Assessing the Impact of Administrative and Technological Enhancements on the Kenya Police Service: A Case Study of Machakos County

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ARTICLE INFO

**Keywords:** administrative capacity; police service; technological readiness; performance measurement; public organizations

**How to cite:**

ABSTRACT

This study investigates the effect of performance and technological readiness of police officers in the Kenya Police Service, specifically in Machakos County. Utilizing a descriptive survey design, the research aimed to explore the effects of technology on the efficacy of police officers. The study's methodology involved stratified random sampling of 203 police constables and four station commanders from the county's twelve police stations, employing both quantitative and qualitative approaches for data collection and analysis. The findings revealed that technological preparation significantly influences officers' performance, suggesting that improvements in administrative capacity are positively correlated with enhanced police performance. However, it was also found that most administrative capacity improvements have not been implemented at the station level, adversely affecting officers' performance. This study underscores the need for focused interventions in career development, workload management, and technological advancements to bolster the administrative capacity and, consequently, the performance of police officers in Machakos County.

Introduction

The impact of administrative capacity on worker performance is significant globally. As Farazmand (2009) argued that governance and public administration's current administrative capacity cannot handle future challenges and must be matched with modern values. Other researchers have characterized administrative ability differently, according to Misener and Doherty (2009). Administrative capacity involves administering a political or economic system's machinery and attaining political and societal goals Farazmand (2009). The individual capacities of civil personnel determine service delivery, hence Mentz (1997) defines administrative capacity as their employees' capacities.
Effective administrative capacity is crucial for improving worker performance globally. Following this background, this study investigated how administrative capacity affects officers' knowledge, motivation, and ability to accomplish their tasks in accordance to the study’s objectives. Workplace career growth affects everyone worldwide. According to Korir and Kipkebut (2016), compensated employees are more likely to value their work since they know their employers care about their well-being and career advancement.

For example, British Police Regulations (2003) established the UK College of Policing for learning and career development, which led to Professional Development Review (PDR) to help police officers develop professionally and manage their careers. Hence, career development initiatives in Africa, like Nigeria, motivate employees (Nnaji-Ihedinmah, 2015). Although Nigeria's requirement for police services has expanded, Adegoke (2014) concluded that the police force lacked the information and expertise to improve their performance and the capability to accomplish their duties.

Chelangat and Gachunga (2016) address that organizational commitment greatly influences career development in Kenya through training and development. The 2009 National Task Force Report found that Kenyan police officers are dissatisfied with career advancement practices, despite Service standing orders (SSOs). According to allegations, career progression selection criteria are polluted by corruption, political intervention, favouritism, and excessive bureaucracy, demoralizing officers and undermining their performance.

Overwork hurts productivity in every workplace. UNISONS concluded in 2014 that several factors related to occupational stress. Stress in the workplace was caused by increased workload, low pay, poor co-worker relations, unrealistic goals, shift work, lack of support and control, and working alone, as well as poor working conditions like poor facilities, overcrowding, and hazardous materials. According to a 2014 UK survey, 32% of police officers are severely worried, 62% are highly anxious, and 77% had experienced high stress in the past year. Workload increases, job insecurity, living expense concerns, and a lack of managerial support contributed. Bother and Pienaar (2006) found that South African police officers were requested to do unrelated jobs when staffing was low. As Task Force Report (2009) reported that Kenyan police personnel working as clerks, receptionists, private bodyguards, and drivers hindered their work.

Other studies highlight role of technology to support police capacities. Harries (1999) found that GIS, CCTV, and other current crime management technology have been widely used since the 1990s. Ahmed & Salihu (2013) report successful application of GIS technology in crime management in developed nations including the US, UK, and Germany. New York and Chicago use Comp Stat for crime analysis and police deployment, according to Getis et al. (2000).

