



**SUPPLY CHAIN RESILIENCE MANAGEMENT AND PERFORMANCE OF PRIVATE HOSPITALS IN NAIROBI CITY COUNTY, KENYA**

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**ABSTRACT**

The purpose of the study was to establish the relationship between supply chain resilience and performance of private hospitals in Nairobi City County, Kenya. The specific objective were: vulnerability resilience, and operations resilience respectively. The research study used descriptive research design, where both qualitative and quantitative research were applied. The target population was 322 respondents from the concerned departments in Nairobi city county, Kenya. The researcher carried census survey since respondents are manageable. The research technique was stratified random sampling techniques with different stratus 10% (32) of the respondents were pilot tested for validity and reliability of the research instrument. Data was analyzed using descriptive statistics and inferential statistics with the help of Statistical Package for Social Science version 28 and the same is presented in a form of tables and figures. The pilot study was carried out to validate the research instruments and make any necessary adjustment before the actual data collection. The results of pilot were over 0.7 for reliability and 0.5 for content validity, hence acceptable. The study concludes and recommends that there was strong relationship between supply chain resilience and performance of private hospitals in Nairobi City County, Kenya.

**Key Words:** Supply Chain Resilience, Performance of Private Hospitals, Vulnerability Resilience, Operations Resilience

## **Background of the Study**

Supply chain management is so huge topic so; people often give him another definition based on their personal experience. Researchers found that there was a great difference in understanding among practitioners in terms of both how they define and implement supply chain management (McKeller, 2014). The emergence of the concept of supply chain management is usually associated with four scientific disciplines: system theory such as system theory was very quickly adapted management researchers to explain the processes, behavior of agents, firms and the economy as a whole; game theory such as the main issue is the study and explanation of the optimization of economic decisions involving more than one participant, for example, a consumer and a supplier, or several suppliers; theory of transaction costs that represents the theory of organization of enterprises, the object of study of which is a multilateral agreement as a form of organization; inter-organizational relations and theories of industrial networks. Some researches define the supply chain management concept as philosophy, which considers a way of combining actions within and between organizations to meet customer needs in terms of the supply chain (Ceccarelli, 2017).

Supply chain management as a philosophy has developed as business organizations realized that both customers and suppliers could exert considerable influence on supply processes developed a partnership perspective on the supply chain, where associations work interconnected to accomplish a higher common objective (Pereira & Mohiya, 2021). She supplied it as "an integrating philosophy for controlling the flow of a distribution channel from a supplier to an end-user". She suggested channel integration focused on organizational structures, associated relationships, supply chain coordination, inter, and internal enterprise communication, sourcing, manufacturing orientation, inventory and cost management. He mentioned that SCM philosophy has: a systems approach to viewing the supply chain as a whole, and to managing the total flow of goods from the supplier to the ultimate customer, a strategic orientation toward cooperative efforts to synchronize and converge internal operational and strategic capabilities into a unified whole, customer focus to create unique and individualized sources of customer value, leading to customer satisfaction" Ceccarelli, 2017).

According to Ceccarelli (2017) find that as a philosophy, SCM requires a systems approach to viewing the supply chain as a single entity rather than a set of individual firms each performing its function. The fit systems approach into process perspective. She suggested the necessity to "use relationship marketing philosophy within the B2B context to understand the whole value creation process from the first tier suppliers". At the same time she separated the different aspects of SCM to outline and name them differently as "supply chain," "supply chain management philosophy," "supply chain orientation," and "supply chain management". She indicates that the theoretical commitment of the perspective of supply chain management as a philosophy provides an understanding of how integration with other disciplines can contribute to a competitive advantage (Pereira & Mohiya, 2021). From a managerial point of view, this perspective can provide an idea of how to effectively integrate various supply chain management issues into broader organizational decisions. From process orientation, there are a large number of researches. She also finds that the most common definition practitioners have of supply chain management is as a combination of strategy and activity. She argued that many authors have stressed the importance of implementing supply chain management as a part of a process orientation to management. Miles and Snow [2007] realized that "supply chain structures aimed only at cost reductions provided little sustainable competitive advantage because management techniques such as benchmarking, business process reengineering, total quality, and best-practices helped leading competitors learn how to achieve maximum efficiency across their network of suppliers and partners (Ceccarelli, 2017).

Supply chains integrate several areas and so several actors with divergent interests. The main challenge is conciliate all the expectations and provide the appropriated level of service and quality for the customers (Pereira & Mohiya, 2021). He states that SCM's practices involve a set of activities undertaken by organization to promote effective management of their supply

chain. He goes beyond that and states that SCM lead to changes in the structure of the organization by integrating internal functions and linking these with the external operation of suppliers, customers and others stakeholders of the supply chain. The study presents that there is an extensive range of practices to be explored. Since the practices about forecasting, inventory, collaboration, development of warehouses, hub, site factories and besides that there is not a recent research treating all those dimensions of management. Ceccarelli (2017) worked on a project to link the TQM – Total Quality Management practices to SCM practices. A set of 12 practices applicable to different organization were identify above 50 TQM practices and 90 SCM practices. Authors indicate that implementation of these TQM and SCM practices in the organization will result in many desirable outcomes and benefits such as customer satisfaction; JIT delivery and reduced cycle time.

