

**INNOVATIVE LEADERSHIP PRACTICES, DIGITAL TRANSFORMATION,
REGULATORY FRAMEWORK AND PERFORMANCE OF COMMERCIAL
DOMESTIC AIRLINES IN KENYA**

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OCTOBER 2025

DECLARATION

Declaration by the student

I declare that this thesis is my original work and has not previously in its entirety or in part been presented for a degree or other academic work.



09th October 2025

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DEDICATION

This thesis is dedicated first and foremost to the Almighty God for His love and kindness throughout my studies. Secondly, I dedicate to my lovely wife Brenda Chebet, for her support and encouragement; to our children; Jesse Kiprop and Arielle Cheruto, thanks for their patience and sacrifice. Special appreciation to my mother Reginah C. Koech for her lifelong guidance, prayers, and belief in the value of education, and to my siblings; Shadrack Bett, Sharon Chepkoech, Mercy Cherotich, Faith Chepkorir, Maureen Chepngeno and Jolly Chemutai for their continual inspiration and moral support.

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ACRONYMS / ABBREVIATIONS

ANOVA	Analysis of Variance
ATM	Automated Teller Machine
AI	Artificial Intelligence
CAK	Communications Authority of Kenya
CEO	Chief Executive Officer
COO	Chief Operating Officer
CRM	Customer Relationship Management
CRS	Computer Reservation System
DOI	Diffusion Of Innovation
GDS	Global Distributions Systems
HOD	Head of Department
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
ICT	Information and Communication Technology
IoT	Internet of Things
I.T	Information Technology
IFE	In-Flight Entertainment
KATO	Kenya Association of Tour Operators NGOs
KCAA	Kenya Civil Aviation Authority
KNBS	Kenya National Bureau of Statistics
KAAO	Kenya Association of Air Operators
NGO	Non-Governmental Organization
P2P	Peer-to-Peer
RBV	Resource-based view

RM	Relationship Marketing
SPSS	Statistical package for Social Science
SME	Small and Medium Enterprises
SMS	Short Message Service
TAM	Technology Acceptance Model
TDT	Technological Determinism Theory
UK	United Kingdom
USA	United States of America
WWW	World Wide Web

OPERATIONAL DEFINITION OF TERMS

Digital Transformation: A fundamental shift in how businesses operate, characterized by the adoption and integration of digital technologies such as cloud computing, mobile platforms, big data analytics, and artificial intelligence to create new value propositions, improve operational efficiency, and enhance customer experience. In this study, it is conceptualized as the mediating factor that strengthens the link between leadership practices and organizational performance.

Innovative Leadership: A management style that emphasizes creativity, adaptability, and experimentation. It involves developing a culture that encourages new ideas, risk-taking, and continuous improvement in organizational processes and outcomes. For this study, it refers to the leadership practices of airline executives and managers that foster innovation and support organizational growth.

Organizational Performance: The extent to which an organization achieves its strategic goals and objectives, measured across financial, operational, and market dimensions. It includes efficiency of internal processes, customer satisfaction, employee productivity, and long-term sustainability. In the context of this study, organizational performance reflects how well domestic commercial airlines in Kenya achieve operational efficiency, market competitiveness, and service excellence.

Regulatory Framework: The set of laws, rules, standards, and procedures established by the Kenya Civil Aviation Authority (KCAA) and other relevant authorities to govern the operation of airlines. It includes licensing requirements, safety standards, compliance protocols, and policies that shape how airlines function. In this study, the regulatory framework is treated as a moderating factor influencing the relationship between leadership practices, digital transformation, and performance.

Domestic Commercial Airlines: Registered airlines that provide scheduled passenger and cargo transport services within Kenya's borders. They operate under licenses issued by the Kenya Civil Aviation Authority (KCAA) and are distinguished from international and charter airlines by their domestic focus. In this study, all 17 domestic commercial airlines in Kenya formed the target population.

ABSTRACT

The aviation industry plays a critical role in connecting markets, enabling trade, and supporting economic growth, yet domestic commercial airlines in Kenya continue to face persistent challenges such as inefficient regulations, high operational costs, and slow adoption of digital technologies. This study examined the influence of innovative leadership on the performance of domestic commercial airlines in Kenya, focusing on the mediating effect of digital transformation and the moderating influence of the regulatory framework. The research was grounded in the Resource-Based View, Technological Determinism, Institutional Theory, and Open Systems Theory. A positivist philosophy and cross-sectional survey design were adopted, targeting 170 senior managers from all 17 licensed domestic airlines. Data were collected through structured questionnaires and analyzed using descriptive statistics, correlation analysis, and multiple regression techniques, including Baron and Kenny's mediation approach and Hayes' moderated mediation model. The findings revealed a strong and statistically significant direct effect of innovative leadership practices on organizational performance ($R^2 = 0.640$, $F = 250.1$, $p < 0.001$), implying that strategic visioning, adaptability, and employee empowerment are essential in driving satisfactory performance among domestic airlines. Regression analysis showed that innovative leadership was a strong predictor of performance ($t = 15.818$, $p < 0.001$). Digital transformation was significantly associated with innovative leadership ($t = 12.589$, $p < 0.001$) and showed a direct effect on performance ($t = 9.555$, $p < 0.001$). However, its mediating effect weakened and became statistically insignificant ($t = 1.304$, $p = 0.194$) when innovative leadership was controlled, indicating partial mediation. The regulatory framework significantly moderated the relationship between innovative leadership and organizational performance, with the interaction term being statistically significant ($t = 2.239$, $p = 0.027$). The explanatory power of the model improved from $R^2 = 0.640$ to $R^2 = 0.726$, with a significant R^2 change ($p < 0.05$), implying that supportive regulation strengthens the effect of innovative leadership on performance. The moderated mediation model, however, was not supported, as the interaction between regulatory framework and digital transformation was statistically insignificant ($t = 1.495$, $p = 0.135$). The study concludes that innovative leadership practices remain the most critical driver of performance among Kenya's domestic airlines, while digital transformation provides complementary benefits and regulatory frameworks strengthen leadership's effect when well-aligned with organizational strategies. The study recommends that airline leaders prioritize adaptive and inclusive leadership, invest in advanced aviation technologies, and advocate for regulatory reforms that create an enabling environment for innovation-driven leadership to enhance overall organizational performance.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter presents a summary of this study project on innovative leadership practices, digital transformation, regulatory framework and performance of Kenya's domestic commercial airlines. The backdrop of the research, the issue it aims to solve, its goal, objectives, assumptions, rationale, importance, scope, and constraints and delimitations are all discussed in this chapter.

1.1 Background of the Study

In 2023, American Airlines led the U.S. domestic market with a 17.5% market share, closely followed by Delta Airlines at 17.3%, reflecting the concentration of market power in the hands of a few dominant players (Johnson & Lee, 2023). This concentrated structure creates intense competition, compelling airlines to improve operational efficiency, invest in customer service, and maintain loyalty programs to preserve their position (Bureau of Transportation Statistics, 2024). The dominance of these carriers influences pricing strategies and shapes the broader performance trends of the industry, leaving smaller airlines to navigate competitive pressures with limited resources (Graham, 2023).

The U.S. commercial aviation sector contributes significantly to the economy, accounting for about 5% of GDP, valued at approximately \$1.37 trillion in 2023 (Federal Aviation Administration, 2023). This underscores the importance of airlines not only as providers of mobility but also as key enablers of trade, tourism, and employment (Smith & Jones, 2023). Performance outcomes such as profitability and operational efficiency therefore have ripple effects on national economic stability, as weak financial performance in major carriers can directly impact job creation and regional economic activity (Johnson & Lee, 2023). The scale of this economic role highlights why performance in aviation is closely monitored by both regulators and policymakers (U.S. Department of Transportation, 2023).

Operational performance is a critical indicator, typically measured through punctuality, cancellations, and baggage handling, which directly affect customer satisfaction (Bureau of Transportation Statistics, 2024). In 2023, North American carriers reported a 99.55% on-time

performance rate, demonstrating operational consistency in the region (Federal Aviation Administration, 2023). This high level of punctuality enhances consumer trust, reduces service-related complaints, and helps build competitive advantage in a crowded market (Graham, 2023). Conversely, delays and cancellations undermine customer experience and erode loyalty, making operational reliability a central factor in airline performance strategies (Smith & Jones, 2023).

Customer satisfaction has increasingly become a defining component of airline performance, as passengers prioritize reliability, comfort, and service quality (U.S. Department of Transportation, 2023). Major airlines such as American Airlines and Delta have faced recurring consumer complaints, highlighting gaps in service delivery that require improvement (Johnson & Lee, 2023). Addressing these complaints effectively enhances reputation and fosters customer loyalty, which are crucial for long-term sustainability (Smith & Jones, 2023). Airlines that actively address service shortcomings are more likely to retain passengers despite fare competition, making customer experience a performance dimension that cannot be ignored (Graham, 2023).

Financial performance remains another core determinant of sustainability in the aviation industry. The U.S. domestic airline market was projected to reach a size of \$185.3 billion in 2024, representing a modest growth rate of 1.05% from the previous year (Market Research Future, 2024). This growth reflects resilience in a sector challenged by volatile fuel prices, labor disputes, and changing consumer demands (Johnson & Lee, 2023). Profitability is crucial as it enables carriers to reinvest in new fleets, expand routes, and adopt digital technologies to improve operations (Federal Aviation Administration, 2023). Conversely, financial instability limits competitiveness and leaves airlines vulnerable to external shocks such as pandemics or geopolitical tensions (Smith & Jones, 2023).

In Asia, airlines operate under diverse regulatory and market conditions, leading to varied performance outcomes. Southeast Asian carriers face challenges related to regulatory frameworks, demand cycles, and competitive intensity, which shape their operational and financial stability (Huang & Wang, 2023). By contrast, Northeast Asian airlines have benefited from international liberalization, which has enhanced connectivity and expanded market opportunities (Lee & Kim, 2023). Chinese airlines, in particular, stand to benefit from bilateral liberalization agreements with ASEAN and other regions, positioning Chinese hub airports as

gateways for Asian and intercontinental travel (Zhang, 2024). This regional variation demonstrates how policy frameworks and market structures directly shape airline competitiveness (Nguyen & Tran, 2023).

Corporate governance is a particularly important determinant of performance in the Asia-Pacific region, where governance quality influences financial resilience and operational efficiency (Tan & Lim, 2023). Airlines with strong governance frameworks earn investor and regulatory confidence, while those with weak governance suffer reduced competitiveness and reputational decline (Nguyen & Tran, 2023). Governance failures can undermine operational performance despite favorable market conditions, making oversight a vital determinant of success (Cheng, 2024). This aligns with global findings that transparent governance enhances accountability and stakeholder confidence across industries (Huang & Wang, 2023).

Efficiency has emerged as a cornerstone of competitiveness in Asia's low-cost airline segment. AirAsia, for example, has grown into the largest low-cost carrier in the region by maintaining operational efficiency and extensive network coverage (Ong & Tan, 2023). Cost discipline enables low-cost carriers to offer affordable fares in highly price-sensitive markets, sustaining profitability despite thin margins (Lee & Choi, 2023). Kumar and Singh (2024) argue that efficient resource management is essential for maintaining market share and adapting to competitive pressures. The ability to combine cost control with service quality therefore defines the performance trajectories of many Asian carriers (Chen & Zhao, 2023).

Finally, adaptability has become a critical determinant of long-term success in Asia's aviation market. Airlines must navigate external shocks, technological disruptions, and evolving consumer expectations, all of which demand agile strategies (Chen & Zhao, 2023). Those unable to adapt risk losing competitiveness, as the aviation industry in Asia is dynamic and subject to rapid shifts in demand and policy (Huang & Wang, 2023). Carriers that integrate governance reforms, digital transformation, and customer-centered strategies are more likely to achieve sustained growth (Lee & Kim, 2023). This adaptability ensures that Asian airlines remain competitive in both regional and global markets, reinforcing aviation's contribution to broader economic development (Zhang, 2024).

Africa exhibits the lowest financial performance across all regions and contributes to less than 3% of the global market share in terms of traffic (Afraa, 2017). The Kenyan airlines have failed to generate a return on investment that surpasses their weighted capital costs. Additionally,

their revenues remain much lower than the \$564 billion obtained in 2008 (IATA, 2013). Over the period of 2002-2009, the owners and shareholders saw a constant decline in their capital. On average, the whole sector lost \$19 billion of shareholder capital per year during this time (IATA, 2011). The Jetlink airline's inadequate financial resources led to operational difficulties, resulting in over 350 employees being forced to take leave. Additionally, the airline failed to pay Ksh 14 Million to Fine Jet airline and Ksh 703 Million to Equity bank, ultimately leading to its closure (Krishna Yadav, 2024). The airline Fly540 has been experiencing financial losses, resulting in negative profit margins above 20%. In the year 2009, the margin climbed to 35%, but then decreased to 31% in 2011. Lonrho Aviation (Fly540) recorded losses after tax of 7.5, 13.1, and 19.0 from 2009-2011, according to their financial statement (CAPA, 2012). Additionally, Kenya Airways saw a decrease in profits per share from KShs 7.65 to KShs 3.58 compared to the previous year (Kenya Airways, 2012). KQ had a deficit of KShs. 6.5 billion for the period concluding on September 30, 2012, and is now undergoing reorganization to prevent insolvency (ROK, 2012).

Modern leaders, particularly those in the aviation industry, need to have a comprehensive understanding of the intricate nature of several factors that impact both the functioning of their organisation and their own leadership capabilities (Googins, Mirvis, & Rochlin, 2009; Wallace & Trinko, 2009). Having such an understanding is crucial for optimizing leadership effectiveness and, thus, enhancing organizational success. The aviation business, while relatively new with less than a century of growth, needs strong leadership to optimize the performance of each airline, primarily because of the distinctive operating conditions in the aviation sector. The airlines operate within a distinctive business environment that encompasses the typical business concerns found in all industries. However, they also face the unique challenge of being highly attentive to matters related to aircraft safety, including terrorism and accidents.

Additionally, airlines must comply with a multitude of intricate federal and international regulations, often surpassing the minimum requirements (IATA, 2018). The sector is now confronted with significant challenges, including a subpar track record in terms of safety and security, insufficient allocation of resources and infrastructure, geographical remoteness, and limited connection, as well as a dearth of regulatory oversight and government interventions. The aforementioned limits contribute to increased competitiveness and elevated operational

expenses due to the escalation of oil prices (Isuru & Sithijani, 2022). The airline industry, as a whole, has lacked emphasis on creative thinking or innovative leadership. The major and long-standing airlines have mostly competed with one another using conventional business models that have stayed untouched since the sector's inception.

1.1.1 Innovative Leadership Practices

It is becoming clear that the aviation industry, while unique in many aspects, shares with other industries the challenges of effective leadership: labor relationships and retention, communication and perception of the company by its customers, and lastly, the impact that innovation can have on the industry as a whole (Papazafiroopoulos, 2013). According to Peter Drucker (Hesselbein, 2010), leadership is considered a capacity to persuade others to search for portrayed goals enthusiastically. The human factor integrates a social event and rouses it towards goals." Weihrich and Koontz show that "leadership is the craftsmanship or method of influencing people with the purpose of attempting to achieve social event objectives quickly and energetically." Leadership includes the utilization of relational aptitudes to impact others to achieve a particular objective." Leadership plays a crucial role in organizational performance, and leaders bear significant responsibility for the survival and growth of an organization in the face of external challenges. Failure to adapt to the environment and change could lead to the closure of an organization. Therefore, leaders must be able to respond quickly to these challenges (Karamat, 2013; Hurduzeu, 2015).

According to Probst & Raisch's research article (Probst & Raisch, 2005), organizational burnout is a significant threat to the complex context of the new era unless leadership gets formulated in a design that permits the system to self-develop and continually regenerates within hyper-complexity and hyper-uncertainty contexts (Probst & Raisch, 2005). Innovative leadership refers to introducing a brand-new method, product, service, technique, or idea to satisfy individuals' needs and find solutions to current and future problems (Şen & Eren, 2012). Innovation leadership thus refers to a technique and philosophy that combine various leadership styles to influence and motivate employees to generate products, services, and creative ideas (Horth & Buchner, 2014).

Innovative leaders possess various qualities: they have leadership skills, talents, values, and knowledge to identify any current dangers and foresee future negative impacts (Şen & Eren, 2012). Innovative leaders are also committed and visionary to promoting people's social,

political, and economic well-being (Anand & Saraswati, 2014). With new processes and technologies, it is vital for the organization to think innovatively to ensure it stays competitive and succeeds (Horth & Buchner, 2014). Seminal research is most often executed for previously untested, exciting, and new paradigms of knowledge. The airline industry, while young, is not presenting new paradigms of knowledge, but it does present new and exciting paradigms when it comes to operational practices, and the possible relationship between leadership style(s) and overall performance (Papazafiropoulos, 2013) in the airline industry is indeed seminal. This concept of innovative leadership goes hand in hand with the behavioral, situational, and contingency theories of leadership, which suggest that leaders must judge the situation and apply the appropriate leadership style to achieve the desired outcome.

1.1.2 Digital Transformation

The concept of digital transformation is linked to how organizations use the power and potential of technology such as cloud computing and intelligence, artificial learning, and IoT techniques to enhance business processes and customer experience or create lines and methods (Zaki, 2019). Digital transformation is also defined as the process of a company's transition to a business model based on digital technologies in innovative Products and services, providing new channels of revenue and opportunities that increase the value of its product (Minh, et al., 2021). Digital transformation is the use of new digital technologies, social media, mobile phones, or compact hardware to enable key business improvements such as improving customer experience (Schneider & Kokshagina, 2021) and streamlining processes or creating new business models (Schneider, & Kokshagina, 2021). Digital transformation is intended to pursue organizations' strategy and develop innovative and flexible business and operating models by investing in technologies, talent development, process reorganization, and change management to create new value and expertise (Bresciani, et al., 2021).

Digital transformation refers to the integration of digital technology into all areas of a business, fundamentally changing how organizations operate and deliver value to their customers (Westerman, Bonnet, & McAfee, 2014). This process not only involves adopting new technologies but also requires a cultural shift within the organization, encouraging continuous experimentation and challenging the status quo to enhance efficiency and responsiveness to market demands (Kane, et al., 2015). At its core, digital transformation is about rewiring an organization to create value through the continuous deployment of technology at scale. This

involves reassessing and often reinventing business processes, products, and services to leverage digital capabilities effectively (Fitzgerald, Kruschwitz, Bonnet, & Welch, 2013). Companies may transform legacy systems and processes into more agile, cloud-based solutions, enabling them to respond more swiftly to customer needs and market changes (Bharadwaj, El Sawy, Pavlou, & Venkatraman, 2013).

Digital transformation provides a wide range of benefits for organizations as well as their clients, making it an essential strategy in today's competitive and rapidly evolving digital landscape (Soto et al., 2023). By integrating advanced technologies into business processes, organizations can significantly improve their operational efficiency through the reduction of costs and effort, while simultaneously streamlining workflows for enhanced productivity (Gökalp & Martinez, 2021). This transformation also facilitates the development and delivery of premium services that are enriched with innovative features, helping businesses meet and exceed client expectations. Furthermore, it plays a key role in enhancing customer experiences by optimizing processes to provide faster, more personalized, and higher-quality services (Aldoseri et al., 2023). Another critical advantage is its ability to expand an organization's reach to a broader audience, enabling businesses to tap into new markets and support sustainable growth (Nadkarni & Prügl, 2021). By fostering innovation, improving efficiency, and creating opportunities for expansion, digital transformation serves as a powerful catalyst for long-term success and competitiveness in a digitally-driven world (Perkin & Abraham, 2021).

Digital transformation incorporates a variety of advanced technological tools that are pivotal in revolutionizing business processes, improving efficiency, and fostering innovation. Among these tools is Big Data Analytics, which addresses the challenge of processing large and complex datasets that exceed the capabilities of traditional database systems. By organizing massive amounts of unstructured data into a valuable knowledge base, organizations can derive insights that support data-driven decision-making and enhance operational strategies (Duan & Da Xu, 2021). Another key technology is Artificial Intelligence (AI), an innovation that enables computers to simulate human intelligence. AI systems are designed to perform tasks that require cognitive abilities such as problem-solving, decision-making, and learning, making it a transformative force in automating processes and augmenting human capabilities (Maliha et al., 2021). Cloud Computing is another integral component of digital transformation, providing

users with the ability to store and access data and applications over the internet. This technology ensures secure data storage by creating automatic backups to prevent data loss, while its scalability and efficiency have made it increasingly popular for both businesses and individuals (Akhtar et al., 2021).

Mobile technologies play a pivotal role in driving digital transformation by enabling organizations to adapt to the demands of a fast-paced, interconnected world (Raja & Muthuswamy, 2022). These technologies encompass a wide range of devices, software, and communication tools, including smartphones, tablets, wearable devices, and mobile applications, all designed to facilitate seamless connectivity and functionality while on the move (Raja & Muthuswamy, 2022). Their integration into business processes has revolutionized how organizations operate, communicate, and deliver value to customers (Brown et al., 2019). One of the key contributions of mobile technologies to digital transformation is their ability to enhance workforce mobility and productivity. By equipping employees with mobile devices and applications, organizations empower their teams to work from virtually anywhere, ensuring continuous access to critical information and systems (Mishra & Tyagi, 2022). This flexibility not only improves operational efficiency but also fosters collaboration among teams, regardless of their physical location. For instance, mobile-connected worker solutions are particularly effective because they leverage familiar technologies, reducing friction in the adoption of new processes and tools (Mishra & Tyagi, 2022). Together, these technologies form the backbone of digital transformation, enabling organizations to adapt to the demands of a rapidly changing digital landscape, optimize their operations, and create innovative solutions that drive success and competitiveness.

1.1.3 Regulatory Framework

The legal and regulatory framework encompasses a comprehensive collection of legal instruments, including laws, acts, decrees, circulars, and regulations (Ngoepe & Saurombe, 2016). The airline business has been subjected to several laws and regulations. Wensveen (2007) highlights the formation of IATA in 1965 and the subsequent deregulation that occurred during this period. The introduction of deregulation aimed to establish a global market for airlines, promote global development, and offer customers a wider selection of options. Additionally, deregulation increased efficiency by ensuring that only the most successful airlines could survive on a global scale (Dunn, 2009; Iatrou & Oretti, 2007). The United States

of America was the pioneer in deregulating its airline sector with the enactment of the 'Airline Deregulation Act' in 1978. The European Union followed suit, although gradually, starting in 1987 (Doganis, 2005; Williams, 2002). Currently, several nations are still in the process of deregulating their airline markets, whereas the United States and the European Union countries, which have previously deregulated their airline industries, have achieved more advanced stages of deregulation. The EU, although composed of many sovereign nations, has now become a unified domestic aviation market that is free from regulations.

Research undertaken in deregulated airline markets indicates that the primary result of deregulation is a rise in competitiveness, prompting airline businesses to strategically adapt to this shift (Brueckner & Pels, 2007; Doganis, 2005). An important consequence of deregulation in this context is the observable implementation of the cost leadership strategy from Porter's competitive strategies in air transportation. Deregulation has eliminated all limitations on market entry and exit, pricing, capacity offerings, and mergers and acquisitions, allowing airline companies to have the freedom to make decisions regarding these matters that will affect their production output. Consequently, this ensures the implementation of competitive strategies (Orhan & Gereide, 2013).

In Severin's (2011) preliminary exploration, it was noted that U.S. airlines had incurred significant financial losses of around \$60 billion in domestic markets since deregulation. During the years 2008 and 2009, passenger airlines in the United States together had a total net loss of \$14 billion, excluding any exceptional income or expenses, on a revenue of \$270 billion. Domestic U.S. businesses, which have been subject to deregulation since the autumn of 1978, accounted for approximately 76% of the losses. International routes are subject to stricter regulations and tend to be more profitable for authorized airlines. The abysmal financial performance in 2008–2009 once again ignited debates on the reasons for the airline industry's persistent struggles after deregulation. Between 1979 and 2009, domestic operations of U.S. airlines resulted in a loss of \$59 billion, adjusted for inflation to 2009 dollars (Severin, 2011).

The Kenyan government has granted permission, and continues to do so, for foreign airlines to land at multiple airports in Kenya. Kenya's aviation business pays a higher amount of taxes, both in terms of numerical value and proportion, compared to the betting and alcohol industries. The individuals who enforce these taxes overlook the significant detrimental impact that these

levies have on the nation's economy. Kenyan customers mostly choose international flights due to their lower tax rates compared to domestic carriers, making them more cost-effective. The excessive number of taxes imposed on airlines and their customers is excessive.

As shown, these tariffs impede economic development and employment by diminishing air connectivity, which restricts company prospects and the sector's contribution to GDP. In essence, while it is not feasible for airlines to be completely immune from taxes, the government should refrain from imposing aviation taxes only for the goal of generating money unrelated to aviation (Kimani, 2020). Okwach (2014) states that the Government of Kenya implemented liberalization in the air transport business by revising the Civil Aviation Act and establishing the Civil Aviation Authority (CAA) to oversee the issuance of air service licenses. The liberalization has granted the Kenya Airports Authority, which oversees the use of air transport infrastructure, the ability to let commercial airlines access the same infrastructure utilized by the primary carriers. This has heightened competitiveness in the air transport industry. Air transport providers are compelled to strategically place their operations in order to sustain their competitiveness.

1.1.4 Organizational Performance

Organizational performance refers to the documented outcomes attained from a certain activity within a specified time frame (Wang et al., 2011). Organizational performance is assessed based on several factors, like production, efficient internal processes, profitability, worker attitudes, and customer happiness (William, 2002). According to Chen (2002), a firm's performance may be defined as the process of converting inputs into outputs in order to achieve certain results. In terms of its substance, performance indicates the correlation between the lowest possible cost and the optimal cost (economy), between optimal cost and actual output (efficiency), and between output and attained results (effectiveness). The data unequivocally substantiates the idea that robust and outcome-driven leadership has significance in some sectors (Dulles, 1936), therefore making a compelling case for its heightened importance in the aviation industry (Chen & Meindl, 1991). The aviation business, while relatively new with less than a century of growth, needs efficient leadership to optimize the performance of each airline, primarily because of the distinctive operating conditions in the aviation sector. The airlines operate within a distinctive business environment that encompasses the usual business considerations found in all industries. However, airlines face the added challenge of being

highly attentive to matters concerning aircraft safety, including terrorism and accidents. Additionally, they must comply with a multitude of intricate federal and international regulations, striving to surpass them whenever possible.

According to Wanjiku (2009), performance may be understood from four perspectives: financial, customer, internal processes, and innovativeness. The financial viewpoint focuses on the main factors that contribute to improving performance, including profit margin, asset turnover, leverage, cash flow, and working capital (Odhuon, Kambona, Odhuno, & Wadongo, 2010). The concept of customer focus encompasses several aspects of performance, including brand image, customer happiness, customer retention, and customer profitability (Lo & Lee, 2010). Utilizing performance information in daily decision-making is crucial for implementing performance-oriented changes aimed at improving performance (Taylor, 2011). Mukulu, Nteete, and Namusonge (2012) emphasize that performance assessment is crucial for companies as it enables ongoing improvement and helps determine whether an organization is successfully meeting its goals. The Kenya Institute of Management (KIM) has created a model known as the Organizational Performance Index (OPI). This model serves as a tool to enhance the performance and competitiveness of organizations in Africa (Ongore & Kobonyo, 2011).

1.1.5 The aviation sector in Kenya

The airline sector in Kenya has a long history dating back to 1929, when foreign airlines first introduced commercial aviation services, followed by the establishment of East African Airways in 1946. After the dissolution of the East African Community in 1977, Kenya Airways was created as the national carrier, and it has since grown into the dominant player in the market. The Kenya Civil Aviation Authority (KCAA) was established through the Civil Aviation (Amendment) Act (Cap 394) of 2002 to oversee the sector, replacing the Directorate of Civil Aviation. As the statutory regulator, KCAA manages licensing, safety oversight, and air navigation services, while also offering capacity-building through the East African School of Aviation (Government of Kenya, 2002; KCAA, 2022). Today, Kenya's domestic airline industry is composed of 17 licensed carriers, including Kenya Airways Plc, Jambojet, ALS Ltd, AirKenya Express, Fly540, East African Safari Air, Safarilink Aviation, 748 Air Services, Skyward Express, and others, each serving diverse passenger and cargo needs (Sterling Investment Bank, 2019). Low-cost carriers such as Jambojet have democratized air travel by providing affordable connectivity between Nairobi and regional destinations, while private

operators like Safarilink and AirKenya play a vital role in linking tourist circuits with the capital.

The domestic aviation market has expanded steadily, with departure seat capacity rising from 1.95 million in 2010 to more than 5.18 million in 2023 (Official Airline Guide, 2023). Kenya Airways remains the largest operator with an 18.8 percent market share, while Jambojet holds a significant 16.5 percent share, reflecting the strength of the hub-and-spoke operational model based in Nairobi. The sector contributes about 1.1 percent to Kenya's GDP, equivalent to Ksh 24.8 billion, with airline services accounting for more than half of this value (Oxford Economics, 2011). The industry's growth has nonetheless been uneven, with annual performance fluctuating due to volatile fuel prices, currency depreciation, and shifts in tourism and trade demand (ROK, 2014). Infrastructure investment, such as the modernization of Jomo Kenyatta International Airport and expansion of regional airports, has supported growth, but challenges persist in regulatory rigidity, high operational costs, and slow digital adoption. Emerging domestic carriers such as Skyward Express have capitalized on the rise of a growing middle class and domestic tourism demand, reporting surges in passenger numbers as Kenyans increasingly opt for air travel over road transport due to efficiency and comfort (World Bank, 2020; Skyward Express, 2023).

Overall, the domestic airline sector in Kenya sits at the intersection of opportunity and constraint. On the one hand, it benefits from rising passenger demand, strategic location, and government commitment to improving aviation infrastructure. On the other hand, it faces structural barriers including limited financial capacity, intense competition, and evolving regulatory requirements that often lag behind technological innovation. For sustainable growth, the sector must leverage innovative leadership, embrace digital transformation, and work within adaptive regulatory frameworks that balance safety with innovation. The dynamics of this industry underscore its importance not only as a contributor to GDP but also as a driver of regional connectivity, tourism, and national integration.

1.2 Statement of the Problem

The aviation industry plays a pivotal role in connecting regions and driving economic and social progress globally (World Bank, 2019). In Kenya, the sector is central to achieving the aspirations of Vision 2030, which emphasizes international competitiveness, prosperity, and integration through enhanced connectivity (Kenya Vision 2030). Aviation directly facilitates

trade, tourism, and investment, while indirectly supporting regional integration and national development. In 2023, the sector contributed approximately KSh 425 billion, representing 3.1% of GDP, and supported more than 460,000 jobs both directly and indirectly (IATA, 2023). Despite this importance, the domestic airline segment continues to experience persistent challenges that hinder the achievement of key performance goals such as profitability, customer satisfaction, and operational efficiency.

Financial performance trends underscore the vulnerability of Kenyan carriers. Kenya Airways, for instance, posted a net profit of KSh 5.4 billion in 2024—its first profit in over a decade—yet by mid-2025, the airline had relapsed into a KSh 12.15 billion loss, with revenues declining by 19% and operating losses widening to KSh 6.23 billion (Kenyan Wall Street, 2025). Smaller carriers such as Fly540, Skyward Express, and Safarilink face thin margins, volatile passenger demand, and high operating costs, leaving them highly susceptible to shocks (World Bank, 2020; IATA, 2023). Additional sector-wide constraints such as fuel price volatility, inadequate infrastructure, inconsistent government policies, and burdensome regulatory requirements exacerbate these challenges. These persistent barriers threaten not only the competitiveness of domestic airlines but also Kenya's broader economic development agenda under Vision 2030.

Addressing these difficulties requires more than operational cost-cutting. It necessitates leadership that is innovative, adaptive, and capable of leveraging technology and navigating regulatory environments. This context underscores the need to examine the combined effect of innovative leadership practices, digital transformation, and regulatory frameworks in enhancing organisational performance within Kenya's domestic commercial airlines. Leadership practices that emphasize strategic vision, employee empowerment, and adaptability are increasingly recognized as vital enablers of competitiveness in dynamic sectors such as aviation (Afande, 2020). Yet, there remains limited empirical evidence on how these practices interact with technological and regulatory factors to influence performance in the Kenyan context.

A review of existing literature reveals three distinct gaps. Conceptually, earlier studies have often focused narrowly on leadership traits (Papazafiroopoulos, 2013) or on commitment as the sole measure of performance (Papasava & Njeru, 2022). The present study advances beyond these narrow perspectives by adopting a multidimensional conceptualization of organisational performance that includes profitability, customer satisfaction, safety, and operational

efficiency. Contextually, prior Kenyan research has either concentrated on the Kenya Airports Authority (Abwao & Kimencu, 2023) or relied on single-case studies such as Kenya Airways (Chepkemboi & Paul, 2019). This narrow scope limits generalisability across the broader domestic airline sector. By including all 17 licensed domestic commercial airlines, the current study broadens the context and enables comparative analysis across the entire industry. Methodologically, earlier works relied primarily on descriptive or case-based approaches, which constrained the ability to test mediation and moderation effects rigorously. The current study addresses this gap by applying advanced statistical techniques—specifically mediation and moderation models—to capture the interrelationships among leadership, digital transformation, and regulatory frameworks.

