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STRATEGIC AGILITY AND PERFORMANCE OF CLEANING COMPANIES IN NAIROBI CITY COUNTY, KENYA

[1] Mwivaki Javanson Sifa, [2] Dr. Kyule Alexander

[1]Masters Student, Jomo Kenyatta University of Agriculture and Technology
[2]Lecturer, Jomo Kenyatta University of Agriculture and Technology

ABSTRACT

Cleaning companies in Nairobi City County, Kenya, face several challenges that significantly impact their performance. These challenges are intricately connected, and they necessitate the adoption of strategic agility for companies to maintain a competitive edge in a dynamic market. The general objective of this study was to examine the influence of strategic agility on performance of cleaning companies in Nairobi City County, Kenya. Specifically, the study sought to assess the influence of flexibility in decision-making on performance of cleaning companies in Nairobi City County, Kenya and to evaluate the influence of technology capability on performance of cleaning companies in Nairobi City County, Kenya. The study was guided by Dual Process Theory and Resource-Based View (RBV). This study used a descriptive research design. The target population makes a part of the universal population (Creswell, 2018). The unit of analysis is what was being targeted in the research. The study's target population was cleaning companies in Nairobi City County. According to KRA (2023), the total number of registered cleaning companies in Nairobi City County is 105. This study therefore targeted senior management employees in all the 105 firms. The total target population was therefore 210 respondents. Since the target population is small the study used census method. This research used a questionnaire to collect primary data. The pilot study was carried out on 21 respondents who are sufficient based on Glesne (2019) who stated that 10% of the population is adequate to constitute the pilot test size. Data analysis was done through use of descriptive statistics and inferential statistics. The study results were presented through use of tables and figures. The study concludes that flexibility in decision-making has a positive and significant effect on performance of cleaning companies in Nairobi City County, Kenya. The study also concludes that technology capability has a positive and significant effect on performance of cleaning companies in Nairobi City County, Kenya. Based on the findings, the study recommends that the management of cleaning companies in Kenya should empower managers with the autonomy to adapt operations based on real-time customer needs and market changes. By adopting a more flexible approach, companies can respond swiftly to fluctuating demand, adjust pricing strategies, or implement innovative cleaning solutions tailored to specific client requirements.

Key Words: Strategic Agility, Flexibility in Decision-Making, Technology Capability, Performance of Cleaning Companies

Background of the Study

Cleaning companies are businesses that provide professional cleaning services for residential, commercial, or industrial spaces. They typically offer a range of services such as routine cleaning, deep cleaning, carpet and upholstery cleaning, window washing, and specialized sanitation (Clauss *et al*, 2020). These companies employ trained staff and use various cleaning equipment, chemicals, and techniques to ensure spaces are sanitized, organized, and well-maintained. Cleaning companies may operate on a one-time, weekly, or monthly basis, depending on client needs, and aim to deliver high-quality, efficient cleaning solutions tailored to different environments (Suradi & Hasnawati, 2020). Cleaning companies play a crucial role in maintaining hygiene and cleanliness in various environments, from homes to commercial and industrial spaces. Their primary responsibility is to ensure that areas are clean, safe, and well-maintained, which directly contributes to the health and well-being of the people who use those spaces (Demetris *et al*, 2022). In residential settings, cleaning companies help homeowners save time and effort by providing thorough cleaning services, including dusting, vacuuming, and sanitizing bathrooms and kitchens. Their services are especially beneficial for busy individuals or those unable to clean due to health or physical limitations (Tsilionis & Wautelet, 2022).

In commercial and industrial sectors, cleaning companies ensure that work environments are conducive to productivity and employee well-being. Clean office spaces, for example, create a positive atmosphere, reduce the spread of illness, and promote a professional image (Boonlua *et al*, 2022). Industrial cleaning companies may specialize in more technical tasks, such as cleaning machinery, warehouses, or factory floors, which requires specific expertise and safety protocols. For businesses, regular cleaning is not only about aesthetics; it's also about compliance with health and safety regulations and maintaining a sanitary environment for employees and clients (Arokodare, 2021). Another important role of cleaning companies is in the field of specialized cleaning services. This includes services like carpet cleaning, window washing, and post-construction cleaning. These tasks require specialized equipment and knowledge, as they often involve delicate surfaces or environments. Cleaning companies also help maintain public spaces such as schools, hospitals, and government buildings, where cleanliness is crucial for controlling the spread of infectious diseases and ensuring the safety of large numbers of people (Okumu, 2023).

