the operating their business to protect their premises and attract customers. This finding is supported by the [40] report which identifies the growth of private security and diversion of investment towards public and private security. Hence the declining in private security costs in the entire tourism business industry and value chain could sound as the main impact of adopting CCTV security system as it was opined by 9% of all respondents.

On the other hand the respondents attributed lack of police visibility and response contribute to increase in crime in the study area such that the recently adoption of CCTV in Zanzibar has invited his kind of efficiency in police security administrations practices. This shows that the police officers play a critical role in enforcement of crime. However there is need to find better methods to make them efficient in crime response which can be done through use of

CCTV cameras. This is supported by [41] positing that, if CCTV operates as a guardian, offences against targets should be reduced. However [42] argument on the introduction of CCTV as crime prevention mechanism also supports the need to have CCTV as crime prevention tool that can prevent crime by altering the tourism business environment in Zanzibar.

In line with the study findings, community participation can be measured in many ways but for purposes of this study we will emphasize on involvement in implementation and decision making. Community consultation will help ensure that schemes are designed to meet local needs. It will also facilitate strong and continuing public support, if and when, a scheme is implemented. Publicity and high quality information provide an opportunity for the community to voice any concerns which may be held about the proposed scheme. The community should be consulted about the proposed area to be monitored, the current prevalence of crime, community concerns about the area, the objectives of the program (it is important that the community be provided with a realistic appraisal of what the program might achieve, i.e. what types of offences/behaviors are/are not likely to be deterred. It was further drawn from one interview in the area saying:

"It is the high time for community members to come together and stop crimes from the family levels by advocating for good morals. It is quite obvious that CCTV should not be promoted as a cure for all crime problems in our society rather people should be advocated to follow good manners from holy Quran. All criminal thinking and minds are rooting from evil mind which is always not among the Gods plan to an individual's conducts. This among other things makes me call upon every community member to stand firmly in eradicating all sorts of evils in community and let's not depend on CCTV camera to sharpen our society."

3.4 The Factors Influencing the Effectiveness of CCTV Camera Security Project in Zanzibar

This study strove to reveal the factors influencing the effectiveness of CCTV camera security project in Zanzibar (Table 4). The fact that CCTV can be regarded as an effective mechanism in reducing or preventing crime, it can stand as a part of a broader crime prevention and community safety strategy. It is quite clear to many people that CCTV can bring benefits to the

Table 4. Factors influencing the effectiveness of CCTV camera security project in Zanzibar (n=120)

Factor	Summary of Responses			
	Yes		No	
	n	%	n	%
Level of operators' education	89	74%	31	26%
Nature of Business	94	78%	26	22%
Reliability of Power Supply	84	70%	36	30%
Level of Community Awareness	102	85%	18	15%
Community Attitudes	98	82%	22	18%
Willingness Law Enforcement Agencies	73	61%	47	39%
Community Safety Strategy	80	67%	40	33%
Adoption of Sophisticated Technology	112	93%	8	7%
Resource and Technical expertise	95	79%	25	21%
Government Policy	80	67%	40	33%

Source: Study findings, (2019)

community through a reduction in crime which can lead to enhanced perceptions of safety in a particular area. On the other hand, CCTV may involve a degree of cost to the community, for example in terms of the allocation of resources or in implications on personal privacy. It is therefore essential for this study to reveal the factors influencing the effectiveness of CCTV camera security project in Zanzibar.

The study findings revealed various factors influencing the effectiveness of CCTV camera security project in Zanzibar including level of operators' education, nature of business, reliability of power supply, level of community awareness, community attitudes, willingness law enforcement agencies, community safety strategy, adoption of sophisticated technology, resource and technical expertise and government policy. The factor namely adoption of sophisticated technology was highly mentioned by the pool of respondents participated in this study by more than 112(93%). This highly posited influencing factor was in line with the level of technical expertise which need to be consulted on technical specification is consistent with the objectives set. However, the technology is only one part of a CCTV system. No system can work without a control room, and there is wide variation in the way that these operate as it is widely posited in [13]. The systems can be monitored full-time or for a limited number of hours a week, and by a dedicated operator or by one who has other duties besides CCTV monitoring. On the other hand qualified staffing levels vary greatly, and so do the types of areas surveyed, including town centres, residential areas and car parks. There are also a range of control room cultures,

management styles, and methods of communicating with the police. All of these factors, and others, influence the way the control room operate. Many systems also incorporate the installation, or improvement, of street lighting in their design and often such improvements are made at the same time as the cameras are installed. These are then treated as part of the scheme design rather than as confounding factors in line with the findings from [15,16].