### **Statement of the Problem**

Most Organizations Spend More Than 50% of their income dollars on purchasing goods and services. It is even possible that about 30% of an organization’s purchases constitute 70% of the total purchase value. The private hospitals demands have grown tremendously and has lest into liberalization of provision of processing treatment to its patient, hence the need to adopt to supply chain resilience. Private hospital facilities have stepped in to bridge the gap that firms through supply chain resilience has left (Jackson, 2019). Application of technology in procurement is one of the hot areas of resilience costs up to 20% and a strategic upgrade from the manual procurement systems (Mrope, 2018). According to Suleiman (2015) “supply chain resilience plays a key role that helps reduce the operation costs, increase efficiency and significantly reduce lead times. Private hospitals providers like other organizations have embraced supply chain resilience to take advantage of the accruing benefits.

Despite the benefits that supply chain resilience generates literature provides that performance in delivery of private hospitals to the stakeholders and public has taken a dip. Challenges in procurement processes have significantly strained the availability of the necessary supplies for hospital operations (Rotich & Okello 2015). There are reported vulnerability resilience, and operations resilience, invoicing that derail the entire procurement process. The significant number of complaints that firms are blamed for in the procurement process varies (Nzuve (2013). The inconveniences caused by inefficient procurement process in the healthcare supply chain resilience explain “the farmers due to delays from upstream supply chain resilience and poor access to private hospital” (Ongeri & Osoro, 2021). These concerns peg the question on the role of supply chain resilience in the provision of patient to the public hospitals. It’s in the foregoing that this study seeks to examine the effect of implementation of supply chain resilience on performance of private hospital in Nairobi City County, Kenya.

### **Objectives of the Study**

The general objective is to establish the relationship between supply chain resilience management and performance of private hospitals in Nairobi City County, Kenya

The study was guided by the following specific questions:

- I. To examine the effect of Vulnerability resilience on performance of private hospitals in Nairobi City County, Kenya
- II. To examine the effect of operations resilience on performance of private hospitals in Nairobi City County, Kenya

## LITERATURE REVIEW

### Theoretical Framework

#### Transaction Cost Economics (TCE) Theory

The early studies of transaction cost theory as described in the works of Coase and others had paid little attention to the internal operation of the organization further expanded the application of transaction cost theory by highlighting the role of transaction cost theory in promoting vertical integration and trust in organizations (Bratton, 2003). These aspects of transaction cost theory are supporting evidences for the role of supply chain management in organizations. Transaction cost economics (TCE) offers a natural fit with supply chain management research because it focus on the “make or buy” decision whether a firm should make a product within the confines of its organizational boundaries or purchase it from an outside provider. TCE argues that, during any economic exchange, the cost of the product or service should include all hidden costs. The overarching goal is to maximise performance by minimizing transaction costs among and between organizations. Given the natural fit and previous use of the TCE in supply chain research, TCE was a popular theory in this special issue as well. Whether we look at supply chain, as a network or as an integrated process, the transaction cost theory explains the vertical connection and integration of various elements of organizational supply chain, from second tier and first tier suppliers to first tier and second tier customers (Carver, 1996).

Transaction costs are the expenses generated by identifying fair market prices, negotiating, and carrying out economic exchange (Bratton, 2003). Under some conditions, internalizing an activity minimizes such costs, while under others, buying a product or service from another firm is best. Supply chain managers should balance these contingencies to seek out a suitable balance of relationships across a chain. Consequently, TCE makes assumptions about how relationships are structured, and the development of ensuing forms of leverage. In this way, TCE overlooks two key considerations. The first involves contractual obligations and therefore the way transaction costs are usually dissipated throughout the supply chain. The second centres on the locus of control in supply chains and, in particular, how often minor players are able to exert considerable leverage through structural manipulation (Carver, 1996).

#### Systems Theory

Ludwig von Bertalanffy provide seminal contribution to the development of systems theory specifically throughout the 1950s. His researches before the 1950s were largely from biology perspective that led to development of organism system theory. after the 1950s, his analysis was mostly around the methodology development of science, that led to the development of general system theory (Carver, 1996). Bertalanffy challenged classical modelling, that were based on mathematical view of the systems, and argued that these open systems are affected by the time issue. Therefore, a dynamic view of systems is required for understanding these open systems explore the historical background of application of systems theory in supply chain management and specifically in the context of logistics (Bandura, 1977). They argue that the neoclassic economic theories were dominant during the period of 1950s1970s. Throughout this era, the main focus was one “total cost” and “trade-offs”. However, since the 1970s systems theory has become the dominant theory for explaining the domain and functioning of organizational supply chain. The post 1970s era itself witnesses a shift of focus (Penrose, 1959). Whereas the balance of cost and service as well as trade-offs were the center of attention till1985, the main focus of the idea was shift around 1985 to explain efficiencies and the role of processes (Yin, 2012). This latter period continues to date.

#### Conceptual Framework

A conceptual framework is an underrated methodological approach that should be paid attention to before embarking on a research journey in any field, be it science, finance, history and psychology. A conceptual framework sets forth the standards to define a research question and find appropriate, meaningful answers for the same (Yin, 2012). It connects the theories,

assumptions, beliefs, and project behind your research and presents them in a pictorial, graphical, or narrative format. Your conceptual framework establishes a link between the dependent and independent variables, factors, and other ideologies affecting the structure of your research.

