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**THE SOCIO-CULTURAL FACTORS AND TECHNOLOGICAL IMPACT  
ON PRIVATE SECURITY FIRMS: EVIDENCE FROM KENYA**

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**Abstract**

This study explained the influence of Socio-Cultural Factors and Information Communication Technology on the management of private security firms in Nairobi, Kenya. The study also sought to establish the moderating influence of Legal and Regulatory Framework in the management of Private Security Firms in Nairobi County. The study was guided by Institutional Theory. This study used descriptive design with structured questionnaires as the instrument for data collection. The study conducted a multiple regression analysis to determine the relationship between socio-cultural environment, ICT and the management of private security firms. The study findings revealed that external environmental factors have a statistically significant and positive influence on the management of private security firms. The findings also revealed that Legal and Regulatory Framework moderates the relationship between the external environmental factors and management of Private Security Firms. Based on the findings, the study recommends the management of Private Security Firms in Kenya to monitor the changing socio-cultural factors such as peoples' attitude towards embracing technology. This would help them strategize their service delivery in line with the current customer preferences technological evolution and settlement patterns (gated communities). There is also need for the management of Private Security Firms to monitor closely the dynamism in the technological world (global market trends) in order to realign their strategic approaches towards quality service provision to their clients.

**Keywords:** Environment, Sociocultural Factors, ICT, Security Industry, Management, Security Firms

**Introduction**

External environment refers to factors outside of organization's scope that affects directly or indirectly the management of a firm. Murgor (2014) posits that external environment comprises all forces and occurrences outside the business that interfere with its operations. External environment consists of two interconnected sets of variables (macro and micro) that play a key part in shaping the opportunities, threats and constraints that companies face and evidently influence their effectiveness. Janković, Mihajlović and Cvetković (2016) posit that the achievement of any firm hinges on its capacity to adjust to the events in the surroundings in which it operates. For instance, when the government introduces /alters regulations, the firm

should adjust to such alterations. Equally, technological shifts can render some of the existing products or equipment obsolete for instance the case of typewriters that were rendered redundant by inception of computers. Wong, Hazlina, Mohd and Nasurdin (2014) who noted that if the company wants also support this assertion to progress, it must adapt to the present changes. Thus for a firm to be successful, managers must continuously monitor the occurrences in outside operating environment in order to identify evolving prospects in terms of chances and threats.

Jane, Justus and Francis (2014) argue that the success of any organization and achievement of the desired level of business operations is dependent on its environment; more so external environment which lies beyond the control of the organization. Owing to the market forces brought about by stiff competition among Private Security Firms, firms need to reengineer their operations in order for them to remain competitive. However, due to the shifts occurring in the external environment such as changing government policies and innovation require the management of private security firms to adopt measures such as best human resource practices integrate information technology and so forth to remain relevant. Gitonga (2019) avers that irrespective of the industry in which firms contend for the market, the external environment affects their strategic decision making as they seek to be competitive and profitable. The general analysis of the circumstances affecting companies today, according to Wong, Hazlina, Mohd & Nasurdin (2014); Islam & Mukit (2019), shows that their external climate is typified by uncertainty for most companies. Managers need to be aware of and thoroughly appreciate the different manifestations of the external world in order to efficiently resolve those uncertainties and recognize competitive efficiency for businesses to succeed. With such considerations, businesses should build their capacity and increase their core competencies in order to protect themselves from adverse environmental impacts when seeking growth prospects.

According to Hajela (2013), the environmental uncertainty makes it difficult for the managers to predict the cost of decisions that they render while managing their organizations. This is because environmental uncertainties brought about by factors such as globalization or entry of new players in the market makes it unpredictable for the management to forecast their company's growth. However, Hitt, Ireland and Hoskisson (2016) argues that irrespective of where firms operate in the external environment, the environment presents both opportunities and threats; and as a result, it influences the company's strategy in the attempt to remain competitive and profitable. Sadiq and Bala (2015) opine that external environmental factors such as entry barriers, bargaining power of suppliers, bargaining power of consumers, government regulations, technology and competitive rivalry have an impact on the management. For instance, firms have to be innovative in order to adapt to new challenges as well as superior service and product delivery. Similarly, competition brought about by globalization (entry of new players) influence the way firms operate especially those providing similar products and services. Competition such as extreme competitiveness among the present players in the private security industry has forced many players in the industry to adopt strategies such as low pricing so as to maintain competitive advantage and retain their customer base. To understand fully the influence of external environmental factors on management, this study focused on private security firms operating within Nairobi City County.

### **Statement of the Problem**

Private Security Firms play a critical role in enhancing security in Kenya. While provision of security services and maintaining of the rule of law is the sole mandate of the National Police Service of Kenya, Private Security Firms play a vital part in supplementing the concerted efforts of the government in providing security services to the public. In spite of the critical role played by private agencies in promoting national security, many private firms continue to face environmental hurdles that undermine effective provision of security services. For instance, many private security firms face the environmental challenge of intense unhealthy competition among existing firms. The intense competition among existing firms is strengthened by the high barriers of entry, which limits the effective entry of new entrants, thus undermining the service delivery of private security firms. As a result, the existing private security firms engage in unhealthy competition with the intention of obtaining market monopoly. Moreover, most private security firms are faced with the environmental challenge of rapid advances in information technology. Majority of these firms in Kenya lack the required resource competences to undertake incremental innovation and investments in research and design, thus; making the adoption of new technologies among private security firms in Kenya a mirage. The lack of adoption of new technologies not only affects the achievement of competitive advantage of private security firms in Kenya, but also affects the level of service delivery among private security firms.