Yelwa and Bello (2012) and Ahmed and Salihu (2013) found that Nigeria, South Africa, and Egypt employ GIS to fight crime. Bulelani Jili (2020) reports that Kampala, Uganda, police are using CCTV cameras to fight rising crime. In an age
of technology-driven police operations, John Krigler (2007), Waki (2008), and Ransley (2009) found that Kenya's police system still uses outdated equipment for crime management. However, the assessments showed that a lack of ICT, modern technology, and old equipment and vehicles hindered police officers' activities.

However, there are limited studies related to police officers' administrative capacity affect performance and crime rates Kenya context. However, research on officers' technological preparedness remains lacking, contributing to poor performance. As study of Tonui (2020) examined the impact of participatory supervision on police officers in Machakos County, Kenya, but it did not account for their environment, such as their knowledge, motivation, and ability to perform their duties. Because of this, this research sought to fill the identified gap. Thus, this study proposes following research question "How does technological preparedness of Kenyan police service officers in Machakos County affect their performance?".

**Literature Review**

Poor performance has been associated with the administrative capacity of the Kenyan police service as established in prior research. A multitude of obstacles have impeded the service's endeavor to operate effectively, encompassing deficient professionalism, constrained resources, an unfavorable working milieu, and fatigue. According to a study by King'oo and Njoroge (2019), the aforementioned challenges, along with others, have impeded the service from fulfilling its objectives as stated in its mission statement. Ndung'u (2011) identifies the following as critical areas of focus: provision of up-to-date machinery and motor vehicles, technological expertise, comfortable lodging and workspace, and competitive compensation and benefits for personnel. In order to maintain their efficacy, he believes that the police require modernized equipment and procedures to replicate shifting criminal trends.

As per the Kenyan Constitution of 2010, the exclusive jurisdiction over public safety rests with the police. In contrast, the Kenyan police service encounters a multitude of challenges when it comes to fulfilling its constitutional responsibilities. The Ransley Report (2009) was established by a succession of committees mandated by ruling Kenyan administrations with the aim of improving police performance. The report indicates that the Kenyan police force was inadequately equipped, underfunded, and unmotivated as a result of stagnant career advancement opportunities, excessive workloads, and inadequate technological readiness.

The report presented extensive recommendations with the objective of enhancing the Kenyan police force's capability to execute their constitutional responsibilities. The National Police Service Strategic Plan (2018-2022) delineates reforms with the objective of enhancing the administrative capabilities and performance of police officers over the long and medium term.

**Police officers' administrative capabilities**

The word "administrative capacity" remains undefined and lacks an agreement, as indicated before. This study examined the relationship between administrative capacity and the level of knowledge, motivation, and ability of the
professionals in the police service to carry out their duties. The study aimed to investigate the impact of career development, workload, and technological preparedness on the administrative capability and performance of the officers. The level of administrative capability tends to vary depending on the particular duties that need to be performed. According to Honadle (1981), the commonly accepted notion of administrative capacity in the field of public administration is not believable. Establishing measurable objectives and attaining intended results is crucial for the prosperity of any institution. It is necessary in all domains of society, encompassing government, education, business, healthcare, and even private dwellings and places of worship. Therefore, it is crucial to strengthen the capabilities of individuals within institutions in both developed and developing nations.

In order to cope with the challenges posed by globalization, governments must continually enhance their administrative capabilities, as suggested by Farazmand (2009). In the midst of this prevailing uncertainty, the author astutely notices a significant prevalence of hyper-competition. The user criticizes the lack of clarity in his policy recommendations and the absence of a clear definition of administrative capability. This hypothesis is plausible given the author's article generalizes that globalization leads to challenges in administrative capability, rather than addressing a particular topic.

According to Bowormwathana (2009) and Cheung (2009), globalization is not the cause of administrative capacity difficulties. Administrative challenges are attributed to the governments and organizations' lack of foresight in anticipating issues. The state's inability to govern effectively is a result of its limited capability being overwhelmed by a complex internal and external governing environment, as noted by Cheung (2009). Although globalization intensifies the pre-existing constraints in public administration and management, it is not responsible for these deficiencies. Therefore, this study was essential since public administrators need to develop efficient strategies to enhance their administrative capacity.