### Independent Variables

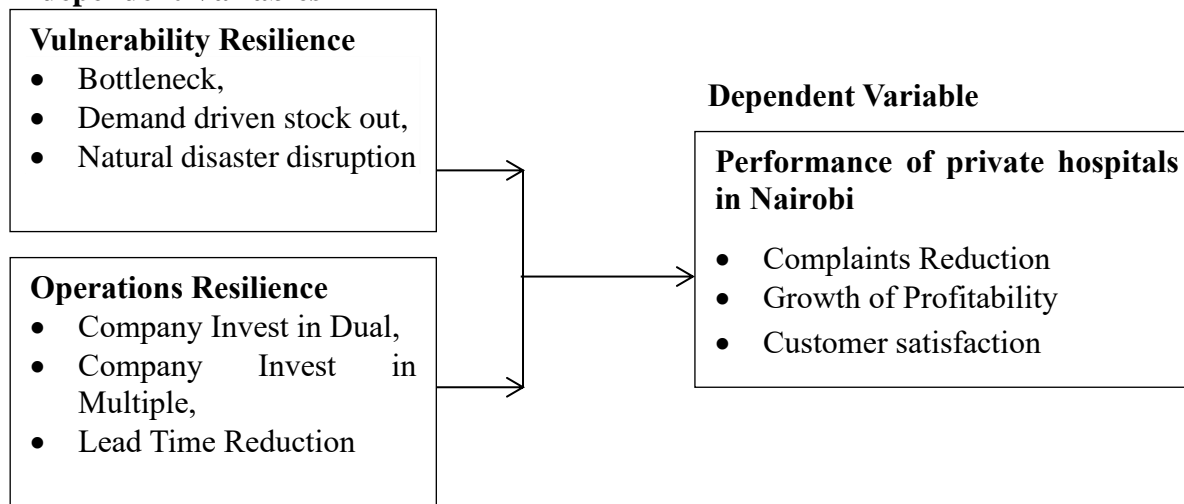


Figure 2.1 Conceptual Framework

### Vulnerability Resilience

Different migratory phases are associated with distinct physical health issues, influenced by the type, duration and methods of migration. Behavioral, environmental, genetic, biological, socioeconomic and cultural factors can influence the manifestation of physical illnesses in migrating individuals and populations, and can be compounded by migration-specific factors (Ongeri & Osoro, 2021). Those experiencing complex emergencies, such as conflict-related displacement, are often especially vulnerable, for example, to increased risk of infectious diseases due to lack of access to clean water, sanitation, nutrition, shelter and health care. Children and elderly people who have been forced to migrate are especially vulnerable to malnutrition and related illnesses, and may have come from settings where immunization programs were sub-optimal. Migrants from those middle-income countries afflicted by conflict have benefited from functioning health systems that have allowed them to survive with chronic conditions such as heart disease, chronic respiratory diseases and diabetes but are now vulnerable to lack of life-sustaining medicines – particularly older people (Sharma et al., 2019).

Women who lack of access to essential reproductive health services are at risk for unwanted pregnancies, maternal and infant mortality, and sexually transmitted infections. Women and children are also extremely vulnerable to sexual abuse, physical abuse, slavery, and other assorted forms of violence (Ongeri & Osoro, 2021). Individuals may be especially vulnerable to mental disorders during certain phases of migration, and when engaged in certain types of migration, each of which may exacerbate existing vulnerabilities. Mental disorders come in many forms among migrants, with different types of disorder, range of symptoms and time to symptom manifestation since the flight phase. Several characteristics are associated with greater vulnerability to mental disorders in migrant populations. These include: female gender, older age, widowed/divorced marital status, lower education, lower socio-economic status, living conditions, cumulative trauma exposure and type of trauma, duration of forced migration, post-migratory detention and asylum processes, fluency in the required foreign language/s, occupation, family and household factors, and support systems (Sharma et al., 2019).

Psychological adaptive mechanisms, resources that are available or utilized, and degree of individual adjustment can influence resilience all influence mental health outcomes. The model

also highlights the importance of meso and macro level factors influencing health vulnerabilities of migrant populations (Ongeri & Osoro, 2021). For example, the lack of a legal frameworks and denial of rights can increase vulnerability through reduced access to protection and social support, such as for IDPs when compared with the greater legal protection provided for refugees. The power of companies and corporations and weak accountability and enforcement mechanism are linked with exploitative working conditions and consequently negative physical and mental health effects for labour migrants. Discrimination and stigma can increase stress and reduce access to health services. Populist responses to migration can also lead further social discrimination and restrictive government policies. Low and middle income countries hosting large numbers of migrants such as IDPs or refugees may have weak health systems and so struggle to meet their health needs or instead rely on parallel services provided by international agencies which can cause inequitable health care access between migrant and host populations (Sharma et al., 2019).

The model indicates how social determinants of health can be both negative and positive, such as through increasing health vulnerability or supporting resilience (Ongeri & Osoro, 2021). It must be recognized that the majority of migrants (including forced migrants experiencing highly traumatic events) do not experience adverse health effects, including mental disorders. Factors such as better initial health, supportive networks in transit or on arrival, and access to medical care can support resilience. This highlights the importance of measures such as effective development assistance to reduce vulnerability in populations affected by threats that can be anticipated, such as political tensions leading to persecution and armed conflict. It is thus necessary to address these interrelated political, environmental, economic, social and cultural determinants if we are to improve people's health, and help prevent or reduce adverse influences on health in the future. It is also important to recognize that health differences in migrant groups do not necessarily disappear when social determinants (e.g. socio-economic status) are controlled (Sharma et al., 2019).