Despite Private Security Firms management' efforts to adjust to ever-changing innovation, they are also faced with a challenge of dynamic consumer preferences. The unpredictable dynamic shift in society's demographic characteristics such as social mobility, attitudes towards technology in which the firms operate hinder managements planning for effective service delivery. Hence, failure by the management of Private Security Firms to streamline their organizational rules and plans in proportion to the cultural values of the society affects their ability to fulfil their clientele expectations. Observably, Kenya lacks an effective security policy that empowers private security firms to engage intensively in the maintenance of law and order. As such, the lack of government regulations to empower private security firms has constricted the ability and capacity of Private Security Companies to engage in the provision of law and order with reference to crime detection and mitigation. This creates a research gap, which this study sought to fill.

### **Research Objectives**

- i. To elucidate the influence of socio-cultural factors on the management of Private Security Firms in Nairobi County
- ii. To ascertain the influence of information communication technology on the management of Private Security Firms in Nairobi County
- iii. To explore the moderating effect of legal and regulatory framework on the management of Private Security Firms in Nairobi County

## **Theoretical Review**

### **Institutional Theory**

DiMaggio and Powell proposed the theory in 1981. The theory posits that institutional setting in which businesses operate exert stress on them (Kinuu, 2014). Owing to forces emanating from the business setting, firms are forced to be innovative in order for them to survive and prosper in the environment, (Isaksson & Laskin, 2010). An assessment of different institutional variables, especially external variables, suggests that their effect is beyond the control of management. Therefore, creative techniques such as price review are crucial for management to follow in order to maintain their customer base. Based on the theory, market forces can significantly affect organizational performance due to competitive rivalry between players as well as institutionalized management policies (Popadiuk, Rivera & Bataglia, 2014). Such pressures force the managers to come up with tactical strategies and measures to counter such forces in order for them to stay afloat. Simply put the influence of the external environmental factors such as government policies and technology make it challenging the management to predict their best growth strategy. Messah and Kariuki (2011) assert that environmental settings such as uncertainty, dynamism, hostility and the interactions amongst these elements adds to the perceived difficulty in running businesses. As postulated by the institutional theory, when faced with such challenges, organizations are forced to react and adjust to the new norms in their environments. Even so, occurrences in the external environment may alter completely how a firm formulates and implements its strategies for maximum returns. Similarly, Porter, (1985) affirmed that competitive aspects in a business environment determine its corporate policy approach. Additionally, more emphasis is out on the aspects of the environment in that they define the most suitable form of policy for a company, (Scott, 2013). He further portends that, external environmental factors brought about by globalization and technological advances have completely reshaped the organization's external environment. Thus, this theory is applicable to the study as it helps provide an understanding on the effect of external environmental factors on the management of the firms.

## **Empirical Review**

### **Socio-Cultural Factors and Management of Private Security Firms**

De Alwis and Senathiraja (2014) carried out a study to establish the influence of socio-cultural aspects on management and corporate practices of particular small and medium scale enterprises in Sri Lanka. The study conducted a case study on 150 Textile and Jewellery industries situated in urban areas. The unit of analysis was the businesspersons of the Textile and Jewellery industries. Multiple regression technique was used to analyse data. The findings of the study showed that socio-cultural aspects such as religion and feminine traits have a considerable influence on management and corporate practices of small and medium scale enterprises in Sri Lanka. The study however focused only on small and medium scale businesses in Sri Lanka. Thus, the study presents a contextual knowledge gap. This study sought to determine the influence of socio-cultural environmental factors on Private Security Firms in Nairobi County in Kenya.

Okeke, Onuorah, Onyekwelu and Nwajei (2019) sought to determine the influence of socio-cultural environment on the growth of selected manufacturing companies in Nigeria. The study adopted descriptive research design. Four hundred and eight respondents comprising of management and employees of 10 manufacturing companies in Anambra State in Nigeria were sampled. Descriptive and simple regression statistics were used to analyze the data. The study indicated that the social norms, cultural values, attitude and beliefs of the environment within which the organizations operate have a statistically significant effect on their operations and provision of services. Additionally, results indicated that for companies to operate efficiently, the management should make certain that their organizational plans and approaches are in line with the cultural principles of the society and environment. However, the study was limited only to the manufacturing firms and thus it presents conceptual knowledge gap. Moreover, the study was carried out in Nigeria. This study was carried out in Kenya to evaluate the influence of socio-cultural environment on the management of Private Security Firms in Nairobi County.

Another research by Mbiti, Mukulu, Mung'atu and Kyalo (2015); Mukit et al. (2020) tried to assess the influence of socio-cultural factors on the success of micro and small businesses operated by women in Kitui County, and another study with 315 respondents applied in Bangladesh. Descriptive analysis was adopted by the study. 390 women-owned Micro and Small Entrepreneur were the target demographic for the research. The women-owned Micro and Small Enterprises were sampled from the manufacturing, agriculture, commerce and services segments in Kitui County. The study employed proportionate stratified sampling to select a sample size of 194 women entrepreneurs. Descriptive and inferential statistics were used to analyze data. Findings showed that socio-cultural aspects have a statistically significant effect on the success of women-owned Micro and Small Enterprises. The study however was limited to only Micro and Small Enterprises thus presenting a contextual knowledge gap. This study focused on private security industry within Nairobi County.

### **Information Communication Technology and Management of Private Security Firms**

Yegon (2012) looked at the effect of information technology investments on business success of at Kenya Commercial Bank Group. A longitudinal research methodology was employed. The study targeted 10 high-ranking executives across key management areas of the financial institution. The study used Excel software tools for analysis. The study found that Information Technology had a considerable benefit to the bank in form of cost reduction, enhanced client services, method and persons competences, restructuring, expansion as well as increased business opportunities. Though the study indicated that Information technology has a positive impact, the study was centred on financial or banking context. This study focuses on the effect of Information Technology on the management of private security companies in Nairobi County.