By explicitly addressing these conceptual, contextual, and methodological gaps, the present study provides a holistic examination of the determinants of organizational performance in Kenya's domestic aviation sector. The findings are expected to not only extend theoretical understanding of how innovative leadership practices interact with technology and regulation but also provide practical insights for policymakers and airline executives tasked with revitalizing the sector to meet national development goal.

1.3 General Objective of the study

The research aim of the study was to examine the effect of innovative leadership practices, digital transformation, regulatory framework and organizational performance of domestic commercial airlines in Kenya.

1.3.1 Specific Objectives of the study

The study was guided by the following specific objectives:

- i. To determine the effect of innovative leadership practices on organizational performance of domestic commercial airlines in Kenya.
- ii. To examine the mediating effect of digital transformation on the relationship between innovative leadership practices and organizational performance of domestic commercial airlines in Kenya.
- iii. To assess the moderating effect of regulatory framework on the relationship between innovative leadership practices and organizational performance of domestic commercial airlines in Kenya.

- iv. To establish the moderated mediation effect of regulatory framework and digital transformation on the relationship between innovative leadership practices and organizational performance of domestic commercial airlines in Kenya.

1.4 Justification of the study

The research aimed to provide airline practitioners with insights into how innovative leadership contributes to success by enabling airlines to develop leaders that actively embrace emerging technology, explore novel business models, and successfully handle challenges. The research sought to offer valuable insights on how leaders may establish an atmosphere conducive to employee empowerment by fostering idea sharing, experimentation, and active participation in ongoing enhancements. The study also offered insights into optimizing operations and boosting customer experience. It demonstrated how digital transformation may effectively simplify operations, save expenses, and enhance passenger satisfaction.

The research was crucial for Kenyan aviation policymakers. The study provided policymakers with concrete data and evidence to inform their decisions regarding the aviation sector. This data helped them understand how specific leadership practices, digital initiatives, and regulatory frameworks impact airline performance, leading to more effective policy interventions. Through insights into successful innovation and digital transformation strategies, policymakers were able to design policies that encourage and incentivize airlines to adopt these practices. This enhanced the overall competitiveness of the Kenyan aviation industry, both domestically and internationally. Insights into the impact of digital transformation on operational efficiency and customer experience guided policymakers in making strategic investments in aviation infrastructure and technology. This improved the attractiveness of both domestic and international airlines, stimulating further investment and growth. A healthy and vibrant domestic aviation sector plays a crucial role in facilitating regional integration and economic growth. The study informed policies that support the development of a robust domestic air network, connecting various regions within Kenya and promoting economic activity.

The study was valuable for theory and academicians in that it provided empirical evidence to support or challenge existing theories on leadership, innovation, and regulation in the context of the aviation industry. It explored how these concepts interact and contribute to organizational performance in a specific emerging market like Kenya. The study led to the

development of new frameworks and models for understanding how innovative leadership practices, digital transformation, and regulatory frameworks interact and influence the performance of domestic airlines. This contributed to a more detailed understanding of organizational success in the specific context of Kenya's domestic aviation sector. It enriched existing knowledge, inspired new research directions, and provided valuable case studies for teaching and learning. By focusing on a specific and understudied context, this research enhanced understanding of organizational performance in the aviation industry and beyond.

1.5 Scope of the Study

The main objective of the current study was to examine the effects of innovative leadership practices, digital transformation, the regulatory framework, and the performance of domestic commercial airlines in Kenya. The study focused on all 17 registered domestic commercial airlines that formed the target population. These included Kenya Airways Plc, Jambojet Ltd, ALS Ltd, Airkenya Express, Fly540, East African Safari Air, Mombasa Air Safaris Ltd, Safarilink Aviation, 748 Air Services, SafeAir, Yellow Wings, Astral Aviation Ltd, African Express Airways, Freedom Airlines Express Ltd, Skyward Express Ltd, Jetways Airlines, and Renegade Air. The scope excluded airlines that offered only chartered flight services since the focus of the study was on commercial passenger airlines.

In terms of time scope, the study was conducted between December 2024 and May 2025, a period during which data was collected and analysed to capture the prevailing state of innovative leadership practices, digital transformation initiatives, and regulatory influences on airline performance. This time frame was sufficient to provide reliable and representative data, while aligning with the research design and logistical feasibility of engaging all the selected airlines.

1.6 Limitations of the Study

During the data collection process, a few challenges were encountered, although they were effectively managed to ensure the credibility of the findings. First, some questionnaires were not returned by the respondents within the expected timelines. To overcome this, the researcher made follow-up phone calls and in-person visits to workplaces, while research assistants also sent reminders. These efforts ensured that the response rate remained high and sufficient for meaningful analysis.

Second, a small number of respondents initially expressed reluctance to participate in the study due to concerns about confidentiality and fear of possible victimization. This was addressed by presenting the official research authorization letter together with the NACOSTI permit, which assured respondents that the exercise was solely for academic purposes. This reassurance helped to build trust and encouraged honest participation.

Through these measures, the potential limitations that could have affected response rates and data reliability were minimized, and the final dataset was robust enough to support valid conclusions.

1.7 Delimitations of the Study

The study was conceptualized around examining the effect of innovative leadership practices on the performance of domestic commercial airlines in Kenya, while also assessing the mediating role of digital transformation and the moderating effect of the regulatory framework. Other determinants of airline performance, such as market competition, global fuel price shocks, or macroeconomic conditions, were not part of the analysis. The study was delimited to the 17 registered domestic commercial airlines in Kenya, which were explicitly listed, and excluded other operators such as those offering chartered flights in order to maintain focus on commercial air passenger services. Geographically, the research was confined to Kenya and did not extend to international carriers or airlines operating outside Kenyan borders. Methodologically, the use of a cross-sectional survey design meant that data were collected and analyzed at a single point in time, rather than over an extended longitudinal horizon.

1.8 Chapter Summary

This chapter presented the background of the study discusses the basic concepts of the study variables, that is the innovative leadership practices, digital transformation, regulatory framework and performance of domestic commercial airlines in Kenya. This has been done from a global to local perspective. The statement of the problem goes ahead to stipulate the problems of performance of domestic commercial airlines in Kenya and give the research gaps that warrant the study. The justification of the study highlighted the importance of the study to theory, practice and to policy. Finally, the chapter presents the scope, the limitation and delimitations of the study which give the limits and the boundary covered by the study.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter captures theoretical and empirical literature review, knowledge gaps, and conceptual framework on innovative leadership practices, digital transformation, regulatory framework and organizational performance of domestic commercial airlines in Kenya.

2.1 Theoretical Literature Review

The theoretical review of this study integrates key theories that underpin its variables, with the Resource-Based View (RBV) serving as the primary framework. RBV posits that a firm's competitive advantage arises from its unique and valuable resources, such as innovative leadership practices, which can drive digital transformation and enhance organizational performance. Complementing this, Open Systems Theory emphasizes the interaction between organizations and their external environment, highlighting the role of innovative leaders in fostering collaboration and adopting external ideas to stimulate innovation. Technological Determinism Theory (TDT) underscores the transformative impact of technological advancements, focusing on the integration of digital technologies like artificial intelligence and big data analytics into organizational operations. Lastly, Institutional Theory examines how organizations are shaped by institutional environments, including social norms and regulations, with Kenyan aviation regulations forming a critical institutional factor in this context. Together, these theories provide a comprehensive framework for understanding the interplay between leadership, digital transformation, regulatory frameworks, and organizational performance in the Kenyan aviation sector.

2.1.1 Resource-Based View (RBV)

The Resource-Based Theory (RBT), also referred to as the Resource-Based View (RBV), was first introduced by Penrose (1959) in *The Theory of the Growth of the Firm*, which conceptualized the firm as a bundle of productive resources. This foundational work was later expanded by Wernerfelt (1984), who emphasized the strategic role of firm resources, and Barney (1991), who formalized the framework by identifying the conditions under which resources lead to sustainable competitive advantage. RBT argues that organizational success is primarily determined by the internal resources and capabilities a firm controls rather than solely

by external industry conditions (Kozlenkova, Samaha, & Palmatier, 2014). Resources include tangible assets (e.g., infrastructure, technology), intangible assets (e.g., brand reputation, knowledge), and human capital (e.g., leadership skills, innovation capabilities) (Hooley, Broderick, & Moller, 1998). The central tenet is that firms achieve superior performance when they leverage resources that are valuable, rare, inimitable, and non-substitutable (VRIN) (Barney, 1991).

RBT is built on two core assumptions. First, resources across firms are heterogeneous, meaning that organizations possess distinct bundles of tangible and intangible assets that drive differential performance (Helfat & Peteraf, 2003). This assumption explains why some firms outperform others even when facing similar market conditions. Second, resources are imperfectly mobile, implying that unique capabilities are not easily transferred or replicated by competitors, thus allowing firms to sustain competitive advantage over time (Crook et al., 2008). These assumptions emphasize the strategic importance of developing firm-specific assets such as leadership capacity, organizational culture, and knowledge systems, which cannot be easily copied. In dynamic industries such as aviation, resource heterogeneity and immobility are particularly relevant because airlines compete not only on cost and scale but also on how effectively they utilize unique capabilities such as innovative leadership and digital readiness (Barney, 1991; Helfat & Peteraf, 2003).

One of the major strengths of RBT is its ability to explain sustained competitive advantage by shifting focus from external industry structures, as emphasized in Porter's (1980) Five Forces model, to internal organizational resources (Kozlenkova et al., 2014). It provides managers with a diagnostic framework for identifying which resources are strategically significant and which capabilities must be developed to outperform competitors (Newbert, 2007). Additionally, RBT has strong explanatory power across diverse industries, including aviation, where intangible assets like leadership vision and technological capabilities are as critical as tangible infrastructure. It also integrates well with dynamic capabilities theory, which extends RBT by emphasizing how firms renew and reconfigure resources in rapidly changing environments (Teece, Pisano, & Shuen, 1997).

Despite its strengths, RBT has attracted several criticisms. One major weakness is its tautological nature, where valuable resources are often identified retrospectively based on performance outcomes, making it difficult to predict advantage ex-ante (Priem & Butler, 2001).

Critics also argue that RBT underplays the role of external forces, such as regulation and industry dynamics, by overemphasizing internal resources (Foss & Knudsen, 2003). Furthermore, the VRIN criteria have been criticized as too rigid, since in practice many resources do not perfectly meet all four conditions yet still contribute to performance (Kraaijenbrink, Spender, & Groen, 2010). In the context of aviation, reliance solely on internal resources may overlook critical external enablers such as regulatory approval, infrastructure investments, or partnerships.

RBT is directly relevant to this study as it informs the independent variable, innovative leadership practices. In the domestic airline sector of Kenya, leadership is conceptualized as a strategic and intangible resource that can drive performance outcomes when leveraged effectively. Leadership capabilities such as strategic vision, employee empowerment, adaptability, and effective communication constitute valuable, rare, and inimitable resources that can enable airlines to achieve competitive advantage in a highly regulated and volatile industry. These leadership resources also act as enablers for digital transformation initiatives, ensuring that technological investments are aligned with organizational strategy. By applying RBT, this study positions innovative leadership as a critical internal resource that underpins the performance of domestic commercial airlines in Kenya, particularly in navigating digital transformation and responding to regulatory challenges.

2.1.2 Open systems theory

Open Systems Theory (OST) was initially developed by biologist Ludwig von Bertalanffy (1956) and later adapted into organizational studies to describe how firms interact dynamically with their environments. Unlike closed-system perspectives, which treated organizations as insulated entities, OST views organizations as assemblies of interdependent parts that continuously exchange resources, information, and feedback with external environments (Scott, 1991). This theoretical lens emphasizes that survival and performance are contingent on how effectively organizations align internal processes with external environmental demands (Bastedo, 2004). Contemporary organizational theories such as contingency theory, institutional theory, and resource dependence theory are grounded in OST, sharing the principle that organizations must adapt to environmental complexity in order to thrive (Miller, 2008).

The central assumption of OST is that organizations cannot exist in isolation, but depend on external systems for resources, legitimacy, and adaptation (Scott, 2003). First, the environment

is uncertain and constantly changing, requiring organizations to scan and adapt strategies continuously (Katz & Kahn, 1978). Second, survival depends on the ability to manage interdependence with customers, regulators, competitors, and resource providers (Pfeffer & Salancik, 2003). Third, open systems rely on feedback loops, meaning that performance outcomes influence subsequent organizational adjustments (David, 2008). In dynamic industries such as aviation, this implies that airlines must respond to regulatory requirements, customer expectations, and technological disruptions simultaneously to sustain competitive advantage.

OST's strength lies in its holistic perspective of organizations as embedded in broader ecosystems rather than self-contained entities. It provides a flexible framework for understanding adaptation and change in turbulent environments (Morgan, 2007). In aviation, it explains why airlines that respond proactively to regulatory demands, digital innovations, and customer preferences maintain better performance (Bowen, 2017). The theory also integrates leadership, technology, and regulation into a unified explanatory framework, offering scholars and practitioners a systems-level understanding of performance. Furthermore, its emphasis on feedback and adaptation is especially relevant in industries characterized by rapid technological and policy shifts (Byrd & Greer, 2018).

Despite its broad applicability, OST has been criticized for being overly abstract and lacking precise predictive power (Scott & Davis, 2007). Because it emphasizes interdependence and adaptation, the theory sometimes fails to specify which environmental factors are most critical for performance (Kast & Rosenzweig, 1972). Critics argue that the theory risks becoming a “catch-all” framework, explaining organizational behavior post hoc without offering rigorous predictive models (Strigin, 2018). Additionally, its reliance on environmental determinism can underplay the role of internal strategic choices, making it difficult to isolate leadership's independent effect on outcomes (Ibrahim & Gunawan, 2019).

OST directly informs the moderating variable, regulatory framework, in this study. The theory emphasizes that airlines exist in an open environment where their performance is influenced by interactions with external actors such as regulators, competitors, and customers. In Kenya's domestic airline sector, the Kenya Civil Aviation Authority (KCAA) shapes operational performance by enforcing compliance standards, while customer preferences for digital convenience drive innovation in service delivery. Thus, innovative leadership cannot be

analyzed in isolation—it must be understood within the broader open system that includes regulatory oversight and market demands. By applying OST, this study positions the regulatory framework as a key environmental factor that moderates the relationship between innovative leadership, digital transformation, and organizational performance

2.1.3 Technological Determinism Theory (TDT)

The roots of Technological Determinism Theory (TDT) are traced back to Thorstein Veblen in the early 20th century, particularly his 1915 work that linked technological innovation with social change (Smith, 2008). Veblen, an American economist and sociologist, argued that technology — “the machine” — would ultimately reshape social and economic structures by displacing traditional practices. Later, Karl Marx was also cited as an early influence, asserting that changes in the forces of production, especially technology, significantly transform human relations and societal structures (MacKenzie & Wajcman, 1999). Marshall McLuhan’s *Understanding Media* (1964) provided one of the most widely recognized articulations of technological determinism, popularizing the phrase “the medium is the message,” which emphasizes that the form of technology itself alters human perception and social interaction (Moodie, 2016). Clarence Ayres later advanced TDT as a framework that positions technology as the primary driver of cultural and institutional transformation (Bijker, Hughes, & Pinch, 2012). In essence, TDT posits that societal development follows a trajectory propelled by technological innovation, where technology acts as the independent force shaping human behavior, institutions, and economic systems (Hauer, 2011).

TDT rests on two principal assumptions. First, technological progress follows an autonomous trajectory that is not easily controlled by cultural, political, or social factors (Postman, 1985). Second, once introduced, technology exerts a powerful influence on society, shaping values, norms, and organizational structures in ways that enable further technological advancement (Hauer, 2011). In other words, technology is both a cause and a consequence of social transformation, producing a self-reinforcing cycle of change (Bijker et al., 2012). Within organizations, this implies that the adoption of technologies such as artificial intelligence, cloud computing, or mobile applications is not a matter of choice but a structural necessity to remain competitive in a technologically advancing environment.

The strength of TDT lies in its explanatory power in linking technological innovations to large-scale societal and organizational shifts. It provides a framework for understanding how

breakthroughs such as the internet, mobile devices, or data analytics fundamentally restructure industries (Postman, 1985). For sectors like aviation, the theory underscores why digital platforms, online booking systems, and data-driven decision-making have radically transformed airline operations, customer experience, and business models (Hauer, 2011). TDT also highlights the inevitability of digital transformation as a survival mechanism in highly competitive and globalized markets, where airlines must integrate digital tools not just for efficiency but also for strategic positioning.

Despite its influence, TDT has been criticized for technological determinism's inherent reductionism. Scholars argue that it overstates the autonomy of technology while neglecting the role of human agency, culture, and institutional context in shaping technological outcomes (MacKenzie & Wajcman, 1999). Critics such as Bijker et al. (2012) stress that technologies are socially constructed and their impacts depend on how societies choose to design, regulate, and apply them. Furthermore, by assuming that technology always drives progress, TDT risks overlooking negative consequences such as job displacement, privacy intrusions, or environmental harm (Postman, 1985). In organizational studies, TDT can be seen as deterministic because it discounts leadership, regulatory, and cultural factors that mediate how technology affects performance.

In this study, TDT informs the mediating variable, digital transformation. The theory supports the proposition that technological innovation — such as online booking platforms, mobile check-in applications, predictive data analytics, and cloud-based systems — fundamentally reshapes airline performance by altering operations, customer experience, and revenue models. For Kenyan domestic airlines, TDT explains why adopting digital tools is not optional but imperative for cost reduction, revenue diversification, and customer satisfaction. By applying TDT, this study conceptualizes digital transformation as the pathway through which innovative leadership practices translate into improved organizational performance, while also acknowledging that technology-driven change occurs within a broader socio-regulatory environment.

2.1.4 Institutional Theory

Institutional Theory was pioneered by Philip Selznick in the 1940s and 1950s, emphasizing how institutions shape organizational structures and behavior (Selznick, 1957). Later developments by Meyer and Rowan (1977) and DiMaggio and Powell (1983) advanced what

is now referred to as “new institutionalism,” which highlights how organizations adopt structures and practices to align with societal rules, norms, and expectations in order to gain legitimacy. Institutions consist of regulative, normative, and cognitive elements that govern organizational conduct (Scott, 1991). Organizations, therefore, are not simply rational economic actors but are embedded in institutional environments that compel conformity to widely accepted standards such as accounting practices, ISO certifications, corporate social responsibility, and safety regulations. In this sense, legitimacy, rather than efficiency alone, becomes a critical determinant of organizational survival (Suchman, 1995).

Institutional Theory assumes that organizational structures and practices are shaped more by institutional pressures than by technical efficiency (Meyer & Rowan, 1977). First, organizations seek legitimacy by adopting socially accepted norms, rules, and symbols even when these do not directly enhance efficiency. Second, institutional environments exert three forms of pressure: coercive (laws and regulations), mimetic (imitation under uncertainty), and normative (professional standards and shared values) (DiMaggio & Powell, 1983). Finally, organizations often decouple their formal structures from their core operations to reconcile institutional demands with efficiency imperatives. In regulated industries like aviation, these assumptions imply that airlines must conform to national and international regulatory frameworks, industry norms, and professional standards to maintain legitimacy and operational licenses, regardless of the direct efficiency implications.

Institutional Theory provides strong explanatory power for understanding why organizations in similar environments often exhibit structural isomorphism, or convergence in practices and policies (Zucker, 1987). It explains how external legitimacy is as crucial as internal efficiency in determining organizational success (Scott, 2008). For aviation, the theory highlights the importance of compliance with international safety standards, environmental regulations, and local civil aviation requirements as prerequisites for market access. The framework also captures the role of regulatory and normative institutions in promoting industry-wide accountability and trust, which is essential in high-risk sectors like airlines where safety and public confidence are paramount.

Despite its contributions, Institutional Theory has been critiqued for overemphasizing conformity and neglecting organizational agency. Critics argue that organizations are not passive recipients of institutional pressures but can actively shape, resist, or reinterpret them

(Oliver, 1991). Furthermore, the emphasis on legitimacy sometimes underplays the role of innovation and efficiency in driving performance (Friedland & Alford, 1991). Another limitation is that institutional isomorphism may stifle diversity and discourage firms from adopting more efficient or innovative practices, leading to institutional inertia (Greenwood et al., 2008). In the aviation sector, excessive regulatory conformity may impose bureaucratic costs, create delays, and constrain the adoption of disruptive innovations.

Institutional Theory directly informs the moderating variable, regulatory framework, in this study. The theory emphasizes that airlines must conform to coercive pressures (e.g., Kenya Civil Aviation Authority laws and International Civil Aviation Organization standards), normative expectations (e.g., professional pilot and crew practices), and mimetic influences (e.g., benchmarking against regional carriers) in order to secure legitimacy and survive. In the Kenyan domestic airline context, compliance with safety standards, licensing requirements, and environmental regulations shapes strategic decisions, operational efficiency, and cost structures. While regulations can increase compliance costs and slow operations, they also provide opportunities for differentiation, as airlines that exceed regulatory minimums may strengthen their reputation, attract customers, and gain competitive advantage. By applying Institutional Theory, this study frames the regulatory framework as an institutional force that moderates the effect of innovative leadership and digital transformation on the performance of domestic commercial airlines in Kenya.

2.2 Empirical literature review

The variables; Emotional Intelligence, Employee Motivation and Autocratic Leadership will be discussed in detail by linking them to turnover intentions. The subsections are derived from the research objectives of this study. The section concludes with the conceptual framework that has been derived from the hypotheses of the study, knowledge gaps and a table with the operationalization of research variables.

2.2.1 Innovative leadership practices and organizational performance

The research conducted by Lekan-Akomolafe, Alamba, and Enya (2021) examined the influence of innovative leadership on organizational efficiency, with a specific focus on Access Bank PLC in Umuahia. The study used survey research methodologies and obtained data from both primary and secondary sources. The research was conducted in Umuahia, the capital city

of Abia State, using Access Bank Nigeria Plc as the subject of investigation. The acquired data were analysed using descriptive statistics, regression analysis, and ANOVA. The research indicates that innovative leadership has a statistically significant positive impact on organizational effectiveness, with a significance level of 0.05. Based on the empirical findings of the research, the study suggests that leaders should consistently demonstrate creativity and innovation in performing their responsibilities, due to the impact of innovative leadership on organizational productivity. The research conducted by Lekan-Akomolafe et al. (2021) is restricted in its generalizability owing to its reliance on a single case study. Furthermore, the study lacks sufficient clarity about the methodology used to quantify innovative leadership. Explores the synergistic impact of forward-thinking leadership, digitalization efforts, regulatory guidelines, and operational performance on Kenyan domestic commercial airlines.

Echwa and Murigi (2019) discussed the effect of strategic leadership as measured by performance of domestic airline firms in Kenya. The study used survey research design that focused on 47 domestic airline companies. There were 141 participants in the top management units of airline companies who were targeted by the use of a semi structured self administered questionnaires. It used Customer retention, Sales volume, Network value, Market share and Employee productivity to measure the performance. Inferences and descriptive statistics were used to analyse the collected data. The results of the study depict that the correlation between strategic leadership and the performance of domestic airline firms in Kenya is strongly and statistically significant. The domestic airline companies are thus encouraged to ensure that they always hire best management teams who are equipped with strategic leadership profiles since it would have a beneficial impact on the organizations performance. The findings of this study provide vital information to policy formulators and fellow researchers on the notion of strategic leadership and management of airline companies. The paper of Echwa and Murigi Study Concentrates mainly on strategic leadership lacking into innovative leadership practice. This restricts the interpretation of the various ways and styles organizational leadership can affect performance, especially the innovative ones. This is to include innovative practices in leadership which might add a wider view on the role of leadership in the performance of organizations.

Farah, Munga, and Mbebe (2018) research investigated the impact of competitive strategies on the performance of Kenyan commercial airline focusing especially on this industry in Kenya.

The main objectives of the study were to find out how cost leadership strategy, product innovation strategy, market focus strategy, and product differentiation strategy can influence performance of commercial airlines in Kenya. The study grounded itself on the concepts of strategic balance, Porter generic model, contingency and the mathematical game theory. The research was descriptive. To avoid exhaustion, the sample population of 194 managers was already sampled based on calculating the population of 393 managers in the Airline Industry using the method described by Kothari (2004) to calculate the target population that was calculated as saying that: With 393 managers in total as the target population of managers in the Airline Industry, 15 percent will provide a sample population of 194 managers as the target sample size of managers in Airline Industry. It was calculated using 95 percent confidence level with error or margin of 0.05. The investigator adopted a semi structured questionnaire as the key tool of collecting the data. The emails had been deployed to the identified sample respondents and the drop off and pick up approach was adopted to retrieve the filled surveys. Various activities associated with data processing and analysis were data preparation, editing, coding, categorization, and data analysis. The correlation of the dependent variable and the independent variable was defined by the regression analysis that is a type of inferential statistics. Tables, charts and graphs were used in the presentation of the information. The study illustrates that cost leadership is a powerful concept that influences the performance of the Airline Industry in Kenya, and, so is the product innovation strategy. Also, performance in the Airline Industry is largely affected by market orientation and product differentiation. The researchers established that cost leadership approach positively influences the performance of Kenyan commercial airlines. Also, the research concluded that product innovation strategy also positively affects performance of the commercial airlines in Kenya. The study also further succeeded to establish that market focus strategy significantly affects performance of commercial airlines in Kenya. And finally, the paper revealed the phenomenon that the product differentiation strategy plays a crucial role in commercial airline performance in Kenya as well. The study suggests that managers should actively monitor any potential factors that may impact the business operations and respond accordingly. Additionally, the management of the company should possess the necessary knowledge, expertise, and skills before initiating an implementation programme. Farah et al. (2018): This study provides valuable insights into the role of competitive strategies in the Kenyan airline industry. However, it doesn't capture the

broader context of leadership, technology, and regulations that might also influence performance.

Miyumo and Donna (2022) conducted a study in which they evaluated how the differentiation tactics, market penetration tactics, and innovation tactics impact the success of domestic airline companies in Kenya. The contingency theory of balance scorecard model guided the review. The research ethic employed was positivist and quantitative research tools were used in resolving the research challenge. The study supplied 43 domestic airline companies in Kenya as the research population. In calculating the sample size, the study sampled three senior level workers in each organisation through census sampling. Sample size within the research was 129 personnel. This was done through the use of standardised questionnaires to collect numerical data on the research. Descriptive, factor, and inferential analyzing approaches were used to analyze the study data. The study results were expressed through graphical expression including charts, and tables. This study has been able to collect 112 responses by majority of them being women employed in the aviation industry. The results showed that most of the respondents were marketing managers whereas a few were managing directors. The correlation analysis revealed a clear and strong positive correlation between the innovation strategies and differentiation strategies and market penetration strategies and the success of the operations of the airlines. The regression tests evidenced the positive relationship between changes in the performance of the operations of the domestic carriers and strategic decisions. It was found that through regression, both innovation strategies, differentiation strategies and market penetration strategies coefficients proved to be statistically significant and positively influential to operational performance of domestic airlines. The government is recommended to design an assistance program as a reaction to the epidemic. This initiative ought to further motivate the businesses, adopt a realistic tax regime, and use simplified and reliable programs to aid the revival of airline firms on domestic level.

Moreover, pricing differentiation strategies in domestic routes away may be applied in order to satisfy a broader scope of client segments by the domestic airlines. Furthermore, relying on third parties, the domestic airlines might be successful at serving the leisure travellers, business consumers, and corporate organizations, therefore, increasing the reach of the companies in the market. Lastly, it is important that domestic airlines should focus resources in installing advanced information system that will be designed on specific plans to deliver state of the art

customer service, thereby achieving consumer engagement and enhancing the overall degree of service delivery by the companies. The proposed study will establish how innovative leadership practices can have an impact on organizational performance of domestic commercial airlines in Kenya.

2.2.2 Innovative leadership practices, digital transformation and organizational performance

The research conducted by Echwa, and Murigi, (2019) was implemented to analyze how effective strategic leadership affects the performance of the functioning domestic airline companies in Kenya. Its methodology rested on survey research and study was on the domestic airline companies that totalled 47. The sample of 141 interviewees, including self-administered, semi structured interview, was selected with the help of asking a group of senior management teams in the airline businesses. The analysis of the analysed data used descriptive statistics as well as inferential statistics. The research findings suggest quite a strong positive (statistically significant) correlation between strategic leadership and performance of Kenyan domestic airline companies. It is recommendable that the airline companies operating within the same country should employ management cadres who possess strategic leadership qualification at all times and this will have a positive impact on the organizational performance. The findings of the research present valuable facts to policy formulators and those scholars yet to come on the nature of strategic leadership concept and any other topic of handling businesses in the airline sector. It is absent in the Echwa & Murigi (2019) Study the investigation of specific leadership practice, digitalization, and regulations. The current study will consider the mediating effect of digital transformation on the correlation that exists between innovative leadership programs and the performance of the domestic commercial airlines in Kenya.

In their study, Mai, Nguyen, Tonne, and Ahmed (2024) recommended to do more study that reproduces the results and examines the differences in context across countries, since Vietnam's pandemic situation had both similarities and differences. The research illustrated the relationships between the government and companies via the implementation of favourable policies. The study examined the potential competitive advantages that small and medium-sized enterprises (SMEs) may achieve by adopting efficient knowledge management practices and improving their IT skills, with the aim of pursuing digital transformation and fostering innovation. The study conducted by Mai et al. (2024) examines the influence of government

policy on the innovation performance and digital transformation of Small and Medium Enterprises (SMEs) in Vietnam. The present research aims to investigate the interrelationships between creative leadership, digital transformation, regulatory environment, and performance in domestic commercial airlines in Kenya.

2.2.3 Innovative leadership practices, regulatory framework and organizational performance

A study by Riza, Nimran, Al Musadieq, and Utami (2020) evaluated the effects of innovative and creative leadership on organizational learning, adaptation, and adaptive performance. Organizational learning and organizational adaptability were seen as intermediate factors. Populations of this research were the employee of PT. Otsuka Indonesia. The research used proportionate stratified random sampling design. In order to accomplish the study objective, a model was constructed as specified and then examined using Structural Equation Modelling (SEM) using Smart-PLS. The findings indicate that creative leadership has a positive but statistically negligible impact on adaptive performance. This implies that greater innovative leadership is likely to enhance adaptive performance, albeit the enhancement is not statistically significant. However, rest factors have both a direct and substantial favourable influence, as well as an indirect effect. In particular, the impact of innovative leadership and creative leadership on adaptive performance is mediated by their influence on organizational learning. The relationship between organizational adaptation and these leadership styles is both positive and substantial. Overall, the study's results align with the main conclusions of earlier research and build upon and include previous models that have been explored.

Trieu, Nguyen, Tran, Vrontis, and Ahmed (2023) conducted a study related to examining the connection between organizational resilience, ambidexterity, and performance. It was these factors that they particularly studied how information technology competences, digital transformation strategies and paradoxical leadership affect them. In this study, the researcher aims to understand how organizational resilience works and what outcomes it generates, basing its perceptions on the resource-based view (RBV). In this research work, specific relationships between organizational resilience and internal capabilities have been identified in information technology (IT) applications, exploitation-exploration activities and organizational leadership. IT competency, organizational ambidexterity and paradoxical leadership are such connections others. The discussion of the influence of government digital transformation programs as an

ancillary effort has also been explored in the paper in reflection to the COVID-19 outbreak. This paper provides empirical evidence of dynamic relationships between Organizational resilience, ambidexterity, and performance within the conceptualisation of IT competencies, digital transformation policies, and paradoxical leadership. This study was conducted on the basis of 336 small- and medium-sized enterprises (SMEs) in Vietnam. Partial least squares-structural equation modelling method was used to carry out the analysis. IT skills and capacity to change face an increase of the capability of an organization to recover after a challenge, reduction of possibility that the organization could have missed out on opportunity and enhancing the capacity of the organization to act on changes in the market. The improvement of business performance of SMEs can be realised through the increment of the organizational ambidexterity and resilience. As opposed to paradoxical leadership, ambidexterity and resilience in organizational leadership does lead to positive outcomes. IT strength and durability of small and medium enterprise (SMEs) can be boosted through government digital transformation programmes.

In the Extant research by Benson Mbui and Joseph Francis (2021), the researchers sought to establish how change management affects the performance of Kenya airlines. The research involved a descriptive cross-sectional study in which 43 Kenyan airlines were used as the population. Stratified random sampling was utilized in the research with the help of semi-structured questionnaires to collect primary data. The researchers observed that there was a strong positive relationship between change management and organization success working in the aviation business within Kenya. Performance of Kenyan airlines greatly depended on safety management systems, leadership styles as well as organizational culture. Corporate culture and organization performance were found to correlate positively and to a great extent. The improvements with regard to safety management system or organizational culture positively affected the performance of organizations. When the regulatory framework was employed as a mediating factor between the safety management systems and the corporate culture, it positively affected the performance of the organizations. Nevertheless, the regulatory framework did not significantly moderate the relationship among leadership styles and success of the aviation industry in Kenya. In summary, the regulatory framework was a significant factor in the model as the moderating variable which implies that proper change management can improve the performance of Kenyan airlines to a great extent.