Instead, such determinants act not just as confounders but also as mediators influencing health outcomes on the causal pathways between migration status and health. Adverse individual, meso and macro level factors, each creating vulnerabilities among migrants, act during the classic phases of migration such as origin-pre migration, transit-migration, destination-post migration, return (Ongeri & Osoro, 2021). These different phases of migration are associated with specific vulnerabilities that can influence subsequent health outcomes. Thus, health problems already present at the pre-migration phase such as endemicity of disease, availability of health services, living with chronic disease, exposure to traumatic events may impair health during migration, which may in turn exacerbated by physical/psychological trauma, injury, or deprivation during the process of migration. All these factors may influence health on settlement in the destination country, which themselves may be worsened by post-migration experiences (e.g. deprivation, lack of services, lack of protection, broken social networks) (Sharma et al., 2019).

### **Operations Resilience**

Over time however, banks' growing complexity, interconnections and exposure to external events have made them increasingly vulnerable to operational disruption. In response, operational resilience has climbed the agendas of supervisors and regulators (Ongeri & Osoro, 2021). For instance, in the EU, individual components of operational resilience are addressed via dedicated guidelines from the EBA and The Basel Committee. At the same time, COVID-19 is putting banks' operational resilience to the test and stimulating debate over new supervisory or regulatory requirements. The pandemic is putting customer needs and new collaboration models into the spotlight, and may yet bring further changes or disruption. It follows that banks must thoroughly assess their ability to respond to disruption, close any gaps and strengthen their overall operational resilience. In this publication we define operational resilience and set out how to implement an efficient, effective framework (Sharma et al., 2019).

Most banks' operations performed well during the acute phase of the COVID-19 crisis. Even so, the pandemic still held up a mirror to institutions' resilience under pressure (Ongeri & Osoro, 2021). Faced with an increased threat landscape, banks need to accept that it's impractical and too costly - to prevent all disruption. Instead, their whole organizations should be ready to limit, respond to, recover and learn from a wide variety of events. Faced with creating such an operational resilience framework and integrating it with existing functions banks can learn from their experience of strengthening financial resilience after the crisis of 2008. As well as enhancing financial risk management through monitoring and stress-testing, this involved a structural program to build recovery and resolution planning into day today management (Sharma et al., 2019).

Institutions can use a similar approach to build the key elements of an effective operational resilience framework; Overarching crisis governance including clear roles and responsibilities among senior management, well-defined escalation mechanisms based on measurable indicators, and an effective reporting framework; Identifying and prioritizing important business functions, their underlying operational resources and key interconnections and interdependencies; Promoting enterprise-wide cooperation and strengthening existing interfaces and communication channels, for example through creating playbooks and performing dry runs. Creating recovery and communication strategies to deal with severe disruptions, and performing paper-based and live scenario exercises that put each element and their interplay to the test (Sharma et al., 2019).

Supervisors, regulators and standard-setters around the world are increasingly focused on the importance of overarching operational resilience frameworks. New requirements are being drafted and consulted on (Ongeri & Osoro, 2021). These new approaches are highlighting some areas that banks have previously tended to neglect. While cyber resilience, IT infrastructure and outsourcing clearly play an important role, authorities have realized that a broader approach to operational resilience - incorporating equally important components such as processes and people - is needed. This makes it critical to have transparency over banks' operating models, including the resources that support important business functions. In addition, new regulations highlight the importance of identifying severe but plausible tailored scenarios, and of performing stress-tests to reveal weaknesses in operating models. In the UK in particular, the authorities emphasize the importance of consumer protection during periods of disruption. They also require banks to set impact tolerance and metrics must be defined to monitor and measure the firm's ability to remain within the tolerance (Sharma et al., 2019).

Private hospitals seeking to achieve operational resilience need to develop enterprise-wide frameworks that allow them to respond flexibly to unexpected disruption (Ongeri & Osoro, 2021). We propose five action items that will allow banks to meet this goal, while also fulfilling future supervisory expectations. Senior managers must define the strategic goals for setting up and running the operational resilience framework. This should include the business objectives to be protected and the risk appetite. The strategy should also set the primary goals for the operational resilience programmed, including which operations should be prioritized during crisis management, and taking relevant stakeholders into account. The strategy should be integrated into the broader planning process and aligned with the business strategy and operational risk management. The Committee defines operational resilience as the ability of a bank to deliver critical operations through disruption. This ability enables a bank to identify and protect itself from threats and potential failures, respond and adapt to, as well as recover and learn from disruptive events in order to minimize their impact on the delivery of critical operations through disruption. In considering its operational resilience, a bank should take into account its overall risk appetite, risk capacity and risk profile (Sharma et al., 2019).

### **Performance of Private Hospitals**

Supply chain operational performance is well-defined as the result of systematic, strategic, and efficient collaboration of the conventional business functions within and outside organization,

it consists of processes and activities associated with transforming material inputs into finished goods (Ongeri & Osoro, 2021). To guarantee a complete performance measurement, supply chain operational performance should be measured by relational capability, organizational culture and IT capability. The supply chain literature has mainly employed two types of performance measures – costs or a combination of costs and non-costs performance (i.e. customer responsiveness, flexibility). Cost measures may include inventory costs and operating costs whereas non-costs performance may include indexes such as lead time, quality, fill rate, stock-out probability, and firm ability to switch productions and to introduce new products. He proposed three performance measures for supply chains. They include: resource, output and flexibility. These were later adopted by many scholars to measure the supply chain performance (SCP) (Sharma et al., 2019).