Ong'ele (2018) investigated the effect of digital technology adoption on competitive advantage of tours and travel companies in Nairobi, Kenya. Descriptive cross-sectional design was used by the study. A hundred and seventeen tour companies operating in Nairobi were sampled. The study used inferential regression statistics to analyze data. Results showed that the adoption of digital technology enhanced the competitive advantage of Tours and Travels firms in Nairobi. Moreover, the findings showed that adoption of digital technology enhanced the quality of

service delivery of the firms at low cost with the provision of unique services leading to high customer satisfaction, improved market share and sales volume leading to high turnover. Though the study revealed that digital technology enhances the competitive advantage of a firm, it only looked at the tours and travel firms. This study focuses on private security firms in Nairobi County.

Ombaka, Machuki and Mahasi (2015) examined the effect of external environment and innovation on the link among organizational resources and operations. The outcome of the study indicated that organization resources have a direct influence on operations and provision of services. The study indicated that the impact of the organizational resources on effectiveness is determined by external environment and innovation. However, the study indicated that both external environment and innovation have independent effects on business growth. Even though the study revealed that external environment and innovation influence success of an organization, it only focused on two variables while this study sought to explore the influence of competition, socio-cultural environment, Information Technology and policy framework on management of Private Security Firms in Nairobi County.

### **Legal and Regulatory Framework and Management of Private Security Firms**

Kaguru and Ombui (2014) sought to find out the factors affecting the business growth of private security companies in Nairobi County. A descriptive research design was employed. Purposive simple random sampling technique was employed to pick a section of 70 senior management personnel working for the G4S Limited in Kenya. The study employed simple descriptive statistics to evaluate the data. The findings revealed that the security company functions in a segment with unclear policy framework and as a result affected their effectiveness greatly. However, the study only looked at the factors influencing the service delivery of Private Security Firms as a whole. This study specifically focused on external environmental factors (competition, socio-cultural factors, ICT and Legal and Regulatory Framework) in the management of Private Security Firms in Nairobi County. Narikae, Namada and Katuse (2017) sought assess the effect of institutional strategy framework on the policy implementation gaps. The researcher used descriptive research methodology. Two hundred and fifty participants comprising of top-level management and subordinate staff from respective Kenyan commercial banks took part in the study. Data analysis was carried out using both descriptive and inferential statistics. The findings of the study revealed that organizational policy framework such as standard operating procedures influenced loan-processing policies. The study however, examined the impact of strategy framework on policy implementation gaps. This study sought to explore the influence of policy framework as a moderation variable in the management of Private Security Firms. Currently, some of the most notable policy challenges affecting the private security firms are related to the Private Security Regulation Authority (PSRA) regulations. PSRA requirements on private security firms includes change of uniform and rebranding as per part V section 20 of PSRA Regulations. It also entails upgrading security equipment as per part V section 21 of PSRA Regulations as well annual calibration of equipment as per part IV of PSRA Regulations. Moreover, as per part IV of PSRA Regulations, firms are required to upgrade their control rooms, vaults, rapid response vehicles, and communication tools. Finally, part VI

section 25 and 26 of the PSRA Regulations requires Private Security Firms to cooperate with national security Agencies.

**Conceptual Framework**

A conceptual framework refers to a pictorial illustration of the link between the independent and dependent variables of the study (Hair, 2015). The dependent variable for this study is Management of Private Security Firms whereas the independent variables comprise socio-cultural environment, Information Technology and policy framework. The conceptual framework is as presented in Figure 1 below.