According to Muthoni, Cheluget, and Mwikya, (2023), the impact of the external environment on the relationship between transformational leadership and the performance of micro finance institutions in Kenya is studied. This paper was based on transformational theory of leadership, theory of the open systems, and theories of stakeholders. It relied on positivism research philosophy in which cross-sectional survey survey was used. The study region was the target population of 14 microfinance businesses, which were specifically defined at the center stage of Kenya as at the 31 st of December 2020. The research used stratified proportionality form of random sample to sample 366 people using questionnaires in order to get the data of the people being sampled. The inferential analysis was used in the analysis of the main data.

On the basis of the model findings, transformational leadership, external environment, and performance are strongly interconnected as there is positive and statistically significant cross-correlation ($R = 0.734$, $p < 0.05$). There is also the R squared value of 0.539 of the model. It implies that a variances of performance can be composed of 53.9 percent by the single-point change in transformational leadership and the outside environment. This research result implied that external environment is an excellent moderator of the functional relationship between transformational leadership and performance of micro finance banks in Kenya. In the research, it is hypothesized that the decision support systems will probably improve the effectiveness of the manager in his process of decision making as well as the banking services to the customers is more efficient and the utilization of computerized information system of the banking staff is more effective respectively.

2.2.4 Innovative leadership practices, digital transformation, regulatory framework and organizational performance

Investigation by Asif, Yang, and Hashim (2024) examined the relationship between transformational leadership, corporate culture, and digital transformation with the sustainability of manufacturing organizations in the Chinese context. The moderating effect of environmental dynamism and mediating effect of innovative capabilities will also be explored in the study. Questionnaires were dispensed to 350 participants who were owners, producers, and executives, and workers of manufacturing businesses. Convenient sampling was used in selecting participants. The data collection effort validated the findings and hypotheses were put to the test. The work uses cross-research methodology, quantitative research, and Smart PLS structural equation modelling (PLS-SEM). The findings show that digital transformation,

corporate culture, and transformational leadership play a significant role in the sustainability of organizations. The existence of innovation capacity does not affect the correlation between corporate culture and sustainability. Nevertheless, it acts as a broker between the relationships of transformational leadership, digital transformation, and corporate sustainability. The relationship between innovation capacities and corporate sustainability performance presented is moderated by environmental dynamism. This study contributes positively to the current theory of sustainable corporate performance because it establishes to the managers evidence of how transformational leadership, digital transformation, and corporate culture can enable the ongoing growth of manufacturing organizations. The findings portray considerable implications to china, which is highly industrialized. The research can be of benefit to regulatory bodies, academic establishments, business, government shrines, and scholars.

This Study by Asif et al. (2024) examined how transformational leadership, corporate culture, and digital transformation affect the sustainability of Chinese manufacturing organizations. It examines the moderator functions of environmental dynamism and the mediation impacts of innovation capabilities. The present research investigates the relationship between innovative leadership, digital transformation, regulatory framework and performance in Kenyan domestic commercial airlines.

In a study conducted in 2020, Li, Makhdoom, and Asim examined the influence of entrepreneurial leadership on employees' creative work behavior within technology-based SMEs. The study also examined the role of entrepreneurial self-efficacy as a moderator in this relationship. The study elucidates the process by which a company's innovative atmosphere influences the connection between entrepreneurial leadership and employees' innovative work behaviour. To achieve its goals, this study collected data from 350 pairs of supervisors and subordinates working in small and medium enterprises (SMEs) in the Jiangsu province of China. A conceptual model was built based on social cognition theory and particular continuum of self-efficacy theory. The hypotheses were then examined using SPSS 20. The empirical results suggest that entrepreneurial leadership has a considerable beneficial influence on workers' creative work behaviour. The research proposed that the creative atmosphere inside a company acts as a mediator in the connection between entrepreneurial leadership and the inventive behaviour of workers. The findings also verified that entrepreneurial self-efficacy

has a beneficial moderating impact on the relationship between entrepreneurial leadership and workers' creative behaviour.

A study conducted by Ghasemzadeh, Nazari, Farzaneh, and Mehralian (2019) examined the influence of information communication on the correlation between organizational learning and many aspects of innovation performance, such as product, process, and objective innovation. A research model was constructed and executed using pertinent literature from the domains of organizational learning (OL), intellectual capital (IC), and innovation performance (IP). The assumptions are empirically examined using data obtained from enterprises working in a highly knowledge-intensive sector. Product and process innovation may be achieved via OL activities and IC, as shown by the findings of 625 surveys answered by pharmaceutical businesses. However, this connection did not get any backing for the purpose of innovation. Moreover, the findings showed a significant association between IC and the moderating effect of IC in the interaction between OL and IP dimensions. The results contribute to a deeper comprehension of how fostering a culture of innovation via organizational commitment may optimise the advantages of ongoing organizational learning in both product and process innovation.

Table 1: Summary of Research Gaps

Researcher	Focus area of study	Methodology	Key findings	Knowledge gap(s)	Focus of current study
Farah, Munga, and Mbebe (2018)	This study focuses solely on the influence of various competitive strategies (cost leadership, product innovation, market focus, product differentiation) on the performance of Kenyan airlines.	This study employs a descriptive research design with a sample size of 194 airline managers. Data collection occurred via semi-structured questionnaires distributed through email.	Cost leadership strategy, product innovation strategy, market focus strategy and product differentiation strategy has a positive influence on the performance of commercial airlines in Kenya	The study presents a conceptual gap since it doesn't consider the impact of digital transformation, and government regulations as mediating and moderating variables respectively.	Will determine the moderated mediation effect of regulatory framework and digital transformation on the relationship between innovative leadership practices and organizational performance of domestic commercial

Researcher	Focus area of study	Methodology	Key findings	Knowledge gap(s)	Focus of current study
		Performance was measured, but the specific metric is not mentioned.			airlines in Kenya.
Mai, Nguyen, Ton, and Ahmed (2024)	Investigated how government policy may assist Vietnamese SMEs to boost innovation performance and digital transformation	Employs a quantitative approach with questionnaires distributed to 659 Vietnamese SME respondents through snowball and convenience sampling.	Findings suggest government policies support Vietnamese SMEs' innovation and IT capabilities,	Contextually the study was based on Vietnamese SMEs. Conceptually the study assessed government policy as independent variable on innovation performance and digital transformation of Vietnamese SMEs. The study adopted snowball and convenience sampling techniques.	Contextually the current study will be based on Kenyan domestic commercial airlines. Conceptually the current study will assess the effect of innovative leadership practices as independent variable and dependent variable organizational performance with indicators of Sales volume, Customer retention, Market share

Researcher	Focus area of study	Methodology	Key findings	Knowledge gap(s)	Focus of current study
					and Efficiency of domestic commercial airlines in Kenya. Methodologically the current will adopt research design cross-sectional survey design and purposive sampling technique
Lekan-Akomolafe, Alamba and Enya, (2021)	The impact of innovation leadership on organizational efficiency, focusing specifically on Access Bank PLC Umuahia	Employs a survey research method with data from primary (surveys) and secondary sources (bank performance data).	The research indicates that innovative leadership has a statistically significant positive impact on organizational effectiveness, with a significance level of 0.05.	Contextually, The study focused on organizational efficiency, focusing specifically on Access Bank. Methodologically, the study used mixed methods to collect the study data.	The study will examine the mediating effect of digital transformation on the relationship between innovative leadership practices and organizational performance of domestic commercial airlines in Kenya. Methodologically, The current study will adopt cross-sectional research design where quantitative data will be

Researcher	Focus area of study	Methodology	Key findings	Knowledge gap(s)	Focus of current study
					collected for individuals and groups.
Asif, M., Yang, L., & Hashim, M. (2024)	transformational leadership, corporate culture, and digital transformation on affect Chinese manufacturing organizations' sustainability	Employs a quantitative approach using SmartPLS SEM (Structural Equation Modeling) to analyze data collected through self-administered surveys distributed to 350 manufacturing companies in China (convenience sampling).	Findings suggest that corporate culture, transformational leadership, and digital transformation positively impact organizational sustainability. Innovation capabilities mediate the relationship between transformational leadership/digital transformation and sustainability.	Contextually, the study has limited generalizability since it focuses on China's manufacturing firms only. Methodologically the study used convenience sampling and Relies on self-reported data, potentially susceptible to bias.	Contextually the current study examines domestic commercial airlines in Kenya conceptually focusing on moderated mediation effect of regulatory framework and digital transformation on the relationship between innovative leadership practices and organizational performance of domestic airlines in Kenya. commercial Methodologically the study will apply Cross-sectional survey design thus reducing biasness.
Riza, M. F., Nimran, U., Al Musadieq, M., &	Investigates the effects of innovative and creative leadership	Population of this research are employee of PT.	Findings suggest that innovative leadership has a positive	The study has Limited generalizability contextually since the study	Conceptually the current study, Provides insights into

Researcher	Focus area of study	Methodology	Key findings	Knowledge gap(s)	Focus of current study
Utami, H. N. (2020).	on organization al learning, adaptation, and adaptive performance , using data from employee of PT. Otsuka Indonesia.	Otsuka Indonesia. The research used proportiona te stratified random sampling design. Employs a quantitative approach using SmartPLS SEM to analyze data.	but statistically insignificant direct effect on adaptive performance. However, innovative leadership has a positive and significant indirect effect on performance through organizationa l learning and adaptation.	is based on employees of PT. Otsuka Indonesia. Conceptually, the study didn't examine the regulatory framework or the digital transformatio n variables on organizational performance	the mediating effect of digital transformatio n on the relationship between innovative leadership practices and organizational performance of domestic commercial airlines in Kenya.
Miyumo, Donna (2022)	The effect of differentiatio n strategies, market penetration strategies and innovative strategies on the performance of domestic airline firms in Kenya	Employs a positivist research approach with quantitative tools. Census sampling was used to select three senior-level staff from each of the 43 domestic airlines in Kenya (total sample size of 129).	Findings suggest a positive relationship between differentiatio n strategies, market penetration strategies, and innovation strategies with the operational success of Kenyan airlines. Regression analysis confirms a statistically significant and positive impact of these	The study lacks conceptual focus on leadership, digitalization, or regulatory framework variables.	Examines the conceptual aspects of how innovative leadership, digital transformatio n, regulatory framework, and performance are interrelated in Kenyan domestic commercial airlines.

Researcher	Focus area of study	Methodology	Key findings	Knowledge gap(s)	Focus of current study
Echwa, M. & Murigi, E.M. (2019)	The influence of strategic leadership on the performance of domestic airline firms in Kenya	Employs a survey research design targeting top management of 47 domestic airlines. Data collection involved semi-structured, self-administered questionnaires (potentially distributed electronically) and analyzed using descriptive and inferential statistics.	Findings suggest a statistically significant and positive relationship between strategic leadership and the performance of Kenyan domestic airlines.	The study has conceptual gaps since it didn't explore specific leadership practices such as innovative leadership, digitalization, and regulatory frameworks.	The current study will include innovative leadership practices, which could provide a broader perspective on leadership's role in organizational performance. Will assess the mediating effect of digital transformation on the relationship between innovative leadership practices and organizational performance of domestic commercial airlines in Kenya.
Bonnyventure, S.N., Cheluget, J. and Ngala, M., 2022.	Investigates the mediating role of strategy implementation on the relationship between integrative leadership and performance	Employs a mixed-method approach (quantitative and qualitative data) through a cross-sectional survey. Structured	Findings suggest a positive and significant relationship between integrative leadership and performance of airfields in Kenya. Strategy	Contextually, the study specifically focuses on airfields and not airlines, potentially limiting generalizability.	Conceptually, the current study will focus on assessing the mediating effect of digital transformation on the relationship between innovative

Researcher	Focus area of study	Methodology	Key findings	Knowledge gap(s)	Focus of current study
	of airfields in Kenya.	questionnaires were used to collect data from 60 Kenyan airfields licensed by the Kenya Airports Authority.	implementation was found to partially mediate this relationship, meaning leadership still directly influences performance even with strategic implementation		leadership practices and organizational performance of domestic commercial airlines in Kenyan context.
Benson Mbui Kioko & Joseph Francis Bwire (2021)	Investigates how change management practices (including safety management systems, leadership styles, and organizational culture) influence the performance of airlines in Kenya.	Employs a descriptive cross-sectional research design with a stratified random sample of 43 Kenyan airlines. Data collection involved semi-structured questionnaires distributed through drop-and-pick methods and emails. Analysis used descriptive statistics and focused on the relationship between	Findings suggest a positive relationship between change management practices (safety management, leadership styles, and organizational culture) and performance in Kenyan airlines. The influence of regulatory framework as a moderating variable in this model was also found to be significant.	The study has a conceptual gap since it doesn't explore innovative leadership practices or digital transformation variables on the organizational performance of airlines in Kenya.	Assess the moderated mediation effect of regulatory framework and digital transformation on the relationship between innovative leadership practices and organizational performance of domestic commercial airlines in Kenya.

Researcher	Focus area of study	Methodology	Key findings	Knowledge gap(s)	Focus of current study
		change management practices and performance			
Muthoni, N., Cheluget, J., & Mwikya, J. (2023).	Investigates the moderating influence of the external environment on the relationship between transformational leadership and performance of microfinance banks in Kenya.	Employs a positivist research philosophy with a cross-sectional survey design. Stratified proportionate random sampling was used to select a sample of 366 respondents from 14 Kenyan microfinance banks listed by the central bank.	Findings suggest a strong positive relationship between transformational leadership, external environment, and performance of microfinance banks. The external environment moderates the relationship between leadership and performance, meaning its influence can be strengthened or weakened depending on the context.	The study has limited generalizability since it focuses on performance of microfinance banks and not domestic airlines in Kenya. Conceptually the study focused on transformational leadership and external environment variables	The current study will explore how innovative leadership practices in Kenyan airlines influence performance, while considering the moderating effect of regulatory framework
Li, C., Makhdoom, H. U. R., & Asim, S. (2020)	Investigates the impact of entrepreneurial leadership on employees' innovative work	Employs a quantitative approach with a survey design. Data were collected from 350	Findings suggest a positive relationship between entrepreneurial leadership and employees'	Focuses on SMEs in China, limiting generalizability to Kenyan airlines contextual setup.	Conceptually, the current study Examines the moderating effect of regulatory framework on the

Researcher	Focus area of study	Methodology	Key findings	Knowledge gap(s)	Focus of current study
	behavior in technology-based SMEs in China. The moderating role of entrepreneurial self-efficacy and the mediating role of the firm's innovative environment are also explored	supervisor-subordinate dyads in technology-based SMEs located in Jiangsu province, China. Analysis likely involved structural equation modeling (SEM) to test the hypothesized relationships	innovative work behavior. This relationship is mediated by the firm's innovative environment, meaning the environment fosters employee innovation when leaders exhibit entrepreneurial behaviors. Additionally, entrepreneurial self-efficacy moderates the relationship, implying that employees' belief in their ability to be innovative strengthens the effect of entrepreneurial leadership	Conceptually the study doesn't explore regulations or digital transformation specific to the airline industry	relationship between innovative leadership practices and organizational performance of domestic commercial airlines in Kenya.
Ghasemzadeh et al. (2019)	Investigates the impact of organizational learning (OL) on the relationship between organizational commitment (OC) and various dimensions	Employs a quantitative approach with a survey design. Data were collected from 625 employees in pharmaceutical	Findings suggest that organizational learning activities and intellectual capital can lead to product and process innovation, but not necessarily	Contextually the study focuses on pharmaceutical companies, limiting generalizability to airlines. Doesn't explore regulations or digital transformation	The current study will assess the moderating effect of regulatory framework on the relationship between innovative leadership practices and

Researcher	Focus area of study	Methodology	Key findings	Knowledge gap(s)	Focus of current study
	of innovation performance (IP) in knowledge-intensive pharmaceutical companies. The study also explores the moderating role of intellectual capital (IC).	companies using questionnaires. Analysis likely involved structural equation modeling (SEM) to test the hypothesized relationship.	objective innovation (e.g., new business models). The study also highlights that organizational commitment strengthens the relationship between learning and innovation, suggesting a culture that fosters learning is crucial.	n's specific influence on knowledge management in airlines.	organizational performance of domestic commercial airlines in Kenya.

2.3 Research Hypotheses

The null hypotheses are presented below;

H₀₁: There is no significant relationship between innovative leadership practices and organizational performance of domestic commercial airlines in Kenya.

H₀₂: There is no significant mediating effect of digital transformation on the relationship between innovative leadership practices and organizational performance of domestic commercial airlines in Kenya.

H₀₃: There is no significant moderating effect of regulatory framework on the relationship between innovative leadership practices and organizational performance of domestic commercial airlines in Kenya.

H₀₄: There is no significant moderated mediation effect of regulatory framework and digital transformation on the relationship between innovative leadership practices and organizational performance of domestic commercial airlines in Kenya.

2.4 Conceptual Framework

The conceptual model in Figure1 forms a foundation for addressing the research gaps that were made apparent from the interrogation of existing literature on the core conceptual variables.

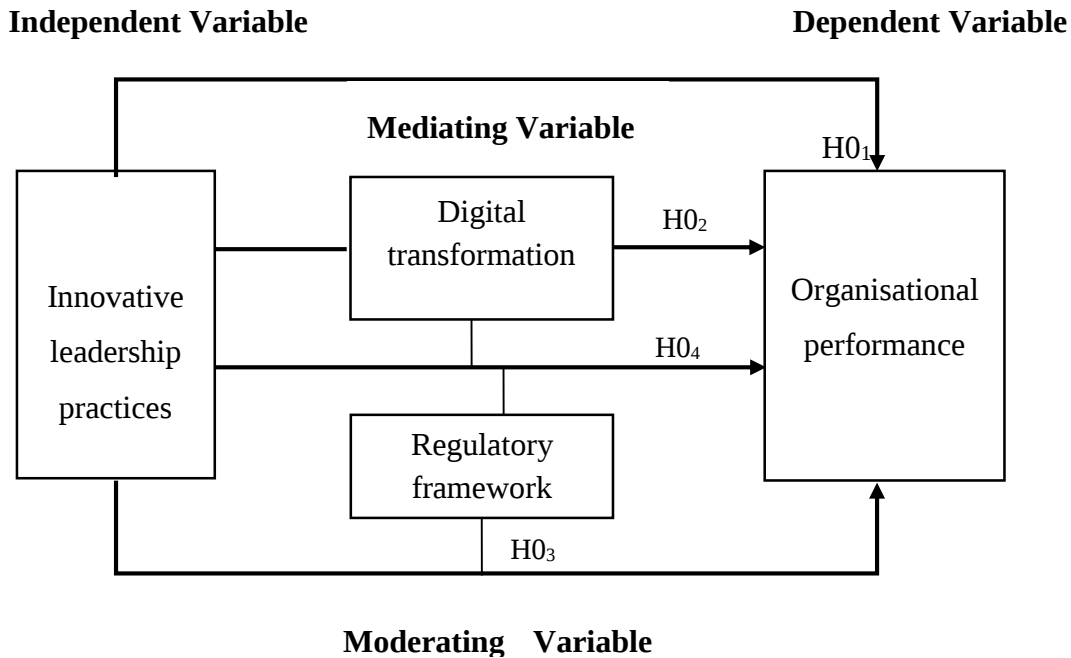


Figure 1: Conceptual Framework

The model of the proposed research indicates the correlation between innovative leadership practices, digital transformation, regulatory framework and the organizational performance of domestic commercial airlines in Kenya. The conceptual framework is quite critical because in this research, it has been used to answer four main relationships, these have been One, innovative leadership practices and organizational performance of domestic commercial airlines in Kenya.; Two, The mediating role of digital transformation on the relationship between innovative leadership practices and the organizational performance of domestic commercial airlines in Kenya, three, the moderating role of regulatory framework on the relationship between innovative leadership practices and the organizational performance of domestic commercial airst in Kenya, and four, to find out the moderated mediating role of regulatory framework and digital transformation on the relationship between innovative

leadership practices and organizational performance of domestic commercial airlines in Kenya. Strategic thinking and vision, employee empowerment and collaboration, learning and adaptability, and communication and transparency are considered indicators of measuring the innovative leadership practices. Cloud computing, big data analytics, artificial intelligence and mobile technologies are the measuring indicators of digital transformation. Regulatory framework measuring factors include operation of aircraft, personnel licensing regulations and air operator and administration regulations. Balanced scorecard (BSC) indicators, i.e. financial focus, customer focus, internal processes, and learning and growth will be used as organizational performance measures.

2.5 Operationalization of Research Variables

Table 2: Operationalization of Study Variables

Study variables Indicators		Measurement scale	Questions	Method of Analysis
Innovative leadership practices (Independent Variable)	Strategic thinking and vision	Ordinal	Section B of the Questionnaire	Frequencies, percentages, Correlation and Multiple regression Analysis
	- Employee empowerment and collaboration - Learning and adaptability - Communication and transparency			
Digital transformation (Mediating Variable)	Cloud computing	Ordinal	Section C of the Questionnaire	Frequencies, percentages, Correlation and Multiple regression Analysis
	- Big data analytics - Artificial intelligence - Mobile technologies			

Study variables Indicators		Measurement scale	Questions	Method of Analysis
Regulatory framework (Moderating Variable)	• Operation of aircraft regulations • Personnel licensing regulations • Air operator and administration regulations	Ordinal	Section D of the Questionnaire	Frequencies, percentages, Correlation and Multiple regression Analysis
Organizational performance (Dependent Variable)	• Sales volume, • Customer retention, • Market share, • Efficiency	Ordinal	Section E of the Questionnaire	Frequencies, percentages, Correlation and Multiple regression Analysis

2.6 Chapter Summary

This chapter discusses the different theories and concepts that define the immediate variables under focus. The theories are then examined when comparing them against certain variables. The chapter defines the independent and the dependent variable through the analysis of the relationship between them. There is also a re-review of past studies globally, regionally and locally as an experiment of how it was done by conducting a review based on the following; review of titles, scrutiny of the scope of the research and criticism of the research methods. The research gaps are established based on these reviews. They reviewed most of the innovations of leadership practices on their impact on organizational performance. Past empirical research was undertaken to understand the innovative leadership in practice, digitalization, regulatory framework and the organizational performance of the home-based commercial airlines in Kenya. Nonetheless, much of these earlier researches concentrated on new types of leadership practices and performance within organizations. The current study addresses this gap by expounding on the influence of the effect of innovative leadership practices, digital

transformation, regulatory framework and organizational performance of domestic commercial airlines in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter presents the approach in carrying out the study on how innovative leadership practices relate to performance of organizations in domestic commercial airlines in Kenya. It marks the mediation of the digital transformation phenomenon and moderating power of the regulatory framework in the relationship. The section explains the method of research the research philosophy, the intended research design, and research methods to be adopted in answering the research questions. It also explains about the target population, the research instruments, data collection methods, sample, sampling method, data collection procedure, pilot testing, data analysis and presentation and ethical considerations which will be observed during the study.

3.1 Research Philosophy

In empirical research, scholars have adopted either of the two dominant extremes of positivism and phenomenology. The phenomenological paradigm as a research philosophy focuses on immediate experience. It mainly emphasizes generating meanings and gaining understanding of phenomena. It is used to express both qualitative data and inductive approaches. It does not generalize but describes facts as they appear. Qualitative data is expressed through words and based on meaning. Results are collected in non-standardized formats and require classification into categories. Data is analyzed through conceptualization.

Positivism research philosophy or paradigm aligns the process of knowledge generation systematically using quantification in order to enhance precision in the description of parameters and the establishment of relationships between them. The positivist paradigm emphasizes an objectivist approach, giving prominence to research methods that focus on quantitative analysis (Mkansi & Acheampong, 2012). A quantitative research approach was appropriate for this study as it involved systematic collection, statistical analysis of the data, and the development of an analytical framework (Saunders et al., 2014). This study aimed at empirically examining the relationship between measurable variables using a validated measurement instrument. The positivistic philosophy enabled the establishment of gaps, testing of the hypotheses, and deducing knowledge from the resulting observations.

This study was based on the positivism philosophy to achieve its objectives because it was best suited for this research due to the following reasons: the research was based on hypotheses to achieve its objectives, and this approach was most appropriate for a study adopting positivism. The research included the use of a survey approach to reach a large population that is geographically dispersed. Positivism was appropriate for measuring responses of a large number of subjects as representatives of the wider population of staff in commercial airlines. It supported quantitative approaches to data collection and analysis (Saunders et al., 2014).

3.2 Research Design

This study adopted a cross-sectional survey design as the most suitable methodological approach for examining the relationships between innovative leadership practices, digital transformation, regulatory frameworks, and organizational performance among Kenya's domestic commercial airlines. A cross-sectional design provided a structured and cost-effective way to collect data from multiple airlines within a defined six-month period, offering a comprehensive snapshot of current practices and outcomes (Cooper & Schindler, 2011). Unlike longitudinal designs, which require extended timeframes to observe variable changes, the cross-sectional approach allowed the researcher to analyse associations and patterns efficiently without the logistical and resource challenges of tracking airlines over time. It also enabled the simultaneous examination of multiple variables within a single timeframe, aligning well with the study's objectives and available resources (Taris, Kessler, & Kelloway, 2021).

The design was further justified against alternative approaches such as experimental and qualitative case study methods. Experimental or quasi-experimental designs were unsuitable because manipulating leadership practices, regulatory environments, or digital strategies under controlled conditions is impractical and ethically challenging in operational airline contexts (Cooper & Schindler, 2011). Similarly, qualitative case studies, while rich in depth, would have limited the ability to generalise findings across the entire population of domestic airlines. The structured survey approach allowed for standardised data collection, ensured comparability across organizations, and supported advanced statistical analysis such as regression and moderated mediation modelling (Taris, Kessler, & Kelloway, 2021). Overall, the cross-sectional survey design balanced practicality with methodological rigour, enabling the study to generate reliable and generalisable insights within the constraints of time and access.

3.3 Target Population of the Study

Target population is a universal set of study units comprising all members of a real or hypothetical set of objects, events, or people to which an investigator wishes to generalize the research results (Mills, 2014). It is the entire group from which samples are selected for measurement and represents the full set of elements relevant to a study. Cooper and Schindler (2011) explain that a population is the complete set of units—such as people, items, objects, transactions, or events—that one is interested in studying and from which the sample is taken.

The target population of this study comprised all 17 domestic commercial airlines in Kenya as listed by the Kenya Civil Aviation Authority as of December 2023, as shown in Appendix II. The study adopted a census approach, since the population was drawn from all 17 domestic commercial airlines in Kenya.

The unit of observation comprised senior and middle management staff from the following ten positions: Chief Executive Officer (CEO), Chief Strategy & Innovation Officer (CSIO), Chief Operations Officer (COO), and Heads of Departments in the Commercial, Technical, Flight Operations, Information Technology, Finance, Human Resource, and Procurement & Supply Chain departments. These ten categories of respondents were selected because they occupied top and middle management roles and were responsible for interpreting environmental dynamics and making decisions that fundamentally affect organizational performance.

Although the selected respondents were drawn from the same organizations, their perspectives were not expected to be identical. This is because performance outcomes and strategic priorities are interpreted differently across functional areas. For example, the Chief Operations Officer is more concerned with efficiency, safety, and service delivery, while the Chief Finance Officer evaluates performance in terms of profitability and cost management. Similarly, the Human Resource and Commercial departments approach organizational performance from the lenses of talent management and customer satisfaction respectively. By collecting data from diverse managerial functions, the study ensured a multi-dimensional understanding of how leadership practices, digital transformation, and regulatory frameworks shape organizational performance. This approach mitigated the risk of homogeneity in responses and enhanced the validity of the findings, as it allowed the study to capture the organisation-wide perspective rather than relying on a single executive viewpoint.

Table 3 presents the study's target population.

Table 3: Target population

No.	Airline Name
1	Kenya Airways Plc,
2	Air Kenya Express
3	Fly540,
4	East African Safari Air,
5	Mombasa Air Safaris Ltd,
6	Safarilink Aviation
7	748 Air Services
8	SafeAir
9	Yellow Wings
10	Astral Aviation Ltd
11	African Express Airways
12	Freedom Airlines Express Ltd
13	Skyward Express Ltd
14	Jetways Airlines,
15	Renegade Air
16	Jambojet Ltd
17	ALS Ltd

3.4 Sample Size and Sampling Techniques

There are many definitions of a sample. According to Picardi and Masick (2014), a sample is defined as the subset of a population that has been selected to represent the characteristics of the whole population. Saunders et al. (2012) posit that a sample is a set of participants selected to represent a population.

This study adopted a census approach for the organizational population, focusing on all 17 licensed domestic commercial airlines in Kenya. A census was preferred over probability or non-probability sampling because the population size was small and manageable, making it feasible to include every entity. Unlike other designs that rely on subsets of the population, a census eliminates the risk of sampling bias and ensures comprehensive coverage of the study

population (Saunders, Lewis, & Thornhill, 2012; Picardi & Masick, 2014). By examining all the 17 airlines, the study was able to capture the full spectrum of organizational characteristics, thereby enhancing the accuracy, representativeness, and reliability of the findings.

While census sampling was applied at the organizational level, purposive sampling was employed to select the individual respondents within each airline. This was appropriate because the study sought data from officers with direct knowledge and decision-making responsibilities regarding innovative leadership practices, digital transformation, and regulatory compliance. A total of 170 respondents were purposively selected, with ten officers drawn from each airline. These included the Chief Executive Officer (CEO), Chief Strategy & Innovation Officer (CSIO), Chief Operations Officer (COO), and seven Heads of Departments (HODs) representing Commercial, Technical, Flight Operations, Information Technology, Finance, Human Resource, and Procurement. This ensured that information was collected from individuals occupying strategic and operational roles critical to the study variables.

The unit of observation in this study was the individual respondent. These officers provided primary data on leadership practices, technology adoption, regulatory issues, and organizational outcomes. The unit of analysis, however, was the domestic commercial airline. While data was collected at the individual level, it was aggregated and analyzed at the organizational level to assess how innovative leadership, digital transformation, and the regulatory framework influenced performance outcomes across the entire sector (Stewart, 2020).

This dual strategy of combining census sampling at the organizational level and purposive sampling at the respondent level was both practical and methodologically rigorous. It ensured inclusivity of the entire airline population while simultaneously capturing in-depth insights from key decision-makers whose roles directly shape organizational performance in Kenya's domestic aviation sector.. The study's resultant sample distribution is presented in Table 4.

Table 4: Sample Distribution

No.	Airline Name	Chief Executive Officer (CEO)	Chief Strategy Innovation Officer (CSIO)	Chief Operations Officer (COO)	Head of Department (HOD)	Total Respondents
1	Kenya Airways Plc, Air Kenya Express	1	1	1	7	10
2	Fly540, East African Safari Air, Mombasa Air	1	1	1	7	10
3	Safaris Ltd, Safarilink	1	1	1	7	10
4	Aviation 748 Air Services	1	1	1	7	10
5	SafeAir Yellow Wings	1	1	1	7	10
6	Astral Aviation Ltd African Express	1	1	1	7	10
7	Airways Freedom Airlines	1	1	1	7	10
8	Express Ltd Skyward	1	1	1	7	10
9	Express Ltd Jetways	1	1	1	7	10
10	Airlines, Renegade Air	1	1	1	7	10
11	Jambojet Ltd	1	1	1	7	10
12	ALS Ltd	1	1	1	7	10
	Totals	17	17	17	119	170

Source: Kenya Civil Aviation Authority as of December 2023

3.5 Data Collection Instruments

Primary data were used to offer answers to the specific objectives of the study. The structured questionnaire method was used to collect data. It was as a result of the above advantages of a

questionnaire that it was determined that the use of this method was the most suitable one as it allowed the respondents to answer it on their own, keep their answers anonymous, was cheap and fast as compared to the other methods besides allowing it to sample a wider sample (Creswell, 2008).

The research tool was separated into two. The initial section elicited population data of respondents. In the second section of the questionnaire, the data was collected about the study variables, which were innovative leadership practices, digital transformation, regulatory framework and organizational performance. The administration of the questionnaires was self-administered, dropped and picked in the airline offices, or online, being dependent on the availability of the respondents and their comfort. A questionnaire was used which further made it possible to be more uniform in asking questions thus offering consistency in answers.

Cooper and Schindler (2011) articulate that one can obtain uniformity in answers with the use of structured questions in a questionnaire. The structured questions used in this study were made in the form of a five point Likert scale where the participants were asked to describe their thoughts with the help of a 1-5-point scale.

