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THE INFLUENCE OF TECHNOLOGY USE ON LABOUR PRODUCTIVITY IN THE JUDICIAL SERVICE IN NYERI COUNTY

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ABSTRACT
Labour productivity was an important factor in the success of a company. A company's output was as much dependent on labour productivity as it was on capital productivity. The study sought to examine the influence of technology used on labour productivity in the judicial service in Nyeri regional courts. The study adopted the descriptive design. The target population comprised 43 Magistrates, 93 Court Administrators, and 145 Lawyers (members of the Nyeri Law Society). Using 30% representation, a sample size of 13 Magistrates, 21 court administrators, and 44 Lawyers (members of the Nyeri Law Society) was utilized. The study used cluster random sampling to select 8 clusters, stratified sampling to identify the sample within each cluster, and simple random sampling to choose respondents from each stratum. It collected quantitative and qualitative data using questionnaires and interviews, then used statistical analysis to organize, summarize, and present the data. Quantitative data was analyzed with descriptive statistics (frequencies, percentages, means, and standard deviation) and presented in tables, graphs, and charts. The study demonstrates a very strong positive correlation between labour productivity in courts and technology used (coefficient of 0.746 with a significance level of 0.000. The regression analysis shows that technology use significantly enhances productivity, with a one-unit increase resulting in a 0.265 standard deviation rise (Beta = 0.265, p = .026). The study recommended that the judicial service should improve the technology infrastructure to boost productivity and performance in the legal sector.

INTRODUCTION
Improving judicial labor productivity is crucial for efficient justice delivery and broader socio-economic development. The judiciary's role in achieving Sustainable Development Goals, particularly SDG 16, underscores its impact on poverty eradication, gender equality, and sustainable development (World Bank, 2021; United Nations Development Programme, 2018). Judicial performance not only fosters the rule of law and human rights protections but also enhances a country's attractiveness for foreign investment and economic growth (World Justice Project, 2021). However, challenges persist globally, as evidenced by declining productivity in U.S. federal courts in 2020 (Administrative Office of the U.S. Courts, 2021), significant case backlogs in Pakistan (Dawn, 2022), and suboptimal productivity levels in Nigeria and Kenya (Fleming, 2023; The Standard, 2021). Addressing these issues is crucial for enhancing justice delivery and achieving broader developmental goals.

The influence of technology on labor productivity in the judiciary service varies significantly between developed and developing nations. In developed countries such as the USA and the UK, the judiciary workforce is highly skilled, with many possessing advanced degrees in law, leading to greater efficiency and productivity (Bell & Mankiw, 2020). However, developing nations like Nigeria, Kenya, and Pakistan face a shortage of skilled judicial workers, which contributes to lower productivity levels (Jangkamol & Wuttisorn, 2021; Shahid & Awan, 2022). Studies from these countries highlight that the skills and qualifications of judicial workers significantly impact productivity, although the extent of this influence can vary (Ahmed & Saeed, 2022).

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Technology adoption in the judiciary has been shown to positively impact labor productivity. In developed countries, such as the USA and the UK, the widespread use of electronic case filing systems, videoconferencing, and case management systems has enhanced efficiency and reduced case processing times (Hodges, 2021). Conversely, developing nations in Africa, like Nigeria and Ghana, are still in the early stages of adopting such technologies, but initial studies indicate significant improvements in productivity where technology is used (Adeyemi et al., 2021). For instance, Nigeria's implementation of electronic case management systems has led to a substantial reduction in case processing times (National Judicial Council, 2022). Despite these advancements, overall technology adoption remains lower in these regions compared to their developed counterparts, highlighting the potential for further productivity gains through increased technological integration.

Labour productivity in Kenya's judicial service faces significant challenges, as highlighted by reports and studies. The Judiciary of Kenya (2020) reports a persistent backlog of cases in the country's courts, resulting in prolonged delays in case resolution and negatively impacting overall productivity. Ouma et al. (2019) emphasize that the productivity of judges in Kenyan courts lags behind their counterparts in neighboring East African countries, underscoring the need for a thorough investigation into the factors contributing to this disparity and the development of strategies to enhance judicial efficiency. Moreover, the National Council for Law Reporting (2021) identifies corruption, inadequate resources, and insufficient training of judicial officers as major impediments to productivity within Kenya's judicial system, echoing the call for comprehensive research to address these issues and improve service delivery effectiveness. Similarly, studies by the World Bank (2018) indicate systemic inefficiencies and delays exacerbated by corruption within Kenya's judiciary, emphasizing the critical need for detailed analysis and strategic interventions to optimize judicial productivity in the country, including in regions like Nyeri County, where absenteeism among judicial officers further hampers case processing efficiency (Republic of Kenya, 2021; Republic of Kenya, 2022).

Statement of the Problem

Labour productivity significantly impacts company success, influencing total output, capital efficiency, and overall operational costs beyond just labour expenses. Improving productivity is crucial for organizational efficiency, reducing workforce requirements while maintaining output levels. In Nyeri County, low labour productivity in the judicial service has resulted in substantial challenges for the justice system. Case processing delays have created extensive backlogs, denying timely justice to litigants and contributing to overcrowding in remand facilities (Republic of Kenya, 2021). Moreover, high levels of absenteeism among judicial officers have undermined public trust in the judiciary, prompting individuals to seek alternative dispute resolution methods (Republic of Kenya, 2022). These issues necessitate an investigation into the factors driving low productivity in the county. Although studies have identified technology adoption as influencing productivity in various sectors (Kinyanjui & Mutai, 2019; Ogutu, 2019), there is limited specific research on these factors within the judiciary sector of Nyeri County. Therefore, a study is needed to explore the determinants of labour productivity in the magistrate courts of Nyeri County.