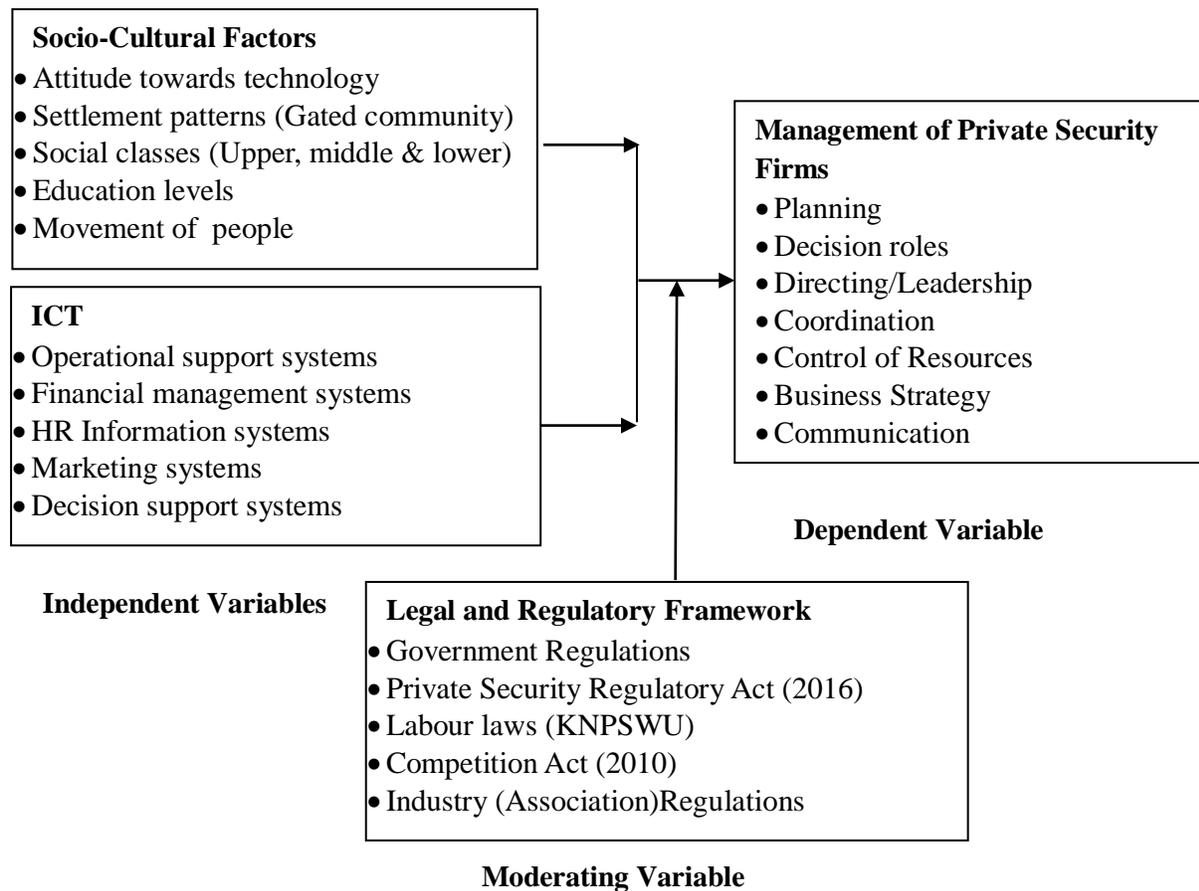


Figure 1. Showing Conceptual Framework

**Research Methodology**

The study adopted a descriptive survey design. Descriptive research is appropriate for identifying the characteristics, trends and correlations of the phenomena, (Williams, 2007). A descriptive research design hence allows the researcher to describe the effect of environmental factors on management’s decision-making. The target population were the firms in the private security industry in Nairobi County. According to the Kenya Security Industrial Association (2020), there

were 111 firms in the private security industry in Nairobi County. The unit of analysis was the firms in the private security industry. The unit of observation was one manager from human resource, finance, operations and ICT departments. The study adopted purposive sampling method. Krejcie and Morgan (1970) formula was used to obtain a more manageable sample size of 53 private security firms. The study adopted purposive sampling method because it allows the researcher to choose the respondents from the four management sub groups given their knowledge about the subject under study. The study adopted structured questionnaires to collect primary data using drop and pick method. The study also pilot-tested the research instrument before actual data collection in order to determine its suitability and ability to obtain consistent results. 10% of the sample was used to pilot test the research instrument. This is in line with the suggestions of scholars such as Connelly (2008) who indicated that for a pilot study, 10% of the sample should be used. Whitehead, Julious, Cooper and Campbell (2016) also suggested a sample of between 1% and 10% as good for a pilot test. Reliability analysis findings for this study indicated that the overall Cronbach alpha coefficient was 0.7564. Quantitative data were analyzed using descriptive statistics that include means, frequencies, percentages and standard deviation. The data from the completed questionnaires was cleaned, re-coded, and entered into the computer using SPSS for Windows version 22 for analysis. Inferential statistics used included regression and correlation analysis. Data was presented using tables. The analysis of variance (ANOVA) was used to check the overall model significance. A multiple regression analysis was used to determine the relationship between socio-cultural factors, ICT and the management of private security firms.

## **Results**

The study targeted four managers (heads of operations, human resource, and finance and ICT departments) from the respective 53 Private Security Firms in Nairobi County. Simply put, 212 respondents were targeted by the study. A hundred and sixty (160) out of 212 of the sampled participants duly filled and returned their questionnaires. This translates to 75.47% response rate, which is an acceptable response rate in social research. The findings are in agreement with the assertion of Rubin (2013) who affirmed that return rates of 50% are considered acceptable for a descriptive research to analyze and publish, 60% are good and 70% are very good. Hence, a return rate of 75.47% was considered adequate to allow generalization of the findings of this study to the target population.

## **Distribution of Respondents' Characteristics**

**Table 1. Response Rate**

Category	Response	Results
Gender	Female	28%
	Male	72%
Level Of Education	Certificate	23.4%
	Diploma	28.1%
	Undergraduate Degree	26.5%
	Postgraduate	22%
Working Department	HR	21.9%
	Finance	25%
	Operations	28.7%
	ICT	24.4%
Experience	Less Than 5 Years	19.6%
	5-10 Years	23.3%
	11-20 Years	27.6%
	Above 20 Years	29.5%
Age	Below 30 Years	24.4%
	30-40 Years	23.3%
	41-50 Years	23.2%
	Over 50 Years	29.1%

**Descriptive Analysis Results**

**Management of Private Security Firms (PSF)**

The study sought to determine whether the participants agree or disagree with the statements on management of Private Security Firms based on a 5-point Likert scale. The findings are illustrated in Table 2.

**Table 2. Management of Private Security Firms**

Statement	SD	D	NS	A	SA	Mean	Std Dev.
Competition for market share in the industry has improved management of private security firms	0.0%	0.0%	18.1%	42.5%	39.4%	4.21	0.73
Social cultural factors such as settlement patterns and social classes influence management of PSF	0.0%	0.0%	27.5%	35.6%	36.9%	4.09	0.80
Integration of latest information technology has improved management of PSF	0.0%	0.0%	23.1%	41.9%	35.0%	4.12	0.76
Compliance with Legal and Regulatory Frameworks has streamlined the management of PSF	0.0%	0.0%	18.1%	43.8%	38.1%	4.20	0.73
<b>Total</b>						<b>4.16</b>	<b>0.75</b>

**Key: SD=Strongly Disagree; D= Disagree; NS=Not Sure; A=Agree; SA=Strongly Agree**

Results revealed that majority of the respondent agreed that competition for market share in the industry has improved management of PSF (Mean=4.21). Results indicated that most of the participants agreed that social cultural factors such as settlement patterns and social classes influence management of PSF (Mean=4.09). Moreover, the findings revealed that the participants indicated that they agree that integration of latest information technology has improved management of PSF (Mean=4.12). Lastly, results showed that most participants agreed that regulatory and legislative frameworks have streamlined business operations (Mean=4.20). In conclusion, findings of the study indicated that most of the participants indicated that they agree with the statements regarding management of Private Security Firms as shown by an average mean of 4.16. Additionally, the responses provided by the participants were less varied

**Socio-Cultural Factors**

The participants were asked to point out the level to which they agree or disagree with the statements regarding Socio-Cultural Factors and their influence on the management of PSF.