The Performance and Technological Readiness of Police Officers.

In order to enhance the effectiveness and efficiency with which the police accomplish their goals and objectives, it is imperative that they augment their administrative capacity. The integration of state-of-the-art technologies is augmenting the efficiency and effectiveness of a diverse array of police responsibilities. With the progression of forensic procedures, border control computer systems, command and control systems in control (or "dispatch") rooms, and covert surveillance equipment, there is a corresponding increase in sophistication.

Computer processing speed and storage capacity have increased substantially since the early 1990s, enabling police departments worldwide to implement Geographical Information Systems (GIS) computerized mapping technology in their routine activities. Since the mid-1990s, there has been a significant surge in the adoption and utilization of GIS technology, particularly in the domains of resource allocation, strategic planning, crime mapping, hotspot analysis, and targeted
deployment (Harries, 1999). As argued by Getis et al. (2000), Comp Stat, a GIS tool that is integrally related to crime analysis and police deployment in cities such as New York and Chicago, is a good example of this. A limited number of African nations, such as Egypt, South Africa, and Nigeria, employ geographic information systems (GIS) for legal purposes. According to a report by the African Centre for Strategic Studies, the Kampala Police Department in Uganda invested $126 million in CCTV monitoring technology from Chinese telecoms behemoth Huawei in 2019 in an effort to combat the city's escalating crime problem.

According to Nyongesa (2013), the government commissioned these assessments because the Kenyan Police Service was unable to keep up with technological advancements in the external environment, as determined by the National Police Reform Task Force, which consisted of John Krigler, Waki, and Ransley. Despite the increasing reliance on technology to drive operations, Kenyan police continue to face a dearth of technological advancements in their operations. It is recommended that traffic management responsibilities be transferred to the computer system of the Traffic Department when traffic signals are operational, as this improves efficiency. The Task Force concluded, following an examination of the technical preparedness of the police force, that the Kenyan police were inadequately equipped to address the escalating security threats and criminal activities. Their lack of access to critical law enforcement resources such as vehicles, computer expertise, and surveillance apparatus poses a significant obstacle to the execution of their responsibilities. In pursuit of modernizing security and policing, the government has implemented the following measures in accordance with "The Ransley Report": (a) enhancing security infrastructure; (b) optimizing the utilization of contemporary technology in investigative processes; (c) integrating policing and surveillance; (d) installing and enhancing information and communication technology; and (e) computerizing traffic officers. For this investigation, The Ransley Report (2009) was a primary source of information.

**Research Methods**

In order to fulfil the objective of providing an explanation in this study, a descriptive survey design was utilized to collect, analyze, and present the data, as indicated by Orodho (2002). According to Mugenda & Mugenda (1999), there are numerous methods available for conducting descriptive research. The study fulfilled the criteria of a descriptive survey research design since the researcher gathered and presented the data in its original form.

The study was conducted at the Machakos County Police Authority in Machakos County. Section 41 of the National Police Service Act (2014) has mandated the establishment of county policing authorities in all 47 counties. Consequently, the Inspector General has assigned the task of upholding order in the counties to County Police Commanders (CPC). Additional personnel of the ranks specified in the legislation will support the County Police Commanders in upholding law and order, as mandated by the Act and essential for effective execution. Kenya has a total of 47 Counties Policing Authorities. There are 29 Senior
County Police Commanders (SCPCs) who are responsible for overseeing nine sub-county police commands.

In contrast, Officer-in-Charges (O.CS) are in charge of supervising police stations throughout the county. The territory under consideration includes police stations such as Machakos, Kathiani, Masii, Matungulu, Mulolongo, Kangundo, Mwala, KBC, Kamulu, Kakuyuni, Athi-River, and Yatta. According to the Annual Report (2018) of the Machakos County Police Commander, a total of 690 police officers were examined in Machakos County. This includes 12 Officers in Charge of Stations (OCSs) and 678 Police Constables (PCs). Respondents must have a minimum of five years of experience in the police service, either as an OCS (Officer in Charge of a Station) or a PC (Police Constable), to be eligible for consideration.