Objective

To find out the influence of technology used on labour productivity in the judicial service in Nyeri County

Research Hypotheses

$\mathbf{H_{O2}}$ Technology used does not have a statistically significant influence on labour productivity in the judicial service in Nyeri County

LITERATURE REVIEW

Technology used and labour productivity

Several studies have explored the impact of technology on labour productivity within judicial systems across various countries. Kim and Kim (2021) conducted research in a US federal court, using a quasi-experimental design to assess the effects of a case management system. Their study demonstrated a significant improvement in labour productivity following the implementation of the system. Similarly, Chan and Kumar (2019) focused on the UK Crown Court, employing qualitative methods to examine electronic case management systems. Their findings indicated enhanced efficiency and time savings as a result of adopting these systems. Noor et al. (2020) investigated Malaysian courts, employing a quantitative approach to study electronic court management systems, which also showed a notable increase in productivity.

Akinola and Adeniran (2020) investigated the Nigerian judiciary's use of ICT through a survey, finding that ICT significantly enhanced labour productivity. However, their study did not differentiate between types of ICT tools, such as case management software versus video conferencing. Muhumuza et al. (2019) explored the Ugandan judiciary's technology adoption, revealing positive impacts on productivity but noting challenges like inadequate infrastructure and training. Lyimo and Mwakaje (2021) studied the Tanzanian judiciary's electronic case management systems, finding they improved productivity despite challenges in training and support. Finally, Njoroge and Ombuki-Berman (2021) examined the Kenyan judiciary's technology adoption and found significant productivity improvements alongside challenges in infrastructure and training. These studies collectively underscore the transformative potential of technology in enhancing labour productivity within judicial systems worldwide, though they also highlight the importance of addressing contextual challenges to maximize these benefits effectively.

Labour Productivity in the Courts

Several studies have examined labour productivity within judicial systems across different countries, highlighting various dimensions and challenges. For instance, Dieterle (2021) focused on US federal courts, suggesting that increasing the number of judges could alleviate case backlogs and enhance productivity. In India, Kumar (2021) emphasized the role of technology in improving judicial efficiency. Similarly, Smith's (2022) study in Canada underscored the importance of training and resources in enhancing court clerk productivity, while Kriel (2022) in South Africa highlighted the impact of language training on court interpreters' productivity.

Efficiency is a critical dimension of labour productivity in judicial services, as evidenced by studies such as those by the American Bar Association (2020) and the UK Ministry of Justice (2019). These studies found significant case backlogs and delays, recommending the adoption of technology and recruitment of more personnel to improve efficiency. The Malaysia Productivity Corporation (2018) and the National Judicial Academy in India (2017) also emphasized efficiency, suggesting the adoption of case management systems and regular training for court staff to enhance productivity.

Quality is another important dimension in judicial labour productivity. The World Bank's study (2013) in Rwanda focused on the quality of judgments and efficiency in case resolution, attributing Rwanda's higher productivity to technological adoption and streamlined processes. Mwakatobe (2017) highlighted challenges in Tanzania's judiciary, including low quality of work due to inadequate training and innovation, demonstrating the impact of quality on overall productivity.

In Kenya, recent studies (Otieno & Ongondo, 2022; Omondi et al., 2022; Kimani & Mwiti, 2022) have identified multiple factors contributing to low labour productivity in the judiciary, including case backlogs, outdated technology, and insufficient human resources. These findings underscore the need for comprehensive reforms and investments to enhance efficiency, effectiveness, and quality in delivering justice in Kenya. Thus, addressing these dimensions holistically is crucial for improving judicial labour productivity globally.

Theoretical Framework

The study was guided by the Diffusion of Innovation (DOI) Theory as proposed by (Rogers, 2003). The DOI posits that the adoption of innovations follows a five-stage process: knowledge, persuasion, decision, implementation, and confirmation. This theory is instrumental in understanding how new ideas, technologies, or practices are disseminated and embraced within a social system (Helfrich et al., 2017). For the study on labour productivity in Nyeri County's judicial service, DOI elucidates how factors influencing productivity, such as employee skills and technological adoption, are diffused among workers. It emphasizes the importance of factors like relative advantage, compatibility with existing practices, complexity, trialability, and observability in determining the adoption and integration of innovations (Greenhalgh et al., 2004; Rogers, 2003). DOI provides a robust framework for examining how skills and qualifications are perceived and adopted by employees, as well as how technological advancements are incorporated into daily operations to enhance labour productivity.

RESEARCH METHODOLOGY

The study employed a descriptive research design, which was chosen for its ability to comprehensively explore and describe the factors influencing labor productivity in the judicial service of Nyeri County. According to Mugenda and

Mugenda (1999), descriptive research involves fact-finding and inquiries that explain the current state of affairs. This design facilitated the collection of both quantitative and qualitative data. Quantitative data, obtained through surveys and questionnaires, quantified factors such as the frequency and intensity of influences on productivity. Qualitative data, gathered via interviews and focus group discussions, provided deeper insights into the perceptions and experiences of judicial service workers regarding productivity (Creswell & Poth, 2018). The combination of these methods allowed for a holistic understanding of the productivity dynamics within the judicial service.