**Table 3. Socio-Cultural Factors**

Statements	SD	D	NS	A	SA	Mean	Std Dev.
People attitude towards technology such as adoption of CCTVs has enhanced better planning for private security services	0.0%	0.0%	21.3%	45.6%	33.1%	4.12	0.73
Highly educated population influences better business strategy and good communication	0.0%	0.0%	20.6%	43.8%	35.6%	4.15	0.74
Social classes (upper, middle & lower) of the people in urban areas has influenced coordination of private security services	0.0%	0.0%	20.0%	46.9%	33.1%	4.13	0.72
Settlements patterns such as gated communities influence planning and coordination of private security services	0.0%	0.0%	19.4%	45.0%	35.6%	4.16	0.73
Movement of the people in Nairobi County fosters communication and coordination of private security services	0.0%	0.0%	21.3%	44.4%	34.4%	4.13	0.74
<b>Total</b>						<b>4.14</b>	<b>0.73</b>

**Key: SD=Strongly Disagree; D= Disagree; NS=Not Sure; A=Agree; SA=Strongly Agree**

Findings indicated that most of the respondents agreed that people attitude towards embracing technology such as adoption of CCTVs has influence planning for private security services (Mean=4.12). The results also revealed that most of the participants agreed that highly educated population are more likely to influence better business strategy and good communication (Mean=4.15). Moreover, the findings indicated that the respondents agreed that social classes of the people in urban areas influence planning and coordination of private security services (Mean=4.13). Further, findings showed that most respondents agreed that settlements patterns such as gated communities influence planning and coordination of private security services

(Mean=4.16). Finally, results showed that most of the participants agreed that movement of the people within Nairobi County fosters coordination of private security services (Mean=4.13). In summary, findings demonstrated that majority of the participants indicated that they agree with the statements regarding socio-cultural factors as illustrated by an average mean of 4.14. Additionally, the responses provided by the participants were less varied as shown by a standard deviation of 0.73.

**Information Communication Technology (ICT)**

The participants were asked to state the level to which they agree or disagree with the statements regarding ICT and their influence on the management of Private Security Firms.

**Table 4. Information Communication Technology (ICT)**

Statements	SD	D	NS	A	SA	Mean	Std Dev.
Integration of operation support systems promotes coordination of private security operations	0.0%	0.0%	20.0%	43.8%	36.3%	4.16	0.73
Embracing financial information systems enhances control of resources and financial planning	0.0%	0.0%	23.8%	43.8%	32.5%	4.09	0.75
Embracing HR information systems enhances HR planning and control	0.0%	0.0%	21.9%	48.8%	29.4%	4.08	0.71
Integration of marketing information systems has improved communication with consumers	0.0%	0.0%	25.0%	46.3%	28.7%	4.04	0.73
Adoption of decision support systems promotes managements strategic and timely decision making	0.0%	0.0%	33.1%	37.5%	29.4%	3.96	0.79
<b>Total</b>						<b>4.07</b>	<b>0.74</b>

**Key: SD=Strongly Disagree; D= Disagree; NS=Not Sure; A=Agree; SA=Strongly Agree**

Outcome of the study showed that majority of the participants agreed that integration of operation support systems promotes coordination of private security operations (Mean=4.16). The results also revealed that most of the participants agreed that embracing financial information systems enhances control of resources and financial planning (Mean=4.09). Moreover, the findings indicated that the respondents agree that embracing HR information systems enhances HR planning and control (Mean=4.08). Further, findings showed that most respondents agreed that integration of marketing information systems has improved communication with consumers (Mean=4.04). Finally, results showed that most of the participants agreed that adoption of decision support systems promotes managements strategic and timely decision making (Mean=3.96). In summary, outcomes of the study showed majority of the participants stated that they agree with the statements regarding Information Communication Technology as illustrated by an average mean of 4.07. Additionally, the responses provided by the participants were less varied as shown by a standard deviation of 0.74.

### Legislative and Policy Framework

The study sought to determine whether the participants agree or disagree with the statements on Legislative and Policy Framework based.

**Table 5. Legislative and Policy Framework**

Statement	SD	D	NS	A	SA	Mean	Std Dev.
Government regulations fosters professionalism in the industry	0.0%	0.0%	21.9 %	50.0 %	28.1 %	4.06	0.71
The enactment of Private Security Regulatory Act (2016) has promoted integrity in the security industry	0.0%	0.0%	26.3 %	43.1 %	30.6 %	4.04	0.76
Compliance with labour laws fosters communication in the industry (negotiations)	0.0%	0.0%	33.1 %	44.4 %	22.5 %	3.89	0.74
Enactment of Competition Act (2010) has promoted fair business practices in the industry	0.0%	0.0%	22.5 %	51.9 %	25.6 %	4.03	0.70
Industry regulations has streamlined the operations in the private security sector	0.0%	0.0%	34.4 %	40.6 %	25.0 %	3.91	0.77
<b>Total</b>						<b>3.99</b>	<b>0.73</b>

**Key: SD=Strongly Disagree; D= Disagree; NS=Not Sure; A=Agree; SA=Strongly Agree**

Findings in Table 5 showed that most participants agreed that government regulations foster professionalism in the industry (Mean=4.06). Moreover, the findings indicated that most of the participants agreed that the enactment of Private Security Regulatory Act (2016) has promoted integrity in the security industry (Mean=4.04). Additionally, the findings indicated that the respondents agree that compliance with labour laws fosters communication in the industry (negotiations) (Mean=3.89). Further, results revealed that the most of the participants agreed that the enactment of Competition Act (2010) promoted fair business practices in the industry (Mean=4.03). Lastly, findings revealed that most of the participants agreed that industry regulations has streamlined the operations in the private security sector (Mean=3.91). In conclusion, findings of the study indicated that most respondents agree with the statements on Legislative and Policy Framework as indicated by an average mean of 3.99. In addition, the responses given by the participants were less varied as indicated by a standard deviation of 0.73.