Resource measures are the fulfilment of cost efficiency goals, such as cost optimization in productions, warehouse and logistics. Output measures are the fulfilment of goals which are related to customer service like response times, product quality, on-time delivery, customer complaints and customer satisfaction (Ongeri & Osoro, 2021). Flexibility measures are related to adjustments in product quantity, product mixes and adjustments in the capacity to better serve the customers. In another study, had categorized the SCP into supply chain flexibility and supply chain efficiency whereas others have adapted performance measures by categorizing these into customer efficiency performance and customer service performance, efficiency and effectiveness. This study will use both costs (cost efficiency) and non-costs (customer service and flexibility) performance. By incorporating the non-costs performance, the impact of supply chain benchmarking on the SCR and the SCOP on the day-to-day manufacturing and supply chain operations can be seen more clearly. Managerial perceptions will be used to capture these performance dimensions rather than accounting measures due to the limitation of the financial data available. This would have made it impossible to quantify the performance. Furthermore, these measures are more historically oriented, thereby limiting its ability to predict future performances (Sharma et al., 2019).

The focus of SCR is to cope with the temporary disruptive events (Ongeri & Osoro, 2021). It is simply described as the capacity to prepare the plan and construct the network of the supply chain that can envision sudden troublesome or negative occasions and will adaptively react to interruptions while keeping up command over the network and structure of the supply chain. SCR has the capacity to rise above to an initial position as before the disruption, or preferably to be more improved and more profitable. In this definition, all the characteristics of SCR are included, i.e., capacity, preparation, adaptive capability, well-timed recuperation to the original state, preferably a better state. There are few indicators of SCR, and if a supply chain consists of them, it surely indicates that a supply chain is resilient (Sharma et al., 2019).

## **Empirical Review**

### **Vulnerability Resilience**

We seek to provide a clearer understanding of health vulnerabilities and resilience of migrant populations through developing a ‘migration health vulnerability and resilience model’. The model is based on a social determinants of health approach (Smith & Johnson, 2020). The role played by social determinants of health was recognized in the 1948 Constitution of the World Health Organization (WHO), and extensive research conducted particularly from the 1970s onwards highlighted the importance of social determinants of health, demonstrating the persistence of large inequalities in health between and within societies. A variety of theories have been invoked to explain this phenomenon. Some emphasize the physical and psychological toll of poverty and inequality on individuals and communities, leading to hazardous exposures and psychosocial stress that, in turn, predispose to greater vulnerability to poor health. Other approaches focus more on the ‘social production of disease’ following a political economy perspective, arguing that the structural causes of inequality should be given primacy, even if not exclusively (Tajeddinin et al., 2020).



. Another theoretical approach is 'Eco social theory'. This emphasizes the importance of exposures over the entire life course, seeking to integrate biological, ecological and social factors throughout an individual's lifetime as determinants of their health (5). The theories on social determinants of health have been brought together in various ways, of which the most widely used is the 'main determinants of health' image developed (Smith & Johnson, 2020). This depicts the individual and their micro-level features; surrounded by a meso-level layer of lifestyles, social and community networks, living and working conditions; and a macro-level layer of socioeconomic, cultural and environmental conditions. The 'migration health vulnerability and resilience model' is presented in Figure 1. It broadly follows Dahlgren and Whitehead's model of concentric circles of micro, meso and macro-level influences, with the migrant at the centre, and which has also been applied elsewhere to migration. These influences vary over time, as the migrant moves through successive phases of migration, from their country of origin to their destination, reflecting the heterogeneity of the migration process and migrant populations (Tajeddinin et al., 2020).

### **Operations Resilience**

Investment in people, organizations and technology will be needed to bring the operational resilience framework into force. Any vulnerabilities need to be addressed by replacing outdated or weak infrastructure, increasing system capacity and addressing key person dependencies (Smith & Johnson, 2020). Employees need to be trained in their new roles, and policies, processes and management information systems must be set up. To help anchor the new roles in the mindset of employees, we recommend creating a guideline for operational resilience that explains the main objectives. Promote an operational resilience culture embedding the framework in a bank's corporate and risk culture is essential to successfully achieving and maintaining operational resilience. Risk-conscious behaviour should be fostered by sensitizing and training employees, and through published crisis management guidelines. Keeping employees updated about actual disruption and its effects will help staff to identify threats early, understand how to respond and who to report to. Creating a shared culture of openness and transparency in which people are encouraged to admit mistakes is key to the timely detection and management of potential disruption (Tajeddinin et al., 2020).

Until recently, some of the most predominant operational risks that private hospitals faced resulted from vulnerabilities related to the rapid adoption of and increased dependency on technology infrastructure for the provision of financial services and intermediation, as well as the sector's growing reliance on technology-based services provided by third parties (Smith & Johnson, 2020). The Covid-19 pandemic has exacerbated these operational risks and increased economic and business uncertainty. 7. Pandemic-related disruptions have affected information systems, personnel, facilities and relationships with third-party service providers and customers. In addition, cyber threats such as ransomware attacks, phishing, have spiked, and the potential for operational risk events caused by people, failed processes and systems has increased as a result of greater reliance on virtual working arrangements. The Committee's guidance on operational resilience will continue to be informed by its monitoring of the impact of the Covid-19 pandemic and any lessons taught (Tajeddinin et al., 2020).