Strategic agility refers to an organization's ability to swiftly adapt and respond to changes in the business environment, market trends, or competitive landscape while maintaining alignment with long-term goals (Asikhia & Arokodore, 2022). It involves a combination of flexibility, foresight, and decision-making speed, allowing companies to pivot, innovate, and capitalize on new opportunities without losing focus on their overall strategy. This capability requires a culture that embraces change, encourages continuous learning, and fosters collaboration across all levels of the organization (Aswan, 2022). Flexibility in decision-making is a key component of strategic agility, allowing organizations to quickly adapt to new circumstances or challenges. It involves the ability to make informed, timely decisions even in uncertain or fast-changing environments (Mapesa, 2023). Innovation allows organizations to continuously improve products, services, and processes, ensuring they can meet shifting customer demands and industry disruptions. Coupled with strong technology capability, which includes the ability to adopt and integrate new technologies, companies can streamline operations, enhance efficiency, and unlock new growth opportunities (Masai, Sang & Odunga, 2024). Resilience ensures that organizations can weather setbacks or unexpected challenges. It's the ability to recover quickly from adversity, maintain operational continuity, and keep long-term goals in focus, even in the face of difficulties like

economic downturns, market volatility, or internal disruptions (Murungi, 2020). This study sought to examine the influence of strategic agility on performance of cleaning companies in Nairobi City County, Kenya.

Cleaning companies in Nairobi City County, Kenya, play a vital role in maintaining cleanliness and hygiene in both residential and commercial spaces. Nairobi, being the capital city and a bustling economic hub, has seen a significant rise in the demand for professional cleaning services (Kiilu, Machuki & Aosa, 2023). These companies offer a wide range of cleaning solutions, including general cleaning, deep cleaning, office cleaning, post-construction cleaning, carpet cleaning, and specialized services such as sanitization and disinfection, especially in the wake of the COVID-19 pandemic. One of the main factors driving the growth of cleaning companies in Nairobi is the increasing urbanization and growing middle class (Arokodare, Asikhia & Makinde, 2023). As more people move to the city for work or business, there is a heightened need for cleanliness in residential buildings, offices, shopping malls, and other commercial establishments. Cleaning companies in Nairobi cater to these needs by offering tailored services for different sectors, ranging from homes and schools to hospitals and hotels (Karatu, Mutunga & Rintari, 2023).

Additionally, many of these companies are adopting eco-friendly practices by using green cleaning products and environmentally conscious methods. With the increasing awareness around sustainability and environmental issues, customers are leaning more towards companies that use non-toxic, biodegradable cleaning agents and methods that are safe for both the environment and human health (Masai, Sang & Odunga, 2024). Another trend in the Nairobi cleaning industry is the rise of technology-driven cleaning services. Many companies have introduced online platforms that allow customers to book cleaning services through mobile apps or websites. This convenience, coupled with transparent pricing, has made it easier for customers to access professional cleaning services (Murungi, 2020). Moreover, the competitive nature of the market has led to the emergence of different pricing models, including subscription-based plans for regular cleaning services. The cleaning industry in Nairobi also faces some challenges. One of the main hurdles is the informal nature of some cleaning businesses, where workers may not always be trained, insured, or provided with fair working conditions. However, many established cleaning companies are addressing this by offering professional training programs and adhering to labor laws, ensuring better quality service and employee welfare (Kiilu, Machuki & Aosa, 2023).

Statements of the Problem

Cleaning companies play a crucial role in maintaining hygiene, health, and environmental standards in Nairobi City County, Kenya. These businesses are integral to both residential and commercial spaces, ensuring that buildings, streets, and public areas remain clean and safe (Arokodare, Asikhia & Makinde, 2023). In a rapidly growing urban environment like Nairobi, the demand for cleaning services is ever-increasing, driven by population growth, industrial development, and the need for improved public health standards (Karatu, Mutunga & Rintari, 2023). Furthermore, cleaning companies contribute significantly to the economy by creating job opportunities and enhancing the overall living and working conditions within the city. By offering specialized cleaning services, these companies also help in the waste management process, reducing pollution and promoting sustainability, which is vital in a fast-developing city (Masai, Sang & Odunga, 2024).

Cleaning companies in Nairobi City County, Kenya, face several challenges that significantly impact their performance. These challenges are intricately connected, and they necessitate the

adoption of strategic agility for companies to maintain a competitive edge in a dynamic market (Masai, Sang & Odunga, 2024). Profitability is a significant challenge for cleaning companies in Nairobi, primarily due to high operational costs, stiff competition, and fluctuating demand. A report from Kenya National Bureau of Statistics (KNBS) highlighted that service-based businesses, including cleaning companies, are highly labor-intensive (Kiilu, Machuki & Aosa, 2023). In Kenya, approximately 30% of the total operational costs in service sectors are attributed to labor costs (KNBS, 2021). Cleaning companies often struggle to control these costs, particularly when wages increase and training is required for staff. Furthermore, the lack of a streamlined cost management approach leaves many companies with very narrow profit margins (Arokodare, Asikhia & Makinde, 2023). According to Kenya Association of Cleaning Companies (KACC), more than 60% of cleaning companies in Nairobi report profit margins of less than 10%, with many small players earning even less due to aggressive price-cutting in the competitive market. In addition, PWC Kenya states that 42% of businesses in the cleaning industry in Nairobi suffer from cash flow issues, which directly affect profitability (Karatu, Mutunga & Rintari, 2023).