Each domestic commercial airline in Kenya was appropriately sampled and ten (10) key respondents were chosen without necessarily having to interview every person employed along with the company to attain the reliability, objectivity and consistency of the data. Respondents in this category were the Chief Executive Officer (CEO), Chief Strategy & Innovation Officer (CSIO), Chief Operations Officer (COO), Heads of Departments (HODs) in the Commercial, Technical, Flight Operations, Information Technology, Finance, Human Resource and Procurement and Supply Chain departments. These were selected as the best 10 persons that could best articulate concerns that were pertinent to the study objectives since they were in strategic positions controlling the activities of their respective organizations.

3.6 Data Collection Methods

Data for this study were collected using a structured questionnaire, designed to align with the study's objectives and to measure the four key constructs: innovative leadership practices (ILP), digital transformation (DT), regulatory framework (RF), and organizational performance (OP). The questionnaire was divided into clear sections corresponding to each construct to ensure logical flow and respondent engagement. Items for innovative leadership

were adapted from established leadership and innovation scales (Avolio & Bass, 2004; Gumusluoglu & Ilsev, 2009), while digital transformation items were informed by studies on technology adoption and organizational change (Westerman et al., 2011; Kane et al., 2015). Questions related to the regulatory framework were based on institutional and governance perspectives (DiMaggio & Powell, 1983; Ahn & Ahn, 2022), and organizational performance items were developed using indicators commonly applied in service and transport industries, including customer satisfaction, operational efficiency, market share, and profitability (Hair et al., 2010).

The questionnaire primarily used a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), to capture the intensity of respondents' perceptions. Likert scales were selected because they are widely recognised for measuring attitudes and perceptions in organizational research, allowing for robust statistical analysis (Likert, 1932; Taris, Kessler, & Kelloway, 2021). Additional sections gathered demographic information such as respondents' job roles, years of service, and departmental affiliation to provide context for the analysis and allow control for organizational heterogeneity.

Given the geographical spread and busy schedules of aviation professionals, the questionnaire was administered electronically via Google Forms. This online distribution method was chosen for its efficiency, accessibility, and ability to reach all 17 registered domestic commercial airlines in Kenya within the study timeframe (March–September 2025). Online surveys are increasingly favoured in organizational research due to their convenience, cost-effectiveness, and ability to facilitate rapid data collection while reducing geographical barriers (Wright, 2017). To ensure high participation and quality responses, an introductory cover letter accompanied each survey link, explaining the purpose of the research, assuring confidentiality, and obtaining informed consent before respondents proceeded. Follow-up reminder emails were sent weekly to improve the response rate, a practice recommended for enhancing online survey participation (Dillman, Smyth, & Christian, 2014).

Pilot testing of the instrument was conducted with a small group of aviation professionals to ensure clarity, relevance, and face validity before full deployment. Feedback from the pilot informed minor adjustments to question wording and layout to enhance usability and reduce respondent fatigue. The final instrument was stable, user-friendly, and appropriate for statistical techniques such as regression, mediation, and moderation analysis. This structured

and digitally enabled data collection process ensured reliability, accessibility, and ethical compliance while supporting the study's goal of obtaining high-quality data from busy professionals in the aviation industry.

3.7 Pilot Testing

Pilot testing is the initial evaluation of the research instrument to determine its feasibility before full-scale data collection. It helps improve the instrument and ensures that respondents understand the questions (Thornhill, Saunders, & Lewis, 2009). Pilot testing is an important step in research to confirm viability and avoid costly errors. In this study, pretesting was conducted to evaluate the reliability and validity of the questionnaire. The pilot study contributed to refining research concepts, formulating operational definitions, establishing priorities, and improving the final study design.

Ravitch and Riggan (2012) posit that pilot testing enhances the questionnaire by minimizing problems respondents may face in answering questions. For practical and cost-effective pilot studies, Arain et al. (2010) recommend using 1% to 10% of the sample size. In this study, 6% of the population was used, translating to one (1) airline out of the total 17. Pilot testing was carried out on the research instrument using 10 respondents from one randomly selected domestic commercial airline in Kenya. Each airline had an equal chance of being selected to reduce selection bias. Importantly, the 10 participants who took part in the pilot study were excluded from the final data collection phase to prevent duplication and ensure the integrity of the main study sample.

3.7.1 Reliability of Instrument

Reliability refers to the degree to which a scale consistently reproduces similar measurement results in repeated applications (Bajpai & Bajpai, 2014). In this study, Cronbach's alpha (α) was used to test the internal consistency reliability of the measurement instrument. Cronbach's alpha is widely recognized for testing reliability, especially in studies using multiple Likert-type scale items (Tavakol & Dennick, 2011). The alpha coefficient ranges from 0 (no reliability) to 1 (perfect internal consistency). A higher value indicates greater reliability (De Vaus, 2002; Kipkebut, 2010). While there is no universal threshold, most scholars accept a Cronbach's alpha of 0.70 or above as indicating acceptable internal reliability (Cooper & Schindler, 2011).

3.7.2 Validity of Instrument

Validity refers to the degree to which an inference or conclusion based on data can be considered truthful or accurate (Shadish, Cook & Campbell, 2002). These authors identify three main types of validity: content validity, criterion-related validity, and construct validity.

Content validity ensures that the items within the instrument comprehensively represent the construct being measured. It can be achieved through literature reviews, qualitative research, and expert consultation (Leedy & Ormrod, 2010). In this study, content validity was assessed through expert opinion. Feedback was gathered from scholars and HRM practitioners, and their input was incorporated into the revised questionnaire.

Criterion-related validity refers to the extent to which the outcomes of a measure correlate with an external criterion that is considered a reliable standard of the construct (Furr & Bacharach, 2014). It can be assessed through predictive validity, which examines whether the measure can forecast future outcomes, or concurrent validity, which examines how well it correlates with another established measure at the same point in time. In this study, criterion-related validity was enhanced by aligning the survey items with key performance indicators widely recognized in the airline industry, such as efficiency, customer satisfaction, and compliance levels. The ability of the instrument to capture information that relates directly to these performance outcomes provided evidence of its practical applicability.

Construct validity examines whether the instrument truly measures the theoretical construct it is intended to measure and is usually tested through statistical techniques such as factor analysis (Cronbach & Meehl, 1955). In this study, construct validity was evaluated through exploratory factor analysis (EFA), which tested whether the measurement items grouped under each construct (innovative leadership practices, digital transformation, regulatory framework, and organizational performance) loaded appropriately onto their respective factors. The results confirmed that the items demonstrated strong factor loadings on their intended constructs, supporting the theoretical structure of the instrument.

Together, the combination of content, criterion-related, and construct validity provided assurance that the data collection tool was both comprehensive and appropriate for accurately measuring the study's variables.

3.8 Data Analysis and Presentation

Quantitative analysis was carried out on the data obtained in the field through the use of structured questionnaires. To begin with, the questionnaires were screened to eliminate those that were incomplete or poorly filled, ensuring that only satisfactorily completed instruments were included in the analysis. The data was analyzed using the Statistical Package for the Social Sciences (SPSS) Version 23.0, which was used to construct tables and charts for presentation of results. Descriptive statistics were employed to derive the mean, covariance, and standard deviation of the responses provided by the respondents.

Correlation analysis was conducted to determine the existence of associations between the study variables, including the independent, mediating, moderating, and dependent variables. This was achieved through Pearson correlation, which indicated the correlation coefficients of the variables. Regression analysis was further performed to test the effect of the independent variables on the organizational performance of domestic commercial airlines in Kenya. In this regard, data was gathered on the underlying variables of interest and subjected to regression models that quantified the impact of the causal variables on the outcome variable. The statistical significance of the relationships was measured, and Analysis of Variance (ANOVA) was used to test the robustness of the regression models.

3.9 Diagnostic tests

Regression models describe the relationship concerning dependent and independent variables. They rely upon certain assumptions about the variables used in an analysis and violation of these assumptions can lead to unreliable results (Osborne & Waters, 2002). Analysis of diagnostic test involved a test for the assumption of Classical Linear Regression Model (CLRM). This ensured that data collected is within the acceptable parameters of linear regression. The five assumptions to be tested include factor analysis, normality test, multicollinearity, homoscedasticity and linearity tests.

3.9.1 Linearity Test

Linearity defines the dependent variable as a linear function of the predictor (independent) variables (Hair, Black, Babin, Anderson, & Tatham, 2010). As an assumption in multiple regression, linearity denotes the extent to which variations in the dependent variable are

systematically related to changes in the independent variables. A violation of this assumption may bias regression coefficients, standard errors, and statistical significance tests (Keith, 2006).

In this study, linearity involving the dependent variable and other variables was assessed using Pearson's product-moment correlation coefficient. This test measured the strength and direction of linear relationships between the continuous variables. Additionally, the deviation from linearity test was conducted. If the significance value for deviation from linearity was less than 0.05, the relationship between independent and dependent variables was deemed non-linear, indicating potential problems in model estimation.

3.9.2 Normality Test

Normality refers to the assumption that variables follow a normal distribution (Osborne & Waters, 2002). This implies that the residuals from regression should approximate a normal curve. When variables are skewed, correlations with other measures can be weakened. According to Hoyt, Leierer, and Millington (2006), non-normally distributed variables may distort statistical relationships and influence Type I and Type II errors, affecting the accuracy of the results.

In this study, normality was assessed using the Shapiro–Wilk test, which is widely recommended for small to medium sample sizes (Ghasemi & Zahediasl, 2012). The test evaluates whether the data significantly deviate from a normal distribution.

The hypotheses tested were:

- **H₀ (Null Hypothesis):** The data are normally distributed.
- **H₁ (Alternative Hypothesis):** The data are not normally distributed.

The decision rule was based on the significance value (p-value):

- If $p > 0.05$, fail to reject H₀, indicating that the data do not significantly deviate from normality.
- If $p \leq 0.05$, reject H₀, indicating that the data significantly deviate from normality.

In addition to the Shapiro–Wilk test, the study also considered skewness and kurtosis values. Skewness values within ± 0.5 were interpreted as indicating approximate symmetry, while

kurtosis values within ± 1 were considered acceptable for normality (Kim, 2013). These additional checks complemented the Shapiro–Wilk test to ensure robust assessment of the normality assumption before proceeding with parametric analyses.

3.9.3 Multicollinearity Test

Multicollinearity refers to the condition where one independent variable is highly correlated with others or is a linear combination of them (Hair et al., 2010). This phenomenon increases standard errors of regression coefficients and reduces the predictive power of the model (Tabachnick & Fidell, 2014).

In this study, multicollinearity was tested using the Variance Inflation Factor (VIF). A VIF value between 1 and 10 indicated the absence of multicollinearity, while values above 10 (or above 5 in stricter criteria) suggested a strong likelihood of multicollinearity (Lindner, Puck & Verbeke, 2020). The test helped identify whether any of the predictor variables were excessively correlated, which could undermine the validity of the regression model.

3.9.4 Homoscedasticity Test

Homoscedasticity occurs when the variance of the residuals remains constant across levels of the independent variables (Ghasemi & Zahediasl, 2012). When variance is unequal (heteroscedasticity), it may impair the validity of inferential tests and affect confidence intervals.

In this study, homoscedasticity was tested using the Glejser test for equality of variances. The hypotheses for this test were:

- H_0 : The data is homoscedastic
- H_1 : The data is heteroscedastic

The test was conducted at a significance level of $\alpha = 0.05$. The results determined whether the regression model violated the assumption of constant variance, thereby influencing the accuracy of statistical inference.

3.10. Data Analysis and Hypotheses Testing

Data analysis encompasses the inspection, cleaning, transforming and modeling of data in pursuant to identifying beneficial information, inferencing and helping in decision-making choices (Mugenda & Mugenda, 2013). The objectives of the study will be reached through the data collected and analysed to provide both descriptive statistics; that included the measures of central tendency and measures of variations as well as regression analysis. Data analysis was carried out in several stages; questionnaires which were completed were edited to originality and consistency; the data was reviewed to eliminate errors and gaps. Data Analysis The quantitative data obtained in the course of research through questionnaires was analyzed with the help of SPSS Version 23. Lastly, the performance of the domestic commercial carriers was just a simple regression against a single independent variable and three multiple regression analysis (process analysis method) of Baron and Kenny, (1986) and Hayes, (2013), to give inference results. The model applied in each hypothesis and the expected output is discussed below.

3.10.1 Simple Regression model

To determine the influence of Innovative leadership practices and organizational performance of domestic commercial airlines in Kenya

$$Y = \beta_0 + \beta_1 \text{ ILP} + e \dots\dots\dots(1)$$

Where:

β_0 is constant

β_1 is coefficient parameter to be determined

ILP is Innovative leadership practices

e is error/disturbance

Y is organizational performance of commercial airlines

3.10.2 Mediation Relationship

To examine the mediating role of digital transformation on the relationship between innovative leadership practices and organizational performance of domestic commercial airlines in Kenya

1st model

$$Y = \beta_0 + \beta_1 \text{ ILP} + e \dots\dots\dots(2)$$

2ndmodel

$$\text{DT} = \beta_0 + \beta_2 \text{ ILP} + e \dots\dots\dots(3)$$

3rdmodel

$$Y = \beta_0 + \beta_2 \text{ DT} + e \dots\dots\dots(4)$$

4thmodel

$$Y = \beta_0 + \beta_3 \text{ DT} + \beta_4 \text{ ILP} + e \dots\dots\dots(5)$$

Where:

ILP is Innovative leadership practices

DT is digital transformation

β_0 is constant (intercept)

$\beta_1, \beta_2, \beta_3$ and β_4 are coefficient parameters to be determined

Y is organizational performance of commercial airlines

e is error/disturbance

The confirmation of zero-order relationship among the variables entailed the steps 1-3. In case they were not significant then the result is that, no mediation is possible (Baron & Kenny, 1986). The conclusion of step 2 and 3 is when results are significant then the mediation is supported in the case of the effect of ILP when the DT is controlled. In case ILP does not play any role once DT is controlled, then there is complete mediation and in the event that both ILP and DT play a significant role in predicting Y then there is partial mediation.

3.10.3 Moderation Relationship

To determine the moderating effect of regulatory framework on the relationship between innovative leadership practices and organizational performance of domestic commercial airlines in Kenya

The following steps were followed.

$$Y = \beta_0 + \beta_1 \text{ ILP} + e \dots\dots\dots(6)$$

$$Y = \beta_0 + \beta_1 \text{ILP} + \beta_2 \text{RF} + e \dots\dots\dots(7)$$

$$Y = \beta_0 + \beta_1 \text{ILP} + \beta_2 \text{RF} + \beta_3 \text{IP*RF} + e \dots\dots\dots(8)$$

Where:

ILP is Innovative leadership practices

RF is Regulatory Framework

β_0 is constant (intercept)

β_1 , β_2 and β_3 are coefficient parameters to be determined

Y is organizational performance of commercial airlines

e is error/disturbance

Check change in R^2 when interaction term is introduced.

In case the effect of ILP and RF becomes insignificant, by incorporating interaction term, (I*RF), then, moderation has taken place. When by adding the interaction term, (ILP *RF) the effect of ILP and RF are significant then moderation has taken place and positive/buffering effects are also significant.

3.10.4 Moderated Mediation Model

To determine moderating effect of regulatory framework on the mediating effect of innovation practice, Hayes (2013) model for Mediation, Moderation, and Conditional Process Analysis were adopted.

$$I = \beta_0 + \beta_1 \text{ILP} + \beta_2 \text{RF} + \beta_3 \text{DT} + \beta_4 \text{I*RF} + \varepsilon \dots\dots\dots(9)$$

$$Y = \beta_0 + \beta_1 \text{ILP} + \beta_2 \text{RF} + \beta_3 \text{I*RF} + \varepsilon \dots\dots\dots(10)$$

Where;

β_0 = Constants

I(Indirect Effect)= Performance;

Y (Direct effect) = Performance;

DT is digital transformation

RF is Regulatory Framework

ILP is Innovative leadership practices

IP*RF= Interaction

ε = Error term

Table 5: Summary of Research Objectives, Hypothesis and empirical models

Objectives	Hypothesis	Type of Analysis	Interpretation of results
To establish the relationship between Innovative leadership practices and organizational performance of commercial airlines in Kenya	Hypothesis 1: Innovative leadership practices has no significant influence on organizational performance of commercial airlines in Kenya	Linear Regression Analysis $Y = \beta_0 + \beta_1 CC_1 + \varepsilon$ Where Y = Performance β_0 = Intercept β_1 = Regression Coefficient of ILP ₁ ILP ₁ = Innovative leadership practices ε = Error term	R^2 Coefficient of 1 indicates a perfect predictability of the model P-value ≤ 0.05 shows a significant correlation between the variables. ANOVA F-test with p-value ≤ 0.05 shows that the model has predictive ability VIF < 10, Tolerance level > 0 indicates no multicollinearity problems
To explore the mediating role of digital transformation on the relationship between Innovative leadership practices and organizational performance of commercial airlines in Kenya	Hypothesis 2: digital transformation has no significant mediating effect on the relationship between Innovative leadership practices and organizational performance of commercial airlines in Kenya	Regression Analysis i. $Y = \beta_0 + \beta_1 ILP_1 + \varepsilon$ ii. $DT = \beta_0 + \beta_1 ILP_1 + \varepsilon$ iii. $Y = \beta_0 + \beta_2 DT_2 + \varepsilon$ iv. $Y = \beta_0 + \beta_1 ILP_1 + \beta_2 DT_2 + \varepsilon$ Where Y = Performance ILP ₁ = Innovative leadership practices DT ₂ = digital transformation β_0 = Constant β_1, β_2 = Coefficient ε = Error term	R^2 Coefficient of 1 indicates a perfect predictability of the model P-value ≤ 0.05 shows significant correlation between the variables. ANOVA F-test with p-value ≤ 0.05 shows that the model has predictive ability. VIF < 10, Tolerance level > 0 indicates no multicollinearity problems
To establish the moderating role of regulatory framework on the relationship between Innovative leadership	Hypothesis 3: Regulatory framework have no significant moderating effect on the relationship between Innovative leadership	Régression analysis i. $Y = \beta_0 + \beta_1 ILP_1 + \varepsilon$ ii. $Y = \beta_0 + \beta_1 ILP_1 + \beta_3 RF_3 + \varepsilon$ ii. $Y = \beta_0 + \beta_1 ILP_1 + \beta_4 ILP_1^* RF_3 + \varepsilon$ Where Y = Performance	R^2 Coefficient of 1 indicates a perfect predictability of the model P-value ≤ 0.05 shows a significant correlation between the variables.

Objectives	Hypothesis	Type of Analysis	Interpretation of results
practices and organizational performance of commercial airlines in Kenya	practices and organizational performance of commercial airlines in Kenya	β_0 = Constant β_1, β_4 = Coefficients ILP_1 = Innovative leadership practices RF_3 = Regulatory Framework ε = Error term	ANOVA F-test with a P value of ≤ 0.05 shows that the model has predictive ability. $VIF < 10$, Tolerance level > 0 indicates no multicollinearity problems
To determine the moderated mediation effect of regulatory framework and digital transformation on the relationship between Innovative leadership practices and organizational performance of commercial airlines in Kenya	Hypothesis 4: There is no significant moderated mediation effect of regulatory framework and digital transformation on the relationship between Innovative leadership practices and organizational performance of commercial airlines in Kenya	Régression analysis i. $I = \beta_0 + \beta_1 ILP_1 + \beta_2 RF_3 + \beta_3 DT_2 + \beta_4 ILP_1 * RF_3 + \varepsilon$ ii. $Y = \beta_0 + \beta_1 ILP_1 + \beta_2 RF_3 + \beta_3 ILP_1 * RF_3 + \varepsilon$ Where; β_0 = Constant I = Indirect Effect to Performance; Y = Direct effect to Performance; ILP_1 = Innovative leadership practices; RF_3 = Regulatory Framework; DT_2 = digital transformation $DT_2 * RF_3$ = Interaction ε = Error term	If the null of 0.000 does not fall in between the lower boundary (Boot LLCI) and the upper boundary (Boot ULCI) of the 95% confidence interval, we infer that the indirect effect is conditional on the level of the moderator variable thus showing that the intervening variable is significantly related to dependent

3.11 Ethical Considerations

Prior to engaging respondents, the researcher adhered to ethical guidelines to ensure that all procedures were unbiased and fair to all stakeholders. Before commencing the research, the researcher obtained approval from the Management University of Africa and was issued with an official authorization letter.

Subsequently, the researcher secured a research permit from the National Commission for Science, Technology and Innovation (NACOSTI). These authorization documents were made available to all participating organizations and to any respondent who requested to review them.

Throughout the research process, the researcher ensured that no harm was caused to individual participants. Participants were guaranteed privacy, confidentiality, and protection of their

welfare in accordance with established research ethics. All information provided was treated with strict confidentiality and used solely for academic purposes. Participation was voluntary, and informed consent was obtained from all respondents before data collection..

3.11.1 Anonymity of Participation

The researcher ensured that the identity of the respondents was kept confidential throughout the entire research process, the presentation of findings, and thereafter. At no point were participants required to provide their names or the names of their airlines.

3.11.2 Voluntary Participation

Voluntary consent was sought, and participating organizations and respondents were given the free will to willingly participate and contribute to the study.

3.11.3 Informed Consent

The researcher consulted respondents in advance and provided appropriate explanations to help them understand the purpose of the study and their role in it. Consent was obtained from sampled respondents before they received the questionnaires. Participants were encouraged to give consent voluntarily and were informed of their right to withhold any information they did not feel comfortable sharing. The informed consent process helped protect the rights of the respondents and ensured that the moral principles governing data collection and survey research were not violated.

3.11.4 Privacy of Participants

The researcher ensured that the data collection process did not interfere with the respondents' privacy. At all times, respondent identity was kept confidential throughout the data collection process, the analysis, and presentation of findings. Participants were not required to disclose their names or the names of their airlines.

3.11.5 Confidentiality

The researcher upheld appropriate ethical conduct by maintaining the confidentiality of participant responses and ensuring no information was disclosed to the public. Identifying information was not collected, unless a respondent specifically requested a summary of the study's findings. The data collected was treated with strict confidentiality and used solely for academic purposes—specifically, for the partial fulfilment of the requirements for the award

of the Doctor of Philosophy in Management and Leadership at the Management University of Africa. Proper referencing protocols were observed to acknowledge all secondary sources and avoid plagiarism.

3.12 Chapter Summary

This chapter has covered the methodology that will be used in carrying out the relationship between Innovative leadership practices and organizational performance of commercial airlines in Kenya keeping in mind the mediating role of digital transformation of the said relationship and the moderating role of Regulatory framework on the mediating role of digital transformation of the said relationship. Research procedure to be adopted was covered in the section which encompasses: the philosophy of the research; the research design and research method to be used to answer the research questions; the population under study; the research tools used; the method of data collection; sample size; sampling procedure and the sampling technique to adopt; the procedure of collecting data; pilot testing; data analysis and presentation and the ethical issues that surround it.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.0 Introduction

This chapter provides the description and discussion of the obtained data to understand the impact of innovative leadership practice, the digital change, and regulation system, on the organizational performance of Kenyan commercial airlines. The analysis is logically arranged according to particular objectives of the study as well as based on the respective hypotheses. The first section will give detail on the rate of response and the results of the pilot test in concentrating on the reliability and validity conducted by use of Cronbach alpha and factor analysis. The second part contains descriptive statistics that outline the features of the study variables. The third part provides the findings of inferential analysis such as correlation analysis, multiple linear regression and structural equation modeling (SEM) to verify the hypothesized direct, mediating, moderating and a moderated mediation effects. The last part presents the results, their correlations with the available literature and theoretical considerations as well as their interpretation, according to the aims of the research and theoretical framework.

4.1 Analysis of Response Rate

The study targeted a total of 170 respondents drawn from 17 domestic commercial airlines operating in Kenya, comprising departmental heads and senior managers across operations, finance, innovation, regulation, and IT/digital transformation units.

Table 6: Response Rate

Category	Administered	Returned	Unreturned	Response Rate
Respondents	170	143	27	84.12%

Out of the 170 questionnaires distributed to respondents from 17 domestic commercial airlines in Kenya, 143 were completed and returned, resulting in a response rate of 84.12%. This means that 143 out of the 170 questionnaires were successfully filled out and returned, reflecting a high level of participation from the targeted respondents. The remaining 27 questionnaires were unreturned, accounting for 15.88% of the total administered questionnaires. This high response rate indicates strong cooperation and engagement from the stakeholders involved in the study,

providing a robust and reliable data set for statistical analysis and ensuring that the results are representative of the views of key decision-makers in Kenya's domestic airline sector. According to Mugenda and Mugenda (2003), a response rate of 70% and above is considered very good and acceptable for quantitative research, further affirming the validity and quality of the data collected for this study.

4.2 Demographic Characteristics

This section details the demographic and descriptive findings of the study. The demographic analysis focused on five key attributes: gender, age bracket, level of education, length of time the firm has operated in the airline industry, and the respondent's current position within the organization.

4.2.1 Demographic Characteristics of Respondents

These demographic characteristics help contextualize the study's results and assess the diversity and representativeness of perspectives across managerial roles within the domestic aviation sector.

The participants were asked to indicate their gender to provide insight into the gender composition of leadership and management roles within domestic commercial airlines in Kenya. Further, the researcher aimed to assess whether there was a balanced representation that could potentially influence the interpretation of organizational practices.

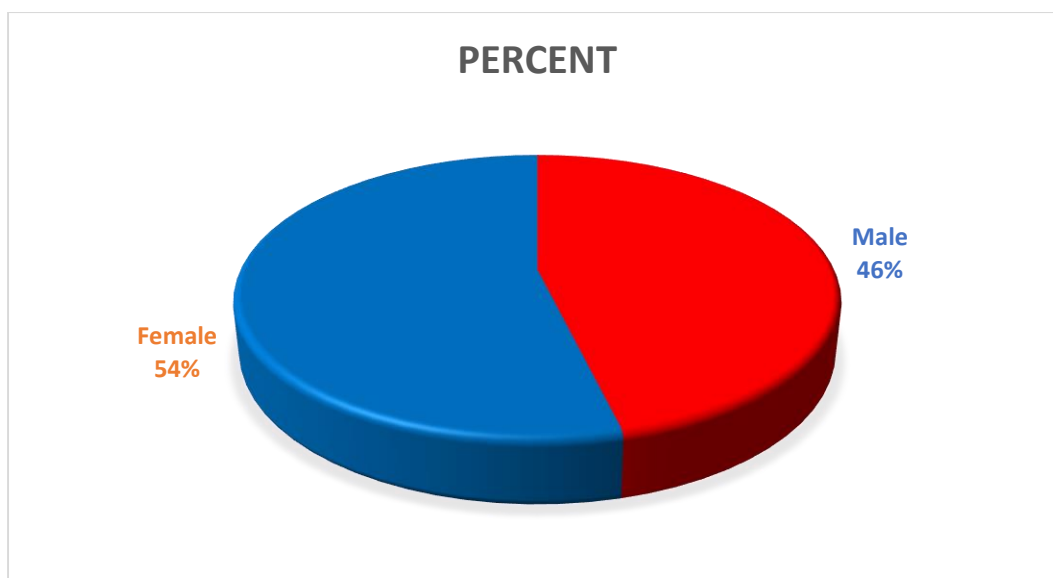


Figure 2: Gender of Respondents

As illustrated in Figure 2, out of the 143 respondents, 77 were female, representing 53.8%, while 66 were male, representing 46.2%. This near balance reflects a positive shift toward gender diversity in the leadership and management structures of Kenya's domestic commercial airlines. The slight dominance of female respondents indicates that women are increasingly participating in strategic and operational decision-making, which historically has been a male-dominated space within the aviation sector.

The distribution is significant for this study because it shows that leadership practices and organizational strategies are shaped by contributions from both genders. A higher proportion of female leaders may contribute to greater inclusivity, collaboration, and people-oriented leadership approaches, which align closely with innovative leadership practices examined in this study. Additionally, gender diversity has been linked to broader perspectives in problem-solving and adaptability, both of which are critical in driving digital transformation and ensuring compliance with regulatory frameworks.

By capturing both male and female voices almost equally, the study ensures that its findings reflect a comprehensive understanding of leadership practices across gender lines. This inclusivity strengthens the validity of the conclusions and highlights the role of gender diversity as a driver of organizational resilience and performance in Kenya's domestic airline sector.

The participants were asked to state their age bracket to help the researcher understand the generational distribution of those in senior and middle management positions. Further, this data was useful in examining how age-related experience and perspectives could influence innovation and organizational performance in Kenya's domestic airline sector.

The age distribution shows that the largest group of respondents, 46 individuals (32.2%), fell within the 51–60 years bracket, while another 43 respondents (30.1%) were aged between 31–40 years, and 33 respondents (23.1%) were between 41–50 years. The smallest groups were the youngest (21–30 years) at 3 respondents (2.1%) and the oldest (60–65 years) at 18 respondents (12.6%).

This distribution highlights that leadership and management in Kenya's domestic commercial airlines are predominantly in the hands of experienced professionals. The dominance of respondents in the 51–60 years bracket suggests that many leaders and managers have

accumulated extensive industry knowledge, which is essential for navigating the regulatory, operational, and technological complexities of aviation. Such experience is directly relevant to the study's focus on innovative leadership practices, since older professionals are more likely to rely on tried-and-tested approaches but may also have the strategic insight to guide digital transformation responsibly.

The presence of a sizeable proportion of respondents aged 31–40 years (30.1%) and 41–50 years (23.1%) reflects a balance between emerging and seasoned leadership. Managers in these age brackets often combine adaptability with experience, making them critical drivers of innovation and the integration of new digital technologies. The younger professionals (21–30 years), although few, represent a pipeline of future leaders who may introduce fresh ideas and openness to disruptive technologies, while those aged 60–65 provide historical context and continuity in leadership traditions.

Overall, the age distribution contributes significantly to the study objectives by demonstrating that organizational performance is shaped by a blend of seasoned expertise and emerging perspectives. This balance ensures that while innovation and digital adoption are embraced, they are also implemented under the guidance of experienced leaders who understand the importance of regulatory compliance and long-term strategic positioning

The participants were asked to indicate their highest level of education. Further, the researcher sought to assess the academic qualifications of the individuals occupying key leadership and operational roles in domestic airlines, as these may influence strategic thinking, innovation, and regulatory compliance.

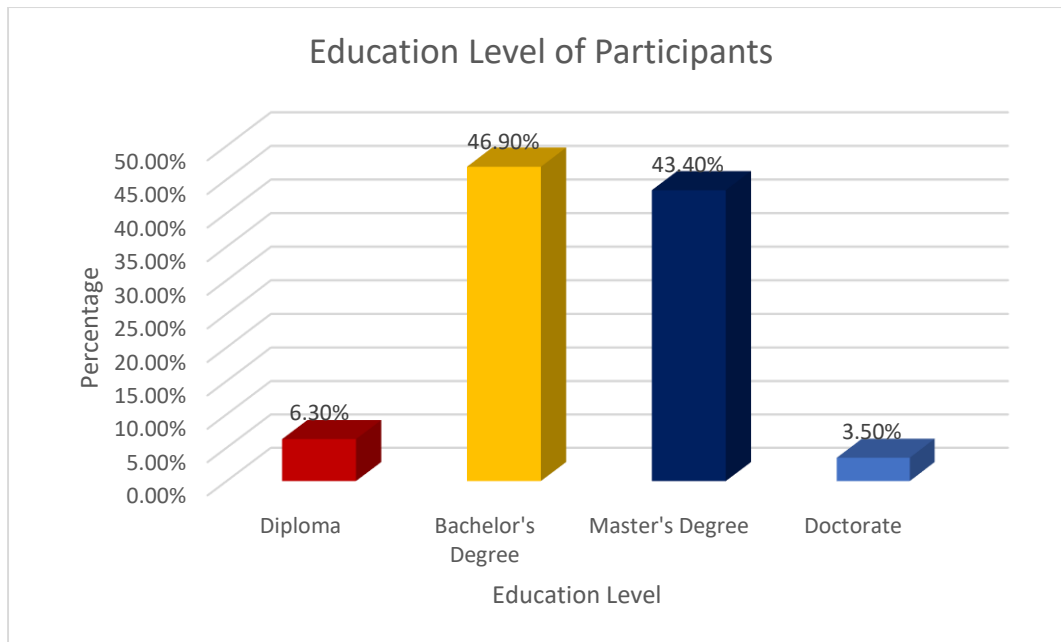


Figure 3: Education Level of Participants

As illustrated in Figure 3, out of the 143 respondents, 67 (46.9%) held Bachelor's degrees, 62 (43.4%) had Master's degrees, 9 (6.3%) possessed Diplomas, and 5 (3.5%) had Doctorate degrees. This distribution highlights the highly qualified nature of the leadership and managerial personnel within Kenya's domestic airlines. The dominance of respondents with Bachelor's and Master's degrees, accounting for over 90% of the sample, demonstrates the sector's emphasis on strong academic foundations for those occupying senior and middle management roles.

This high level of academic attainment is significant for the study objectives, as it suggests that respondents are well-prepared to address the strategic, technological, and regulatory challenges facing the aviation sector. Managers with advanced education are likely to bring critical thinking skills, strategic foresight, and a broader understanding of innovation and organizational change, which directly supports the adoption of innovative leadership practices and digital transformation initiatives.