The target population of the study included magistrates, court administrators, and lawyers across various courts in Nyeri County. Magistrates, as key decision-makers in delivering justice, were crucial to assessing productivity. Court administrators played a pivotal role in ensuring efficient court operations, while lawyers' productivity was essential for the effective functioning of the justice system. The target population for this study, sourced from the County Government of Samburu (2023), encompasses a diverse group totaling 150,780 individuals. It includes local government officials (500), policy makers (30), project managers (180), communication teams (20), NGO representatives (50), and beneficiaries (150,000).

The research employed a stratified sampling technique to ensure a representative sample from each category of the target population. This method allowed for proportional representation of magistrates, court administrators, and lawyers based on their numbers in each court location. Cluster random sampling within each stratum further ensured that the sample accurately reflected the population diversity within Nyeri County's judicial service. the sample size comprised of 13 Magistrates, 21 court administrators, and 44 Lawyers (members of the Nyeri Law Society. The sample size of 80 respondents was determined based on the distribution across the courts and categories, ensuring adequate representation for robust data analysis (Orodho, 2003).

Reliability and validity were critical considerations in ensuring the robustness of the research instruments and the credibility of the study findings. Reliability, as defined by Mugenda and Mugenda (1999), refers to the consistency and stability of results obtained from a research instrument over repeated trials. In this study, reliability was assessed through a pre-test of the questionnaire in Muranga regional courts, involving 20 sampled employees. The use of Cronbach's Alpha helped gauge internal consistency, with scores expected to exceed the recommended threshold of 0.7, as per Franklin (2012). This process ensured that the questionnaire reliably measured variables related to labor productivity in the judicial service of Nyeri County.

Validity, on the other hand, pertained to the extent to which the research instruments accurately measured the intended phenomena. Piloting the questionnaire in Muranga regional courts enabled the researcher to identify and modify items that did not effectively capture relevant information. These adjustments were crucial in enhancing the validity of the research tools, ensuring that they appropriately measured factors influencing labor productivity in the study context (Mugenda and Mugenda, 1999; Orodho, 2005). By addressing reliability and validity concerns upfront, the study laid a strong foundation for conducting meaningful data analysis and drawing reliable conclusions.

In data analysis, both quantitative and qualitative data were collected and systematically analyzed to derive meaningful insights. Quantitative data underwent descriptive statistical analysis, including frequencies, percentages, means, and standard deviations. This approach facilitated the organization and presentation of data through graphs and tables, aiding in the interpretation of findings related to variables such as skills and qualifications of workers, technology usage, employee motivation, and quality circles. Additionally, Pearson Correlation and regression analyses were employed to explore relationships among these variables and their impact on labor productivity in the judicial service of Nyeri County. This comprehensive analytical approach, guided by Orodho (2005), ensured that the study's objectives were met effectively, providing a nuanced understanding of factors influencing labor productivity within ethical guidelines that safeguarded participant confidentiality and minimized potential risks.

RESULTS AND DISCUSSIONS

Response Rate

The study achieved an average response rate of 86% across the target population, demonstrating high levels of participation from magistrates (77%), court administrators (86%), and lawyers (89%). These figures exceed the typical response rates observed in research, as suggested by Nulty (2008), indicating excellent engagement and cooperation

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from the respondents. Such robust participation enhances the validity and reliability of the survey findings, ensuring a representative sample for investigating the determinants of labour productivity in Nyeri County's judicial service.

Demographic Characteristics

Regarding demographic characteristics, the study revealed a balanced gender distribution among lawyers (48.7% male, 51.3% female) and court administrators (50% male, 50% female). Age distribution analysis indicated significant representation among lawyers aged 29-38 years (41.0%) and 39-48 years (51.3%), while court administrators predominantly fell within the 29-38 years (50.0%) and 39-48 years (44.4%) age categories. Educational attainment was notably high, with a majority holding a University Degree (Undergraduate) among both lawyers (64.1%) and court administrators (66.7%). These findings underscore a well-educated workforce within the judicial service, critical for understanding factors influencing labour productivity.

Awareness of Human Resource Information Systems (HRIS) among respondents

Furthermore, the study explored tenure and awareness of Human Resource Information Systems (HRIS) among respondents. It revealed that a significant proportion of lawyers (51.3% with 6-10 years) and court administrators (50.0% with 6-10 years) had served in their roles for 6-10 years. Moreover, a substantial majority were aware of HRIS applications (79.5% lawyers, 83.3% court administrators), indicating a high level of technological integration within the judicial service. This uniform adoption of ICT (100% in both categories) further highlights a technologically advanced environment, potentially impacting labour productivity positively.

The study's comprehensive analysis of demographic characteristics, including age, gender, educational attainment, tenure, and technological awareness among judicial service professionals in Nyeri County, provides a robust foundation for examining the determinants of labour productivity. These insights not only enhance the study's validity but also offer valuable considerations for improving organizational effectiveness within the judicial service context.

Descriptive Statistics for Technology Used: Lawyers' Perspectives

The table shows the descriptive statistics of the responses given by 39 lawyers who participated in the survey. The responses were measured on a five-point Likert scale, where 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree. The mean and standard deviation of each statement indicate the average level of agreement and the variation of opinions among the lawyers, respectively. The results are summarized in Table 4.9 below.

The results in Table 2 are explained as follows. Majority of courts use computerized systems to manage cases. The statement has a mean score of 2.6667, the lowest among all, indicating lawyers tend to disagree or stay neutral, suggesting limited and uneven technology adoption in courts. Its standard deviation of 1.15470 is high, showing diverse views on court technology. Some lawyers encounter advanced tech in some courts, while others find little or none elsewhere. This aligns with Mwenda's (2020) study on e-justice in Kenya, noting nascent technology use, lack of uniformity, and challenges like infrastructure gaps, funding shortages, skills gaps, and resistance to change in court technology adoption.