In a city with over 200 registered cleaning companies, as reported by Kenya Private Sector Alliance (KEPSA), smaller companies often struggle to differentiate themselves in a saturated market (Masai, Sang & Odunga, 2024). This leads to price wars, where businesses lower their prices to attract customers, ultimately harming their ability to sustain market share and profitability. Moreover, a study by PwC Kenya found that 55% of cleaning companies in Nairobi rely on small-scale contracts (such as residential and small business cleaning services), leaving them vulnerable to market fluctuations (Masai, Sang & Odunga, 2024). Only 20% of companies manage to secure long-term contracts with large organizations or governmental entities, which provide more stability and larger revenue streams. Consequently, companies without such contracts find it hard to compete with larger firms that have the infrastructure to manage bigger contracts and achieve economies of scale, further reducing the market share of smaller players (Kiilu, Machuki & Aosa, 2023).

According to a KPMG Kenya survey conducted in 2023, 47% of cleaning companies reported receiving frequent customer complaints about service quality, with 37% of customers mentioning inconsistent service delivery, including missed cleaning appointments or inadequate cleaning results. Furthermore, customer dissatisfaction due to unprofessional staff behavior (28%) and the use of outdated cleaning equipment (32%) has led to high customer churn (Karatu, Mutunga & Rintari, 2023). This is particularly concerning as Kenya Business Review indicates that the cost of acquiring new customers in Nairobi's cleaning industry is at least 50% higher than the cost of retaining existing ones. Additionally, customers are increasingly demanding eco-friendly cleaning practices (Masai, Sang & Odunga, 2024). A PwC Kenya report in 2022 revealed that 56% of cleaning service users in Nairobi prefer companies that use green cleaning products, and 48% are willing to pay up to 20% more for such services. However, only 18% of cleaning companies in Nairobi are able to offer these eco-friendly solutions due to the higher costs of sourcing and using environmentally friendly products, further impacting customer satisfaction and retention (Masai, Sang & Odunga, 2024).

Strategic agility has a profound influence on the performance of organizations. It refers to the ability of an organization to quickly adapt to changes in the business environment, identify new opportunities, and execute strategies that enable growth and sustainability (Karatu, Mutunga & Rintari, 2023). Various studies have been conducted in different parts of the world on strategic agility on organization performance. For instance, Kiilu, Machuki and Aosa (2023) conducted a study on the influence of strategic agility and organizational performance: a critical review of

literature., Masai, Sang and Odunga (2024) investigated the effect of strategic agility on corporate performance of unclaimed financial assets authority and Murungi (2020) assessed on the influence of strategic agility on competitive capability of private universities. However, none of these studies focused on flexibility in decision-making and technology capability on performance of cleaning companies. To fill the highlighted gaps, the current study sought to determine the influence of strategic agility (flexibility in decision-making and technology capability) on performance of cleaning companies.

Objectives of the Study

General Objective

The general objective of this study was to examine the influence of strategic agility on performance of cleaning companies in Nairobi City County, Kenya

Specific Objectives

i. To assess the influence of flexibility in decision-making on performance of cleaning companies in Nairobi City County, Kenya
ii. To evaluate the influence of technology capability on performance of cleaning companies in Nairobi City County, Kenya

Theoretical Review

Dual Process Theory

Dual-Process Theory, developed by Richard Petty and John Cacioppo (1986), is a psychological framework that explains how people process information and make decisions. According to this theory, individuals rely on two distinct cognitive systems or processes, often referred to as "System 1" and "System 2." These systems operate in parallel but differ significantly in their approach to thinking (Senftleben, Schoemann & Scherbaum, 2020). System 1 is fast, automatic, and unconscious. It handles routine tasks and relies heavily on intuition and heuristics (mental shortcuts) to make decisions quickly. For example, when a person sees a familiar face in a crowd, they recognize it almost instantly without consciously analyzing every feature of the face. This system is efficient but can sometimes lead to errors because it oversimplifies complex situations and makes snap judgments based on previous experiences or biases (Nweze, Agu & Lange, 2020).