Essential elements of operational resilience; Operational resilience is an outcome that benefits from the effective management of operational risk. Activities such as risk identification and assessment, risk mitigation (including the implementation of controls) and ongoing monitoring work together to minimize operational disruptions and their effects (Smith & Johnson, 2020). An operationally resilient bank is less prone to incur untimely lapses in its operations and losses from disruptions, thus lessening their impact on critical operations and their related services, functions and systems. While it may not be possible to avoid certain operational risks, such as a pandemic, it is possible to improve the resilience of a bank's operations to such events. In addition, business continuity, outsourcing of services to third parties and the technology upon which they rely are important factors for banks to consider when strengthening their operational resilience. Previously issued guidance in these areas, whether issued solely by the Committee

or jointly with other standard setting bodies (SSBs), does not adequately capture all essential elements when considered on a standalone basis, but does advance operational resilience when considered collectively (Tajeddinin et al.,2020).

It is essential for banks to ensure that existing risk management frameworks, business continuity plans and third-party dependency-management are implemented consistently within the organization. Internationally active banks should consider whether their operational resilience efforts are appropriately harmonized with the stated actions, organizational mappings, and definitions of critical functions and critical shared services contained in their recovery and resolution plans as specified in the Financial Stability Board's (FSB) Recovery and Resolution Planning framework (Tajeddinin et al.,2020). The principles for operational resilience set forth in this consultative document are largely derived and adapted from existing guidance that has already been issued by the Committee or national supervisors over a number of years. 9 The Committee recognizes that many banks have well-established risk management processes that are appropriate for their individual risk profile, operational structure, corporate governance and culture, and conform to the specific risk management requirements of their jurisdictions. By building upon existing guidance and current practices, the Committee is proposing a pragmatic, principles-based approach to operational resilience that will help to ensure proportional implementation across banks of various size, complexity and geographical location (Thompson et al., 2019).

### **Performance of Private Hospitals**

A resilient supply chain performance not only alleviates the capabilities of firms to absorb disruptions, but also to speedily recover and return to normal conditions, this can influence firms' performance (Thompson et al.,2019). It is evident from literature that the more time a firm takes to react to any turbulence; the greater the damage would be. The reason is because these disruptions can cause a decrease in firm performance. In another study, studied the resilience phenomenon in relation to the service performance in 3PL companies. They found a positively significant influence on service performance. In a nutshell, it can be argued that firms with greater levels of SCRES were better at detecting potential risks and threats (Teece, 2018).

Operational Performance can strongly be linked how firms benchmark their performance against others in the industry, which encompasses initiatives that benefit them beyond an organisation's goals (Thompson et al.,2019). The impact of benchmarking implementation on business performance has long been debated among scholars, but the conclusions have remained disputed. He indicated that any company that wants to combine the many aspects of its business processes, such as procurement, manufacturing, and distribution, must think about benchmarking their performance. Companies that have embraced sustainable activities that include the environment and society have reaped long-term economic gains and gained a competitive advantage over their competitors. Some researchers have discovered a link between corporate benchmarking and firm performance (Teece, 2018).

This is because this efforts promote stakeholders' interests, which increases a firm's goodwill, consequently enhancing its value, social legitimacy, and market potential, and thus improving its performance (Thompson et al.,2019). Perceived BM, has a considerable impact on organizational performance. However, other academics believe that there may be a negative relationship between benchmarking and firm performance because it raises a firm's costs and hence has a detrimental impact on firm performance. This could result in the firm's limited valued resources being diverted from economically beneficial internal projects to non-economically useful operations. Furthermore, some research have shown that there is no connection between the two. This activities can also help companies establish relationships with firms within the industry, resulting in easier access to information and opportunities (Teece, 2018).

## RESEARCH METHODOLOGY

The research adopted descriptive survey research design for the purpose of this study. For this study, target population was 322 respondents from the private hospital in Nairobi City County, Kenya, they comprised the head of procurement and head of finance officers in the in Kiambu County, Kenya. Given that the target population was small and manageable the study adopted a census approach. Data was collected using open and closed ended (structured) questionnaires. Structured questionnaire were used since it gave quantitative parameters from the respondent.

The completed questionnaires was edited for accuracy and completeness before being processed using Statistical Packages for Social Sciences (SPSS) version 28 (Mugenda & Mugenda, 2008). Descriptive statistics such as means, frequencies, and percentages was used to analyze the quantitative data. Tables, figures, and charts was used to display the information. The research study assumed a linear relationship between the independent variables and the dependent variable by adopting the Ordinary Least Square Method of estimation (OLS)

## RESEARCH FINDINGS AND DISCUSSION

Out of 290 questionnaires that were circulated to the respondents, 252 of the respondents dully filled and returned questionnaires; yielding a response of 86.9%. This was considered to be a very reliable response rate for the generalization of study findings is in line with Sharma (2015), states that a response rate of 70% and above is believed to be a reliable response rate. This was less 32 (10%) respondents who were pilot tested.

### Descriptive Statistics

In this section, the study presents findings on Likert scale questions on the role of inventory management practices and performance of private hospitals' private hospitals in Nairobi City County, Kenya. The study specifically presents the effect of vulnerability resilience, operations resilience, on performance of preference group's private hospitals in Nairobi City County, Kenya. Respondents were asked to use a 5-point Likert scale where 5 (SA) = Strongly Agree, 4(A) = Agree, 3(UD) = undecided, 2 (D) = Disagree, and 1(SD) = Strongly Disagree. Results obtained were interpreted using means and standard deviations where a mean value of 1-1.4 was interpreted as; (SD) =strongly disagree, (D)= disagree, N= neutral, (A)= agree and (SA) = strongly agree.