### Tests of Assumptions of Regression Analysis

The study sought to ascertain whether residuals of the data are in line with the assumptions of Ordinary Least Squares. Specifically, the study conducted homoscedasticity, normality and autocorrelation (test for independence) to ascertain whether the data meet or violate the assumptions of ordinary least squares.

### Homoscedasticity Test

Homoscedasticity Test is also referred to as equality of variance test. The study employed Levene's T-Test to observe if the variances of the sample groups (predictors) are approximately

equal. Simply put, Levene's Test for Equality of Variances tests if the standard errors/variances of the two samples are roughly equal. In order to test for the equality of variance, we take the null hypothesis, that is, there is no difference between the error variances of the predictor variables. For the variances of the dataset to be homoscedastic or said to have equal variances, Levene's Test should be non-significant. That is if the significance value of Levene's Test is greater than 0.05, then we assume that the datasets are statistically similar/ have equal variances. However, if the Levene's Test is lower than 0.05 then it means that the variances are not equal or statistically significantly different.

**Table 6. Levene's Test of Equality of Error Variances**

<b>Dependent Variable: Management of PSF</b>			
F	df <sub>1</sub>	df <sub>2</sub>	Sig.
3.077	74	85	.143
<i>Tests the null hypothesis that the error variance of the dependent variable is equal across groups.</i>			

Levene's Test results in table 6 indicates that p-value is 0.143 (not significant). This shows that the null hypothesis is accepted; that is, the error variance of the variables are equal across groups. This implies there is no significant difference from an equality of variance across the variables of the study.

**Autocorrelation Test**

The study carried out autocorrelation tests to check if the residuals (error terms) of the regression model were autocorrelated. One of the assumptions of ordinary least squares is that the error term should not be autocorrelated over time. The study used Durbin-Watson test to check whether autocorrelation was present. Autocorrelation test results are presented in table 7.

**Table 7. Autocorrelation Results**

<b>R</b>	<b>R Square</b>	<b>Adjusted Square</b>	<b>R Std. Error of the Estimate</b>	<b>Durbin-Watson</b>
.646	.418	.406	.20578	2.281

Results in Table 7 revealed that the Durbin Watson t-test value is 2.281. A rule of thumb is that Durbin Watson t-test statistic values of between 1.5 and 2.5 are not autocorrelated. This implies that the residuals for the regression model are not autocorrelated as it is within a range of 1.5 and 2.5; hence, it implies that the variables of the study are not autocorrelated.

**Test for Normality**

One of the assumptions of Ordinary Least Squares (Regression) is that that data are distributed normally. Hence, to ensure that the data drawn from the sampled populations are valid, the residuals (error terms) of the regression should follow a normal distribution. In this study, using the graphical method approach was used to check whether the error terms (data set) are normally distributed.

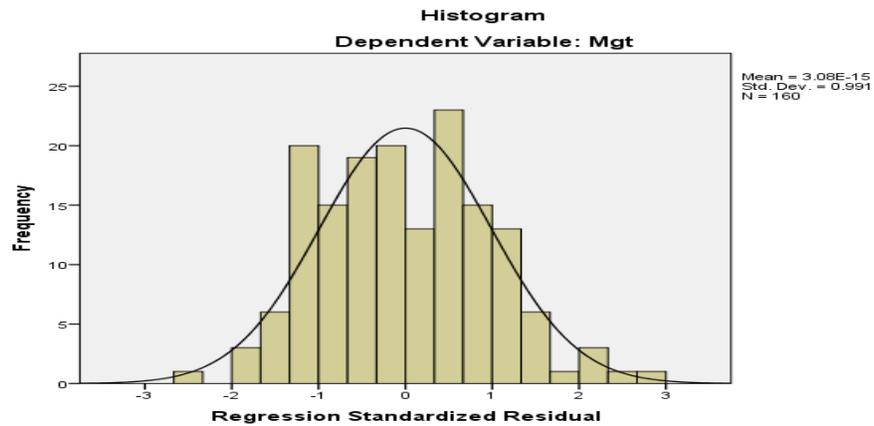


Figure 2. Test for Normality

Findings in figure 2 shows that the residuals follow a normal distribution curve. This implies that the data sets are normally distributed. Simply put, the residuals of the dataset follow a normal distribution as required for a linear regression and hence the data is fit for use in this study.

**Correlation Analysis Results**

Correlation analysis was used to determine the association among the study variables (both Independent and Dependent Variables). The study used Pearson Correlation coefficient (R) ranging between +1 and -1 to measure the linear association among the study variables. A Pearson correlation coefficient of +1 denotes a positive linear relationship while -1 Pearson correlation coefficient symbolizes a negative association between the variables and a Zero (0) Pearson correlation coefficient denotes that there is no linear association between the variables.