The criterion was established according to this fact. The study employed stratified random sampling to choose a representative sample of the police officers. Considering the officers' assessment, the use of stratified random selection was suitable as it ensures that each stratum represents a specific subgroup within the intended audience of the study. This methodology guaranteed that each sector of the target population had an equitable and autonomous opportunity to be included in the sample, as proposed by Kombo and Tromp (2006). According to Kathuri and Pals (1993) and Kothari (2004), a researcher should select only those individuals who meet specific criteria. These findings have been reinforced by the claim that stratified random sampling should be complemented with deliberate sampling in situations where the sample provides compelling evidence to the researcher in obtaining the desired information.

The sample size consisted of 207 police officers from Machakos County. This number was determined by computing a sample precision of 30% of the total target population, which included 678 police constables and 12 OCS from the 12 police stations in the county. 30% of the participants were chosen by the implementation of a stratified sampling method. Mugenda & Mugenda (2003) state that a sample precision of 10% to 30% is adequate for a population size of less than 1,000 people. Due to the population's distribution and size, we selected a sample of 30% from a total of 678 police constables and 30% from a total of 12 station commanders. This resulted in a sample size of 203 police constables and 4 station commanders, respectively.

The study included questionnaires and interviews as the primary means of data collection. The questionnaires were sent to police constables (PCs), while the officers in charge of police stations (OCS) were interviewed using a structured interview schedule. Questionnaire guides were utilized as data collection instruments by constables, given their frequent fieldwork and extensive mobility within their assigned areas. Interview schedules were employed to engage in discussions with the OCS in order to obtain information from them.

The data in this study was analyzed using both quantitative and qualitative approaches. Mugenda and Mugenda (1999) suggested that descriptive statistics, such as frequency distributions and percentages, were essential for evaluating
numerical data. Content analysis was employed to reveal patterns, themes, and biases in the qualitative data. The data were presented in tables and described in a systematic manner to enhance user comprehension and facilitate the correlation of various study factors.

The study utilized a basic regression technique to examine the correlation between two variables: administrative capability (independent variable) and performance (dependent variable). The coefficient table was utilized to assess the statistical significance of the independent variable in relation to the dependent variable in the investigations. Kothari, R.C. (2011) states that the independent variable X has an impact on the dependent variable Y.

The correlation between X and Y was computed using the following method:
1. The relationship between X and Y was calculated as follows: $Y = a + bX$
2. Where $Y$ denote dependent variable (performance)
3. X denote independent variable (administrative capacity)
4. $a$ is regression coefficients of administrative capacity”s predictors in X; career progression, workload and technological preparedness.
5. $b$ is regression coefficients” effects on performance in Y; reduction in crime rates, effective service delivery, crime detection and crime prevention.

The fundamental concept of the simple regression model is that any change in the predictors of administrative capacity, denoted as X, has a notable impact on the coefficients’ influence on performance, denoted as Y, either in a positive or negative manner. Ultimately, the Statistical Package for Social Sciences was employed to produce significant statistical data for subsequent research.

**Results and Discussion**

**Demographic characteristics of the respondents**

The researcher effectively gathered data from 150 participants, with 116 being male, accounting for 77.3%, and 34 being female, accounting for 22.7%. This number had a substantial capacity to provide assistance while addressing gender sensitivity concerns. This suggests that the study had a somewhat equal representation of both genders, yet the service still faces challenges related to gender imbalances due to a lower proportion of female police compared to male officers.