Lawyers have access to electronic case management systems. The mean score of this statement is 2.8718, which is slightly higher than the previous statement, but still below 3. This implies that the lawyers tend to disagree or remain neutral on the statement, indicating that they do not have adequate or consistent access to electronic case management systems. The standard deviation of this statement is 0.97817, which is relatively low, suggesting that the lawyers have a more consistent view on the access to electronic case management systems. Most lawyers may have faced similar challenges or barriers in accessing the systems, such as technical issues, login problems, or limited availability. This result is consistent with the finding of a study by Kariuki (2020), who evaluated the effectiveness of the electronic case management system in the judiciary of Kenya. The study found that the system has improved the efficiency and transparency of the case management process, but also faced some challenges such as system downtime, network failure, data security, and user resistance. The study also found that the system is not fully operational in all the courts, and that some lawyers still prefer the manual system over the electronic system.

Magistrates use computerized legal research tools. The mean score of this statement is 2.8718, which is the same as the previous statement, and also below 3.0. This implies that the lawyers tend to disagree or remain neutral on the statement, indicating that they do not observe or experience the use of computerized legal research tools by the magistrates. The standard deviation of this statement is 0.95089, which is the lowest among all the statements, suggesting that the lawyers have a more consistent view on the use of computerized legal research tools by the magistrates. Most lawyers may have similar perceptions or expectations of the magistrates' use of technology for legal research. This result is consistent with the finding of a study by Mwangi (2021), who explored the use of information and communication technology for legal research in the judiciary of Kenya. The study found that the use of technology for legal research is still low among the magistrates, and that there is a need for more training and awareness on the benefits and availability of the technology. The study also found that the magistrates face some challenges in using the technology for legal research, such as lack of access, reliability, and quality of the information sources, as well as ethical and legal issues.

Lawyers have access to electronic legal databases. The mean score of this statement is 2.8462, which is slightly lower than the previous statement, and also below 3.0. This implies that the lawyers tend to disagree or remain neutral on the statement, indicating that they do not have adequate or consistent access to electronic legal databases. The standard deviation of this statement is 1.06471, which is relatively high, suggesting that the lawyers have diverse views on the access to electronic legal databases. Some lawyers may have more access and use of the electronic legal databases, while others may have less or no access and use of the databases. This result is consistent with the finding of a study by Ongaro (2020), who investigated the use of electronic legal information resources by lawyers in Kenya. The study found that the use of electronic legal information resources is still low among the lawyers, and that there is a need for more awareness and promotion of the resources. The study also found that the lawyers face some challenges in using the electronic legal information resources, such as cost, accessibility, reliability, and quality of the resources, as well as lack of skills and training.

Court processes like filing and case registration have been computerized, with an average score of 2.8974, slightly above 3.0. This indicates lawyers generally disagree or remain neutral, suggesting they don't frequently encounter or experience computerized court processes. The statement's standard deviation is 1.14236, showing diverse lawyer opinions on computerization. Some encounter efficient systems, while others face inefficiencies or lack computerized processes. This aligns with Kamau's (2021) study on Kenya's e-filing impact, revealing improvements in speed, accuracy, and transparency despite challenges like system failures, network issues, and legal concerns. The study notes incomplete implementation across courts, with some lawyers still preferring manual filing.

Lawyers can access court schedules online. The mean score of this statement is 2.8718, which is the same as the previous statement, and also below 3. This implies that the lawyers tend to disagree or remain neutral on the statement, indicating that they do not have adequate or consistent access to court schedules online. The standard deviation of this statement is 1.17383, which is relatively high, suggesting that the lawyers have diverse views on the access to court schedules online. Some lawyers may have more access and use of the online court schedules, while others may have less or no access and use of the online court schedules. This result is consistent with the finding of a study by Njoroge (2020), who analyzed the effect of e-scheduling on the delivery of justice in Kenya. The study found that the e-scheduling system has improved the convenience, timeliness, and transparency of the court scheduling process, but also faced some challenges such as system breakdown, network instability, user dissatisfaction, and legal and policy issues. The study also found that the e-scheduling system is not fully operational in all the courts, and that some lawyers still rely on the manual scheduling system over the e-scheduling system.

The court's computerized case management system is user-friendly. The mean score of this statement is 2.9744, which is the highest among all the statements, but still below 3. This implies that the lawyers tend to disagree or remain neutral on the statement, indicating that they do not find the court's computerized case management system user-friendly. The standard deviation of this statement is 1.20279, which is the highest among all the statements, suggesting that the lawyers have diverse views on the usability of the system. Some lawyers may find the system easy to use, while others may find the system difficult or confusing to use. This result is consistent with the finding of a study by Omondi (2020), who evaluated the user satisfaction of the electronic case management system in the judiciary of Kenya. The study found that the user satisfaction of the system is moderate, and that there are some factors that affect

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the user satisfaction, such as system quality, information quality, service quality, and user involvement. The study also found that the user satisfaction of the system has a positive impact on the performance and productivity of the users.

The results of this section provide useful insights into the influence of technology used on labour productivity in the judicial service in Nyeri County. The results indicate that the lawyers are not satisfied with the current state of technology in the courts, and that there is room for improvement in terms of adoption, accessibility, and usability of technology. The results also suggest that the judiciary should consider the views and needs of the lawyers, who are the key stakeholders and users of the technology, in order to enhance the effectiveness and efficiency of the judicial service.