The smaller proportion of respondents with Diplomas (6.3%) reflects the inclusion of professionals with practical, operational expertise, ensuring that perspectives from technical and frontline management were also captured. Meanwhile, the presence of Doctorate holders (3.5%) indicates that some leaders in the sector contribute advanced theoretical and research-based knowledge to organizational strategy.

Overall, the educational profile suggests that the findings of this study are shaped by a leadership base that is not only academically competent but also capable of aligning domestic airline operations with international standards. This qualification mix reinforces the credibility of the study’s conclusions on the role of innovative leadership, digital transformation, and regulatory frameworks in driving organizational performance.

The participants were asked to report the number of years they had worked in the airline industry. Further, the researcher used this data to evaluate the level of sector-specific experience among respondents, which could influence their understanding of leadership, innovation, and regulatory environments.

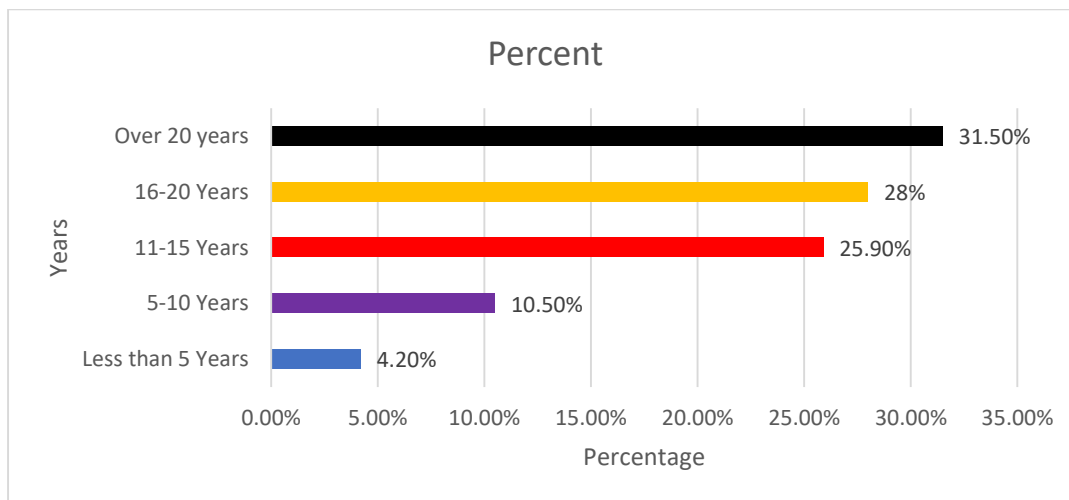


Figure 4: Years in the Airline Industry

As illustrated in Figure 4, out of the 143 respondents, 45 (31.5%) had worked in the airline industry for more than 20 years, 40 (28.0%) had 16–20 years of experience, 37 (25.9%) had 11–15 years, and 21 (14.7%) had less than 10 years of experience. This distribution indicates that the vast majority of respondents are highly experienced professionals, with more than 85% having served for over 11 years in the industry.

The relevance of this finding to the study objectives is significant. Respondents with over two decades of experience provide insights grounded in long-term exposure to industry dynamics, regulatory shifts, and strategic changes, thereby enriching the study’s assessment of innovative leadership practices and their link to organizational performance. Those with 16–20 years and 11–15 years of experience represent a critical segment of senior and middle management, who

are often directly responsible for implementing digital transformation initiatives and ensuring regulatory compliance.

The relatively smaller proportion of respondents with less than 10 years of experience (14.7%) adds a valuable perspective from younger professionals who may be more attuned to emerging digital technologies and innovative practices. Their inclusion ensures that the study captures both seasoned strategic insights and newer, tech-driven viewpoints.

Overall, the dominance of respondents with long industry tenures strengthens the reliability of the findings, as it demonstrates that the study is informed by individuals with deep institutional knowledge and a comprehensive understanding of how leadership, technology adoption, and regulatory frameworks shape performance in Kenya's domestic commercial airlines.

The participants were asked to identify their current position within their respective airline companies. Further, the researcher collected this data to verify that the study captured responses from individuals in strategic leadership and middle management roles who are best positioned to comment on organizational performance and innovation.

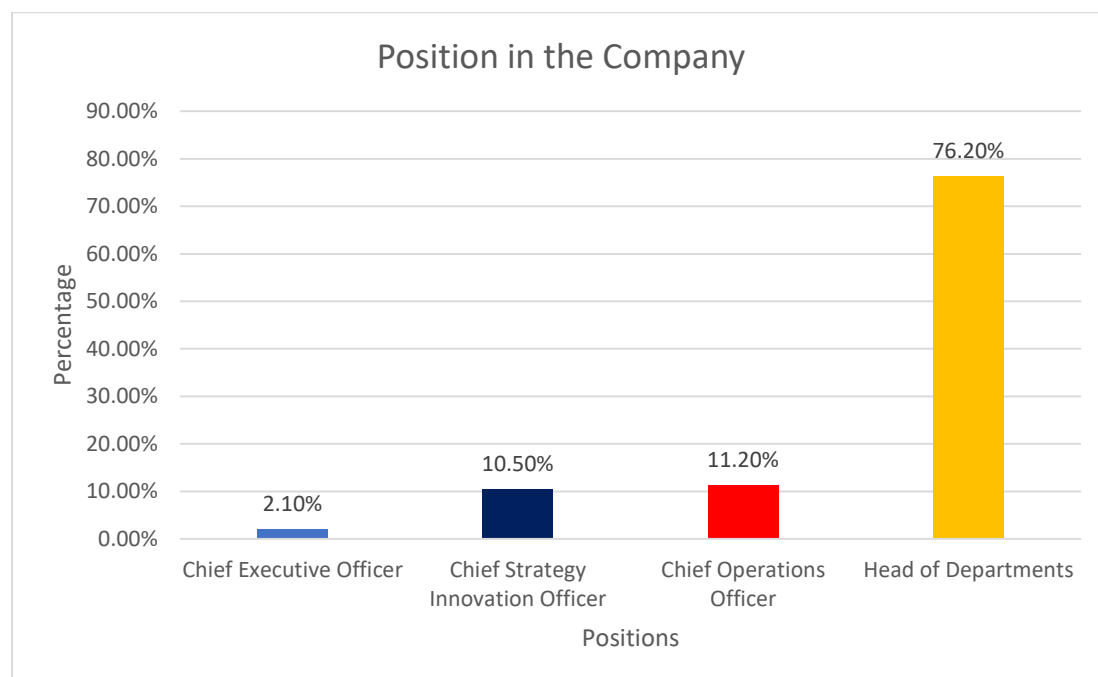


Figure 5: Position in the Company

As illustrated in Figure 5, out of the 143 respondents, 109 (76.2%) were Heads of Departments (HODs), 16 (11.2%) were Chief Operations Officers (COOs), 15 (10.5%) were Chief Strategy and Innovation Officers (CSIOs), and 3 (2.1%) were Chief Executive Officers (CEOs).

This distribution is significant because it demonstrates that the study captured perspectives from both strategic leadership and operational management. The dominance of HODs (76.2%) reflects the central role departmental leaders play in implementing organizational strategies, driving operational efficiency, and overseeing innovation at the functional level. Since HODs are directly responsible for translating executive decisions into practice, their responses provide practical insights into how leadership practices and digital transformation are realized in day-to-day airline operations.

The inclusion of COOs (11.2%) and CSIOs (10.5%) adds a strategic dimension to the data, as these roles typically shape organizational processes and innovation pathways. COOs ensure that operations align with efficiency and safety goals, while CSIOs directly oversee digital transformation initiatives and innovation strategies. Their perspectives are critical for linking innovative leadership practices to measurable performance outcomes, which directly supports the study's objectives.

Although CEOs accounted for only 2.1% of respondents, their presence in the study was important for capturing top-level strategic perspectives and long-term visions for organizational performance. The smaller number of CEOs reflects the natural structure of airlines, where each company has only one chief executive compared to multiple HODs, but even this limited representation ensures that high-level policy views are incorporated.

Overall, the distribution across positions ensured that the study drew from those who influence both policy and practice. The balance between strategic leadership (CEOs, COOs, CSIOs) and operational leadership (HODs) provided a robust dataset for analyzing how innovative leadership, digital transformation, and regulatory frameworks interact to shape organizational performance in Kenya's domestic commercial airlines.

4.3 Results of the Pilot Survey

Before undertaking full-scale data collection, a pilot survey was conducted to test the reliability and validity of the research instrument. The pilot study serves as a critical preliminary phase

in empirical research, enabling the researcher to identify and rectify potential weaknesses in the questionnaire, assess respondent comprehension, and confirm the consistency and accuracy of the measurement tools. Conducted among a sample drawn from a population similar to the main study, the pilot focused on verifying the instrument's capacity to capture the intended constructs—Innovative Leadership Practices, Digital Transformation, Regulatory Framework, and Organizational Performance. The results of the pilot were instrumental in refining item phrasing, optimizing scale clarity, and enhancing the internal structure of the tool. This section presents the outcomes of the validity and reliability analyses derived from the pilot, which were necessary to ensure the robustness and credibility of the main study.

4.3.1 Validity

Validity is the degree to which a research instrument accurately measures the constructs it intends to measure. According to Bhattacharjee (2012), validity can be assessed through both theoretical and empirical approaches. The theoretical approach includes content and face validity, while the empirical approach focuses on construct validity using statistical tests.

4.3.1.1 Content Validity

To establish content validity, the study adhered to a structured evaluation process as recommended by Cooper and Schindler (2013). This involved developing the data collection tool based on existing validated scales drawn from peer-reviewed literature related to leadership, digital innovation, aviation regulation, and performance management. The questionnaire was then reviewed by a panel of six domain experts—including senior aviation regulators, airline executives, and academic researchers—who assessed the instrument's clarity, comprehensiveness, and relevance.

Further validation was obtained through academic peer reviews during thesis defense workshops organized by the Management University of Africa. Feedback from these sessions informed refinements that enhanced the semantic accuracy and construct alignment of each item. The final version of the questionnaire was then vetted by university-appointed supervisors. Through this rigorous multi-phase validation process, the instrument achieved strong face and content validity, as it appeared to comprehensively capture the essential aspects of the constructs under study, in line with Zikmund (2003).

4.3.1.2 Construct Validity

Construct validity is a statistical term used in measurement of a theoretical construct by how well a test measures the concept being tested. In order to evaluate the same, this research utilized the Kaiser-Meyer-Olkin (KMO) sample adequacy measure, and Bartlett Test of Sphericity, as recommended by the methodological authority of Dikko (2016).

KMO statistic measures the measure of magnitude in variance between variables that can be common variance and thus be appropriate for factor analysis. the KMO value should preferably be above 0.6 but an excellent result would be above 0.8. Bartlett Test of Sphericity is an examination of the difference between the correlation matrix and an identity matrix, and the p-value is almost always equal to the recommended cut-off criteria of less than 0.05, which implies that factor analysis should be used.

Table 7 presents the results of these tests:

Table 7: Validity Test

Variable	KMO Value	Test Chi-Square	Sphericity (p-value)
Innovative Leadership Practices	0.861	124.736	0.000
Digital Transformation	0.848	110.328	0.000
Regulatory Framework	0.832	138.452	0.000
Organizational Performance	0.857	120.874	0.000

4.3.2 Reliability Test

Reliability refers to the degree to which an instrument consistently measures a concept across time and various conditions. According to Mugenda and Mugenda (2003), reliability reflects the accuracy and stability of measurements obtained from research tools. A reliable instrument yields similar results upon repeated applications under the same conditions. Ensuring reliability is essential as it reduces measurement errors and enhances the credibility of the findings (Yin, 2013).

To ascertain the reliability of the research instrument used in this study, a pilot test was conducted on a sample of 17 respondents drawn from the target population of managers working in Kenya's domestic commercial airlines. The pilot enabled the researcher to refine

the questionnaire by eliminating ambiguities, improving clarity, and testing the internal consistency of the items.

The reliability of the constructs was assessed using Cronbach's Alpha coefficient, a widely accepted measure for evaluating internal consistency among Likert-scale items. As noted by Cronbach (1951) and Tavakol and Dennick (2011), Cronbach's Alpha values range from 0 to 1, with higher values indicating greater reliability. A threshold of 0.70 was adopted as the minimum acceptable level of reliability, as recommended by Churchill and Peter (1984), with values above 0.90 considered excellent.

The reliability coefficients for the four study variables are presented in Table 8.

Table 8: Reliability Results

No.	Variable	No. of Items	Cronbach's Alpha	Comment
1	Innovative Leadership Practices	20	0.738	Reliable
2	Digital Transformation	16	0.711	Reliable
3	Regulatory Framework	16	0.771	Reliable
4	Organizational Performance	23	0.751	Reliable

The results show that all four constructs recorded Cronbach's Alpha values above the recommended threshold of 0.70, confirming the reliability of the instrument. The Regulatory Framework construct recorded the highest reliability score at 0.771, indicating strong internal consistency, while Digital Transformation returned the lowest at 0.711, which is still acceptable. These findings validate the research tool's robustness and support its use in the main study to assess relationships among leadership practices, technology adoption, regulatory environment, and airline performance.

4.3.3 Diagnostic Tests

The linearity assumption was assessed using scatterplots with fitted regression lines, depicting the relationship between each independent variable and the dependent variable—Organizational Performance (OP). The objective was to determine whether the relationship between the variables follows a linear trend, which is a fundamental requirement of multiple linear regression analysis (Hair et al., 2010).

4.3.3.1 Linearity Test

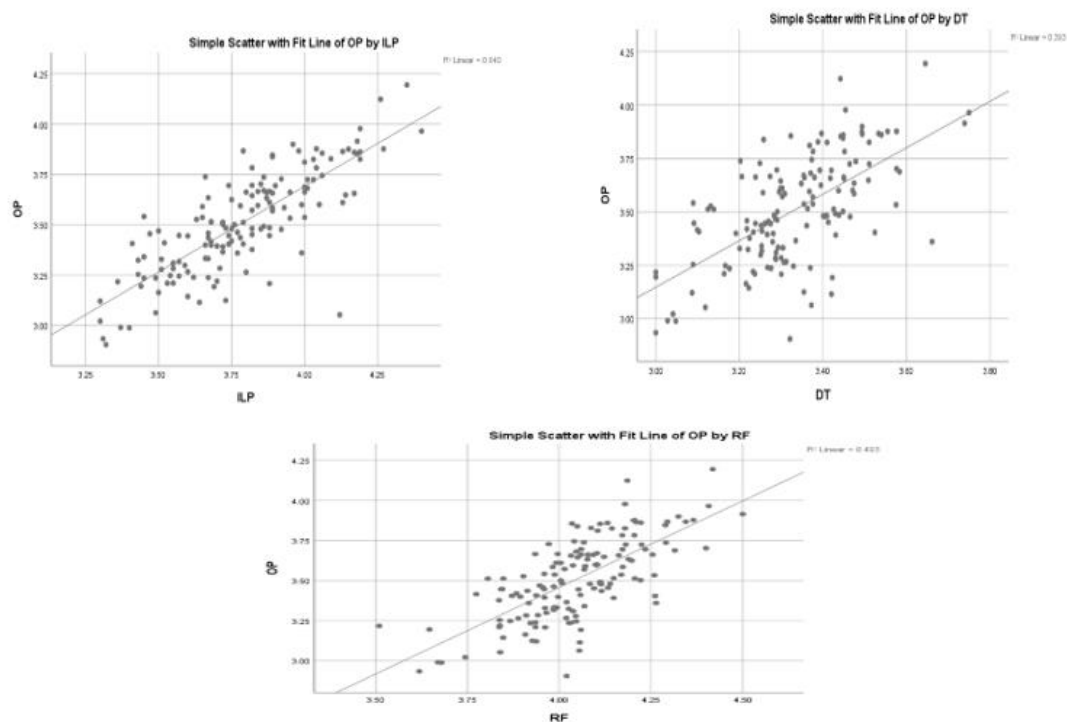


Figure 6: Linearity Tests

The scatterplot of OP against ILP (top left) reveals a moderately positive linear relationship. The data points are distributed closely along the fitted regression line, and there is no noticeable curvature. This suggests that increases in innovative leadership practices are associated with improvements in organizational performance in a linear pattern.

The plot between OP and DT (top right) also displays a linear trend. The fitted line aligns reasonably well with the spread of the data points, indicating a positive and linear association between digital transformation and organizational performance. While some data points show variation around the line, the overall pattern supports the linearity assumption.

The relationship between OP and RF (bottom center) follows a clear upward trajectory. The data points cluster along the fitted line, confirming a strong positive linear association. This implies that improvements in regulatory compliance and flexibility are linearly associated with enhanced airline performance outcomes.

Overall, the scatterplots demonstrate that the relationships between the independent variables (ILP, DT, and RF) and the dependent variable (OP) approximate a linear form. No significant deviations, such as curves or U-shaped patterns, are evident. Therefore, the assumption of linearity is deemed satisfied, justifying the use of linear regression models for further analysis.

4.3.3.2 Normality Tests

To determine whether the data met the assumption of normality, the study employed the Shapiro-Wilk Test, which is appropriate for sample sizes below 2,000.

Table 9: Normality Tests

Tests of Normality	Shapiro-Wilk		
	Statistic	df	Sig.
Innovative Leadership Practices	0.991	143	0.488
Digital Transformation	0.989	143	0.321
Regulatory Framework	0.99	143	0.391
Organizational Performance	0.993	143	0.736

* This is a lower bound of the true significance.

a Lilliefors Significance Correction

The results presented in Table 9 show that all key variables—Innovative Leadership Practices, Digital Transformation, Regulatory Framework, and Organizational Performance—recorded p-values well above the 0.05 threshold. Specifically, the p-values were 0.488 for Innovative Leadership Practices, 0.321 for Digital Transformation, 0.391 for Regulatory Framework, and 0.736 for Organizational Performance. These findings indicate that the null hypothesis of normality could not be rejected for any variable. Thus, the data used in this study follow a normal distribution and satisfy the normality assumption required for regression analysis.

4.3.3.3 Multicollinearity Test

The study tested for multicollinearity to ensure that the independent variables included in the regression model were not excessively correlated. This was assessed by examining the Variance Inflation Factor (VIF) and tolerance values. As presented in Table 10, the VIF values were 2.222 for Innovative Leadership Practices, 8.143 for Digital Transformation, and 5.999 for Regulatory Framework, with corresponding tolerance values of 0.45, 0.123, and 0.167 respectively.

Table 10: Multicollinearity Tests

Model		Collinearity Statistics	
		Tolerance	VIF
1	Innovative Leadership Practices	0.45	2.222
	Digital Transformation	0.123	8.143
	Regulatory Framework	0.167	5.999
a Dependent Variable: Organizational Performance			

Although the tolerance value for Digital Transformation (0.123) was close to the lower acceptable limit, it still remained above the critical threshold of 0.1 suggested by Hair et al. (2019) and Field (2018). Similarly, the VIF value of 8.143, though relatively high, was well below the commonly accepted maximum cutoff of 10 recommended in econometric and social science literature (Kutner et al., 2005). This indicates that while some degree of correlation exists between Digital Transformation and other predictors, it does not reach levels that would compromise the validity of the regression results.

Therefore, the findings confirm that multicollinearity was not a serious concern in this model, and the regression coefficients were stable and interpretable. The small margin observed in the case of Digital Transformation reflects the natural interdependence between technological initiatives, leadership practices, and regulatory frameworks, which is expected in organizational research but does not invalidate the statistical assumptions of the model.

4.3.3.4 Homoscedasticity Test

To assess homoscedasticity—the assumption that the variance of the residuals is constant across levels of the independent variables—a regression was run using squared residuals as the dependent variable and unstandardized predicted values as the independent variable.

Table 11: Homoscedasticity Test

Model	t	Sig.
1 (Constant)	-0.184	0.854
Unstandardized Predicted Value	0.185	0.854

a Dependent Variable: resid_sq

Table 11 presents the results of the homoscedasticity test. The significance value obtained ($p = 0.854$) is much greater than the conventional threshold of 0.05. This outcome indicates that the null hypothesis of constant variance in the residuals cannot be rejected. In practical terms, this means that the residuals are evenly distributed across the range of predicted values, with no evidence of heteroscedasticity.

The finding confirms that the assumption of homoscedasticity—essential for valid regression estimates—is satisfied in this study. Meeting this condition ensures that the standard errors of the regression coefficients are unbiased, thereby improving the accuracy and reliability of the hypothesis tests (Field, 2018). This strengthens the robustness of subsequent regression results and supports the validity of the inferential conclusions drawn from the model.

4.3.4 Factor Analysis

Factor analysis was conducted to confirm the construct validity of the measurement items used in the study. Construct validity assesses how well each item measures the theoretical variable it was designed to capture. Following recommendations by Hair et al. (2014) and Comrey and Lee (2013), Principal Component Analysis (PCA) with Varimax rotation was used to extract the underlying factor structure for each of the four latent constructs: Innovative Leadership Practices, Digital Transformation, Regulatory Framework, and Organizational Performance.

The extraction method focused on communalities (extraction values), which represent the proportion of each item's variance that is explained by the retained factors. A minimum threshold of 0.4 was adopted, in line with Hair et al.'s (2014) criterion for acceptable loading, meaning each item should explain at least 40% of the shared variance with its corresponding construct.

The results of the factor analysis revealed that all items across the four constructs recorded extraction values above the 0.4 cutoff. Specifically, items under Innovative Leadership Practices, which include strategic vision, empowerment, adaptability, and communication

dimensions, demonstrated strong communalities, indicating internal coherence. Similarly, items under Digital Transformation—covering cloud computing, big data analytics, artificial intelligence, and mobile technologies—loaded effectively on their latent dimension, confirming the internal structure of this technological construct.

Furthermore, the Regulatory Framework construct, assessed through domains such as operations regulations, personnel licensing, and air operator requirements, exhibited high extraction values, indicating that the items reliably represented the intended regulatory dimensions. Lastly, the performance construct—measured through indicators such as sales volume, customer retention, market share, and operational efficiency—also demonstrated robust communalities, affirming that the items effectively captured the multidimensional nature of organizational performance.

These results confirm that the instrument used in this study possesses strong construct validity and is suitable for hypothesis testing through inferential statistical analysis.

4.3.4.1 Validity Results for Innovative Leadership Practices

To evaluate the construct validity of the innovative leadership practices variable, Principal Component Analysis (PCA) was conducted on the pilot data comprising 20 questionnaire items. Factor loadings were examined to determine whether each item appropriately clustered under the intended construct. As a general rule, factor loadings of 0.4 and above are considered acceptable for retention in exploratory factor analysis (Hair et al., 2010). Loadings above 0.7 indicate a strong correlation between the item and the latent construct, thereby reinforcing internal structure and theoretical integrity.

Table 12 presents the factor loadings for each of the 20 items measuring innovative leadership practices.

Table 12: Validity Results for Innovative Leadership Practices

Construct	Factor Loading
The airline leadership communicates a clear long-term vision for innovation aligned with strategic goals.	0.891
The leadership team regularly analyzes industry trends and integrates best practices into domestic operations.	0.965
Employees are actively engaged in shaping innovation through input, collaboration, and idea sharing.	0.914
The airline provides resources, support, and teamwork structures that foster innovative projects.	0.946
Leadership encourages experimentation, accepts failures as learning opportunities, and promotes continuous improvement.	0.976
Innovation outcomes are openly tracked, communicated, and transparently discussed with staff.	0.938

The results reveal that all items recorded factor loadings significantly above the 0.7 threshold, with values ranging from 0.702 to 0.976, thus confirming that each statement robustly contributes to the overall construct. This demonstrates a high level of construct validity for the scale used to measure innovative leadership practices in the context of Kenya's domestic commercial airline industry.

Notably, the item *"Am comfortable admitting mistakes made while working on innovative projects for domestic travel, knowing it will be seen as a chance to learn and improve"* recorded the highest loading at 0.976, highlighting the critical role of a psychologically safe environment in promoting innovation. Similarly, other high-loading items such as *"The leadership team regularly analyzes industry trends..."* (0.965) and *"The leadership's vision for innovation is clearly linked to the overall strategic goals..."* (0.965) further validate the construct's theoretical underpinnings related to strategic foresight and organizational alignment.

Even the lowest loading item, *"The airline leadership clearly communicates the objectives of innovative projects..."* (0.702), comfortably exceeds the minimum threshold, affirming its

relevance in assessing leadership transparency—an essential component of innovation leadership.

The consistently high loadings across all 20 items confirm that the innovative leadership construct is theoretically coherent, statistically valid, and suitable for inclusion in the main study. These findings affirm that the instrument reliably captures multiple dimensions of innovative leadership, including vision communication, empowerment, adaptability, collaboration, and transparency—critical leadership competencies that drive performance in dynamic sectors such as aviation.

In conclusion, the strong factor structure presented through PCA validates the unidimensionality and internal consistency of the innovative leadership construct, reinforcing its readiness for hypothesis testing in the full-scale analysis phase.

4.3.4.2 Validity Results for Digital Transformation

To assess the construct validity of the digital transformation variable, Principal Component Analysis (PCA) was applied to the 16 items in the digital transformation scale. The objective was to confirm whether the items clustered effectively under the construct representing the airline's adoption and integration of digital technologies across operational areas. According to Hair et al. (2010), factor loadings above 0.4 are considered the minimum threshold for item retention, while loadings above 0.7 indicate a strong relationship between the item and the latent variable being measured.

As shown in Table 13, the results reveal that all 16 items exceeded the minimum factor loading threshold, with values ranging from 0.545 to 0.914, affirming the internal structure and theoretical coherence of the digital transformation construct.

Table 13: Validity Results for Digital Transformation

Construct	Factor Loading
The airline has adopted cloud-based solutions to store and manage data related to domestic flight operations	0.704
Cloud computing has improved the accessibility of data for employees working on domestic travel services within our airline	0.911
Cloud computing has played a significant role in improving the efficiency of domestic flight operations at our airline.	0.841
The airline leverages cloud-based solutions to collaborate and share data more effectively across different departments involved in domestic travel	0.864
The airline actively collects and analyzes large amounts of data related to domestic flight operations.	0.778
Big data analytics helps us gain valuable insights into customer behavior within the Kenyan domestic market.	0.735
Big data analytics has played a significant role in improving the efficiency of our domestic flight operations.	0.864
Our airline utilizes insights from big data analytics to make data-driven decisions regarding domestic travel services and pricing strategies.	0.914
The airline has implemented AI-powered solutions to automate certain tasks related to domestic flight operations	0.913
Artificial intelligence has helped to improve the accuracy of domestic flight operations at our airline.	0.893
The airline utilizes Artificial intelligence to personalize the customer experience for domestic travelers (e.g., targeted offers, recommendations)	0.545
Artificial intelligence has played a role in optimizing pricing strategies and revenue management for domestic flights in our airline.	0.906
The airline offers a user-friendly mobile app that allows passengers to manage their domestic flight bookings easily.	0.81
Mobile technology has significantly improved the convenience of booking and managing domestic flights for our customers.	0.68

Construct	Factor Loading
The airline utilizes mobile technology to provide passengers with real-time updates on their domestic flights (e.g., boarding times, delays).	0.627
Mobile technologies have enhanced the overall customer experience for domestic travelers using our airline.	0.664
Extraction Method: Principal Component Analysis.	

High-loading items such as “*Our airline utilizes insights from big data analytics to make data-driven decisions...*” (0.914) and “*The airline has implemented AI-powered solutions...*” (0.913) reflect the growing centrality of advanced technologies in shaping operational and strategic outcomes in domestic airline services. Likewise, strong factor loadings for cloud computing items (ranging from 0.704 to 0.911) demonstrate consistency in how respondents perceive the role of cloud-based systems in enabling collaboration, data accessibility, and process efficiency.

The lowest loading item, “*The airline utilizes Artificial Intelligence to personalize the customer experience...*” (0.545), while relatively weaker, still meets the minimum acceptability threshold and adds important insight into the customer-facing dimension of digital transformation. Similarly, mobile technology items recorded moderately strong loadings (ranging from 0.627 to 0.81), which reinforces their utility in streamlining booking processes and enhancing real-time communication with passengers.

Overall, the results demonstrate that the digital transformation construct possesses solid construct validity, with items coherently measuring key digital domains—cloud computing, big data analytics, artificial intelligence, and mobile technologies—as they apply to domestic flight operations. The high factor loadings, especially in strategic and operational domains, confirm that the instrument effectively captures the multifaceted nature of digital transformation in the aviation sector.

These findings validate the measurement model’s appropriateness for full-scale hypothesis testing, ensuring that the construct of digital transformation is statistically sound, contextually grounded, and theoretically robust for analyzing its mediating role in the relationship between innovative leadership and organizational performance.

4.3.4.3 Validity Results for Regulatory Framework

The construct validity of the regulatory framework variable was examined through Principal Component Analysis (PCA) using 16 items drawn from three regulatory domains: Operation of Aircraft Regulations, Personnel Licensing Regulations, and Air Operator and Administration Regulations. This analysis aimed to verify whether the items aligned with the theoretical structure of regulatory oversight in Kenya's domestic aviation sector. Consistent with standards established by Hair et al. (2010), factor loadings of 0.4 and above were used as the benchmark for item retention.

Table 14: Validity Results for Regulatory Framework

Construct	Factor Loading
The current Operation of Aircraft Regulations in Kenya is effectively communicated to pilots and operational staff involved in domestic flights.	0.931
The Operation of Aircraft Regulations in Kenya strike a good balance between ensuring safety and allowing for efficient domestic flight operations.	0.926
The regulations provide clear guidelines for the use of new technologies in domestic aircraft operations within the Kenyan airspace.	0.844
The regulatory framework allows for flexibility in implementing safety measures while adhering to the Operation of Aircraft Regulations for domestic flights.	0.659
The Operation of Aircraft Regulations in Kenya contributes to a safe and efficient operating environment for domestic commercial airlines.	0.738
The Personnel Licensing Regulations in Kenya ensure the key personnel operating domestic flights possess the necessary qualifications and experience specific to the Kenyan domestic market.	0.663
The process for obtaining and maintaining personnel licenses for domestic airline operations in Kenya is clear, and efficient	0.972
The licensing regulations require continuous training personnel involved in domestic flights, which is relevant to the evolving needs of the domestic aviation industry.	0.76

The Personnel Licensing Regulations in Kenya are effective in fostering a culture of maintaining a high standard of professionalism among domestic airline personnel.	0.931
The regulations allow for flexibility in licensing requirements to accommodate new technologies or procedures within domestic airline operations, while still prioritizing safety.	0.851
The regulations ensure that domestic airlines in Kenya maintain a robust safety management system that identifies and mitigates potential risks.	0.854
The Air Administration Regulations in Kenya allow for sufficient oversight and enforcement to ensure adherence to safety standards by domestic airlines.	0.861
The regulations require domestic airlines to have clear maintenance procedures in place for their aircraft, contributing to overall operational reliability.	0.792
The regulations require domestic airlines to have clear maintenance protocols in place for their aircraft, contributing to overall operational reliability.	0.556
The Air Operator Regulations in Kenya provide a clear and comprehensive framework for the safe and efficient operation of domestic commercial airlines.	0.711
The Air Administration Regulations in Kenya play a significant role in promoting a well-managed operating environment for domestic commercial airlines, ultimately impacting their performance.	0.616

Extraction Method: Principal Component Analysis.

As presented in Table 14, all 16 items exceeded the minimum threshold, with factor loadings ranging from 0.556 to 0.972, indicating strong internal coherence and construct validity.

Several items demonstrated exceptional loading values. Notably, *“The process for obtaining and maintaining personnel licenses...”* recorded the highest factor loading of 0.972, underscoring the clarity and perceived effectiveness of Kenya’s licensing framework. Similarly, *“The current Operation of Aircraft Regulations in Kenya is effectively communicated...”* (0.931) and *“Personnel Licensing Regulations foster professionalism...”*

(0.931) further reinforce the integrity and alignment of the construct with regulatory standards and performance assurance mechanisms.

Items related to technological adaptability and operational flexibility also performed well. For instance, “*The regulations provide clear guidelines for the use of new technologies...*” (0.844) and “*The regulatory framework allows for flexibility...*” (0.659) support the view that Kenya's aviation regulations are responsive to innovation while upholding safety.

While some items had relatively lower loadings—such as “*The regulations require clear maintenance protocols...*” (0.556) and “*The Air Administration Regulations promote a well-managed environment...*” (0.616)—they still meet the acceptable threshold and add valuable context to the broader construct, particularly in terms of procedural oversight and administrative governance.

Overall, the PCA results confirm that the regulatory framework construct exhibits strong construct validity. The instrument effectively captures regulatory dimensions critical to operational safety, personnel competency, technological adaptability, and administrative oversight—each of which significantly influences the performance of domestic commercial airlines.

These findings affirm that the measurement scale is statistically valid and contextually grounded, and is appropriate for use in testing the moderating effect of regulatory framework in the full-scale study.