The study initially aimed to include 690 police officers as the target population. However, a selected sample of 207 respondents was chosen for the study. This sample consisted of 203 police constables (PC) and 4 officers controlling 40 police stations (OCS) in Machakos County. The educational background of 150 responders is as follows. The education level of 102 responders was determined to be KCSE, which represents 68.0% of the total. KCSE is the minimal academic criterion required for joining the Service. There were 34 individuals with a Diploma education level, accounting for 22.7% of the total. Following that, there were 14
respondents with a Bachelor's degree, representing 9.3%. All individuals were determined to possess the requisite knowledge and skills to thoroughly analyse the factors being investigated.

**Effects of Technological Preparedness on Performance of Police Officers.**

Regarding the length of service of the respondents, the study revealed that 36.0% of the participants had been employed by the service for a period of 11-15 years. Those who have worked with the service for 5-10 years comprised 32.0% of the followers. 24.7% of the respondents have served in the service for a duration of 16-21 years. The smallest percentage, representing 7.3% of the 41 respondents, indicates that all of them had experience in police work and were capable of expressing their views on the factors being studied.

The impact of technological readiness on the performance of police officers. The researcher utilized a basic regression technique or model to examine the correlations between technical preparation and the performance of the officers. The study utilized various indicators of technological preparedness, including insufficient ICT skills, inadequate surveillance equipment, lack of sophisticated equipment, outdated or ineffective communication devices, insufficient training on new technology, and inadequate motor vehicles and modern equipment. These indicators were used as predictors or measures to assess the statistical relationship.

**Table 1. Correlation Between Technological Preparedness and Performance**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequate skills in ICT</td>
<td>.123a</td>
<td>.015</td>
<td>-.009</td>
<td>.389</td>
</tr>
<tr>
<td>Inadequate surveillance equipment</td>
<td>.119</td>
<td>.014</td>
<td>-.007</td>
<td>.309</td>
</tr>
<tr>
<td>Inadequate sophisticated forensic equipment</td>
<td>.107</td>
<td>.012</td>
<td>-.005</td>
<td>.390</td>
</tr>
<tr>
<td>Outdated or ineffective communication equipment</td>
<td>.007</td>
<td>.000</td>
<td>-.007</td>
<td>.392</td>
</tr>
<tr>
<td>Inadequate training on new technology</td>
<td>.085</td>
<td>.007</td>
<td>-.001</td>
<td>.391</td>
</tr>
<tr>
<td>Inadequate motor vehicles and modern equipment</td>
<td>.014</td>
<td>.000</td>
<td>-.007</td>
<td>.392</td>
</tr>
</tbody>
</table>

a) Dependent variable (performance) of the police officers

b) Predictors (the technological preparedness aspects)

Source: Researcher’s primer data (2022)

The relationship between X and Y was calculated as follows: $Y = a + bX$
Where Y denote dependent variable (performance)
X denote independent variable (administrative capacity)
$a$ is regression coefficients of administrative capacity’s predictors in $X$; career progression, workload and technological preparedness.

$b$ is regression coefficients’ effects on performance in $Y$; reduction in crime rates, effective service delivery, crime detection and crime prevention. The essence of the

Simple regression model was that a change in each administrative capacity’s predictors in $X$ has a significant effect on the coefficients’ effects on performance in $Y$ either positively or negatively. In the end, Statistical Package for Social Sciences was utilized to generate important statistics for further studies.

The regression analysis conducted on table 1 above examined the statistical relationship between inadequate skills in ICT and the performance of the officers. The analysis revealed a $R$ value of 0.123, indicating a weak relationship between inadequate skills in ICT and officer performance. According to the conclusions of this study, weak skills in ICT do not have a substantial impact on the performance of the officers. The regression analysis revealed a statistically significant association between insufficient surveillance equipment and officer performance, as shown by a $R$ value of 0.119. This value suggests a modest correlation between inadequate surveillance equipment and officer performance. According to the conclusions of this study, poor surveillance equipment does not have a major impact on the performance of the officers. An analysis was conducted to examine the statistical correlation between obsolete or ineffective communication equipment and the performance of police. The results revealed a $R$ value of 0.007, indicating a positive association between traumatic and violent occurrences and officer performance. Outdated or inadequate communication equipment can have a substantial impact on the performance of police and should be taken into account when assessing their performance.