Table 1: Descriptive Statistics for Technology Used: Lawyers' Perspectives

	N	Min	Max	Mean	Std. Deviation
Majority of courts use computerized systems to manage cases.	39	1.00	5.00	2.6667	1.15470
Lawyers have access to electronic case management systems.	39	1.00	5.00	2.8718	.97817
Magistrates use computerized legal research tools.	39	1.00	5.00	2.8718	.95089
Lawyers have access to electronic legal databases.	39	1.00	5.00	2.8462	1.06471
Court processes such as filing and case registration are computerized.	39	1.00	5.00	2.8974	1.14236
Lawyers can access court schedules online.	39	1.00	5.00	2.8718	1.17383
The court's computerized case management system is user-friendly.	39	1.00	5.00	2.9744	1.20279
The court's electronic legal databases are regularly updated.	39	2.00	5.00	3.0769	.89984
Lawyers can use electronic legal databases without difficulty.	39	1.00	5.00	3.0769	1.20054
The court's computerized case management system has reduced case processing time.	39	1.00	5.00	2.7436	1.16343
Electronic filing has reduced the backlog of cases in court.	39	1.00	5.00	2.7692	1.32708
Lawyers are able to conduct legal research more efficiently using electronic tools.	39	1.00	5.00	2.6154	1.18356
Valid N (listwise)	0				

Descriptive Statistics for Technology Used: Court Administrators' Perspectives

The table shows the descriptive statistics of the responses given by 18 court administrators who participated in the survey. The responses were measured on a five-point Likert scale, where 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree. The mean and standard deviation of each statement indicate the average level of agreement and the variation of opinions among the court administrators, respectively. The results were as follows. I believe that the use of technology, such as computers, is an important determinant of productivity in the courts. The mean score of this statement is 2.6667, which is below 3. This implies that the court administrators tend to disagree or remain neutral on the statement, indicating that they do not believe that the use of technology, such as computers, is an important determinant of productivity in the courts. The standard deviation of this statement is 1.28338, which is relatively high, suggesting that the court administrators have diverse views on the importance of technology use for productivity in the courts. Some court administrators may have more positive or negative views on the role of technology use for productivity in the courts, while others may have more neutral or mixed views. This result is inconsistent with the finding of a study by Odhiambo (2020), who examined the relationship between technology use and productivity in the judiciary of Kenya. The study found that there is a positive and significant relationship between technology use and productivity in the judiciary, and that technology use has a positive impact on the efficiency, effectiveness, and quality of the judicial service. The study also found that technology use enhances the access to justice, transparency, and accountability of the judiciary.

I believe that the ability to effectively use various technological applications is an important determinant of productivity in the courts. The mean score for this statement is 2.6111, slightly below 3, indicating court administrators tend to disagree or remain neutral on its importance for productivity in courts. The low standard deviation of 1.14475 suggests a consistent view among administrators. This contrasts with Mugambi (2020)'s findings on technology

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adoption in Kenya's judiciary, where effective technology use positively impacts productivity and performance. Mugambi highlighted training, support, and incentives as critical factors influencing technology use.

I believe that the effectiveness of the technology used in the courts is an important determinant of productivity in the courts. The mean score of this statement is 2.6111, which is the same as the previous statement, and also below 3. This implies that the court administrators tend to disagree or remain neutral on the statement, indicating that they do not believe that the effectiveness of the technology used in the courts is an important determinant of productivity in the courts. The standard deviation of this statement is 1.14475, which is the same as the previous statement, suggesting that the court administrators have a more consistent view on the importance of technology effectiveness for productivity in the courts. Most court administrators may have similar perceptions or expectations of the technology effectiveness for productivity in the courts. This result is inconsistent with the finding of a study by Wanjala (2021), who evaluated the impact of technology effectiveness on the delivery of justice in Kenya. The study found that the effectiveness of technology is one of the key factors that influence the delivery of justice in the judiciary, and that the effectiveness of technology has a positive impact on the productivity and quality of the judicial service. The study also found that the effectiveness of technology is influenced by the reliability, security, and functionality of the technology.

The results of this section provide useful insights into the influence of technology used on labour productivity in the judicial service in Nyeri County. The results indicate that the court administrators are not convinced of the importance of technology use, ability, and effectiveness for productivity in the courts, and that there is room for improvement in terms of awareness, education, and communication of the benefits and challenges of technology in the judicial service. The results also suggest that the judiciary should consider the views and needs of the court administrators, who are the key managers and coordinators of the technology in the courts, in order to enhance the adoption and use of technology in the judicial service

Table 2: Descriptive Statistics for Technology Used: Court Administrators' Perspectives

	N	Min	Max	Mean	Std. Deviation
I believe that the use of technology, such as computers, is an important determinant of productivity in the courts.	18	1.00	5.00	2.6667	1.28338
I believe that the ability to effectively use various technological applications is an important determinant of productivity in the courts.	18	1.00	5.00	2.6111	1.14475
I believe that the effectiveness of the technology used in the courts is an important determinant of productivity in the courts.	18	1.00	5.00	2.6111	1.14475
Valid N (listwise)	18				

Comparison of Descriptive Responses for Technology Used

In comparing the responses from the two categories of respondents, namely lawyers and court administrators, distinct patterns emerge regarding their perspectives on the influence of technology on labour productivity in the judicial service in Nyeri County. According to the descriptive statistics presented in Table 4.9, lawyers generally express a level of dissatisfaction or neutrality with the current state of technology in the courts. Key points include the perception that the majority of courts still use computerized systems to manage cases inadequately (mean score: 2.6667), indicating a perceived limitation and uneven adoption of technology. Access to electronic case management systems (mean score: 2.8718) and electronic legal databases (mean score: 2.8462) is also deemed inadequate. Furthermore, the user-friendliness of the court's computerized case management system (mean score: 2.9744) falls below satisfaction levels. These results highlight lawyers' concerns about the limited, inconsistent, and user-unfriendly nature of the technology used in the judicial service.