System 2, on the other hand, is slower, more deliberate, and conscious. It is activated when a person faces a novel or complex problem that requires careful thought, analysis, and reasoning. For example, when solving a difficult math problem or making a major life decision, System 2 is engaged to evaluate different options and weigh the pros and cons (Kristjanson, 2020). While this system is more accurate, it is also more energy-consuming and requires greater cognitive effort. Dual-Process Theory suggests that both systems work together but are often in competition. In many everyday situations, System 1 predominates because it allows for quick decisions with minimal effort (Muga & Senelwa, 2022). However, when accuracy is important or when the decision-making context is more complex, System 2 takes over. This interaction between the two systems helps people navigate both routine and novel situations effectively, although reliance on System 1 can sometimes lead to biases, such as overconfidence, stereotyping, or faulty judgments (Nutley, McNabb & Salentine, 2020).

The theory has significant implications for understanding human behavior, particularly in areas such as decision-making, problem-solving, and social cognition. It has been widely applied in fields like economics, where it helps explain why people may make irrational decisions despite

having all the necessary information (Kaburu, 2020). It also informs research in areas like education, advertising, and cognitive therapy, where understanding how people think can lead to more effective strategies for influencing or supporting decision-making processes (Senftleben, Schoemann & Scherbaum, 2020). This theory was used to assess the influence of flexibility in decision-making on performance of cleaning companies in Nairobi City County, Kenya.

Resource-Based View (RBV)

The Resource-Based View (RBV) theory founded by Barney (1991) is a strategic management framework that focuses on the internal resources and capabilities of a firm as sources of competitive advantage (Rasiah & Shan, 2020). At its core, RBV posits that a firm's unique bundle of resources and capabilities can enable it to achieve sustainable competitive advantage and superior performance in the marketplace. Unlike traditional strategic management approaches that primarily focus on external factors such as market dynamics and industry structure, RBV emphasizes the importance of internal factors in determining a firm's success (Ahimbisibwe *et al*, 2020). RBV theory entails identifying and leveraging a firm's distinctive resources and capabilities to create value and achieve strategic objectives. Resources can include tangible assets such as physical infrastructure, financial capital, and technology, as well as intangible assets such as human capital, intellectual property, organizational culture, and reputation (Diyamett & Mutambla, 2020). These resources are considered valuable if they enable the firm to exploit opportunities or neutralize threats in the external environment. Capabilities, on the other hand, refer to the firm's ability to effectively deploy and utilize its resources to perform specific activities and achieve desired outcomes (Okok, Deya & Rotich, 2024). This theory was used to evaluate the influence of technology capability on performance of cleaning companies in Nairobi City County, Kenya.

Conceptual Framework

In this study, the independent variables were flexibility in decision-making and technology capability while the dependent variables was performance of cleaning companies in Nairobi City County, Kenya

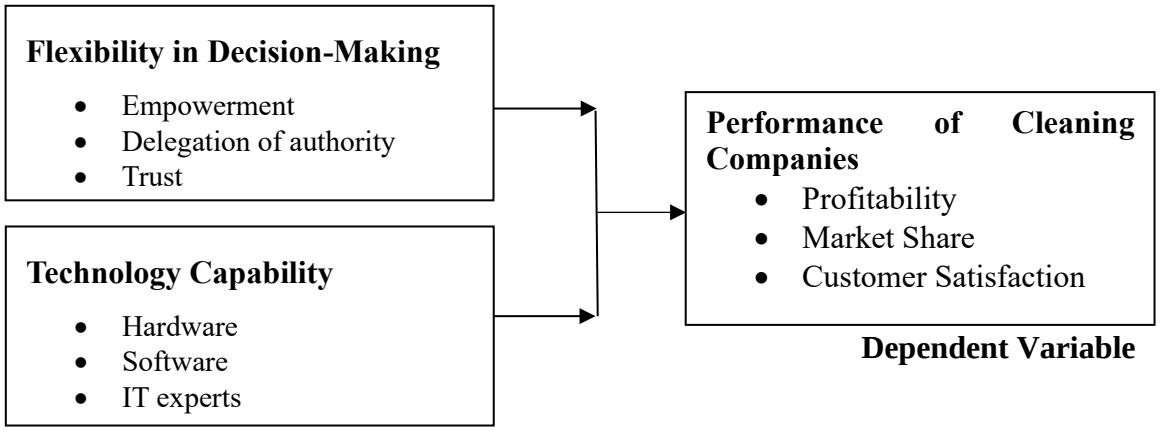

Figure 2. 1: Conceptual Framework

Flexibility in Decision-Making

Flexibility in decision-making refers to the ability to adapt and adjust decisions in response to changing circumstances, new information, or evolving goals. It involves maintaining an open-minded approach while considering various options, being willing to reassess previous choices,

and remaining open to alternative solutions (Senftleben, Schoemann & Scherbaum, 2020). This trait is essential for navigating complex and dynamic situations where outcomes may be uncertain or unpredictable. Empowerment refers to the process of providing individuals with the authority, resources, and confidence to make decisions, take actions, and contribute meaningfully to achieving organizational goals (Kristjanson, 2020). It involves giving people the autonomy to act independently, encouraging them to take initiative, and helping them build the skills and capabilities necessary to assume responsibility. Empowerment is not just about granting authority; it also includes fostering a culture that supports learning, growth, and risk-taking. By empowering employees, organizations create a more motivated, engaged, and productive workforce, as individuals feel valued and trusted to make important decisions (Muga & Senelwa, 2022).