The regression analysis revealed a positive correlation between insufficient training on new technology and the performance of officers, as indicated by a $R$ value of 0.085. Insufficient training in new technology has a notable impact on the performance of officers and should be taken into account when assessing their performance. The regression analysis examined the statistical relationship between insufficient motor vehicles and contemporary equipment and the performance of officers. The results revealed a $R$ value of 0.014, indicating a positive correlation between inadequate motor vehicles, modern equipment, and officer performance. Insufficient motor cars and contemporary equipment have a notable impact on the officers’ work and should be taken into account when assessing their effectiveness. Based on the aforementioned findings, the study concluded that there is a direct and favorable relationship between the level of technological readiness and the performance of the officers. Furthermore, it was determined that this relationship has a noteworthy impact on their performance and should be taken into account when evaluating their overall performance.

**Table 2. Regression Analysis Model of Technological Preparedness and Performance**
The study findings presented in table 2 above demonstrate the application of Beta coefficients in estimating the statistical impact of an independent variable on a dependent variable. The equation for inadequate skills in ICT at work is $Y = 0.044 + 1.013X$. The equation that represents the relationship between inadequate surveillance equipment at work ($Y$) and a certain factor ($X$) is $Y = 0.044 + 1.013X$. The equation representing the relationship between the inadequate sophisticated forensic equipment at work ($Y$) and the model equipment is $Y = 0.45 + 1.006X$. The equation that represents the relationship between obsolete or ineffective communication equipment at work ($Y$) and a certain factor ($X$) is $Y = 0.004 + 1.193X$. The equation representing the relationship between inadequate training skills on new technology and equipment at work is $Y = 0.046 + 1.109X$. Similarly, the equation representing the relationship between inadequate surveillance equipment for my work is $Y = 0.044 + 1.013X$. Lastly, the equation representing the relationship between inadequate motor cars and modern equipment at work is $Y = 0.008 + 1.173X$.

This suggests that an increase in the number of technical preparation predictors, while keeping all other parameters constant, leads to a proportional rise in the performance of the officers. The study's findings suggest that technological preparation has a substantial impact on the officers' performance and should be taken into account when assessing their performance.
Conclusion

The primary aim of the study was to investigate the impact of administrative ability on the performance of police officers in the Kenya Police Service in Machakos County. The study's findings generally stated that the current administrative capacity in Machakos County has a positive and significant link with the performance of police personnel, hence impacting their performance. Furthermore, the study determined that the majority of the administrative capacity improvements in the Service have not been executed at the station level, hence negatively impacting the performance of police officers.

The study's findings regarding the third goal were focused on determining the impact of technological readiness on the performance of officers in the Kenya police service. The investigation revealed that the officers' existing level of technological preparation was insufficient to improve their performance. The study's findings suggest that the officers' level of technological preparedness had a notable impact on their performance. This was evident in their lack of adequate training in new technology and modern equipment, as well as their inability to effectively apply technological skills in managing and addressing emerging crimes. Enhancing the officers' performance can be achieved by improving their technical preparation.

This study focuses on evaluating the administrative capacity and performance of officers in the Kenya Police Service specifically in Machakos County. The study aimed to evaluate the current administrative capacity and its impact on the performance of police officers. Specifically, it focused on the degree of knowledge, motivation, and ability of officers within the County Service to carry out their tasks.

Finally, the researcher suggest that future studies should prioritize evaluating administrative capacity as an institutional concept, specifically the capacity of the Kenya police force to effectively carry out its functions and responsibilities. The researcher also recommends conducting additional studies on different law enforcement organizations to evaluate the impact of administrative capacity on their effectiveness.

Acknowledgement

This paper is an adaptation of the author’s thesis entitled "administrative capacity of Kenya Police Service Officers in Machakos County, Kenya", in Master Program of Public Policy and Administration, School of Law, Arts and Social Sciences, Kenyatta University, Kenya, 2023.

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