**Table 8. Correlation Results**

Correlations		Socio-Cultural Factors	ICT	Management of Private Security Firms
SCF	Pearson Correlation	1		
	Sig. (2-tailed)			
ICT	Pearson Correlation	.275**	1	
	Sig. (2-tailed)	0.000		
Management of Private Security Firms	Pearson Correlation	.465**	.428**	1
	Sig. (2-tailed)	0.000	0.000	
	N	160	160	160

Findings in Table 8 indicted that Socio-Cultural Factors has a strong positive and significant association with the Management of Private Security Firms (r = 0.465, Sig = 0.000). Lastly, findings indicated that Information Communication Technology has a positive and significant association with the Management of Private Security Firms (r = 0.428, Sig = 0.000). These

results are in line with the findings of a study by Dragnić (2014) which indicated that technology, product innovation and market roles have a significant influence on the effectiveness of small and medium enterprises. The results also agree with the findings of Okeke, Onuorah, Onyekwelu and Nwajei (2019) which indicated that social norms, cultural values, attitude and beliefs of the environment within which the organizations operate have a statistically significant effect on their operations and provision of services.

**Bivariate Regression Analysis Results**

**Socio-Cultural Factors and Management of PSF**

To establish the relationship between socio-cultural factors and management of PSF, ordinary least squares regression was conducted. The regression model  $Y = \beta_0 + \beta_2 X_2 + \epsilon$  was thus fitted from the data where  $X_2$  represented Socio-Cultural Factors and  $Y$  symbolized Management of PSF.

**Table 9. Model Summary**

R	R Square	Adjusted R Square	Std. Error of the Estimate
.465	0.216	0.211	0.23719

Findings in Table 9 indicated that the value of R and  $R^2$  were 0.465 and 0.216 respectively. The R-value of 0.465 showed that there was a positive linear relationship between Socio-Cultural Factors and management of PSF. The  $R^2$  value indicated that the explanatory power of the independent variable (Socio-Cultural Factors) was 21.6. This means that 21.6% of the variation in management of PSF is explained by the model  $Y = \beta_0 + \beta_2 X_2 + \epsilon$ .

**Table 10. ANOVA**

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	2.455	1	2.455	43.63	.000
Residual	8.889	158	0.056		
Total	11.344	159			

Model fitness (ANOVA) results in table 10 showed that the regression model of  $X_2$  and  $Y$  was significant ( $F_{1, 158} = 43.63$ ,  $p\text{-value} = 0.000 < 0.05$ ), implying that Socio-Cultural Factors is a valid predictor in the model.

**Table 11. Regression Coefficients for Socio-Cultural Factors and Management of PSF**

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.303	0.281		8.189	0.000
Socio-Cultural Factors	0.448	0.068	0.465	6.605	0.000

The findings in Table 11 showed that there is a positive relationship between Socio-Cultural Factors and the Management of PSF ( $\beta = 0.448$ ). The relationship was also significant indicating

that a change in socio-cultural factors has a significant effect in the management of PSF. These results agree with the findings of a study by De Alwis and Senathiraja (2014) which showed that socio-cultural aspects such as religion and feminine traits have a considerable influence on management and corporate practices of small and medium scale enterprises in Sri Lanka. The findings also agree with those of Okeke, Onuorah, Onyekwelu and Nwajei (2019) which revealed that social norms, cultural values, attitude and beliefs of the environment within which the organizations operate have a substantial effect on their operations and service delivery.

**ICT and Management of Private Security Firms**

To assess the relationship between Information Communication Technology and management of Private Security Firms, ordinary least squares regression was conducted. The regression model  $Y = \beta_0 + \beta_3 X_3 + \epsilon$  was thus fitted from the data where  $X_3$  represented Information Communication Technology and Y symbolized Management of Private Security Firms.

**Table 12. Model Summary**

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.428	0.183	0.178	0.24216

Findings in Table 11 indicated that the value of R and  $R^2$  were 0.428 and 0.183 respectively. The R-value of 0.428 implied that there was a positive linear relationship between Information Communication Technology and management of Private Security Firms. The  $R^2$  value indicated that the explanatory power of the independent variable (Information Communication Technology) was 0.196. This means that 18.3% of the variation in management of PSF is explained by the model  $Y = \beta_0 + \beta_3 X_3 + \epsilon$ .

**Table 13. ANOVA**

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	2.079	1	2.079	35.45	.000
Residual	9.265	158	0.059		
Total	11.344	159			

Model fitness (ANOVA) findings in Table 13 revealed that the regression model of  $X_3$  and Y was significant ( $F_{1,158}$ )=35.45, p-value = 0.000<0.05), implying that Information Communication Technology is a valid predictor in the model.

**Table 14. Regression Coefficients for ICT and Management of PSF**

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.718	0.242		11.216	0.000
ICT	0.354	0.059	0.428	5.954	0.000

The findings in Table 14 showed that there is a positive relationship between Information Communication Technology and the Management of PSF ( $\beta = 0.354$ ). The relationship was also significant implying that a change in ICT has a significant influence in the management of PSF.

These results corroborate the findings of a study by Ong’ele (2018) which revealed that the adoption of digital technology enhanced the competitive advantage of Tours and Travels firms in Nairobi. Moreover, the findings showed that adoption of digital technology enhanced the quality-of-service delivery of the firms at low cost with the provision of unique services leading to high customer satisfaction, improved market share and sales volume leading to high turnover. In addition, a study by Ombaka, Machuki and Mahasi (2015) indicated that the impact of the organizational resources on effectiveness is determined by external environment and innovation.

**Overall Regression Analysis before Moderation**

A regression model was run to assess the influence of the joint relationship between external environmental factors and the management of Private Security Firms. Multiple regression analysis model was used to establish the joint effects of the study variables; socio-cultural factors ( $X_1$ ) and ICT ( $X_2$ ) aggregated together as external environmental factors and regressed on the dependent variable (Management of Private Security Firms) ( $Y$ ); represented in the model as  $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \varepsilon$ .