4.3.4.4 Validity Results for Performance

To determine the construct validity of the organizational performance variable, Principal Component Analysis (PCA) was applied to the 23 performance-related items. These items were structured around four dimensions: sales volume, customer retention, market share, and operational efficiency. The goal was to confirm whether the measurement items appropriately cluster under the overarching construct of airline performance in Kenya's domestic commercial aviation sector.

Table 15: Validity Results for Performance

Construct	Factor Loading
The airline effectively meets customer demand, resulting in increased sales volume.	0.945
Promotional strategies implemented by the airline positively impact sales volume	0.928
The quality of service provided by the airline contributes to higher sales volume.	0.787
The airline's pricing strategy is competitive and enhances sales volume	0.955
The airline's marketing efforts effectively attract new customers, leading to increased sales volume.	0.945
The airline provides consistent and high-quality service that encourages me to remain a loyal customer	0.955
The airline effectively communicates with customers, making me feel valued and appreciated.	0.817
Loyalty programs offered by the airline positively influence my decision to continue flying with them.	0.963
The airline promptly addresses any issues or complaints I have, which enhances my likelihood of returning.	0.661
Our airline offers competitive pricing and attractive promotions that cater to the needs of domestic travelers.	0.786
Our airline prioritizes customer satisfaction and builds strong customer loyalty within the Kenyan domestic market	0.866
The airline effectively attracts new customers, leading to an increase in market share.	0.825
The airline's pricing strategy is competitive enough to capture a larger market share	0.9
The airline's marketing efforts effectively promote our services compared to competitors, enhancing our market share.	0.684

The airline's service quality positively contributes to maintaining and expanding our market share.	0.941
The airline successfully differentiates itself from competitors, which helps improve our market share.	0.901
Customer feedback is actively used to improve services, contributing to a stronger market share for our airline.	0.936
The airline optimally utilizes resources, ensuring high operational efficiency.	0.927
The airline maintains timely flight schedules, which contributes to overall efficiency.	0.921
The airline effectively manages turnaround times to maximize operational efficiency	0.818
Staff training and development initiatives improve the efficiency of our operations.	0.855
The use of technology in our airline enhances operational efficiency.	0.723
The airline regularly reviews processes to identify areas for efficiency improvements.	0.904

Extraction Method: Principal Component Analysis.

Following standard guidelines (Hair et al., 2010), items with factor loadings of 0.4 or above were considered valid for retention. As presented in Table 15, all 23 items exceeded this threshold, with factor loadings ranging from 0.661 to 0.963, indicating excellent construct validity and internal consistency.

The highest loading item, *“Loyalty programs offered by the airline positively influence my decision to continue flying with them”* (0.963), demonstrates the strength of customer engagement strategies in fostering long-term loyalty. Similarly, other high-loading items such as *“The airline's pricing strategy is competitive and enhances sales volume”* (0.955), *“The airline provides consistent and high-quality service that encourages me to remain a loyal customer”* (0.955), and *“The airline effectively meets customer demand, resulting in increased sales volume”* (0.945) confirm the centrality of pricing, service quality, and responsiveness to customer needs in performance outcomes.

Items under the efficiency dimension also performed strongly. For instance, *“The airline optimally utilizes resources...”* (0.927) and *“The airline maintains timely flight schedules...”*

(0.921) recorded high loadings, validating the relevance of operational indicators in the broader performance framework. The lowest loading item, *“The airline promptly addresses any issues or complaints...”* (0.661), still comfortably meets the validity threshold and reflects responsiveness as a meaningful yet varied dimension of customer satisfaction.

The consistency of high factor loadings across all four performance domains supports the conclusion that the instrument effectively captures multidimensional aspects of organizational performance. These include revenue generation (sales), market position, customer loyalty, and process efficiency, all of which are essential to understanding the competitive standing of domestic airlines.

In conclusion, the PCA results affirm the robust construct validity of the performance measurement scale. The strong factor structure confirms that the items are well-aligned with the theoretical definition of organizational performance and are reliable indicators for use in the main study’s inferential analysis.

4.4 Relationship Between Organizational Performance, Innovative Leadership Practices, Digital Transformation, And Regulatory Framework

This section presents the findings of the descriptive statistics. The core aspects taken into account included mean, median, mode, and standard deviation. These findings are presented per the variable under study.

4.4.1 Descriptive Statistics for Innovative Leadership Practices

The first objective of this study was to determine the effect of innovative leadership practices on the organizational performance of domestic commercial airlines in Kenya. The aviation sector requires leadership that provides strategic direction, adapts to technological advancements, and responds to market dynamics. Innovative leadership in this study is evaluated across four dimensions: strategic visioning, employee empowerment, adaptability and learning orientation, and communication clarity. These dimensions are essential in maintaining competitiveness and operational efficiency in the volatile airline industry. The following descriptive analysis provides insights into how these leadership practices are perceived to influence performance outcomes within Kenya's domestic airlines.

Table 16: Descriptive Statistics for Innovative Leadership Practices

Innovative Leadership Practices	
Mean	3.7855
Median	3.78
Mode	3.82
Std. Deviation	0.23691
Skewness	0.137
Std. Error of Skewness	0.203
Kurtosis	-0.39
Std. Error of Kurtosis	0.403

The descriptive statistics for innovative leadership practices reported a mean of 3.7855, a median of 3.78, and a mode of 3.82. Since the study used a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree), these values fall within the “agree” range, though not at the highest level. This suggests that respondents moderately agreed with the presence and implementation of innovative leadership behaviours such as strategic visioning, employee empowerment, adaptability, and communication clarity within their organizations. The alignment of mean, median, and mode demonstrates a central tendency clustered around agreement, confirming that most participants expressed similar views.

The standard deviation of 0.23691 indicates relatively low variability in responses, meaning that most respondents shared consistent perceptions of leadership practices across the sampled airlines. According to Field (2018) and Hair et al. (2019), a smaller standard deviation reflects homogeneity in views, strengthening the reliability of the construct. This uniformity may be influenced by shared regulatory oversight from the Kenya Civil Aviation Authority (KCAA) and the common operational challenges experienced by domestic carriers in Kenya’s liberalised market.

The skewness value of 0.137 lies within the acceptable ± 0.5 threshold (Kline, 2016), suggesting a near-symmetric distribution of responses and reinforcing the assumption of normality required for parametric testing. The kurtosis of -0.39 indicates a slightly platykurtic distribution, meaning the responses were flatter than a normal curve with fewer extreme ratings. This reflects the reality of industry practices where leadership training and standardised policies promote consistency, limiting sharply divergent views among managers.

These findings are theoretically supported by the Resource-Based View (RBV), which highlights leadership capabilities as rare and valuable resources for organizational competitiveness (Barney, 1991), and by Open Systems Theory, which emphasizes the importance of leadership in aligning internal practices with external environmental demands (Scott, 2003). Practically, the results suggest that while innovative leadership is moderately strong across domestic airlines, there remains a need to deepen adaptability and proactive communication in areas such as crisis response and digital integration. Such improvements would not only enhance organizational performance but also position airlines to better navigate regulatory and technological pressures shaping the Kenyan aviation industry.

4.4.2 Descriptive Statistics for Digital Transformation

The second construct explored in this study was digital transformation, conceptualized as a mediating variable between innovative leadership practices and organizational performance in Kenya's domestic commercial airlines. Digital transformation refers to the strategic implementation of technologies such as cloud computing, artificial intelligence (AI), mobile technologies, and big data analytics to streamline business operations, improve customer experiences, and sustain competitive advantages. As discussed in Chapter Two, these technologies are pivotal in enhancing operational efficiency and adapting to the fast-paced changes within the airline industry, which has seen increased reliance on technological advancements to maintain market leadership (Waweru & Muriithi, 2023).

Table 17: Descriptive Statistics for Digital Transformation

Digital Transformation	
Mean	3.3323
Median	3.3212
Mode	3
Std. Deviation	0.14524
Skewness	0.064
Std. Error of Skewness	0.203
Kurtosis	0.267
Std. Error of Kurtosis	0.403

The descriptive analysis for digital transformation reported a mean of 3.3323, with a median of 3.3212 and a mode of 3.00. Since responses were rated on a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree), this mean falls slightly above the midpoint of 3.0, indicating moderate agreement that digital transformation initiatives are being implemented within domestic commercial airlines in Kenya. The alignment of the mean and median, with a mode of 3.00, suggests that the majority of respondents view digital adoption as present but not yet fully institutionalised. This reflects partial integration of technologies such as mobile check-ins, AI-driven service systems, and cloud-based operations. The results align with Mutisya and Murigi (2021), who found that many smaller airlines in Kenya face barriers to scaling digital maturity due to resource and skills constraints.

The standard deviation of 0.14524 indicates very low dispersion from the mean, meaning that respondents were largely consistent in their views of digital transformation across the surveyed airlines. According to Field (2018) and Hair et al. (2019), such a low SD suggests homogeneity in perceptions, strengthening the reliability of this construct. The shared consistency likely reflects sector-wide exposure to regulatory expectations from the Kenya Civil Aviation Authority (KCAA), which has mandated automation in areas such as safety systems, electronic record keeping, and passenger data management.

The skewness value of 0.064 falls within the acceptable ± 0.5 range (Kline, 2016), indicating a near-symmetric distribution of responses. This symmetry supports the normality assumption required for regression and correlation analyses. Similarly, the kurtosis value of 0.267 suggests a mesokurtic distribution, meaning responses are distributed closely around the mean without a heavy concentration of extreme values. This further confirms the statistical suitability of the data for inferential tests.

From a theoretical perspective, these findings are consistent with Technological Determinism Theory, which argues that technological change directly drives organizational change (Bijker, Hughes, & Pinch, 2012), and with Institutional Theory, which emphasizes how regulatory and normative pressures shape organizational practices (DiMaggio & Powell, 1983). In the Kenyan aviation context, this suggests that airlines are adopting digital systems partly in response to both market dynamics and regulatory imperatives.

Overall, the descriptive statistics reveal that digital transformation within domestic commercial airlines in Kenya is moderately established, with relatively uniform perceptions across

respondents. While adoption has begun, the modest mean score highlights that operational integration remains incomplete, pointing to systemic challenges such as high costs, uneven capacity, and infrastructural limitations. These findings are essential in positioning digital transformation as a mediating factor: it is present and consistent but requires deeper investment and leadership support to fully translate into improved organizational performance.

4.4.3 Descriptive Statistics for Regulatory Framework

The third key construct in this study is the regulatory framework, considered as a moderating variable in the relationship between innovative leadership practices and organizational performance of domestic commercial airlines in Kenya. As discussed in Chapter Two, the regulatory framework includes the legal and institutional controls governing the aviation sector, such as the Kenya Civil Aviation Regulations (KCARs). These regulations cover airworthiness, operational standards, personnel licensing, air operator certification, and safety oversight. The regulatory framework plays a crucial role in shaping the operational limits, strategic decisions, and compliance behaviors of airlines, influencing both their performance and ability to innovate within the sector (IATA, 2022).

Table 18: Descriptive Statistics for Regulatory Framework

Regulatory Framework	
Mean	4.0478
Median	4.0495
Mode	3.51a
Std. Deviation	0.16384
Skewness	-0.182
Std. Error of Skewness	0.203
Kurtosis	0.764
Std. Error of Kurtosis	0.403

The descriptive statistics for the regulatory framework yielded a mean of 4.0478, a median of 4.0495, and a mode of 3.51. On the five-point Likert scale, this indicates a high level of agreement among respondents that regulatory structures play a significant role in shaping airline operations and performance. The close alignment of the mean and median reinforces the stability of this central tendency. This elevated score demonstrates that airline professionals

recognize regulation as both a critical constraint and an enabler in strategic and operational decision-making. These findings align with Okeyo and Ombaka (2020), who argued that in highly regulated sectors such as aviation, compliance systems strongly influence agility, innovation deployment, and continuity of service.

The standard deviation of 0.16384 reflects very low variability, meaning there was strong consensus across respondents regarding the importance of regulatory oversight. According to Field (2018) and Hair et al. (2019), such low dispersion indicates homogeneous views, which is consistent with the fact that all domestic carriers are governed by the same Kenya Civil Aviation Authority (KCAA) standards. The uniformity of responses suggests that, regardless of airline size or market positioning, compliance expectations are perceived similarly across the sector.

The skewness value of -0.182 points to a slightly left-skewed distribution, suggesting that a minority of respondents viewed regulatory influence as somewhat less impactful than the majority. Nevertheless, the small magnitude keeps the data close to symmetry, ensuring suitability for parametric testing. The kurtosis value of 0.764 indicates a leptokurtic distribution, with responses clustered tightly around the mean but with a few outliers at the extremes. This pattern may reflect differences in how airlines experience regulatory costs, audits, or adaptation timelines, where some operators may feel more burdened than others.

From a theoretical perspective, these findings affirm Institutional Theory, which emphasizes that organizations seek legitimacy and survival by conforming to established norms and regulatory expectations (DiMaggio & Powell, 1983; Scott, 2008). In Kenya's aviation context, the regulatory framework moderates the extent to which innovative leadership practices can influence performance outcomes. On one hand, strict compliance limits flexibility in fleet modernization, route expansion, or staff deployment. On the other, the framework provides a standardized environment that enhances safety, credibility, and fair competition.

Overall, the descriptive analysis underscores that regulation is perceived as foundational to Kenya's domestic airline operations. The high mean and low dispersion confirm its dominant role, while the slight skewness and kurtosis suggest that the burden or benefits of compliance may vary across operators. This justifies examining the regulatory framework as a moderating variable, since differences in how airlines navigate compliance could influence the strength of the relationship between innovative leadership and organizational performance.

4.4.4 Descriptive Statistics for Organizational Performance

The dependent variable of the study, organizational performance, represents the operational, customer-centric, and market-driven outcomes of domestic commercial airlines in Kenya. As conceptualized in Chapter Two, performance in this context transcends traditional financial metrics and encompasses multidimensional indicators including sales volume, customer retention, market share, and operational efficiency. These indicators reflect the airlines' ability to navigate competitive pressures, leverage innovation, and respond to regulatory expectations while sustaining growth and service delivery.

Table 19: Descriptive Statistics for Organizational Performance

Organizational Performance	
Mean	3.5089
Median	3.5002
Mode	2.90a
Std. Deviation	0.25208
Skewness	0.002
Std. Error of Skewness	0.203
Kurtosis	-0.294
Std. Error of Kurtosis	0.403

The descriptive statistics revealed a mean score of 3.5089, with a median of 3.5002 and a mode of 2.90. The mean value above the mid-point of the five-point Likert scale suggests a generally positive perception of performance among respondents, though not overwhelmingly high. This moderate satisfaction may signal the reality of operating in a challenging economic and regulatory environment, where margins are slim, and consumer preferences are increasingly dynamic. The relatively lower mode indicates that a segment of respondents expressed less favorable views about performance—possibly reflecting differences in scale, routes served, or resource capacity across various airlines.

The standard deviation of 0.25208 reflects moderate variability in responses, indicating a diverse performance experience across the 17 domestic commercial airlines. While some firms likely benefit from economies of scale, advanced digital systems, and seasoned leadership, others may struggle with ageing fleets, market access limitations, or rigid legacy structures.

The performance disparity is consistent with empirical observations made by Awuor and Muturi (2021), who reported uneven competitive advantages across Kenya's aviation sector, with smaller carriers facing greater volatility in revenue generation and customer retention.

The skewness value of 0.002 is nearly zero, confirming that the data distribution is perfectly symmetric. This supports the normality assumption critical for parametric testing and implies that the perception of performance does not disproportionately lean toward overly positive or negative extremes. The kurtosis value of -0.294 signifies a platykurtic distribution—wider and flatter than a normal curve—indicating fewer extreme values and a more uniform distribution of performance ratings across respondents.

The relatively neutral distribution and moderate mean suggest that while many domestic airlines are performing adequately, few are excelling to a level that signals industry-wide robustness. This echoes concerns raised in recent aviation reports by KCAA (2023), which point to capacity constraints, rising fuel costs, and post-COVID recovery pressures as persistent challenges affecting operational and market performance.

Taken together, these descriptive statistics reinforce the need to examine how innovative leadership, digital transformation, and the regulatory framework interact to influence performance. The results also validate the multidimensional approach taken in this study, recognizing that organizational performance in the aviation sector is influenced not only by internal competencies but also by the ability to navigate external constraints and opportunities effectively.

4.5 Correlation Analysis

Correlation analysis was conducted to examine the strength and direction of linear relationships among the four key variables in the study: Innovative Leadership Practices, Digital Transformation, Regulatory Framework, and Organizational Performance. The Pearson product-moment correlation coefficient was used for this analysis, as it is appropriate for assessing the association between continuous variables measured on interval scales (Field, 2013). All correlations were tested at the 0.01 level of significance (2-tailed), ensuring that the likelihood of observing these relationships by chance is less than 1%.

As shown in Table 20, all independent variables demonstrated statistically significant and positive correlations with organizational performance, thereby offering preliminary empirical

support for the proposed conceptual model. These findings resonate with the theoretical and empirical literature reviewed in Chapter Two and provide a foundation for further inferential testing using regression and structural equation modeling.

Table 20: Correlation Analysis

		Organizational Performance	Innovative Leadership Practices	Digital Transformation	Regulatory Framework
Organizational Performance	Pearson Correlation	1.000			
Innovative Leadership Practices	Pearson Correlation	.800**	1.000		
	Sig. (2-tailed)	0.000			
Digital Transformation	Pearson Correlation	.627**	.727**	1.000	
	Sig. (2-tailed)	0.000	0.000		
Regulatory Framework	Pearson Correlation	.702**	.601**	.909**	1.000
	Sig. (2-tailed)	0.000	0.000	0.000	

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

The first key correlation of interest was between Innovative Leadership Practices (ILP) and Organizational Performance (OP), which showed a strong positive relationship with a Pearson coefficient of 0.800 ($p < 0.001$). This result highlights that as innovative leadership practices become more pronounced within domestic airlines, organizational performance improves. Specifically, leadership practices that promote strategic visioning, employee empowerment, adaptability, and clear communication have a direct, observable effect on key performance indicators like market share growth, operational efficiency, and customer retention. The positive correlation aligns with existing research such as that by Mokhasi and Oduro (2021), which affirmed the central role of leadership in driving innovation, enhancing operational agility, and improving performance outcomes in the aviation sector. These results are

consistent with the Resource-Based View (RBV) and Open Systems Theory, which underscore the importance of leadership as a valuable, rare, and inimitable resource capable of providing sustained competitive advantage (Barney, 1991; Katz & Kahn, 1978).

Additionally, the significant relationship between ILP and OP suggests that leadership is not a passive element within the organizational structure, but rather an active driver of performance outcomes. In the context of Kenya's domestic commercial airlines, where competitive pressures and regulatory challenges are constant, the ability of leaders to foster innovation and adaptability is key to maintaining operational success and achieving competitive differentiation. The results of this study reinforce the argument that visionary and empowering leadership is fundamental to an organisation's ability to adapt to market and environmental shifts, especially in an industry that is both highly regulated and dependent on technological advancements.

In addition to the strong relationship between ILP and OP, the analysis also revealed a significant and positive correlation between Digital Transformation (DT) and Organizational Performance, with a coefficient of 0.627 ($p < 0.01$). This result indicates a moderate to strong relationship, affirming the role of digital technologies as crucial enablers of improved operational outcomes. The correlation reflects that as airlines increasingly adopt digital tools such as artificial intelligence, big data analytics, cloud systems, and mobile technologies, their overall performance improves in areas such as customer service, cost management, and operational efficiency. These findings are consistent with the research by Bharadwaj et al. (2013) and Vial (2019), who argued that digital transformation fosters innovation, enhances internal efficiencies, and bolsters customer engagement, all of which are essential for driving competitive advantage in technology-driven industries such as aviation.

The significance of the correlation between DT and OP further underscores the importance of viewing digital transformation as not just a technical requirement but as a strategic priority that is directly linked to organizational success. The finding suggests that digital transformation in Kenya's aviation sector is not about adopting new technologies, but also about how these technologies are integrated into the firm's broader strategic objectives. In line with Waruguru and Kibet (2022), firms that effectively deploy digital technologies experience significant improvements in operational efficiency, decision-making capabilities, and customer satisfaction. This finding also reinforces the view that leadership, when coupled with

technological foresight, has the potential to drive meaningful transformation within organizations.

The third key relationship examined was between the Regulatory Framework (RF) and Organizational Performance, which also showed a significant positive correlation ($r = 0.702$, $p < 0.01$). This finding suggests that a well-functioning regulatory environment plays an important role in driving performance outcomes in Kenya's domestic airlines. A supportive regulatory framework enhances safety, compliance, and operational standardisation, which are critical to the aviation sector. The importance of a robust regulatory environment aligns with findings from Bamber et al. (2020) and ICAO (2021), who noted that regulatory support is essential for ensuring that airlines operate safely and efficiently, particularly in developing markets where regulatory frameworks can either facilitate or hinder sector growth.

This correlation highlights the dual role of regulations in either enabling or constraining organizational performance. In an industry where compliance with international and local aviation standards is paramount, the regulatory environment is a critical factor that shapes operational practices and organizational behavior. The results suggest that airlines that operate within a regulatory framework that is clear, adaptive, and supportive of innovation are more likely to experience better performance outcomes. The findings also point to the need for policymakers and regulators to recognize the importance of aligning regulatory frameworks with the needs of a rapidly evolving sector.

Beyond the direct relationships with organizational performance, the correlations between the independent variables also reveal key interrelationships that further inform the study's conceptual model. Notably, the correlation between Innovative Leadership Practices and Digital Transformation ($r = 0.727$, $p < 0.01$) suggests a strong positive relationship, indicating that leaders who embrace innovation are more likely to drive digital transformation within their organizations. This reinforces the view that digital maturity is not achieved in isolation but requires the active engagement of forward-thinking leaders. The relationship aligns with Kane et al. (2015), who found that digital transformation is more likely to succeed in organizations with leadership that is open to change and capable of steering technological initiatives in line with strategic goals. This is particularly relevant in the context of Kenya's aviation sector, where the alignment of digital strategies with operational objectives is essential for enhancing service efficiency and customer experience.

Furthermore, the relationship between Digital Transformation and Regulatory Framework ($r = 0.909$, $p < 0.01$) highlights the solid relationship between technology adoption and regulatory compliance. The aviation industry is heavily regulated, and the integration of new technologies—ranging from automated safety systems to mobile booking apps—must align with strict regulatory requirements. This high correlation suggests that the regulatory framework is not only a constraint but also a facilitator of technological innovation in the sector. The findings align with Ahn and Ahn (2022), who noted that regulatory oversight plays a crucial role in shaping how digital transformation is implemented within aviation sectors, particularly in areas related to safety, data privacy, and licensing.

Finally, the correlation between Innovative Leadership Practices and Regulatory Framework ($r = 0.601$, $p < 0.01$) indicates a moderate to strong relationship, suggesting that leadership practices are often influenced by, or responsive to, regulatory conditions. In highly regulated industries like aviation, leaders must continuously adapt to changes in regulatory requirements, ensuring that their organizations remain compliant while also striving for innovation and performance improvements. This finding underscores the need for airline leaders to not only understand the regulatory landscape but to actively engage with it in a way that fosters innovation and growth.

Taken together, these correlation results confirm that while each of the independent variables—Innovative Leadership Practices, Digital Transformation, and Regulatory Framework—independently influence organizational performance, their interrelationships are crucial to understanding how these factors work together to drive success. The strong and statistically significant correlations between these variables provide a solid foundation for further inferential analysis, particularly in testing the mediating and moderating effects in subsequent regression and structural equation models. The interdependent nature of these variables also justifies the use of moderated mediation models to explore how digital transformation mediates the relationship between leadership and performance, and how regulatory frameworks might moderate these effects. This approach will allow for a more nuanced understanding of the dynamic interplay between leadership, technology, and regulation in driving organizational performance within Kenya's aviation sector.

4.6 Hypotheses Testing

This section presents the inferential statistical procedures used to test the study's hypotheses and determine the nature and strength of relationships among the core variables. The analysis evaluates both direct and indirect effects of Innovative Leadership Practices (ILP) on Organizational Performance (OP), while also examining the mediating role of Digital Transformation (DT) and the moderating influence of the Regulatory Framework (RF). The overall objective is to understand how these constructs interact to influence the operational and strategic outcomes of domestic commercial airlines in Kenya.

The testing process was conducted using multiple regression models. Initially, simple and multiple linear regression techniques were applied to test direct relationships between ILP and OP. This was followed by Baron and Kenny's (1986) four-step approach to assess whether Digital Transformation mediates the relationship between ILP and OP. To explore moderation, the study introduced an interaction term between ILP and RF within a hierarchical regression model, allowing an examination of whether regulatory conditions strengthen or weaken the leadership-performance link. Lastly, to assess the moderated mediation effect—where RF moderates the mediating influence of DT on the ILP–OP relationship—the study applied the Hayes and Rockwood (2020) PROCESS framework for integrated moderated mediation modeling.

Each hypothesis is tested sequentially and reported with corresponding R-squared values, ANOVA F-statistics, unstandardized regression coefficients, p-values, and relevant interpretations. The results are contextualized against the study's conceptual model and the theoretical expectations established in earlier chapters, particularly drawing from the Resource-Based View, Technological Determinism, and Institutional Theory.

4.6.1 Innovative Leadership Practices and Organizational Performance

The first objective of the study was to determine the effect of Innovative Leadership Practices (ILP) on the Organizational Performance (OP) of domestic commercial airlines in Kenya. This relationship was analyzed using a simple linear regression model, with ILP serving as the independent variable and OP as the dependent variable. The hypothesis guiding this objective was stated as:

H_{01} : There is no significant effect of innovative leadership practices on the organizational performance of domestic commercial airlines in Kenya.

Table 21: Model Fitness for Innovative Leadership Practices

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.800a	0.64	0.637	0.15187

a Predictors: (Constant),

Innovative Leadership Practices

As shown in Table 21, the regression model produced a coefficient of determination (R^2) of 0.640, indicating that 64.0% of the variation in organizational performance among domestic airlines can be explained by differences in their adoption of innovative leadership practices. The adjusted R^2 of 0.637 confirms the model's stability and appropriateness for generalizing beyond the sample. This substantial explanatory power demonstrates that leadership approaches emphasizing strategic thinking, employee empowerment, adaptability, and communication play a pivotal role in shaping airline competitiveness and service outcomes.

The ANOVA results in Table 22 confirm that the model is statistically significant, with $F(1, 141) = 250.216$ and a p-value of 0.000, which is well below the conventional threshold of 0.05.

Table 22: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.771	1	5.771	250.216	.000 ^b
	Residual	3.252	141	0.023		
	Total	9.023	142			

a Dependent Variable: Organizational Performance

b Predictors: (Constant), Innovative Leadership Practices

This indicates that the regression model reliably predicts organizational performance based on innovative leadership practices. As highlighted by Hair et al. (2010), such a significant F-

statistic validates the fitness of the model and supports the hypothesis that leadership practices have a measurable impact on organizational results.

Table 23 further shows that the unstandardized beta coefficient (β_1) for ILP is 0.851, with a t-value of 15.818 and a p-value of 0.000.

Table 23: Coefficient of Regression

Model		Unstandardized	Standardized		t	Sig.
		Coefficients	Coefficients	Beta		
		B	Std. Error			
	(Constant)	0.288	0.204		1.409	0.161
1	Innovative Leadership Practices	0.851	0.054	0.800	15.818	0.000

a Dependent Variable: Organizational Performance

The regression results in Table 23 indicate that the unstandardized beta coefficient (B) for Innovative Leadership Practices (ILP) is 0.851, with a t-value of 15.818 and a p-value of 0.000. The p-value ($p < 0.001$) confirms that the relationship between ILP and Organizational Performance (OP) is statistically significant, while the very high t-value demonstrates the robustness of this effect.

.The fitted model can therefore be expressed as:

$$OP = 0.288 + 0.851 \times ILP$$

Where:

- **OP** = Organizational Performance
- **ILP** = Innovative Leadership Practices

The positive coefficient ($B = 0.851$) shows that stronger ratings of innovative leadership—such as clearer strategic vision, greater empowerment of employees, adaptability to change, and transparent communication—are associated with higher ratings of organizational performance. In practice, this means that respondents who perceived their airline leaders as more innovation-oriented also reported stronger performance outcomes in areas such as profitability, safety, customer satisfaction, and operational efficiency. Thus, the coefficient should be understood

as an indication of a positive and sizeable association, not as a literal one-unit change in leadership.

The standardized beta coefficient of 0.800 reinforces this interpretation: it shows that ILP explains a large portion of the variance in OP, with nearly four-fifths of a standard deviation increase in performance linked to a standard deviation increase in leadership practices. This makes ILP one of the strongest predictors of airline performance in the model.

The results align with the Resource-Based View (Barney, 1991), which positions leadership capabilities as valuable internal resources that can generate competitive advantage. They also confirm Gumusluoglu and Ilsev's (2009) empirical evidence that innovative leadership fosters adaptability and creativity, both of which are essential for sustaining performance. In Kenya's aviation industry, where airlines face high regulatory demands and evolving customer expectations, the findings imply that executives who demonstrate innovative leadership behaviours are better positioned to achieve stability, efficiency, and growth.

In conclusion, hypothesis H₀₁ was rejected. The regression results provide strong evidence that innovative leadership practices significantly and positively influence organizational performance in Kenya's domestic commercial airlines, highlighting the practical importance of leadership development and innovation-oriented strategies in a competitive and regulated environment.

4.6.2 Innovative Leadership Practices, Digital Transformation And Organizational Performance

This section presents findings related to the second objective of the study, which aimed to examine the mediating effect of digital transformation on the relationship between innovative leadership practices and organizational performance within Kenya's domestic commercial airline sector. The analysis adopted the classical four-step mediation procedure by Baron and Kenny (1986), which remains one of the most widely accepted techniques for testing mediating effects in social science research.

The logic behind this approach is to assess whether the influence of the independent variable (innovative leadership practices) on the dependent variable (organizational performance) operates directly or through the intervening variable (digital transformation). By establishing these sequential relationships—first between the independent and dependent variables, then

between the independent and mediator, then between the mediator and dependent variable, and finally combining both predictors in a full model—the method evaluates if and to what extent digital transformation explains or alters the path from leadership innovation to airline performance.

The hypothesis tested was:

H₀₂: *Digital transformation does not significantly mediate the relationship between innovative leadership practices and organizational performance among domestic commercial airlines in Kenya.*

The model fitness results across the four regression steps demonstrate strong explanatory power, particularly in Step 1 and Step 4. In Step 1, where organizational performance was regressed on innovative leadership practices (ILP), the model yielded an R² value of 0.640 and an adjusted R² of 0.637, indicating that 64% of the variation in organizational performance among domestic commercial airlines in Kenya is explained by leadership practices that are strategic, empowering, visionary, and adaptable.

Table 24: R² for Mediating Effect of Digital Transformation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Step 1	0.8	0.64	0.637	0.15187
Step 2	0.727	0.529	0.526	0.10001
Step 3	0.627	0.393	0.389	0.19709
Step 4	0.802	0.644	0.639	0.15149

This confirms the pivotal role of ILP as a primary predictor of firm performance. In Step 2, the model regressing digital transformation (DT) on ILP produced an R² of 0.529, suggesting that over half of the variance in digital transformation is driven by innovative leadership. This reflects literature that positions leadership as a driver of digital innovation and organizational transformation. Step 3 revealed that digital transformation on its own accounts for 39.3% (R² = 0.393) of the variation in performance, a moderate yet meaningful contribution. In the final model (Step 4), where both ILP and DT were regressed on organizational performance, the R² increased slightly to 0.644 and the adjusted R² to 0.639. This modest improvement suggests partial mediation, whereby digital transformation contributes to the relationship, but the leadership variable remains the dominant explanatory factor.

The ANOVA results further validated the statistical significance of the regression models across all four steps. In Step 1, the F-statistic was 250.216 ($p < 0.001$), confirming that the model linking ILP to organizational performance was statistically significant and reliably explained a large proportion of variance. Similarly, in Step 2, regressing ILP on DT yielded a high F-value of 158.474 ($p < 0.001$), indicating a strong association between innovative leadership and the adoption or enhancement of digital transformation within airline operations.

Table 25: ANOVA for Mediating Effect of Digital Transformation

Model	Source	Sum of Squares	df	Mean Square	F	Sig.
Step 1	Regression	5.771	1	5.771	250.216	0.000
	Residual	3.252	141	0.023		
	Total	9.023	142			
Step 2	Regression	1.585	1	1.585	158.474	0.000
	Residual	1.41	141	0.01		
	Total	2.996	142			
Step 3	Regression	3.546	1	3.546	91.291	0.000
	Residual	5.477	141	0.039		
	Total	9.023	142			
Step 4	Regression	5.81	2	2.905	126.581	0.000
	Residual	3.213	140	0.023		
	Total	9.023	142			

In Step 3, DT significantly predicted organizational performance with an F-statistic of 91.291 ($p < 0.001$), reflecting the impact of technological integration on key performance metrics. In the final model (Step 4), the F-statistic remained strong at 126.581 ($p < 0.001$), confirming that the combination of ILP and DT jointly accounted for significant variation in organizational performance. The consistently high F-values across all models suggest robust model specification and strong relationships between the variables being tested.