Delegation of authority is the process by which leaders or managers assign specific tasks, responsibilities, and decision-making powers to others in the organization. This practice allows managers to focus on strategic priorities while entrusting team members with the execution of day-to-day operations (Kaburu, 2020). Effective delegation involves more than just transferring tasks; it includes providing the necessary resources, guidance, and trust to enable others to perform their responsibilities competently. When authority is delegated, the person receiving the responsibility must have the skills, confidence, and autonomy to make decisions within their scope. Trust is the foundation of successful relationships, both in personal and organizational contexts. In an organizational setting, trust is essential for fostering collaboration, effective communication, and a positive work environment (Kristjanson, 2020). It involves believing in the integrity, competence, and reliability of others. Leaders and managers must build trust by being transparent, consistent, and fair in their actions, while also demonstrating respect for the capabilities and judgment of their team members.

Technology Capability

Technology capability refers to an individual's or an organization's ability to effectively utilize, adapt, and integrate technological tools, systems, and resources to achieve desired outcomes (Rasiah & Shan, 2020). It encompasses the knowledge, skills, infrastructure, and processes required to harness technology for solving problems, improving efficiency, driving innovation, and staying competitive in a rapidly evolving digital landscape. For organizations, technology capability involves not only having access to the latest tools and platforms but also the ability to leverage them strategically, ensuring alignment with business objectives and goals (Ahimbisibwe *et al*, 2020). Hardware refers to the physical components of a computer system or technology infrastructure. It includes all the tangible devices and equipment that allow a system to operate, interact with users, and perform tasks. Hardware encompasses a wide range of devices, such as computers, servers, hard drives, keyboards, monitors, printers, routers, and networking equipment (Okok, Deya & Rotich, 2024). Software refers to the collection of programs, applications, and operating systems that run on hardware and allow users to perform specific tasks, solve problems, or interact with the technology in meaningful ways (Kirugumi, Theuri & Magu, 2024). Software is the non-tangible counterpart to hardware and provides the instructions that tell the hardware how to operate. There are two main categories of software: system software and application software. System software, like operating systems (e.g., Windows, macOS, Linux), manages and controls the hardware and allows other software to run (Rasiah & Shan, 2020). IT experts are professionals who specialize in managing, troubleshooting, and optimizing technology systems and infrastructure. These individuals possess a deep understanding of information technology (IT) and are skilled in a wide range of tasks, including software development, system administration, network management, cybersecurity, data analysis, and hardware maintenance (Diyamett &

Mutambla, 2020). IT experts play a crucial role in ensuring the smooth operation of computer systems and technological infrastructure within organizations. They are responsible for installing, configuring, and troubleshooting hardware and software, securing systems against cyber threats, and providing technical support to end-users.

Empirical Review

Flexibility in Decision-Making and Performance of Cleaning Companies

Senftleben, Schoemann and Scherbaum (2020) conducted a study on the effect of stability-flexibility trade-off in decision making. The study combine two experimental manipulations typical for task switching/shielding paradigms, i.e., varying the inter-trial interval and the stimulus onset asynchrony, and implement them in the context of value-based decision making in a binary choice paradigm. The study results show that both the inter-trial interval and the stimulus onset asynchrony modulate choice perseveration as predicted by the model. The study concluded that their findings extend research on cognitive stability and flexibility and their underlying mechanisms by adapting it to the domain of decision making.

Nweze, Agu and Lange (2020) conducted a study on the effect of risky decision making and cognitive flexibility among online sports bettors in Nigeria. In the present study, the study examined whether this population of gamblers shows deficits in decision making and cognitive flexibility that have been documented in Western gambling populations. Thirty-six online sports bettors and 42 non-gambling participants completed a version of the Iowa gambling task (IGT) and an established set-shifting task for the assessment of cognitive flexibility. While our results illustrate that findings from Western populations cannot automatically be generalized to other contexts, it should be noted that the study focused on only one particular type of gambling and included mostly participants with mild gambling-related problems. In conclusion, the present results do not support the existence of gambling-related deficits in decision making or cognitive flexibility in Nigerian sports bettors

Kristjanson (2020) conducted a study on the effect of role of information and flexibility in small-farm decision making and risk management: evidence from the West African semi-arid tropics. This dissertation has explored the issue of how sequential decision making allows a producer to incorporate new information into the decision making process. It was found that the ability to maintain flexible production plans that allow the incorporation of new information about rainfall into a sequence of input decisions as the cropping season progresses is a vital way in which these farmers deal with risk. The study conclusion suggests that the degree of risk aversion may not be as important as the ability of farmers to respond to new information.