**Table 15. External Environmental Factors and Management of PSF**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.766	0.588	0.545	0.20578

Findings in Table 15 shows that R and  $R^2$  are 0.766 and 0.588 respectively. The R-value of 0.766 implies that there is a positive linear relationship between external environmental factors and management of Private Security Firms. The  $R^2$  value indicated that the explanatory power of the environmental factors (as a variable) was 0.588. This means that 58.8% of the change in the management of Private Security Firms is accounted for by socio-cultural factors and ICT.

**Table 16. Analysis of Variance (ANOVA)**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.738	3	1.579	37.292	.000
	Residual	6.606	156	0.042		
	Total	11.344	159			

Findings in Table 16 reveal that the regression model was significant ( $F_{3, 156} = 37.292$ , with a p-value of  $0.000 < 0.05$ ) implying that external environmental factors have a significant influence on the management of Private Security Firms. The study established the joint effect of socio-cultural factors and ICT on the management of Private Security Firms was higher than that of their separate influence.

**Table 17. Coefficients for the Overall Regression Model**

Variables	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	0.782	0.320		2.443	0.016**
Socio-Cultural Factors	0.249	0.065	0.259	3.848	0.000
ICT	0.185	0.055	0.223	3.363	0.001

*Optimal Model before Moderation: Management of PSF = 0.782 + 0.249 Socio-Cultural Factors + 0.185 ICT*

The results also indicated that there was a positive association between Socio-Cultural Factors and the Management of Private Security Firms in Nairobi County ( $\beta = 0.249$ ). Findings also revealed that the relationship was significant implying that a change in socio-cultural factors significantly influences the Management of Private Security Firms. These findings agree with the results of De Alwis and Senathiraja (2014) which showed that socio-cultural aspects such as religion and feminine traits have a considerable influence on management and corporate operations of small and medium scale enterprises. Additionally, results indicated that for companies to operate efficiently, the management should make certain that their organizational plans and approaches conform to the cultural principles of the society and environment. Moreover, the results agree with the findings of Mbiti, Mukulu, Mung’atu and Kyalo (2015) which revealed that socio-cultural aspects have a statistically significant influence on the success of women-owned Micro and Small Enterprises. Additionally, the findings showed that there was a positive relationship between Information Communication Technology and Management of Private Security Firms Nairobi County ( $\beta = 0.185$ ). The relationship was also significant indicating that a shift/change in Information Communication Technology can significantly influence the Management of Private Security Firms. The results are in conformity with the findings of a study by Ong’ele (2018) which showed that adoption of digital technology enhanced the quality-of-service delivery of the firms at low cost with the provision of unique services leading to high customer satisfaction, improved market share and sales volume leading to high turnover. In agreement, the Ombaka, Machuki and Mahasi (2015) also found that both external environment and innovation have independent effects on business growth.

**Regression Analysis after Moderation**

The study used Process macro 3.5 developed by Andrew Hayes (2018) to evaluate the influence of Legal and Regulatory Framework as a moderating variable on the relationship between the independent and the dependent variables. The output findings of moderation analysis are in Table 17.

**Table 17. Regression Results after Moderation**

Y: MPSF=Management of Private Security Firms X: SCF= Socio-Cultural Factors W: LRF= Legal and Regulatory Framework	Covariates: ICT=Information Communication Technology
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**Outcome Variable: MPSF**

Model Summary						
R	R-sq	MSE	F	df1	df2	p
0.7144	0.5104	0.0361	32.1096	5.0000	154.0000	0.0000
Model						
	coeff	se	t	p	LLCI	ULCI
Constant	2.9309	.3149	9.3065	.0000	2.3087	3.553
SCF	0.1681	0.0618	2.7225	0.0072	0.0461	0.2901
LRF	0.2836	0.0551	5.1433	.0000	0.1747	0.3926
Int_1	-0.301	0.1894	-1.587	0.1147	-0.6746	0.0737
ICT	0.1322	.0516	2.5637	.0113	.0303	0.2341

Product terms key: Int\_1: Comp x LRF

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
<b>X*W</b>	.0080	2.5169	1.0000	154.0000	0.1147

Model summary results in Table 4.24 indicate that the model after moderation ( $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 Z + \epsilon$ ) of the bootstrap samples at 95% confidence interval is significant as indicated by a p-value < 0.05. Findings also show that the average direct effect of X predicting Y controlling for the mediator is significant (p-value < 0.000). Moreover, findings reveal that the moderation effect of legal and regulatory framework is positive and significant as shown by a p-value < 0.000. However, results of interaction indicate no statistically significant interaction between legislative and regulatory framework, external environmental factors and management of Private Security Firms (p-value>0.1147). This is also demonstrated by the test(s) of highest order unconditional interactions (X\*W) which indicates that there is no significant interaction.

**Conclusions**

Based on the results, the study concluded that socio-cultural factors such as people attitude towards technology such as adoption of CCTVs has enhanced better planning for private security services. The study also established concluded that highly educated population influences better business strategy and good communication. In addition, the study established that social classes (upper, middle & lower) of the people in urban areas has influenced coordination of private security services. Concerning Information Communication Technology, the study concluded that integration of operation support systems promotes coordination of private security operations. The study also concluded that embracing financial information systems enhances control of resources and financial planning. The study also established that embracing HR information systems enhances HR planning and control. Finally, the study concluded that adoption of decision support systems promotes management’s strategic and timely decision-making. On Legal and Regulatory Framework, the study concluded that Government regulations fosters professionalism in the industry. The study also established that Legal and Regulatory Framework such as compliance with labour laws fosters communication in the industry (negotiations). Most

importantly, the study established that industry regulations have streamlined the operations in the private security sector.

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