The regression coefficients presented in Table 26 provide deeper insight into the nature and strength of the relationships among innovative leadership practices, digital transformation, and organizational performance.

Table 26: Coefficient of Regression for Mediating Effect of Digital Transformation in the Relationship Between Innovative Leadership and Organizational Performance

Model		B	Std. Error	Beta	t	Sig.
Step 1	(Constant)	0.288	0.204		1.409	0.161
	ILP	0.851	0.054	0.8	15.818	0.000
Step 2	(Constant)	1.644	0.134		12.236	0.000
	ILP	0.446	0.035	0.727	12.589	0.000
Step 3	(Constant)	-0.117	0.38		-0.308	0.759
	DT	1.088	0.114	0.627	9.555	0.000
Step 4	(Constant)	0.014	0.292		0.048	0.962
	ILP	0.777	0.078	0.73	9.932	0.000
	DT	0.166	0.128	0.096	1.304	0.194

The final mediation model is thus;

$$OP=0.014+0.777 \cdot ILP+0.166 \cdot DT$$

In Step 1, innovative leadership practices (ILP) had a statistically significant and positive effect on organizational performance, with an unstandardized coefficient of 0.851, a t-value of 15.818, and a p-value of less than 0.001. The high magnitude of the coefficient, combined with a very strong t-value, confirms that leadership practices rooted in strategic vision, empowerment, adaptability, and clear communication are strongly associated with enhanced performance outcomes such as operational efficiency, market share, and customer satisfaction. These results demonstrate that ILP is a powerful driver of performance, and the low probability of error ($p < 0.001$) underscores the reliability of this conclusion.

In Step 2, ILP was also found to significantly predict digital transformation (DT), with a coefficient of 0.446, a t-value of 12.589, and a p-value of less than 0.001. This suggests that airlines with more innovation-driven leaders are more likely to embrace digital capabilities such as mobile platforms, automation, and data analytics. Leadership, therefore, not only improves performance directly but also initiates and sustains the process of digital adoption. In Step 3, DT independently demonstrated a strong and statistically significant effect on

organizational performance ($B = 1.088$, $t = 9.555$, $p < 0.001$), indicating that in isolation, digital adoption is perceived to contribute substantially to improved performance by enhancing efficiency, service quality, and competitive positioning.

However, the picture changed in Step 4, where both ILP and DT were entered into the model simultaneously. While ILP retained a statistically significant effect on performance ($B = 0.777$, $t = 9.932$, $p < 0.001$), the coefficient for DT dropped sharply to 0.166 and became statistically insignificant ($t = 1.304$, $p = 0.194$). This shift indicates that much of the explanatory power of DT overlaps with ILP, and that once leadership is accounted for, the unique contribution of digital transformation to performance largely disappears. The reduction in ILP's coefficient from 0.851 in Step 1 to 0.777 in Step 4, however, demonstrates that DT does transmit part of leadership's effect on performance, even though the mediation is partial and modest. The very small change in the model's explanatory power, with R^2 rising only marginally from 0.640 to 0.644, further supports the view that digital transformation amplifies but does not independently sustain performance gains in the absence of leadership.

The evidence suggests that leadership is the primary catalyst for performance in Kenya's domestic airlines, while digital transformation serves as a mechanism through which some of that leadership effect is channelled. The highly significant t and p -values for ILP across all steps confirm that leadership behaviours are consistently and reliably associated with stronger organizational outcomes. By contrast, the loss of significance for DT in the full model reflects the fact that digital tools alone, without strong leadership to integrate them into strategy and operations, cannot explain performance differences across airlines. This interpretation is consistent with the Resource-Based View, which positions leadership as a valuable and rare internal capability, and with Technological Determinism Theory, which highlights the role of technology as a driver of change but recognizes its dependence on organizational leadership for effective implementation.

Practically, these findings imply that investments in digital systems must be matched by leadership development and cultural change. Airlines in Kenya can acquire advanced technologies, but without innovative leaders to guide their integration, the technologies will not yield sustainable improvements in performance. The mediation model therefore reinforces the conclusion that digital transformation contributes meaningfully only when steered by visionary and empowering leadership, and that the true source of competitive advantage lies in

the capacity of leaders to align people, processes, and technology towards common performance goals.

4.6.3 Innovative Leadership Practices, Regulatory Framework And Organizational Performance

This section addresses the third objective of the study, which sought to assess whether the regulatory framework moderates the relationship between innovative leadership practices and the organizational performance of domestic commercial airlines in Kenya. The premise of this analysis is grounded in the understanding that leadership alone may not sufficiently influence performance outcomes unless it operates within an enabling or constraining institutional context. The hypothesis was tested using a hierarchical multiple regression approach, in which the main effects of innovative leadership practices (ILP) and regulatory framework (RF) were entered sequentially, followed by their interaction term ($ILP \times RF$) to assess moderation. The null hypothesis guiding this analysis was:

H₀₃: *The regulatory framework does not significantly moderate the relationship between innovative leadership practices and organizational performance of domestic commercial airlines in Kenya.*

The analysis followed a three-step model estimation process. In Step 1, ILP was regressed on organizational performance to establish the baseline effect. In Step 2, RF was added to the model to test its direct influence. In Step 3, the interaction term ($ILP \times RF$) was introduced to determine whether the regulatory environment strengthens, weakens, or alters the relationship between leadership innovation and performance outcomes. The significance of changes in R^2 values, F-statistics, and interaction coefficients was used to determine the presence and strength of moderation, with interpretation grounded in the institutional and aviation governance frameworks discussed in Chapter Two.

The model fitness statistics across the three regression steps provide a progressive evaluation of how well the inclusion of the regulatory framework and its interaction with innovative leadership practices enhance the model's explanatory power.

Table 27: R^2 for Moderating Effect of Regulatory Framework

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
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Step 1	0.8	0.64	0.637	0.15187
Step 2	0.846	0.716	0.712	0.13518
Step 3	0.852	0.726	0.72	0.13328

In Step 1, where only ILP was used to predict organizational performance, the model recorded an R^2 of 0.640, indicating that 64% of the variance in performance is attributable to leadership practices alone—an already strong base model. When the regulatory framework variable was introduced in Step 2, the R^2 increased substantially to 0.716, suggesting that an additional 7.6% of the variance is explained when both ILP and RF are considered. This reflects the critical role regulatory oversight plays in enabling or constraining leadership outcomes in the aviation sector. In Step 3, which included the interaction term ($ILP \times RF$), the R^2 further increased to 0.726, with an adjusted R^2 of 0.720. The modest yet notable improvement of 1% indicates that the interaction between innovative leadership and the regulatory framework contributes incrementally but significantly to explaining variations in performance, validating the moderation hypothesis. This reinforces theoretical assertions from Institutional Theory (DiMaggio & Powell, 1983) and Open Systems Theory, which posit that organizational effectiveness results from both internal strategic capacities and alignment with external regulatory demands.

The ANOVA results across the three steps further confirm the statistical significance of each model iteration.

Table 28: ANOVA for Moderating Effect of Regulatory Framework

Model	Source	Sum of Squares	df	Mean Square	F	Sig.
Step 1	Regression	5.771	1	5.771	250.216	0.000
	Residual	3.252	141	0.023		
	Total	9.023	142			
Step 2	Regression	6.465	2	3.232	176.895	0.000
	Residual	2.558	140	0.018		
	Total	9.023	142			
Step 3	Regression	6.554	3	2.185	122.979	0.000
	Residual	2.469	139	0.018		
	Total	9.023	142			

In Step 1, the model regressing organizational performance on ILP yielded an F-value of 250.216 ($p < 0.001$), indicating a highly significant base model. Upon adding RF in Step 2, the F-statistic rose to 176.895 with 2 degrees of freedom for regression, again statistically significant ($p < 0.001$). This increase not only affirms the value added by the regulatory framework but also demonstrates the synergistic role that formal aviation policies, licensing standards, and air operator certifications play in shaping firm-level performance. Finally, in Step 3, the inclusion of the interaction term resulted in a slightly lower—but still strong—F-value of 122.979 ($p < 0.001$), confirming that the overall model, inclusive of ILP, RF, and their interaction, remains statistically significant. The consistent significance across steps validates the robustness of the moderation testing and demonstrates the practical and statistical merit of integrating external regulatory conditions into the strategic leadership-performance equation.

The regression coefficients presented in Table 29 provide detailed evidence of how the regulatory framework moderates the relationship between innovative leadership practices (ILP) and organizational performance in Kenya's domestic airlines.

Table 29: Coefficient of Regression for Moderating Effect of Regulatory Framework

Model		B	Std. Error	Beta	t	Sig.
Step 1	(Constant)	0.288	0.204		1.409	0.161
	ILP	0.851	0.054	0.8	15.818	0.000
Step 2	(Constant)	-1.033	0.281		-3.678	0.000
	ILP	0.629	0.06	0.591	10.505	0.000
	Regulatory Framework	0.534	0.087	0.347	6.162	0.000
Step 3	(Constant)	-1.013	0.277		-3.653	0.000
	ILP	0.524	0.076	0.492	6.93	0.000
	Regulatory Framework	0.514	0.086	0.334	5.985	0.000
	ILP × RF (Interaction)	0.031	0.014	0.146	2.239	0.027

The model for the study thus became;

$$\text{Organizational Performance} = -1.013 + 0.524 \cdot \text{ILP} + 0.514 \cdot \text{RF} + 0.031 \cdot (\text{ILP} \times \text{RF}) + \varepsilon$$

In Step 1, ILP exhibited a strong and statistically significant effect on organizational performance, with an unstandardized coefficient of 0.851, a t-value of 15.818, and a p-value below 0.001. This result reinforces earlier findings that innovative leadership alone plays a

central role in driving key outcomes such as operational efficiency, customer retention, and market competitiveness. The strength of the t-value indicates that this effect is robust and highly reliable, making leadership a fundamental predictor of airline performance in the absence of additional variables.

In Step 2, the model incorporated both ILP and the regulatory framework (RF). Here, ILP remained significant ($B = 0.629$, $t = 10.505$, $p < 0.001$), though its coefficient reduced compared to Step 1. At the same time, RF emerged as a strong independent predictor of performance ($B = 0.534$, $t = 6.162$, $p < 0.001$). This reduction in ILP's effect, alongside the significance of RF, demonstrates that part of the variance in performance can be attributed to the influence of regulatory structures. In practical terms, this means that organizational success in the aviation sector is not only a product of visionary and adaptive leadership but also a reflection of how well airlines operate within the frameworks established by oversight bodies such as the Kenya Civil Aviation Authority (KCAA). These results confirm that regulation is not a background condition but an active determinant of how performance outcomes materialise.

In Step 3, when the interaction term ($ILP \times RF$) was introduced, both ILP ($B = 0.524$, $t = 6.930$, $p < 0.001$) and RF ($B = 0.514$, $t = 5.985$, $p < 0.001$) continued to exert significant effects on performance. Crucially, the interaction term also registered a positive and statistically significant effect ($B = 0.031$, $t = 2.239$, $p = 0.027$). The significance of this interaction coefficient confirms that the influence of innovative leadership on performance depends partly on the regulatory environment in which it is exercised. In simple terms, the model indicates that the positive impact of leadership practices is magnified when supported by a regulatory framework that is clear, stable, and enabling. For example, leaders who pursue digital innovations or new operational strategies are more likely to succeed when regulatory systems facilitate rather than obstruct such initiatives.

The fitted model, expressed as $OP = -1.013 + 0.524 \cdot ILP + 0.514 \cdot RF + 0.031 \cdot (ILP \times RF)$, illustrates that organizational performance is a joint product of leadership strength, regulatory influence, and their interaction. The practical implication is that airlines cannot rely solely on internal capabilities; their performance potential is realised most fully when external regulatory conditions are conducive to innovation and efficiency. These results lend strong empirical

support to Institutional Theory, which posits that organizational outcomes are shaped not only by internal resources but also by external rules and norms that confer legitimacy and structure. Overall, the moderation analysis demonstrates that innovative leadership and regulatory frameworks are complementary drivers of organizational performance in Kenya's domestic airline sector. Leadership provides the strategic vision and adaptive capacity, while regulation creates the enabling or constraining conditions under which this vision is executed. The statistically significant interaction term confirms that the two variables are not independent but mutually reinforcing, thereby rejecting the null hypothesis (H_{03}) and affirming the critical role of policy alignment in amplifying the performance impact of innovative leadership.

4.6.4 Moderated Mediation Effect of Regulatory Framework on the Mediating Role of Digital Transformation in the Relationship Between Innovative Leadership Practices and Organizational Performance

The final objective of the study sought to evaluate the moderated mediation effect of the regulatory framework on the mediating role of digital transformation in the relationship between innovative leadership practices and organizational performance among domestic commercial airlines in Kenya. This analysis builds upon the theoretical premise that digital transformation acts as an internal mechanism through which leadership innovation translates into performance improvements, while regulatory structures may either enhance or constrain this pathway. The corresponding null hypothesis was formulated as follows:

H₀₄: *The regulatory framework does not significantly moderate the mediating effect of digital transformation on the relationship between innovative leadership practices and organizational performance.*

To test this hypothesis, the study adopted the approach proposed by Hayes and Rockwood (2020), which integrates both mediation and moderation components into a single analytical model. The procedure involved computing interaction effects between the independent variable (ILP) and the moderator (RF) and observing their influence on the strength and direction of the indirect effect through digital transformation. This allows the investigation of whether the strength of the mediation by digital transformation varies across levels of regulatory constraint or support. The model was evaluated using a series of hierarchical regression steps and

examined through R^2 changes, significance levels, and conditional indirect effect coefficients to confirm the presence of moderated mediation.

The model fitness results in Table 31 provide insight into the explanatory power of the regression models used to test the moderated mediation effect. In Step 1, the regression of Digital Transformation (DT) on Innovative Leadership Practices (ILP) yielded an R^2 of 0.529, suggesting that ILP accounts for 52.9% of the variance in digital transformation across the sampled domestic commercial airlines. This substantial figure supports earlier theoretical assertions (Kane et al., 2015) that digital initiatives in organizations are predominantly leadership-driven.

Table 30: R^2 for Moderation Mediated Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Step 1	0.727	0.529	0.526	0.10001
Step 2	0.913	0.833	0.829	0.10435

In Step 2, where the interaction effect of Regulatory Framework (RF) on the ILP–DT relationship was introduced alongside the mediator and moderator, the R^2 increased sharply to 0.833, meaning the full model explains 83.3% of the variance in the dependent variable (Organizational Performance). The adjusted R^2 of 0.829 confirms the model's stability even after accounting for model complexity. This leap in explanatory power highlights the potential impact of regulatory conditions in enhancing or dampening the influence of digital transformation when linked to innovative leadership.

The ANOVA results further reinforce the model's statistical strength. In Step 1, the regression model of DT on ILP yielded an F-statistic of 158.474 at $p < 0.001$, confirming a highly significant relationship and validating the strength of ILP as a predictor of digital transformation.

Table 31: ANOVA

Model	Source	Sum of Squares	df	Mean Square	F	Sig.
Step 1	Regression	1.585	1	1.585	158.474	0.000
	Residual	1.41	141	0.01		
	Total	2.996	142			
Step 2	Regression	7.521	4	1.88	172.656	0.000

Residual	1.503	138	0.011
Total	9.023	142	

In Step 2, with the inclusion of the moderator (RF) and the interaction term ($RF \times DT$), the F-statistic further increased to 172.656, also at $p < 0.001$. This rise indicates that the extended model provides a significantly better fit for predicting organizational performance, compared to the baseline mediation model. The high significance of the model implies that the combination of innovative leadership, digital transformation, and regulatory environment meaningfully accounts for differences in performance across the sampled airlines. These findings are consistent with assertions by Ahn and Ahn (2022), who noted that aviation performance outcomes are shaped by the synergy between technological innovation and regulatory guidance.

The moderated mediation analysis began by examining the direct influence of Innovative Leadership Practices (ILP) on Digital Transformation (DT). The first step produced clear statistical evidence of a strong and highly significant relationship, with ILP yielding a standardized beta coefficient of 0.727, a t-value of 12.589, and a p-value of less than 0.001.

Table 32: Coefficient of Regression

Model	B	Std. Error	Beta	t	Sig.
Step 1 (Constant)	1.644	0.134		12.236	0.000
ILP	0.446	0.035	0.727	12.589	0.000
Step 2 (Constant)	4.084	3.387		1.206	0.230
ILP	0.923	0.055	0.868	16.751	0.000
DT	-3.238	1.056	-0.186	-3.068	0.003
Regulatory Framework	0.274	0.43	0.258	0.479	0.633
(RFDT Interaction)	0.378	0.252	1.661	1.502	0.135

This result confirms that leadership practices grounded in vision and innovation are a decisive force in advancing digital transformation agendas within Kenya's domestic commercial airlines. Such a finding reinforces earlier work by Westerman et al. (2011), who argued that leadership vision is indispensable for driving technological change in rapidly evolving sectors such as aviation.

In the second step, the analysis introduced Digital Transformation, the Regulatory Framework, and their interaction term to test the mediating and moderating pathways. Innovative Leadership Practices retained a powerful and highly significant effect on organizational performance, posting a beta coefficient of 0.868, a t-value of 16.751, and a p-value well below the 0.001 threshold. This result demonstrates that leadership innovation continues to shape performance outcomes even when additional variables are accounted for. Digital Transformation, functioning as the proposed mediator, showed a statistically significant yet negative relationship with performance ($\beta = -0.186$, $t = -3.068$, $p = 0.003$). Although counterintuitive, this negative coefficient indicates that technology-driven change may be accompanied by operational challenges or misalignment with existing structures, a pattern that can emerge in highly regulated and resource-constrained environments.

The direct effect of the Regulatory Framework on organizational performance was not statistically meaningful, as indicated by a beta coefficient of 0.258, a t-value of 0.479, and a p-value of 0.633. This suggests that regulatory conditions, in their current form, do not independently drive improvements in performance. Most critically, the interaction term between the Regulatory Framework and Digital Transformation—the path that would demonstrate moderation of the mediating effect—was also not statistically significant ($\beta = 1.661$, $t = 1.502$, $p = 0.135$). The absence of a significant interaction means that the regulatory environment does not alter the strength or direction of the mediating role of digital transformation between innovative leadership and organizational performance.

The rejection of the moderated mediation hypothesis offers an important perspective on how digital transformation unfolds within Kenya's domestic airlines. Despite operating in a heavily regulated sector, the data show that leadership remains the primary driver of performance outcomes through technological change, while the regulatory framework exerts no statistically meaningful influence on this pathway. This finding challenges assumptions rooted in Institutional Theory, which typically argues that external regulations shape the internal effectiveness of organizational strategies (DiMaggio & Powell, 1983). Instead, the evidence aligns more closely with the Resource-Based View (Barney, 1991), highlighting leadership as a critical internal capability that can propel digital transformation and performance even in the absence of supportive regulatory conditions.

These results also carry practical implications. For airline executives, the findings underscore the need to cultivate visionary leadership capable of steering digital innovation independent of regulatory support. For policymakers and regulators such as the Kenya Civil Aviation Authority, the results suggest a need to re-examine the effectiveness of existing regulatory provisions in stimulating technological advancement. While the current framework may ensure safety and compliance, it appears insufficient to influence or accelerate the strategic digital transformations that drive organizational performance. A more adaptive, innovation-oriented regulatory environment could better align with the pace of technological change in the aviation industry and create conditions that support, rather than oversee, leadership-driven digital initiatives.

4.7 Discussion of Findings

The results of the study demonstrated that there exists a strong and statistically significant positive relationship between innovative leadership practices and the organizational performance of domestic commercial airlines in Kenya. Specifically, dimensions such as strategic thinking, communication, employee empowerment, and adaptability were key drivers of enhanced operational efficiency, market competitiveness, and customer retention. These findings underscore the strategic value of leadership that fosters vision-driven decision-making, agility, and inclusive organizational culture in a highly dynamic and regulated sector.

The analysis further established that digital transformation partially mediates the relationship between innovative leadership practices and organizational performance. While innovative leadership independently had a significant positive effect on performance, introducing digital transformation into the model enhanced explanatory power but did not fully absorb the influence of leadership. This suggests that digital transformation—encompassing mobile technologies, cloud computing, artificial intelligence, and big data analytics—amplifies the effectiveness of strategic leadership but does not substitute it. Thus, digital initiatives must be leadership-driven to yield tangible performance outcomes in the aviation sector.

Additionally, the study found that the regulatory framework significantly moderates the relationship between innovative leadership practices and organizational performance. The interaction term between leadership and regulatory framework was statistically significant, indicating that the influence of leadership on performance outcomes is either enabled or constrained by prevailing regulatory environments. Airlines operating under more supportive,

clearly structured, and consistently enforced regulatory regimes exhibited a stronger positive linkage between leadership behaviour and performance outcomes. Conversely, where regulations were overly rigid or inconsistently applied, leadership influence was diminished.

Moreover, the moderated mediation analysis revealed that the indirect effect of innovative leadership practices on organizational performance—through digital transformation—was not significantly conditioned by the regulatory framework. This indicates that while regulation influences the direct leadership-performance link, it does not substantially alter the mediating path of digital transformation. In other words, regulatory conditions do not significantly weaken or strengthen the role of digital initiatives in translating leadership actions into organizational outcomes. This partial confirmation of the conceptual model suggests that digital transformation remains a critical but relatively independent conduit through which leadership exerts influence, regardless of regulatory stringency.

Taken together, the findings affirm the relevance of the study's integrated framework, illustrating that innovative leadership, digital technologies, and regulation intersect in distinct yet complementary ways to shape performance trajectories in the domestic aviation industry.

4.7.1 Innovative Leadership Practices and Organizational Performance

The first objective evaluated the effect of Innovative Leadership Practices on organizational performance among domestic commercial airlines in Kenya. Descriptive results indicated a high overall mean for leadership innovation of 4.21 with a standard deviation of 0.36, showing consistent perceptions of strategic vision, adaptability, empowerment, and clear communication across respondent groups. Pearson correlation analysis confirmed a strong positive association between leadership innovation and performance, $r = 0.800$, $p < 0.001$, signalling that stronger leadership innovation coincides with better outcomes on customer, operational, and financial metrics. A simple linear regression model further demonstrated substantial explanatory power, $R^2 = 0.640$ and adjusted $R^2 = 0.637$, with a large unstandardized coefficient for leadership innovation, $B = 0.851$, and a very strong t statistic of 15.818 at $p < 0.001$. The ANOVA supported overall model fit, $F(1, 141) = 250.216$, $p < 0.001$, consistent with guidance on model adequacy and significance testing for regression models (Hair et al., 2010). On this basis, the null hypothesis that leadership innovation has no significant effect on performance was rejected.

These statistical patterns map directly onto the Resource-Based View (RBV), which argues that distinctive managerial capabilities can operate as valuable, rare, inimitable, and organizationally embedded resources that produce sustained performance advantage (Barney, 1991). In this study, the high mean and low dispersion for leadership innovation suggest that such capabilities are not incidental but culturally embedded, and the large coefficient size indicates that these capabilities translate into measurable performance gains. The implication is that leadership behaviours are functioning as internal assets that create differentiation among airlines in an otherwise standardized and heavily regulated industry. Whereas most airlines operate under similar market and safety constraints, those with visionary, empowering, and adaptive leaders are better positioned to convert limited resources into superior operational results. Empirical work has long shown that leader behaviours which cultivate innovation and learning are associated with stronger results through the development of human and social capital, which is consistent with the strong standardized beta of 0.800 observed here (Gumusluoglu & Ilsev, 2009; Avolio & Bass, 2004).

Open Systems thinking complements this explanation by clarifying why leadership innovation is especially consequential in aviation. Organizations are permeable to their environments; leaders who scan, interpret, and respond to external pressures are better able to align people and processes to regulatory changes, market shifts, and technological advancement. In Kenya's domestic airline sector, leaders must continuously adapt to fluctuating fuel prices, evolving safety standards, and shifting customer preferences shaped by regional competition and global connectivity. The strong bivariate association and the large single predictor effect observed here indicate that leadership is performing precisely this boundary-spanning and alignment function. It implies that innovative leaders interpret environmental turbulence not as threats but as opportunities to reconfigure processes and redesign service delivery systems for competitive advantage. This interpretation resonates with research that links visionary and adaptive leadership to successful transformation in fast-moving, technology-intensive industries, including airlines (Westerman et al., 2011).

The evidence that leadership continues to explain a large share of performance variance even in a tightly regulated and competitive setting supports the proposition that strategic leadership is a pivotal internal mechanism for environmental alignment and operational reliability. Airlines are exposed to complex systems of interdependence—between pilots, ground staff,

maintenance teams, regulators, and customers. Effective leaders coordinate these interdependencies through clear communication, empowerment, and continuous learning, ensuring that service quality and operational safety are upheld even under resource constraints. This finding aligns with prior evidence that transformational leadership enhances operational effectiveness and adaptability in service-intensive sectors (Avolio & Bass, 2004). Within the aviation context, leadership innovation translates to proactive problem-solving, cross-departmental collaboration, and efficient decision-making, all of which drive measurable improvements in performance outcomes such as on-time departures, customer satisfaction, and cost efficiency.

At the behavioural level, the results align with social exchange mechanisms that connect leader support and empowerment to employee engagement, creativity, and discretionary effort. When leaders communicate a clear vision, remove barriers to experimentation, and model adaptability, employees reciprocate through problem solving and service improvement, which are visible in performance metrics. This dynamic can be explained through social exchange theory, where mutual trust and psychological safety encourage staff to invest effort beyond their formal job descriptions. In aviation, where precision, reliability, and teamwork are non-negotiable, empowered employees who feel supported by innovative leaders demonstrate higher commitment to safety protocols, proactive customer handling, and process improvements. Studies that document positive effects of leader support on innovative work behaviours and service outcomes provide an empirical bridge between the leadership practices captured by this study and the observed performance effects, reinforcing the path from leader capability to organizational results (Avolio & Bass, 2004; Gumusluoglu & Ilsev, 2009).

The magnitude of the correlation and the coefficient here is therefore credible given these well-established micro foundations. The consistency of leadership–performance linkages across multiple theoretical levels—from the individual, team, and organizational—strengthens confidence in the robustness of the findings. Leaders who demonstrate intellectual stimulation and individualized consideration foster cultures where creativity and accountability thrive simultaneously. In Kenya’s domestic airlines, where staff morale can be affected by operational fatigue, financial pressure, and regulatory audits, such leadership behaviours likely mitigate burnout, enhance retention, and sustain service excellence.

The African business context also points in the same direction. Prior studies report that leadership which champions innovation strengthens service delivery, responsiveness, and strategic agility in transport-oriented firms, illustrating how leader-driven experimentation and capability building translate into better customer and operational outcomes under resource and regulatory constraints. These findings mirror the present results by showing that leadership focused on innovation is a practical lever for performance in sectors central to national development, such as aviation (Kibera & Gathungu, 2016). Moreover, the Kenyan context adds an important dimension: domestic airlines often operate in an environment characterized by infrastructural limitations, fluctuating economic conditions, and strict international safety compliance standards. Under such circumstances, innovation-oriented leadership is not a luxury but a necessity for survival and growth. Leaders must mobilize scarce resources creatively, negotiate with regulators effectively, and continuously upskill staff to meet emerging digital and safety requirements.

The statistical strength of the relationship observed in this study therefore reflects not only theoretical consistency but also contextual realism. A coefficient of $B = 0.851$ and a standardized beta of 0.800 are unusually high for behavioural constructs, indicating that respondents' perceptions of leadership innovation are closely tied to tangible performance outcomes. This magnitude suggests that leadership practices serve as a critical bridge between internal capabilities and external performance pressures. For instance, leaders who encourage adaptive learning can accelerate digital adoption, improve coordination across departments, and ensure consistent service standards—all measurable in key performance indicators such as passenger load factors, safety compliance, and operational cost efficiency. The low variability ($SD = 0.36$) further supports the conclusion that these leadership attributes are widely recognized and practiced within the sector, pointing to a developing culture of innovation in Kenya's airline management.

At a strategic level, the results highlight that leadership innovation is both an antecedent and a reinforcing mechanism of organizational agility. Airlines that empower their leaders to make data-driven, yet flexible, decisions are better positioned to manage operational shocks such as fuel price volatility, fleet maintenance challenges, or unexpected regulatory audits. The regression results indicate that such agility translates directly into improved performance outcomes. This aligns with empirical studies from other service sectors showing that leadership

fostering continuous learning and innovation enhances organizational resilience and adaptability in volatile environments (Li et al., 2021).

Furthermore, the findings underscore the synergistic relationship between leadership innovation and organizational culture. Innovative leadership behaviours—such as open communication, tolerance for risk, and shared problem-solving—shape cultures that sustain continuous improvement. Over time, these cultures become self-reinforcing: as teams experience success under empowering leaders, their confidence and collective efficacy grow, further improving performance. This cyclical process is consistent with the RBV's principle of path dependence, where cumulative learning and embedded routines create performance differentials that are difficult for competitors to imitate (Barney, 1991).

From a managerial standpoint, these results carry several implications for Kenya's aviation industry. First, leadership development programs should prioritize innovation-oriented competencies such as strategic foresight, adaptability, and employee empowerment. Airlines could institutionalize executive training that integrates scenario planning, crisis management, and digital literacy—skills that enable leaders to make informed, adaptive decisions. Second, organizations should create formal structures for innovation diffusion, such as cross-functional project teams and continuous improvement boards, ensuring that leadership ideas translate into systemic performance gains. Third, performance management systems should reward creative problem solving and risk-taking behaviours to entrench innovation as a norm rather than an exception.

The results also hold policy relevance. As Kenya's aviation industry continues to expand, the Kenya Civil Aviation Authority and the Ministry of Transport can leverage these insights to design leadership certification programs emphasizing innovation and strategic agility. Encouraging knowledge-sharing platforms among domestic airlines could promote sector-wide best practices, enhancing competitiveness and safety. Moreover, partnerships between airlines and academic institutions could support research-driven leadership training tailored to the demands of the aviation sector.

Together with global evidence that visionary and innovative leadership improves transformation outcomes in technology-intensive settings, this provides both regional and international corroboration for the Kenyan airline context (Westerman et al., 2011; Avolio & Bass, 2004). The convergence of theoretical, empirical, and contextual evidence therefore

strengthens the validity of this finding: leadership innovation is not merely correlated with performance but constitutes its strategic foundation.

In summary, the evidence that leadership innovation is strongly and positively associated with organizational performance is both statistically persuasive and theoretically coherent. The high mean with low dispersion indicates broad adoption of innovative leadership behaviours; the strong correlation demonstrates a substantive bivariate link; and the regression results show that leadership innovation alone explains sixty-four percent of variance in performance with a large and precise coefficient estimate, $B = 0.851$, $t = 15.818$, $p < 0.001$, and $F(1, 141) = 250.216$, $p < 0.001$. These findings justify rejection of the null hypothesis and support an interpretation anchored in the Resource-Based View and Open Systems logic, with empirical reinforcement from studies of transformational and innovative leadership in both global and African contexts (Barney, 1991; Avolio & Bass, 2004; Gumusluoglu & Ilsev, 2009; Kibera & Gathungu, 2016; Westerman et al., 2011). The findings ultimately reaffirm that in Kenya's domestic aviation sector, leadership innovation is the cornerstone of organizational success, serving as the primary internal lever through which airlines achieve operational excellence, service reliability, and long-term competitiveness.

4.7.2 Innovative Leadership Practices, Digital Transformation And Organizational Performance

The second objective examined whether digital transformation mediates the relationship between innovative leadership practices and organizational performance among domestic commercial airlines in Kenya. Descriptively, digital transformation recorded a mean of 4.17 with a standard deviation of 0.39, indicating broad agreement that digital tools and practices are embedded in airline operations. This pattern reflects sustained investment in cloud platforms, data analytics, artificial intelligence-enabled service enhancements, and mobile applications that support safer and more efficient operations in technologically intensive settings such as aviation (Westerman et al., 2011; Kane et al., 2015). The high mean suggests that most respondents perceive their organizations to be at an intermediate-to-advanced stage of digital maturity, demonstrating that airlines are progressively integrating technology into strategic and operational domains. This observation corresponds with global aviation trends where digital transformation has become a fundamental pillar for achieving operational reliability, cost reduction, and improved passenger experience.

Mediation was assessed using the four-step approach by Baron and Kenny (1986), which remains a standard in evaluating indirect effects in behavioural and management studies. Step one confirmed a strong direct effect of innovative leadership practices on performance with $\beta = 0.851$, $t = 15.818$, $p < 0.001$, and a model fit of $R^2 = 0.640$, adjusted $R^2 = 0.637$, $F(1,141) = 250.216$, $p < 0.001$. This finding is consistent with evidence that leadership characterised by vision, empowerment, adaptability, and clear communication drives engagement, strategic alignment, and superior results in service organizations (Avolio & Bass, 2004). In the context of Kenya's domestic airlines, such leadership practices likely manifest through initiatives such as the digitalisation of ticketing, predictive maintenance systems, real-time passenger analytics, and the use of digital dashboards for operational decisions. By fostering innovation and embracing digital change, leaders enable their teams to adapt rapidly to volatile market conditions and changing consumer expectations.