Kaburu (2020) conducted a study on the effect of decision making and Kenya's foreign policy behavior: The Moi and Kibaki presidencies in perspective. This reality is further reinforced by institutional and structural discrepancies associated with periodic elections, some of which have had significant changes on the presidency as a core institution in Kenya's foreign policy decision making process. The study found the in an attempt to explore the continuity and change in Kenya's foreign policy behavior during the Moi and Kibaki presidencies, this paper adopts decision making theory as a framework of analysis. The study concluded that Using decision making theory as a framework of analysis, this paper examined Kenya's foreign policy behavior during Presidents Moi and Kibaki administrations.

Technology Capability and Performance of Cleaning Companies

Rasiah and Shan (2020) conducted a study on the effect of institutional support, technological capabilities and domestic linkages in the semiconductor industry in Singapore. This article examines the relationships between host-site institutional support and firm-level technological upgrading, and between technological upgrading and domestic production linkages in the semiconductor industry in Singapore. The results show that host-site institutional support is important for technological upgrading and technological capabilities are positively correlated with domestic linkages. The study concluded that the statistical analysis showed that TC is correlated with institutional support, and domestic linkages

Ahimbisibwe *et al* (2020) conducted a case study on the effect of information technology capability, adoption, logistics service quality and the performance of third party logistics providers. The purpose of the study was to examine the relationships between IT capability, IT adoption, logistics service quality and performance of third party logistics firms in Uganda. The results indicate significant positive relationships between IT capability, IT adoption, logistics service quality and performance of third party logistics firms. Conclusions further revealed that IT adoption was a better significant predictor of the performance of third party logistics providers than logistics service quality

Okok, Deya and Rotich (2024) conducted a study on the effect of influence of technological capability on the performance of pharmaceutical companies in Kenya. The population comprised the 415 pharmaceutical companies that are operating in Kenya. The study used stratified random sampling with sample size of 103 respondents. The study targeted both manufacturers and distributors. The study found that the correlation analysis revealed that there was a positive and significant association between technological capability and firm performance. The study concluded that Technological capability of a firm stands to be one of the main determinants of how well the organization performs in terms of efficiency and effectiveness

Kirugumi, Theuri and Magu (2024) conducted a study on the effect of influence of technological capability on internationalization status of public universities in Kenya. The study employed a descriptive research design. The purpose of the study was to determine influence of technological capability on internationalization status of public universities in Kenya. Descriptive research design was used to conduct the study this research study used positivism research philosophy. The target population comprised of all the 31 fully chartered public universities in Kenya. From the study findings technological capability had a statistically significant and positive influence on internationalization status. Therefore, the research concluded that technological capability had a significant and positive influence on internationalization status

RESEARCH METHODOLOGY

Research Design

This study used a descriptive research design. Mugenda and Mugenda (2019) explained the descriptive design is a process of collecting data in order to test a hypothesis or to answer the questions of the current status of the subject under study. Its advantage is that, it is used extensively to describe behavior, values, attitude and character. The description research design aspect of it attempted to provide more details and insights from the respondents on how the dependent variables impact on the independent variable. This descriptive research design enabled the researcher to analyze the findings and draw informed conclusions.

Target Population

The unit of analysis is what is being targeted in the research. The study's target population was cleaning companies in Nairobi City County. According to KRA (2023), the total number of registered cleaning companies in Nairobi City County is 105. This study therefore targeted senior management employees in all the 105 firms. The total target population was therefore 210 respondents. Since the target population was small the study used census method.

Data Collection Instruments

This research used a questionnaire to collect primary data. According to Patton *et. al* (2019), a questionnaire is appropriate in gathering data and measuring it against a particular point of view. It provides a standardized tool for data collection. The researcher obtained research permit from relevant authorities required for data collection. Structured and open questions were used to collect primary data from the field. The questionnaires were pilot tested to ascertain the extent to which the instrument is correct and to eliminate ambiguous questions, and improve on validity and reliability

Pilot Study

According to Bashir, (2019), validity refers to the extent to which a test measures what it is supposed to measure and the extent to its truthfulness, accuracy, authenticity, genuineness, or soundness, whether the means of measurement are accurate and whether they are actually measuring what they are intended to measure. The pilot study was carried out on 21 respondents who are sufficient based on Glesne (2019) who stated that 10% of the population was adequate to constitute the pilot test size.