Court Administrators' Perspectives

Contrastingly, the court administrators, as reflected in Table 2, appear to be more skeptical about the importance of technology in determining productivity. They express disagreement or neutrality on statements related to the importance of technology use, the ability to use technological applications effectively, and the effectiveness of

technology in enhancing productivity (mean scores: 2.6667, 2.6111, 2.6111, respectively). This suggests a lack of conviction among court administrators regarding the pivotal role of technology in improving labour productivity in the courts. Unlike the lawyers, who express concerns about the adequacy and usability of existing technology, court administrators seem less convinced of the necessity and impact of technology on productivity.

Comparative Analysis

The comparison highlights disconnect between lawyers and court administrators. While lawyers are dissatisfied or neutral about the current state and effectiveness of technology in the courts, court administrators exhibit skepticism about the overall importance and impact of technology on labour productivity. This discrepancy could stem from a lack of communication, understanding, or collaboration between these two key stakeholder groups. Bridging this gap is crucial for successful technology adoption, where lawyers' concerns about usability and access align with administrators' focus on the perceived importance of technology. Addressing these discrepancies and fostering a shared understanding between these groups is vital for the successful integration and improvement of technology in the judicial service of Nyeri County.

Labour Productivity in the Judicial Service: Lawyers' Perspective

The study explored perceptions of 39 respondents regarding labour productivity in the judicial service in Nyeri County, Kenya. The results, as depicted in Table 3, shed light on various aspects of the judicial service, indicating the following implications.

The backlog of cases in the judicial service is a significant problem. The mean score for this statement is 2.9487, which is close to the neutral point of 3. This indicates that the respondents have mixed opinions on whether the backlog of cases in the judicial service is a significant problem. The standard deviation of 0.91619 shows that, there is a moderate variation in the responses. Some respondents may strongly agree or disagree with the statement, while others may be indifferent or unsure. The result implies that the judicial service in Nyeri County may have a backlog of cases, but the extent and severity of the problem may vary depending on the type, nature, and complexity of the cases, as well as the availability and capacity of the judges and personnel. The result also suggests that the respondents may have different expectations and standards of what constitutes a significant problem in terms of the backlog of cases.
A related study in Kenya is the one by Khamala and Makhamara (2022), who investigated the influence of work-life balance on judicial service employees' performance in Kitui County, Kenya. They found that the backlog of cases was one of the factors that contributed to stress at work, which in turn affected the employees' performance and productivity. They recommended that the judicial service should adopt flexible work schedule strategies to reduce the workload and improve the work-life balance of the employees.

The backlog of cases in the judicial service has a negative impact on the efficiency of the courts. The mean score for this statement is 3.0000, which is exactly the neutral point of 3. This indicates that the respondents have no clear agreement or disagreement on whether the backlog of cases in the judicial service has a negative impact on the efficiency of the courts. The standard deviation of 1.16980 shows that there is a high variation in the responses. Some respondents may strongly agree or disagree with the statement, while others may be neutral or ambivalent. The result implies that the judicial service in Nyeri County may face some challenges in delivering timely and effective justice due to the backlog of cases, but the impact may not be uniform or significant across all courts. The result also suggests that the respondents may have different definitions and measures of what constitutes efficiency in the courts. A related study in Kenya is the one by Mwenda and Mwenda (2020), who examined the factors affecting the efficiency of the judiciary in Kenya. They found that the backlog of cases was one of the major factors that hindered the efficiency of the judiciary, as it caused delays, congestion, and dissatisfaction among the litigants and the public. They recommended that the judiciary should adopt alternative dispute resolution mechanisms, case management systems, and performance management systems to reduce the backlog and improve the efficiency of the courts.

Negative Impact of Backlog on Efficiency and Quality: Respondents perceived the backlog to negatively affect both the efficiency (Mean = 3.0000) and the quality of judgments produced (Mean = 2.8205). These results underline the interconnectedness of efficiency and case backlog, emphasizing the need for streamlined processes. Ayub's (2022) study on employee performance and motivation in the Kenyan county assembly provides insights into potential factors influencing judicial productivity.

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Reasonableness of Cases Handled per Judge/Personnel: While participants found the number of cases handled per judge/personnel reasonable (Mean = 3.0256), this might indicate an acceptance of the workload. However, the standard deviation suggests variations in opinions, indicating diverse perspectives on an acceptable caseload. This resonates with Kemboi's (2022) examination of case backlog and productivity factors in Kenya's judiciary. Participants expressed varied views on the manageability of judges/personnel workload (Mean = 2.7949), reflecting uncertainties about the balance between the workload and available resources. This complexity in workload management is consistent with findings in Mureithi's (2020) study on the challenges facing the Kenyan judiciary.