### VULNERABILITY RESILIENCE

Respondents were requested to give their responses in regard to Vulnerability resilience in a five point Likert sale where SA=Strongly Agree, A=Agree, N= Neutral, D=Disagree, and SD= Strongly Disagree. Results obtained were presented in Table 4.3 below:

Respondents were requested to give their opinion on the variable Vulnerability resilience. From table 1, the respondents unanimously agreement that Vulnerability resilience ensured performance of private hospitals and periodic review in Nairobi City County in Kenya viable with agreement of a mean was 3.742, and Standard Deviation of 1.0600; Through their experience in Nairobi City County the respondents gave neutral response with a mean of 3.533 and Standard Deviation of .9200; their skill has contribution to the quality and innovation of the vulnerability resilience with strongly agree a Mean of 3.903, and Standard Deviation of .9005; level of education in Vulnerability resilience it is important to put in place and maintain procurement the respondents gave a strongly agree with a Mean of 4.061, and Standard Deviation of .25249; The management of Nairobi City County in Kenya implements performance of private hospitals award the respondents disagreed with a Mean of 3.541 and SD=1.3018); and Vulnerability resilience enhances performance of private hospitals at Nairobi City County in Kenya, they agreed with a Mean of 3.566, Standard Deviation of .7015. This finding agrees with the findings of Nyile *et al.* (2022) who observed that clear description of Vulnerability resilience, enhance effective performance of private hoitals in Nairobi City County, Kenya.

**Table 1: Vulnerability Resilience**

<b>Statement</b>	<b>Mean</b>	<b>Std. Dev.</b>
My Hospital ensures their experience Sharing through Real time basis	3.370	1.060
Through their skill in Nairobi City County Kenya has been able to make decisions on timeliness	3.531	.9200
Level education has contribution to performance of Nairobi City County, Kenya	3.903	.9005
By Quick, frequent & accurate management culture resilience	4.061	.25249
It is important to put in place Vulnerability resilience	3.541	1.3018
The management of strategic evaluation in virtual integration	3.566	.8015
Vulnerability resilience enhances performance of Nairobi City County, Kenya.		

**OPERATIONS RESILIENCE**

Respondents were asked to give their responses in regard to operations resilience on performance of private hospitals in Nairobi City County in Kenya i.e. 5 point likert scale where SA=Strongly Agree, A=Agree, N= Neutral, D=Disagree, and SD= Strongly Disagree. Their responses are presented in table 2 below:

From table 4.9, respondents, respondents agreed that operations resilience ensure performance of private hospitals Nairobi City County in Kenya; the respondent gave a Mean of 4.037 and Standard Deviation of .7307; decision making on performance of private hospitals Nairobi City County in Kenya, they gave strongly disagree with a Mean of 4.002 and Standard Deviation of .7307; output of operations resilience can affect performance of private hospitals in Nairobi City County in Kenya; the gave strongly agree with a Mean of 4.206, Standard Deviation of .25207; In cases of health workers systems to embrace a better performance of private hospitals in Nairobi City County in Kenya they gave a Mean of 4.009 and Standard Deviation of .8073; Alternative operations resilience to performance of private hospitals in Nairobi City County in Kenya ;most of the respondents were neutral with a Mean of 3.925 and Standard Deviation of .7306; and to enhance market share results, our county has in recent time conducted modern sensitivity resolution towards performance of private hospitals in Nairobi City County in Kenya; they gave a Mean of 4.104 and Standard Deviation of .7055.

These findings are in line with the findings of Nyile *et al.* (2022) who observed that the characteristic of operations resilience are the best value reaction to sort out non-performance of, after Operations resilience, for resolving return on investment. The problem areas giving rise to disputes are mainly related to Nairobi City County's matters.

**Table 2: Operations Resilience**

<b>Statement</b>	<b>Mean</b>	<b>Std. Dev.</b>
My county embrace operations resilience on performance of Nairobi City County in Kenya.	4.034	.7307
My county embrace decision making change on performance of Nairobi City County in Kenya.	4.003	.7307
My county embrace output doctrine n performance of Nairobi City County in Kenya	4.009	.25273
In cases of operations resilience on performance of private hospitals in Nairobi City County in Kenya	3.925	.8306
Alternative operations resilience for money process on performance of private hospitals Nairobi City County in Kenya	4.104	.8055
To enhance operations resilience processes on performance of Nairobi City County in Kenya	4.053	.7105

### Performance of Private hospitals in Nairobi City County

Respondents gave their level of agreement on various statements relating with performance of private hospitals in Nairobi City County, Kenya. The results were as presented in Table 3 below:

From the research findings, respondents were in agreement that performance of private hospitals in Nairobi City County in Kenya is being affect by supply chain agility, they gave 63.2%; when asked about customer satisfaction and its effect on performance of private hospitals in Nairobi City County in Kenya they gave strongly agree of 60.7 %; When the respondents were asked to show their level of agreement on how less complaints affects performance of private hospitals in Nairobi City County in Kenya they gave strongly disagreed of 9%; When also the respondents were asked to show their level of agreement on return on investment of the in Kenya government on performance of private hospitals in Nairobi City County in Kenya they gave They gave agreed of 59.7%; Alternative strategy to contribute to Procurement resilience on performance of private hospitals in Nairobi City County in Kenya they gave neutral of 42.5% and through strategic application, performance of private is measured by quality, flexibility, Procurement resilience on performance of private hospitals in Nairobi City County in Kenya they gave disagreed of 74.2%. The outcome is in line with the findings of Mutai and Osoro (2021) they observed that some of the factors that contribute to inefficiency in public procurement as corruption, delayed payments, poor planning, statutory amendments, insufficient use strategic evaluation low public participation, and improper payment procedures negatively affects performance of private hospitals Nairobi City County in Kenya in Kenya.