Data Analysis and Presentation

Data from the questionnaires was edited and coded and then keyed into Statistical Package for Social Sciences (SPSS Version 24). Data analysis was done through use of descriptive and inferential statistics. Descriptive statistics such as frequency distribution, mean (measure of dispersion), standard deviation, and percentages was used. Descriptive statistics therefore enables researchers to present the data in a more meaningful way, which allows simpler and easier interpretation (Singpurwalla, 2019). Inferential data analysis were conducted by use of Pearson correlation coefficient, and multiple regression analysis. Inferential statistic was used to make judgments about the probability that an observation is dependable or one that happened by chance in the study. The relationship between the study variables was tested using multivariate regression models.

RESEARCH FINDINGS AND DISCUSSIONS

Descriptive Statistics Analysis

Flexibility in Decision-Making and Performance of Cleaning Companies

The first specific objective of the study was to assess the influence of flexibility in decision-making on performance of cleaning companies in Nairobi City County, Kenya. The respondents were requested to indicate their level of agreement on statements relating to flexibility in decision-making and performance of cleaning companies in Nairobi City County, Kenya. The results were as presented in Table 1.

From the results, the respondents agreed that the management of their company is able to adapt quickly to changes in market demands (M=3.891, SD=0.805). In addition, the respondents agreed

that decisions in their company are made quickly when unforeseen challenges arise (M=3.875, SD=0.798). Further, the respondents agreed that flexible decision-making contributes to the overall performance and growth of their company (M=3.854, SD=0.891). From the results, the respondents agreed that their company's ability to adapt its decisions has led to improved customer satisfaction (M=3.815, SD=0.598). In addition, the respondents agreed that employees are encouraged to contribute their ideas during decision-making processes in their company (M=3.787, SD=0.772). Further, the respondents agreed that there is a collaborative approach to decision-making in their company, which enhances performance (M=3.741, SD= 0.681).

Table 1: Flexibility in Decision-Making and Performance of Cleaning Companies

	Mean	**Std. Dev.**
The management of our company is able to adapt quickly to changes in market demands.	3.891	0.805
Decisions in our company are made quickly when unforeseen challenges arise.	3.875	0.798
Flexible decision-making contributes to the overall performance and growth of our company.	3.854	0.891
Our company's ability to adapt its decisions has led to improved customer satisfaction.	3.815	0.598
Employees are encouraged to contribute their ideas during decision-making processes in our company.	3.787	0.772
There is a collaborative approach to decision-making in our company, which enhances performance.	3.741	0.681
Aggregate	**3.827**	**0.758**

Technology Capability and Performance of Cleaning Companies

The second specific objective of the study was to evaluate the influence of technology capability on performance of cleaning companies in Nairobi City County, Kenya. The respondents were requested to indicate their level of agreement on various statements relating to technology capability and performance of cleaning companies in Nairobi City County, Kenya. The results were as presented in Table 2. From the results, the respondents agreed that their company regularly adopts new technologies to improve the efficiency of their cleaning services (M=3.861, SD= 0.668). In addition, the respondents agreed that the use of modern cleaning technologies is a key part of their company's strategy to enhance service delivery (M=3.849, SD=0.598). Further, the respondents agreed that the use of technology has significantly improved the quality of cleaning services offered by their company (M=3.779, SD= 0.869). From the results, the respondents agreed that technology has played a crucial role in increasing the productivity and performance of their company (M=3.742, SD=0.722). In addition, the respondents agreed that employees are well-equipped with the skills and knowledge to handle technological tools used in the company (M=3.720, SD=0.598). Further, the respondents agreed that technology training is regularly provided to ensure that employees can operate the latest cleaning equipment efficiently (M=3.687, SD=0.709).

Table 2: Technology Capability and Performance of Cleaning Companies

	Mean	Std. Dev.
Our company regularly adopts new technologies to improve the efficiency of our cleaning services.	3.861	0.668
The use of modern cleaning technologies is a key part of our company's strategy to enhance service delivery	3.849	0.598
The use of technology has significantly improved the quality of cleaning services offered by our company.	3.779	0.869
Technology has played a crucial role in increasing the productivity and performance of our company	3.742	0.722
Employees are well-equipped with the skills and knowledge to handle technological tools used in the company.	3.720	0.598
Technology training is regularly provided to ensure that employees can operate the latest cleaning equipment efficiently	3.687	0.709
Aggregate	**3.773**	**0.694**

Inferential Statistics

Inferential statistics in the current study focused on correlation and regression analysis. Correlation analysis was used to determine the strength of the relationship while regression analysis was used to determine the relationship between dependent variable (performance of cleaning companies in Nairobi City County, Kenya) and independent variables (flexibility in decision-making and technology capability).

Correlation Analysis

The present study used Pearson correlation analysis to determine the strength of association between independent variables (flexibility in decision-making and technology capability) and the dependent variable (performance of cleaning companies in Nairobi City County, Kenya) dependent variable. Pearson correlation coefficient range between zero and one, where by the strength of association increase with increase in the value of the correlation coefficients.