Respondents generally perceived the quality of judgments as high (Mean = 3.2051), with consistency across all courts (Mean = 3.0256). These positive ratings suggest that, despite challenges, the judicial service maintains a commendable standard of judgment quality. Such insights resonate with Kemboi's (2021) study, emphasizing the importance of quality judgments in addressing backlog issues. Delays in the judicial service were acknowledged as a significant problem (Mean = 3.0769), negatively impacting productivity (Mean = 2.9231) and the quality of judgments produced (Mean = 3.1538). These findings correlate with studies emphasizing the detrimental effects of delays on overall judicial performance, such as Mureithi (2020) and Ayub (2022). Participants acknowledged a well-established system for monitoring and addressing delays (Mean = 3.0256), indicating an awareness of the need for proactive measures. However, the standard deviation suggests variations in confidence regarding the effectiveness of the existing system. These results highlight the multifaceted challenges faced by the Nyeri County judicial service, providing valuable insights for targeted interventions. The linkages to related studies underscore the complexity of factors influencing judicial productivity, offering a basis for informed policy decisions and improvements within the Kenyan judicial system.

Table 3: Labour Productivity in the Judicial Service: Lawyers' Perspective

	N	Min	Max	Mean	Std. Dev
The backlog of cases in the judicial service is a significant problem.	39	1.00	5.00	2.9487	.91619
The backlog of cases in the judicial service has a negative impact on the efficiency of the courts.	39	1.00	5.00	3.0000	1.16980
The backlog of cases in the judicial service has a negative impact on the quality of judgments produced.	39	1.00	5.00	2.8205	1.18925
The number of cases handled per judge/personnel in the judicial service is reasonable.	39	1.00	5.00	3.0256	1.15820
The workload of judges/personnel in the judicial service is manageable.	39	1.00	5.00	2.7949	1.05580
The quality of judgments produced by the judicial service is high.	39	1.00	5.00	3.2051	.89382
The judicial service has a well-established system for ensuring the quality of judgments produced.	39	1.00	5.00	3.0513	.94448
The quality of judgments produced by the judicial service is consistent across all courts.	39	1.00	5.00	3.0256	1.01274
Delays in the judicial service are a significant problem.	39	1.00	5.00	3.0769	1.06090
Delays in the judicial service have a negative impact on productivity.	39	1.00	5.00	2.9231	1.15587
Delays in the judicial service have a negative impact on the quality of judgments produced.	39	1.00	5.00	3.1538	1.13644
The judicial service has a well-established system for monitoring and addressing delays.	39	1.00	5.00	3.0256	1.06344
Valid N (listwise)	0				

Labour Productivity in the Judicial Service: County Administrators' Perspective

The study investigated the perceptions of 18 county administrators in Nyeri County, Kenya, regarding labour productivity in the judicial service, using a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The results from Table 4 revealed valuable insights into various aspects of labour productivity.

The results were as provided below. Consistently striving to meet and exceed customer expectations: With a mean score of 2.2222, administrators displayed a moderate inclination towards meeting and exceeding customer

expectations. The standard deviation of .94281 indicates a considerable variability in responses. This suggests a need for more consistent efforts in aligning service delivery with customer expectations. The findings resonate with a study by Kamau (2021) that emphasizes the importance of customer-centric approaches in enhancing organizational performance within Kenyan public institutions.

Customer Satisfaction with Service Level: The mean score of 2.2778 suggests a moderate level of satisfaction among customers with the service provided by administrators. The wide standard deviation of 1.01782 indicates varying degrees of satisfaction. This calls for a closer examination of the factors influencing customer satisfaction. The results align with findings from a study by Nyaga (2020), which emphasizes the need to prioritize customer satisfaction for improved organizational performance in Kenyan public service.

Demonstrating Effective Problem-Solving Skills: Administrators scored an average of 2.1667, reflecting a moderate agreement in their effective problem-solving skills. The standard deviation of .92355 indicates moderate variability in perceptions. Enhancing problem-solving skills could contribute to more efficient issue resolution. This finding aligns with a study by Ouma (2022), emphasizing the significance of effective problem-solving in organizational efficiency within the Kenyan public sector.

Administrators scored an average of 2.3889, indicating a moderate agreement in consistently identifying and addressing problems promptly. The standard deviation of .91644 suggests variations in perceptions. To improve overall efficiency, a more concerted effort may be needed. This result correlates with a study by Wanjiru (2021), highlighting the importance of proactive problem identification and timely resolution for organizational effectiveness in Kenyan public institutions.

Effective Management of Tasks and Responsibilities by Staff: With a mean score of 2.4444, administrators moderately perceived that staff manage tasks effectively to meet deadlines. The standard deviation of 1.14903 indicates a considerable range in opinions, emphasizing the need for a more uniform approach. This aligns with a study by Mutua (2023), emphasizing the critical role of effective task management in achieving organizational goals within the Kenyan public service.

Administrators indicated an average score of 2.1667, suggesting a moderate level of agreement regarding staff's excellent time management skills. The standard deviation of 1.20049 indicates varied opinions, indicating the need for a more consistent approach to time management. This finding resonates with a study by Karanja (2022), emphasizing the importance of time management in enhancing productivity within Kenyan public organizations. These results collectively indicate a need for targeted interventions to improve various aspects of labour productivity in the judicial service, ranging from customer satisfaction to staff task management. By addressing these areas, Nyeri County's judicial service can potentially enhance its overall efficiency and organizational performance.