Furthermore on the government policy such that the existing policy can either encourage or discourage integrated stakeholder involvement in decision making and implementation of CCTV Cameras. Policy Guidelines should be developed by the Government to provide a policy framework and a set of underlying principles to assist agencies considering CCTV as a possible response to local community safety concerns [43]. The guidelines should principally aim at local councils or police as the most appropriate owners of CCTV schemes in public places. Local councils are democratically organized, are close and accountable to local communities, and generally have the capacity to co-ordinate local activities in crime prevention and the promotion of community safety. It must be recognized that ownership brings with it accountability, responsibility for securing funding, responsibility to consult with and inform the community as interested parties, and responsibility for design, management, running costs, evaluation and audit activities. The study findings concurs [3], findings which reiterate that the availability of specialized uses, such as number plate and facial recognition, has generated yet more potential applications of this flexible technology in various areas of old stone town Zanzibar.

Other factors that contribute to crime include poverty, poor management, proliferation of firearms and high levels unemployment in Zanzibar which turn unemployed youths into position of committing crimes in the streets. This is supported by the identification of economic factors such as unemployment, low wages, social gap among the rich and the poor and an explosive combination of modernization and fast urbanization as some of the factors that contribute to crime in urban areas. This indicates that to address crime there is need to address economic and social aspects of the population for them to be able to engage in gainful employment. In addition management of the built up environment in terms of CCTV cameras, lighting, improved police visibility, decongestion of streets among others need a coordinated approach by the relevant stakeholders. Basing on the study findings, it is undoubtedly that one agency cannot be left to address crime prevention but there is a need to involve the whole community. This is due to interactive factors which influence the effectiveness of CCTV directly or indirectly in the association of other practical factors in place, hence calling for a more comprehensive looking on the matter which would be of high usefulness to the tourism industry in Zanzibar.

4. CONCLUSIONS

This research was an attempt to reveal the role of CCTV camera security project on tourism industry in Zanzibar. Basing on the study findings, it was concluded the existence of the high level of awareness among the majority of government related officers and shopping officers. However, the study concludes the presence of six major common types of crimes found in the study area namely stealing, robbery, vehicles disorders, theft by servants, breaking and assault. This set of common crimes in the area was revealed in the study as it also established that 30% of the respondents opined stealing as the most practices crime in the study area followed by 27% positing robbery and 23% vehicle disorders, 10% opining theft by servant, 7% positing breaking property, 3% opining assault related crimes in the study area respectively. The study further found out that property crimes are the most witnessed incidents by the respondents.

Based in the study findings, it was further concluded that the main impact of CCTV camera security project on tourism industry in Zanzibar

include ensuring secured business environment where by 28 respondents equally to 23% of all respondents who participated in this study suggested; other impacts being building trust 20(17%), improved police visibility 14(12%), decongestion of streets 12(10%), crime prevention 24(20%), decline in private security costs 11(9%), increase opening hours for business 6(5%) and attract customers due to security 5(4%) in the study area respectively. Lastly the study concluded various factors influencing the effectiveness of CCTV camera security project in Zanzibar including level of CCTV operators' education, nature of business, reliability of power supply, level of community awareness, community attitudes, willingness law enforcement agencies, community safety strategy, adoption of sophisticated technology, resource and technical expertise and government policy.

5. RECOMMENDATIONS

Based on the study findings, the following recommendations have been put forward:

Firstly, there is a need to deliberately conduct capacity building programs CCTV operators to be able to effectively administer the entire system well.

Secondly the study urges government authorities to enhance the use of public-private partnership model of implementing development projects such that the rapid adoption of CCTV security cameras in many areas of Zanzibar occurs as the single hand of the government falls short of spreading in many areas due to financial resources constraints.

Finally, the study urges the government actors to innovate and improve the existing power supply to ensure the availability of adequate power supply for keeping the CCTV security systems working smartly all times.

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COMPETING INTERESTS

Author has declared that no competing interests exist.

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