Table 3: Correlation Coefficients

		Performance	Flexibility in Decision-Making	Technology Capability
Performance of Cleaning Companies	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	188		
Flexibility in Decision-Making	Pearson Correlation	.888**	1	
	Sig. (2-tailed)	.000		
	N	188	188	
Technology Capability	Pearson Correlation	.842**	.264	1
	Sig. (2-tailed)	.003	.099	
	N	188	188	188

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

From the results, there was a very strong relationship between flexibility in decision-making and performance of cleaning companies in Nairobi City County, Kenya (r = 0.888, p value =0.000). The relationship was significant since the p value 0.000 was less than 0.05 (significant level). The findings are in line with the findings of Senftleben, Schoemann and Scherbaum (2020) who

indicated that there is a very strong relationship between flexibility in decision-making and performance of cleaning companies.

The results also revealed that there was a very strong relationship between technology capability and performance of cleaning companies in Nairobi City County, Kenya (r = 0.842, p value =0.003). The relationship was significant since the p value 0.003 was less than 0.05 (significant level). The findings are in line with the results of Okok, Deya and Rotich (2024) who revealed that there is a very strong relationship between technology capability and performance of cleaning companies

Regression Analysis

Multivariate regression analysis was used to assess the relationship between independent variables (flexibility in decision-making and technology capability) and the dependent variable (performance of cleaning companies in Nairobi City County, Kenya)

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.855	.731	.732	.10129

a. Predictors: (Constant), flexibility in decision-making, and technology capability

The model summary was used to explain the variation in the dependent variable that could be explained by the independent variables. The r-squared for the relationship between the independent variables and the dependent variable was 0.731. This implied that 73.1% of the variation in the dependent variable (performance of cleaning companies in Nairobi City County, Kenya) could be explained by independent variables (flexibility in decision-making and technology capability).

Table 5: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.292	2	4.146	112.054	.000[b]
	Residual	6.858	185	.037		
	Total	15.15	187			

a. Dependent Variable: performance of cleaning companies in Nairobi City County, Kenya
b. Predictors: (Constant), flexibility in decision-making and technology capability

The ANOVA was used to determine whether the model was a good fit for the data. F calculated was 112.054 while the F critical was 3.045. The p value was 0.000. Since the F-calculated was greater than the F-critical and the p value 0.000 was less than 0.05, the model was considered as a good fit for the data. Therefore, the model can be used to predict the influence of flexibility in decision-making and technology capability on performance of cleaning companies in Nairobi City County, Kenya.

Table 6: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	**(Constant)**	0.237	0.062		3.823	0.000
	flexibility in decision-making	0.378	0.098	0.377	3.857	0.000
	technology capability	0.375	0.099	0.376	3.788	0.001

a Dependent Variable: performance of cleaning companies in Nairobi City County, Kenya

The regression model was as follows:

$$\mathbf{Y = 0.237 + 0.378X_1 + 0.375X_2 + \varepsilon}$$

According to the results, flexibility in decision-making has a significant effect performance of cleaning companies in Nairobi City County, Kenya β_1=0.378, p value= 0.000). The relationship was considered significant since the p value 0.000 was less than the significant level of 0.05. The findings are in line with the findings of Senftleben, Schoemann and Scherbaum (2020) who indicated that there is a very strong relationship between flexibility in decision-making and performance of cleaning companies

In addition, the results revealed that technology capability has significant effect on performance of cleaning companies in Nairobi City County, Kenya β1=0.375, p value= 0.001). The relationship was considered significant since the p value 0.001 was less than the significant level of 0.05. The findings are in line with the results of Okok, Deya and Rotich (2024) who revealed that there is a very strong relationship between technology capability and performance of cleaning companies.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The study concludes that flexibility in decision-making has a positive and significant effect on performance of cleaning companies in Nairobi City County, Kenya. Findings revealed that empowerment, delegation of authority and trust influences performance of cleaning companies in Nairobi City County, Kenya.

The study also concludes that technology capability has a positive and significant effect on performance of cleaning companies in Nairobi City County, Kenya. Findings revealed that hardware, software and IT experts influence performance of cleaning companies in Nairobi City County, Kenya.

Recommendations

The study recommends that the management of cleaning companies in Kenya should empower managers with the autonomy to adapt operations based on real-time customer needs and market changes. By adopting a more flexible approach, companies can respond swiftly to fluctuating demand, adjust pricing strategies, or implement innovative cleaning solutions tailored to specific client requirements.

The study also recommends that the management of cleaning companies in Kenya should integrate a robust digital management system that allows for efficient scheduling, real-time tracking, and customer relationship management. By implementing software solutions that streamline operations, such as automated booking systems, inventory management, and performance analytics, companies can optimize their workforce, reduce errors, and improve response times.

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