Table 4: Descriptive Statistics for Labour Productivity in the Judicial Service: County Administrators' Perspective

	N	Min	Max	Mean	Std. Deviation
I consistently strive to meet and exceed customer expectations.	18	1.00	4.00	2.2222	.94281
Customers are highly satisfied with the level of service provided by me	18	1.00	5.00	2.2778	1.01782
I have been able to demonstrate effective problem-solving skills to resolve issues efficiently.	18	1.00	4.00	2.1667	.92355
I am able to consistently identify and address problems in a timely manner.	18	1.00	4.00	2.3889	.91644
The staff effectively manages their tasks and responsibilities to meet deadlines.	18	1.00	5.00	2.4444	1.14903
The staff consistently demonstrates excellent time management skills in handling their workload.	18	1.00	5.00	2.1667	1.20049
Valid N (listwise)	18				

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Correlations

The table 5 reports the Pearson correlation coefficients and the significance levels for each pair of variables. The results shows that there is a very strong positive correlation between labour productivity in courts and the technology used, with a coefficient of 0.746 and a significance level of 0.000. This means that courts that use more advanced and efficient technology tend to have higher levels of labour productivity, and vice versa. This result is in line with the Kinyanjui & Gachanja (2017). That indicates that technology can enhance productivity by improving the speed, accuracy, and quality of service delivery.

Table 5: Correlations

		Technology Used	Labour Productivity in Courts
Technology Used	Pearson Correlation	1	.746**
	Sig. (2-tailed)		.000
	N	39	39
Labour Productivity in Courts	Pearson Correlation	.746**	1
	Sig. (2-tailed)	.000	
	N	39	39

**. Correlation is significant at the 0.01 level (2-tailed).

Regression Analysis

The regression analysis indicates a strong relationship between technology use and labor productivity in courts (R = 0.934, R Square = 0.873, Adjusted R Square = 0.870). The standard error of the estimate is 0.33001, suggesting the model's predictions are relatively accurate.

Table 6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.934[a]	.873	.870	.33001

a. Predictors: (Constant), Technology Used

The analysis of variance (ANOVA) confirms the significance of the regression model ($F = 254.475$, $p < 0.001$), indicating that technology use significantly predicts labor productivity in courts. The model explains a substantial portion of the variance, with regression sum of squares at 27.714 out of a total of 31.744.

Table 7: Analysis of Variances (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	27.714	1	27.714	254.475	.000[b]
	Residual	4.030	37	.109		
	Total	31.744	38			

a. Dependent Variable: Labour Productivity in Courts

b. Predictors: (Constant), Technology Used

The coefficients table shows that technology use (Beta = 0.934, $p < 0.001$) has a highly significant positive effect on labor productivity. The intercept (Constant) is also significant ($t = 2.457$, $p = 0.019$), indicating a baseline level of productivity even in the absence of significant technology use. These results suggest that increased technology use correlates strongly with higher labor productivity in courts. Each unit increase in technology use is associated with a 0.895 unit increase in productivity, highlighting the importance of technological advancement in court operations. The findings underscore the potential benefits of investing in technology infrastructure and training to enhance overall efficiency within judicial systems.

Table 8: Beta Coefficients

	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	t	Sig.
1 (Constant)	.412	.168		2.457	.019
Technology Used	.895	.056	.934	15.952	.000

a. Dependent Variable: Labour Productivity in Courts

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Research Hypotheses

H_{O2} (Technology Used): The beta coefficient for Technology Used is 0.895 with a significant p-value of 0.000. This leads to the rejection of H_{O2}, suggesting that technology used has a statistically significant positive influence on labour productivity in the judicial service. This result underscores the importance of technology in positively influencing labour productivity within the judicial service. Organizations are encouraged to embrace and invest in technological advancements, recognizing their potential to significantly enhance operational efficiency and productivity in the judicial sector in Nyeri County.

Conclusions

Based on the comparative analysis between lawyers and court administrators in Nyeri County, Kenya, it is evident that there exists a notable disconnect regarding perceptions of technology's role and effectiveness within the judicial service. Lawyers express dissatisfaction or neutrality towards current technology utilization, while administrators exhibit skepticism regarding its impact on labor productivity. This disparity highlights potential communication gaps and differing priorities between these key stakeholder groups. Bridging these divides is essential for successful technology adoption, aligning lawyers' concerns about usability with administrators' focus on technology's perceived importance. Addressing these discrepancies and fostering mutual understanding is crucial for integrating and enhancing technology within the judicial service of Nyeri County, ultimately improving efficiency and performance across court operations.

Recommendations

Based on the conclusions of the study, the following are recommendations for the study.

To Court Administrators: Court administrators have shown skepticism about the importance and impact of technology on labour productivity in courts. To address this, it is recommended that they organize workshops or seminars showcasing successful case studies where technology has significantly enhanced court efficiency and productivity. Inviting legal professionals to these sessions will allow them to see firsthand how technology can streamline processes and improve outcomes. This initiative aims to bridge the perception gap and demonstrate the practical benefits of technology in judicial operations, fostering a more positive outlook towards technological integration.

To Legal Professionals (Lawyers): Lawyers have expressed dissatisfaction or neutrality towards the current state and effectiveness of technology in the courts. To address this, it is recommended to establish a feedback mechanism or forum where lawyers can voice their specific concerns and challenges regarding technology use in court proceedings. Collaboration with court administrators to systematically address these concerns is crucial. Additionally, promoting tailored training programs focusing on practical aspects of technology application in legal practice will help create a supportive environment for technology adoption. This proactive approach ensures that technology initiatives align with lawyers' needs and expectations, enhancing their acceptance and utilization.

To Nyeri County Judicial Service Leadership: There is a strong correlation between technology use and labour productivity in courts, highlighting significant potential benefits. It is recommended that the leadership allocate resources to enhance technological infrastructure and training within the judicial service. Developing a comprehensive technology adoption strategy with clear goals, timelines, and performance metrics is essential to monitor the impact of technology on productivity. Furthermore, establishing a dedicated task force with both legal and administrative representatives will ensure the effective implementation and continuous improvement of technology initiatives.

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