**Table 3: Performance of Private Hospitals in Nairobi City County**

Statements	Yes (%)	No (%)
Customer Satisfaction an affects performance of commercial state corporation Nairobi City County in Kenya	52.2	47.5
No. of private hospitals can affects their performance Eastern in Kenya	60.6	36.4
Access to less complaints can affect performance of private Hospitals in Kenya	44	56
can affects performance of private state corporation Nairobi City County in Kenya	59.7	41.3
Complaints can affects performance of private hospitals Nairobi City County in Kenya	42.2	57.5
performance of private hospitals in Nairobi City County in Kenya	74.1	25.9

### Pearson Correlation Analysis

The study further conducted inferential statistics entailing both Pearson and regression analysis with a view to determine both the nature and respective strengths of associations between the conceptualized predictors such as Vulnerability resilience, and Operations resilience and performance of private hospitals in Nairobi City County, Kenya.

**Table 4: Correlation Coefficients**

		Performance private hospitals	ofVulnerability resilience.	Operations resilience
Performance Of Nairobi City County	Pearson correlation	1		
	Sig. (2-tailed)			
Vulnerability resilience	Pearson correlation	.534* 252*	1	
	N. Sig. (2-tailed)	.000		
Operations resilience. N	Pearson correlation	.152* 252*	.240 252	1
	Sig. (2-tailed)	.000	.035 252	252

From the findings, a positive correlation is seen between each variable and performance. The strongest correlation was established between Vulnerability resilience and performance of private hospitals in Nairobi City County in Kenya ( $r = 0.534$ ) and with

**Regression Analysis**

**Table 5 Regression Coefficient Results**

	Unstandardized coefficients		Standardized coefficients	T	Sig.
	B	Std. Error	Beta		
(constant)	-.132	.060	-1.144	4.004	.002
Vulnerability resilience	.464	.132	.555	5.472	.003
Operations resilience.	.256	.115	.321	2.657	0.001

A unit change in vulnerability resilience would thus lead to a .464 effect on performance of private hospitals in Nairobi City County in Kenya *ceteris paribus*; and finally a unit change in strategic resolution would have an effect of .256 of performance of Nairobi City County in Kenya. This finding is in line with the findings of Onger and Osoro (2021). This implies that among other factors, Vulnerability resilience. Operations resilience are significant determinants of performance of private hospitals in Nairobi City County, Kenya.

**Conclusion**

The study concludes that there is a positive relationship between Vulnerability resilience and Performance of private hospitals. Speciation identification, periodic design assessment, continues improvement and proactive assessment are among the Vulnerability resilience factors that significantly influenced the performance of private hospitals in Nairobi City County, Kenya. The study further concludes that by implementing Vulnerability resilience has enhanced performance of private hospitals in Nairobi City County, Kenya, leading to operational increase in efficiency and effectiveness. Therefore, the study concludes that private hospitals in Nairobi City County, Kenya has significantly increased their strategic ' quality management in the In Kenya government in strategic management practices.

The researcher concludes that there is a positive relationship between Operations resilience and performance of private hospitals in Nairobi City County, Kenya. Partnership enforcement policy, collective bargaining, alternative dispute resolution processes, free expression of concerns by involved practices are among the coordination factors that significantly influenced the performance of private hospitals in Nairobi City County, Kenya. The researcher further concludes that by adopting alternative coordination and partnership mechanisms as it was observed at Nairobi City County in the level of performance of private hospitals in Nairobi City County has increased. Therefore, the study concludes that Nairobi City County in Kenya

has been experiencing significant increase in service delivery through embracing proper coordination in the supply chain practices.

## **Recommendations**

### **Vulnerability Resilience**

The study recommend that Vulnerability resilience formalizes relations between practices within a robust legal framework, but is much more besides; it is an opportunity to define the arrangements that encompass every aspect of what outcomes the Nairobi City County in Kenya wants from the strategic and how it wants the relationship to work. This means that the In Kenya needs to take an active role in the development of the quality mechanism early on; it should not be left as a supplementary activity post negotiation. At preparation of every quality management can contribute to strategic evaluation on performance of private hospitals in Nairobi City County, Kenya. Proper Vulnerability resilience can result to high procurement in Nairobi City County, Kenya.

### **Operations Resilience**

This researcher recommends that operations resilience had a strong relationship with performance of private hospitals in Nairobi City County, Kenya. When relationship are not properly managed, they may cause strategic delays, undermine team spirit, increase delay costs, and, above all, damage business relationships. With the increase in the number of participants in a strategic management, it is obvious that more business interactions and arguments end up with an increase in the number of strategic relationship disputes. Research in preventing and resolving relationship disputes supports the effort for better understanding and harmonization of the different cultures. Therefore, this study recommends to the management of Nairobi City County in Kenya to enhance and upgrade on the implementation of all applicable alternative disputes resolution mechanisms so to protect relationship with its stakeholders in the supply chain practices.

### **Areas for Further Studies**

This research focused on vulnerability resilience, and operations resilience and performance of private hospitals in Nairobi City County, Kenya. The study therefore recommends a further study to be conducted to other counties in Kenya. Then get their findings and compare with this and agree or disagree. The study also recommends replication of the study in other sectors such as manufacturing sector and public sector to allow comparison of research findings. Future researchers an investigate the factors affecting supply chain best practices broadly in all areas of concern in this profession on performance of private hospitals the supply chain practices.

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