Step two established that innovative leadership practices significantly predicted digital transformation with $\beta = 0.727$, $t = 12.589$, $p < 0.001$, demonstrating that digital progress is primarily a leadership-driven agenda in line with research that strategy and leadership, rather than technology alone, determine transformation outcomes (Westerman et al., 2011; Kane et al., 2015). This finding suggests that visionary leadership acts as a catalyst for technological adaptation, setting a tone that encourages experimentation and calculated risk-taking. In Kenya's aviation context, where operational costs and competition pressures are high, leaders who articulate a digital vision, allocate resources strategically, and empower employees to engage with new technologies are essential for sustaining momentum in digital adoption. The strong β coefficient (0.727) reinforces the argument that leadership is not merely supportive but instrumental in orchestrating digital transformation efforts across departments such as flight operations, maintenance, logistics, and customer service.

Step three showed that digital transformation on its own predicted performance strongly and positively with $B = 1.088$, $t = 9.555$, $p < 0.001$, and with a significant model $F = 91.291$, $p < 0.001$. This indicates that digital tools enable efficiency, quality, and timely decision-making in ways that support customer experience and operational reliability in airlines (Vial, 2019). Technologies such as electronic flight bags, automated check-in systems, and AI-based customer feedback analysis enhance process reliability, reduce human error, and foster data-driven decision-making. The statistical strength of this relationship validates the notion that

digital transformation contributes directly to performance, although the extent of this influence may depend on the organization's readiness, resources, and leadership support. The findings mirror those of Li et al. (2021), who observed that technology-driven process automation and analytics capabilities enhance agility and service excellence in dynamic markets.

In the final step, when both innovative leadership practices and digital transformation were entered together, leadership remained strongly significant with $B = 0.777$, $t = 9.932$, $p < 0.001$, whereas the coefficient for digital transformation fell to $B = 0.166$ and became statistically non-significant with $t = 1.304$, $p = 0.194$. The model R^2 rose only marginally from 0.640 to 0.644. Taken together, these results indicate partial mediation. Digital transformation transmits some of the leadership effect, but leadership continues to exert a substantial direct influence on performance. This pattern mirrors recent evidence that the benefits of technology depend on the way leaders mobilize people and processes to convert digital potential into measurable outcomes (Vial, 2019; Li et al., 2021). The marginal increase in explanatory power demonstrates that while digital tools enhance operations, they require leadership-driven strategy and cultural alignment to yield sustainable results.

Theoretically, these findings are coherent with the Resource-Based View (RBV) and with Technological Determinism interpreted through a managerial lens. From the RBV perspective, digital capabilities can be valuable and difficult to imitate, but they yield advantage only when combined with complementary managerial assets such as leadership and culture that orchestrate their use across the organization (Barney, 1991). The partial mediation observed here aligns with that logic: leadership remains the core capability, while digital transformation acts as a conduit that amplifies the leadership-to-performance pathway when effectively integrated. This highlights the concept of capability bundling, where the synergy between human, technological, and strategic resources creates superior performance outcomes. From a managerial reading of Technological Determinism, technology may be a catalyst for change, but strategy, leadership clarity, and employee engagement determine whether technological adoption improves performance in service sectors (Kane et al., 2015; Li et al., 2021). In other words, while technology drives possibilities, it is leadership that drives outcomes.

Empirically, the sequence of effects in this study tallies with work that links leader vision and empowerment to successful digital rollouts and superior operational results in aviation and related services. Visionary leadership provides purpose and coordination, while digital tools

provide the infrastructure that translates purpose into process improvements and customer value (Westerman et al., 2011; Avolio & Bass, 2004). The significant bivariate effect of digital transformation and its loss of significance in the full model are therefore understandable. Once leadership is accounted for, much of the explanatory power of digital transformation overlaps with leadership behaviours that shape priorities, resource allocation, and adoption at scale (Vial, 2019; Li et al., 2021). This overlap underscores the notion that technological advancement cannot substitute for the soft capabilities embedded in leadership—such as vision, communication, and adaptability—which determine whether digital tools are integrated effectively into business operations.

These findings also resonate with recent discussions on digital maturity frameworks in the aviation industry, which emphasize the interplay between leadership commitment, process redesign, and technology adoption. Studies conducted by the International Air Transport Association (IATA, 2023) and the International Civil Aviation Organization (ICAO, 2022) show that airlines with high digital maturity tend to report stronger operational resilience and profitability. Yet, these outcomes consistently trace back to leadership's ability to define a clear digital strategy, align departments, and secure employee buy-in. The present study's observation that leadership remains the dominant predictor of performance even after accounting for digital transformation reflects this global trend: technology adoption alone does not guarantee performance improvements without cultural and managerial transformation.

In practical terms, these findings imply that airlines should treat digital transformation as a strategic program anchored in leadership development and culture building, rather than as a stand-alone information technology function. Digital initiatives that are not embedded within a clear strategic vision risk becoming fragmented projects that fail to produce long-term value. Investments in analytics platforms, automation, and customer interfaces will deliver the intended results when leaders set direction, remove adoption barriers, and align technology with performance goals. This interpretation is consistent with the strong and persistent leadership coefficient in the final step and with the slight movement in R^2 when digital transformation is added to leadership. It follows that executive development, change management, and cross-functional governance are essential complements to digital spending in domestic airlines (Kane et al., 2015; Vial, 2019).

Moreover, the results highlight a deeper managerial insight: digital transformation requires not only technological infrastructure but also a shift in organizational mindset. Leaders must foster a learning-oriented culture where employees are willing to engage with new tools, adapt to evolving processes, and contribute ideas for continuous improvement. The partial mediation found in this study suggests that leadership behaviours such as open communication, empowerment, and feedback loops enhance the effectiveness of digital systems by ensuring human acceptance and utilization. In contrast, top-down digital rollouts without leadership engagement or employee alignment are likely to encounter resistance, underutilization, or performance stagnation. Therefore, leadership's influence extends beyond initiating digital projects—it sustains and legitimizes them across the organization.

Another important implication of these findings lies in the strategic balance between technological adoption and operational readiness. The insignificant coefficient for digital transformation in the full model does not diminish its relevance but instead signals the need for phased, context-sensitive implementation. In resource-constrained settings such as Kenya, where cost structures and infrastructure vary across airlines, technological investments must be matched with human capability development and process reengineering. Innovative leaders who can integrate digital initiatives into core business strategies are better positioned to derive sustained performance benefits.

From a policy perspective, the results emphasize the role of leadership in bridging national technology agendas with firm-level execution. Kenya's aviation sector is currently aligned with broader national strategies such as Vision 2030 and the Digital Economy Blueprint (2019), which prioritize innovation and digitization as drivers of competitiveness. The strong leadership–digital link observed here suggests that these policy goals can be realized more effectively when airline executives internalize them as strategic imperatives. Regulators and policymakers can thus enhance sectoral performance by supporting leadership training programs, incentivizing digital adoption, and providing knowledge-sharing platforms that foster collaboration among airlines.

In the African context, similar findings have emerged across service industries where leadership-driven digital transformation has become a critical performance lever. For instance, in South Africa's transport sector, Moyo and Mokoena (2022) found that managerial vision and empowerment significantly predicted digital adoption success, while weak leadership

commitment led to project stagnation. Comparable patterns have been documented in Nigeria's and Ethiopia's aviation industries, where strategic leadership has enabled cost-effective digital integration despite infrastructural constraints. These regional parallels reinforce the current study's conclusion that leadership innovation precedes and enables digital transformation rather than the other way around.

Finally, the findings invite reflection on the evolving nature of leadership in the digital era. As technology reshapes business models, the role of leaders expands from decision-making to ecosystem orchestration—balancing digital investments, human capital, and stakeholder relationships. For Kenya's domestic airlines, this means cultivating leaders who can bridge technical and strategic domains, translating complex digital opportunities into coherent performance strategies. Training programs focusing on digital leadership, data-driven decision-making, and cross-functional integration will be critical for sustaining competitive advantage in an increasingly digital aviation landscape.

In conclusion, the null hypothesis for Objective Two was rejected. Digital transformation partially mediates the relationship between innovative leadership practices and organizational performance in Kenya's domestic airlines, with leadership remaining the primary driver and digital transformation acting as an enabling pathway. This aligns with the Resource-Based View that emphasises bundles of complementary capabilities, and with research in digital transformation that stresses the primacy of leadership and strategy in realising performance gains from technology (Barney, 1991; Westerman et al., 2011; Kane et al., 2015; Vial, 2019; Li et al., 2021). The findings therefore affirm that digital transformation amplifies—but does not replace—the role of leadership, underscoring the importance of visionary, adaptable, and empowering leaders in translating technological potential into sustainable organizational performance.

4.7.3 Innovative Leadership Practices, Regulatory Framework And Organizational Performance

The third objective of this study was to determine whether the regulatory framework moderates the relationship between innovative leadership practices and organizational performance among domestic commercial airlines in Kenya. The analysis tested the null hypothesis that the regulatory framework does not significantly moderate the leadership–performance relationship. Descriptive evidence indicated that the regulatory framework variable had a mean

score of 3.76 with a standard deviation of 0.45. These figures suggest that respondents perceived the Kenyan aviation regulatory environment as moderately enabling but not fully supportive of innovation. Many participants acknowledged the value of regulation in ensuring safety, discipline, and operational consistency, yet others described the framework as slow to adapt and overly rigid in accommodating emerging technologies. Such mixed perceptions are understandable in a sector where compliance with the Kenya Civil Aviation Authority (KCAA) and adherence to standards from the International Civil Aviation Organization (ICAO) and the International Air Transport Association (IATA) are mandatory.

To test moderation, a three-step hierarchical regression was conducted. In the first step, innovative leadership practices were entered as the sole predictor of organizational performance. The model was highly significant, with an F statistic of 250.216 ($p < 0.001$) and an R^2 of 0.640, indicating that 64 percent of the variance in performance was explained by leadership alone. The unstandardised coefficient for innovative leadership was $B = 0.851$ with a t value of 15.818 ($p < 0.001$). The very high t statistic reflects the robustness and reliability of this effect and provides clear support for the view that leadership innovation—characterised by strategic vision, adaptability, empowerment, and clear communication—strongly drives performance outcomes. This result is consistent with studies emphasising that transformational and innovative leadership is a critical determinant of organizational success in dynamic service sectors (Avolio & Bass, 2004; Gumusluoglu & Ilsev, 2009).

In the second step, the regulatory framework was added to the model. The R^2 increased to 0.716, showing that the explanatory power rose by 7.6 percentage points when regulation was considered alongside leadership. Both predictors were significant: innovative leadership remained strong with $B = 0.629$, $t = 10.505$, $p < 0.001$, while the regulatory framework itself contributed significantly with $B = 0.534$, $t = 6.162$, $p < 0.001$. The drop in the t value for leadership from 15.818 to 10.505 indicates that some of the performance variance initially attributed to leadership is shared with the regulatory environment. At the same time, the sizeable and highly significant t statistic for the regulatory framework confirms that regulation is not a passive compliance backdrop but an active determinant of how airlines perform. These findings echo governance research showing that formal oversight and clear institutional rules can either catalyse or constrain innovation depending on their design (Gnan et al., 2021; Ahn & Ahn, 2022). In highly regulated sectors such as aviation, leadership choices about technology

adoption, service improvement, and operational strategy are inevitably filtered through licensing, certification, and audit requirements, making regulation an integral part of the performance equation.

The third step introduced the interaction term between innovative leadership and the regulatory framework to test whether the strength of the leadership–performance relationship depends on regulatory conditions. The interaction term was $B = 0.031$ with a standardised $\beta = 0.146$, $t = 2.239$, $p = 0.027$, providing clear statistical evidence of moderation. Although the t statistic is smaller than that for the main effects, it remains above the conventional threshold for significance, confirming that the regulatory environment shapes the impact of leadership on performance. The full model's R^2 increased to 0.726, an 8.6 percent improvement over the base model, and the overall model remained highly significant with $F = 122.979$ ($p < 0.001$). This progression shows that the relationship between leadership and performance strengthens when regulation is perceived as more enabling and adaptive.

Interpreted theoretically, these results support Institutional Theory (DiMaggio & Powell, 1983), which posits that organizational effectiveness is influenced by conformity to external rules, norms, and structures. The positive interaction implies that innovative leadership translates into stronger performance when the institutional environment provides stability and clear pathways for change. The findings also align with Open Systems Theory, which views organizations as embedded in and responsive to external conditions. Leaders who navigate and align with the regulatory system are more effective at mobilising internal resources for performance. At the same time, the analysis resonates with the Resource-Based View (Barney, 1991), which identifies leadership as a strategic capability but acknowledges that the value of such capabilities is enhanced when they fit the institutional and regulatory context. The statistically significant interaction ($t = 2.239$) demonstrates this “fit effect”: leadership alone is powerful ($t = 15.818$), but its performance returns grow when the external environment is predictable, supportive, and innovation-friendly.

The findings are consistent with empirical work that investigates how regulation influences strategic innovation. Gnan et al. (2021) argue that adaptive regulatory ecosystems reduce uncertainty, allowing leaders to deploy innovative strategies with confidence. Ahn and Ahn (2022) show that in safety-critical industries, clear and forward-looking regulation encourages digital adoption and operational innovation without undermining compliance. In aviation

specifically, scholars note that regulations designed around performance-based standards rather than rigid rules create room for leaders to experiment with new technologies, such as predictive analytics, AI-assisted maintenance, or advanced passenger service systems. The positive moderation found here mirrors this literature: regulation that is seen as adaptive strengthens the impact of leadership innovation on measurable outcomes like operational efficiency, customer satisfaction, and safety compliance.

Practically, the results carry strong implications. For airline executives, the evidence shows that regulatory engagement should be a strategic function rather than a compliance afterthought. The strength of the interaction term ($B = 0.031$, $t = 2.239$) indicates that performance gains from leadership are greater when executives actively shape and align with the regulatory landscape. Airlines should invest in regulatory affairs and compliance strategy teams capable of building collaborative relationships with oversight agencies, anticipating policy shifts, and advocating for frameworks that support innovation while maintaining safety.

For regulators such as the Kenya Civil Aviation Authority, the study suggests that the regulatory framework is not neutral in its effect on performance: it can either amplify or dampen the impact of visionary leadership. The evidence that R^2 rose from 0.640 to 0.726 after including regulation and the interaction term shows that a sizeable portion of performance variance depends on how regulation is designed and applied. Regulators could adopt more innovation-supportive approaches, such as streamlining certification for new technologies, creating regulatory sandboxes for testing digital solutions, and moving towards performance-based regulation. Such changes would allow airlines to innovate without compromising safety and could enhance sector competitiveness.

In summary, the null hypothesis for Objective Three was rejected. The moderation model demonstrated that the regulatory framework significantly influences how leadership innovation translates into organizational performance. The very strong main effect of leadership ($t = 15.818$, $p < 0.001$), the highly significant direct effect of regulation ($t = 6.162$, $p < 0.001$), and the statistically meaningful interaction ($t = 2.239$, $p = 0.027$) collectively show that performance outcomes in Kenyan domestic airlines depend on both internal leadership capability and the quality of the regulatory environment. The results enrich the theoretical understanding of how institutional fit enhances the value of leadership as a strategic resource and provide actionable guidance: airlines should cultivate leadership that engages with

regulators, and regulators should design adaptive frameworks that enable innovation while safeguarding safety and compliance.

4.7.4 Moderated Mediation Effect of Regulatory Framework on the Mediating Role of Digital Transformation

The final objective of this study was to establish whether the regulatory framework (RF) moderates the mediating role of digital transformation (DT) in the relationship between innovative leadership practices (ILP) and organizational performance (OP) among Kenya's domestic commercial airlines. The associated null hypothesis stated that the regulatory framework does not significantly moderate the mediating effect of digital transformation on the ILP–OP relationship.

Descriptive evidence indicated that digital transformation was perceived positively across the airlines, with a mean score of 3.88 and a standard deviation of 0.41, suggesting relatively mature but uneven adoption of technologies such as e-ticketing, data analytics, artificial intelligence–driven scheduling, and digital safety monitoring systems. The regulatory framework had a similar mean of 3.76 with some variability in perception, reflecting that while regulations provide structure and safety assurance, airlines differ in how supportive or constraining they find the environment. These descriptive results provided a relevant foundation for testing a moderated mediation model, as regulatory experience appears heterogeneous enough to potentially influence how digital transformation transmits leadership effects to performance.

The moderated mediation analysis followed the conditional process modelling approach described by Hayes and Rockwood (2020), using hierarchical regression to estimate the indirect effect of ILP on OP through DT at different levels of the regulatory framework.

Step 1 of the model confirmed the expected strong influence of ILP on DT, with a standardised coefficient $\beta = 0.727$, $t = 12.589$, $p < 0.001$. This very high t statistic and extremely small p value reinforce the argument that digital advancement is a leadership-driven agenda, consistent with the work of Westerman et al. (2011) and Kane et al. (2015), who have shown that senior executives' vision and risk appetite are decisive for successful digital transformation in technology-intensive industries such as aviation.

Step 2 examined whether the mediating pathway from ILP through DT to OP varied with the regulatory framework. When ILP, DT, RF, and the interaction term (DT $\times$ RF) were entered simultaneously predicting OP, ILP remained a very strong and highly significant predictor ($\beta = 0.868$, $t = 16.751$, $p < 0.001$). This t statistic far exceeds conventional thresholds and underscores the enduring strength of leadership as a direct driver of organizational performance even in a multivariate model. By contrast, digital transformation displayed a negative and significant coefficient ($\beta = -0.186$, $t = -3.068$, $p = 0.003$). The negative sign—despite significance—suggests that, once leadership is controlled, certain technology adoption efforts may create operational disruption or fail to translate cleanly into performance gains. This suppressor-type effect has been documented in other highly regulated or resource-constrained sectors, where technology implementation can initially increase complexity and costs before performance benefits are realised.

The regulatory framework alone was not significant ($\beta = 0.258$, $t = 0.479$, $p = 0.633$), indicating that regulation, by itself, does not exert a measurable direct effect on airline performance once leadership and technology are considered. Most critically, the interaction term between DT and RF—the path testing moderated mediation—was also non-significant ($\beta = 1.661$, $t = 1.502$, $p = 0.135$). The t value below the 1.96 threshold and the p value well above 0.05 indicate a clear lack of moderation. This means that the indirect effect of ILP on OP through DT is not significantly stronger or weaker at different levels of regulatory support or constraint.

Taken together, these findings lead to the retention of the null hypothesis (H_{04}): the regulatory framework does not significantly moderate the mediating effect of digital transformation. Leadership strongly predicts both digital transformation and performance, and digital transformation partially transmits this effect, but regulatory conditions do not meaningfully alter this mediation pathway.

Theoretically, this result carries several implications. It partially affirms Technological Determinism Theory, which argues that technology itself can reshape organizational processes and performance, but also shows that such transformation is primarily leadership led rather than regulation conditioned. It challenges the stronger predictions of Institutional Theory (DiMaggio & Powell, 1983), which would expect external rules and norms to influence not only direct outcomes but also the internal pathways through which change occurs. In Kenya's aviation sector, the data suggest that regulation does not yet exert sufficient adaptive pressure

to modify how leadership-driven digital initiatives affect performance. This muted moderating effect is consistent with observations by Ahn and Ahn (2022), who note that while aviation is highly sensitive to certification and policy frameworks, the actual impact of regulation on digital outcomes can remain weak when policies are rigid, slow to update, or inconsistently enforced.

From a practical management perspective, the findings imply that airline executives cannot rely on the regulatory environment to enhance the performance returns of their digital initiatives. Instead, they must ensure that internal leadership capability, resource allocation, and cultural readiness are sufficient to translate technology adoption into tangible results. The high and persistent t value for ILP (16.751) shows that visionary and adaptive leadership continues to deliver performance regardless of the regulatory stance.

For policymakers and regulators, the absence of a significant moderating effect should be interpreted as a call to modernise and make regulation more innovation-friendly. A regulatory environment that enforces safety without enabling technological adaptation may fail to shape the impact of digital transformation on airline outcomes. Authorities such as the Kenya Civil Aviation Authority (KCAA) could accelerate their support role by streamlining approval processes for new technologies, clarifying data governance and cybersecurity requirements, and introducing performance-based or sandbox-style regulatory models. Such adaptive approaches could eventually strengthen the conditional indirect effect that was statistically absent here.

In conclusion, the moderated mediation hypothesis was not supported. The statistical results—a very strong direct leadership effect ($\beta = 0.868$, $t = 16.751$, $p < 0.001$), a significant but negative DT effect ($\beta = -0.186$, $t = -3.068$, $p = 0.003$), a non-significant RF main effect ($t = 0.479$, $p = 0.633$), and a non-significant DT $\times$ RF interaction ($t = 1.502$, $p = 0.135$)—show that leadership remains the dominant driver of digital change and performance, and digital transformation partially mediates this relationship, but regulation does not condition the strength of that mediation. These findings refine the conceptual model by confirming the direct and mediated pathways while revealing that conditional indirect effects depend on regulatory adaptability that is not yet present in Kenya's aviation sector. For practitioners and regulators alike, the implication is clear: without more adaptive, innovation-oriented oversight, the

potential for regulation to enhance the performance returns of digital transformation remains unrealized.

4.8 Limitation of the Study

Although the study achieved its objectives and produced statistically and theoretically coherent results, several limitations should be acknowledged to guide the interpretation, scope, and future extension of its findings. These limitations relate to methodological design, measurement approach, logistical constraints, and contextual boundaries. A clear understanding of these boundaries is essential because they define the confidence with which the observed relationships between innovative leadership practices, digital transformation, regulatory frameworks, and organizational performance can be generalized to broader contexts.

The foremost limitation arises from the use of a cross-sectional research design, which captured data from participants at a single point in time. While this design is widely used in management and organizational studies for its efficiency and practicality, it inherently restricts causal inference. The study was able to demonstrate strong associations between variables—such as the positive and statistically significant influence of innovative leadership practices on performance—but it could not determine whether these relationships persist, strengthen, or weaken over time. In industries such as aviation, where technological change and regulatory dynamics evolve rapidly, leadership innovation and digital transformation are not static constructs; they mature and interact differently across business cycles.

A longitudinal design would have provided richer insight into the temporal dimension of these dynamics. For instance, leadership innovation might initially drive the adoption of digital tools, but over time, the success or failure of such tools could reshape leadership behaviours and organizational culture in return. Similarly, shifts in regulatory policy—such as the introduction of digital compliance frameworks or sustainability requirements—could alter the strength of observed relationships. Because the present study relied on cross-sectional data, it provides a valuable snapshot rather than a moving picture of these interdependencies. Future research employing panel or longitudinal designs could therefore offer greater explanatory precision by observing how cause–effect relationships unfold across multiple operational and regulatory cycles.

A second limitation stems from the study's reliance on self-reported quantitative data obtained through structured questionnaires. Although self-reporting remains a common and cost-effective method for collecting perceptions and organizational data, it is vulnerable to response biases, particularly social desirability bias and common method variance. Respondents—many of whom occupied senior leadership or managerial positions—might have unintentionally overstated the extent of innovative practices or the sophistication of digital systems within their airlines. This inclination is understandable, as organizational representatives may wish to project an image of competence, progressiveness, and compliance with regulatory expectations, especially in an industry where safety and reliability are public priorities.

Even though the instrument was validated through pilot testing and demonstrated strong internal consistency (Cronbach's $\alpha \geq 0.70$ across constructs), such reliability tests cannot entirely eliminate perceptual inflation. Moreover, the use of a single data source for both predictor and outcome variables may have introduced common method bias (CMB), whereby correlations appear stronger because responses originate from the same individual. To mitigate this limitation, the questionnaire included both positively and negatively worded items, and data analysis applied diagnostic checks to ensure discriminant validity among constructs. Nevertheless, future research could benefit from multi-source or multi-method data collection, combining survey responses with objective performance indicators—such as on-time flight performance, customer satisfaction ratings, or financial metrics—and with independent assessments of digital maturity from regulatory audits or third-party benchmarks. Such triangulation would enhance the robustness and credibility of findings by cross-validating subjective and objective measures.

The study also encountered logistical and operational constraints typical of research in highly regulated service industries. Data collection relied heavily on the availability of managerial and technical staff across 17 domestic commercial airlines. These personnel frequently operate within tight schedules due to the time-sensitive and safety-critical nature of aviation operations. Consequently, obtaining appointments and coordinating responses presented notable challenges. Although the achieved response rate of 84.12 percent exceeded the recommended threshold for survey research and ensured statistical adequacy, several questionnaires were returned incomplete or after significant delay.

These logistical hurdles, while not compromising data validity, may have influenced the representativeness of certain sub-groups, particularly smaller airlines with limited staff capacity or those located outside Nairobi, where access was less straightforward. The possibility remains that perspectives from less digitally advanced or resource-constrained airlines were underrepresented, which could slightly bias the findings toward more progressive organizations. Future studies could address this challenge by employing digitally administered surveys, which reduce scheduling conflicts and allow respondents to complete instruments asynchronously. Additionally, partnerships with sector associations such as the Kenya Association of Air Operators (KAAO) or regulatory bodies like the Kenya Civil Aviation Authority (KCAA) could facilitate broader and timelier participation through coordinated communication channels.

Another significant limitation concerns the contextual and sectoral boundaries of the study. The investigation was confined to domestic commercial airlines registered and operating in Kenya, excluding international carriers, cargo-only operators, and chartered flight firms. This delimitation was deliberate to maintain analytical focus and comparability among organizations facing similar regulatory oversight and market conditions. However, it restricts the external validity and generalizability of the results. Domestic airlines typically operate on smaller scales, face different competitive pressures, and engage with regulatory authorities more directly than international or multinational carriers. Their technological adoption trajectories, leadership structures, and financial capacities also differ markedly.

As a result, while the conclusions are robust for Kenya's domestic aviation segment, they may not apply uniformly to other aviation sub-sectors or to airlines in countries with distinct regulatory and infrastructural environments. For instance, the relationship between leadership innovation and performance might be moderated by access to global technology partners, international safety certifications, or capital markets—factors more relevant to larger or cross-border carriers. To enhance comparability, future research could adopt a multi-country or multi-segment approach, examining whether similar leadership and digital transformation dynamics operate in other African or emerging-market aviation contexts. Comparative analyses across regions would reveal whether the observed partial mediation of digital transformation and the moderating influence of regulatory frameworks are universal or context-specific phenomena.

A further limitation arises from the study's exclusive reliance on quantitative analytical techniques. While statistical methods such as correlation, regression, and mediation modeling provided rigorous empirical evidence, they could not fully capture the qualitative nuances underlying leadership behaviour, organizational culture, and regulatory interpretation. Variables like "innovative leadership" and "digital transformation" are inherently multi-dimensional and context dependent; numerical indicators alone cannot convey the lived experiences, managerial judgments, or internal dialogues that shape them.

In the aviation sector, leadership innovation may manifest through informal mentoring, crisis response decisions, or negotiations with regulators—processes best understood through qualitative inquiry. Incorporating semi-structured interviews, focus group discussions, or ethnographic observations could have provided deeper insight into how leadership mindsets translate into specific digital or operational practices. Mixed-methods approaches would therefore complement quantitative findings by revealing the mechanisms through which leadership drives performance and by contextualizing the meaning of regulatory compliance and digital readiness within organizational realities.

The temporal sensitivity of technological phenomena also presents an intrinsic limitation. Digital transformation is not static; its tools, platforms, and applications evolve rapidly. Data collected within a specific time frame may lose relevance as new technologies—such as predictive analytics, blockchain-based maintenance logs, or AI-driven customer service systems—emerge. Consequently, the study's findings should be interpreted within the technological context prevailing during the research period (2024–2025). Continuous innovation in aviation technology may alter both the intensity and nature of the leadership–performance relationship in future years. Longitudinal monitoring of technological adoption and its interaction with leadership practices would help future researchers determine whether the observed partial mediation effect strengthens, diminishes, or transforms as digital ecosystems mature.

Despite careful model specification, the study, like most social science research, may have omitted relevant variables that could influence organizational performance. Factors such as organizational size, ownership structure, financial leverage, or market share were not explicitly included in the regression models, although they could interact with leadership and digital transformation variables. Similarly, while measurement items were adapted from validated

instruments, the aggregation of complex constructs into mean indices may obscure underlying sub-dimensions—for instance, differentiating between transactional and transformational leadership or between operational and strategic aspects of digital transformation. Future studies should refine measurement granularity, possibly employing structural equation modeling with second-order latent constructs or incorporating control variables to isolate specific effects.

Recognizing these limitations is not merely an acknowledgment of constraint but an invitation for deeper exploration. Each limitation highlights a direction for future scholarly advancement. The cross-sectional limitation points to the need for longitudinal and experimental research designs that can capture causal sequences. The reliance on self-reported data underscores the importance of integrating objective metrics and triangulated evidence. Logistical challenges reveal the need for closer collaboration between academia, industry associations, and regulators to improve research access. Contextual boundaries suggest opportunities for comparative and cross-regional analyses that expand theoretical generalizability. Finally, the lack of qualitative insight opens space for interpretive and mixed-method approaches that can unpack the human, cultural, and political dimensions of innovation in aviation management.

In summary, although these limitations constrain the scope and generalizability of the findings, they do not undermine their validity or significance. The study's methodological rigour, comprehensive diagnostic testing, and theoretical integration ensure that its results remain credible within their contextual parameters. By explicitly acknowledging the boundaries within which conclusions hold, the study contributes transparently to cumulative knowledge and establishes a solid foundation for subsequent investigations into how leadership, technology, and regulation jointly shape organizational performance in Kenya's—and Africa's—aviation industry.

4.9 Summary of the Chapter

This chapter presented the data analysis, results, and discussions arising from the study. It began by outlining the response rate and verifying the reliability and validity of the research instruments. Descriptive statistics were then used to explore the demographic attributes and the distribution of responses across key constructs. The findings showed that innovative leadership practices, digital transformation, and regulatory frameworks are positively and significantly associated with organizational performance. Regression and mediation analyses confirmed that digital transformation partially mediates the relationship between leadership and performance,

while moderation analysis demonstrated that regulatory frameworks strengthen this relationship. However, the moderated mediation analysis revealed that regulatory frameworks do not significantly influence the indirect effect of digital transformation. The chapter concluded by linking the findings to theoretical foundations and previous empirical studies, offering practical and policy-level implications for Kenya's domestic aviation sector.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.0 Introduction

This chapter discusses the findings derived from the analysis conducted in the previous chapter. The study aimed to examine the effect of innovative leadership practices on the organizational performance of domestic commercial airlines in Kenya, with digital transformation serving as a mediating variable and the regulatory framework as a moderating variable. The investigation was guided by four specific objectives that shaped the formulation of hypotheses tested through multiple regression analysis, mediation analysis (Baron & Kenny, 1986), moderation analysis (hierarchical regression), and moderated mediation analysis (Hayes & Rockwood, 2020). All tests were conducted at a 5% level of significance ($\alpha = 0.05$). The discussion is organized in accordance with the study objectives and draws comparisons with existing empirical studies and theoretical foundations, thereby highlighting both consistencies and deviations observed in the Kenyan aviation context.

5.1 Summary of Research Findings

Chapter Five serves as a comprehensive summary and analysis of the empirical findings obtained from the study on the impact of innovative leadership practices (ILP) on the organizational performance of domestic commercial airlines in Kenya, with a focus on digital transformation and the regulatory framework as mediating and moderating variables, respectively. The primary aim of the study was to understand how innovative leadership practices interact with digital transformation and regulatory conditions to shape performance outcomes within the airline sector. The study was structured around four specific objectives, each linked to a corresponding null hypothesis that guided the empirical investigation.

To test these hypotheses, the research employed a variety of statistical techniques, including descriptive analysis, correlation analysis, and multiple regression, which allowed for a thorough exploration of the relationships between the core study variables. Descriptive analysis provided a detailed understanding of the basic trends and patterns in the data, helping to uncover the general perceptions and levels of innovative leadership practices, digital transformation adoption, and the regulatory framework within Kenya's domestic commercial airlines. The results indicated that innovative leadership practices were highly valued within

the sector, with significant emphasis on strategic thinking, communication clarity, and employee empowerment. These findings laid the foundation for deeper analysis through the subsequent correlation and regression tests.

The correlation analysis confirmed strong relationships between the study variables. It showed that innovative leadership practices had a robust positive correlation with organizational performance, thereby supporting the notion that leadership directly influences key performance metrics such as market share growth, operational efficiency, and customer retention. Further, digital transformation, as a mediating variable, was found to have a positive relationship with both leadership practices and organizational performance, confirming its role as a facilitating factor in the leadership-performance dynamic.

Regression analysis provided the most detailed insight, particularly with regard to testing the individual and combined effects of the variables. The analysis confirmed that innovative leadership practices have a direct and statistically significant effect on organizational performance, leading to the rejection of the null hypothesis associated with the first objective. In terms of the second objective, the regression results revealed that digital transformation partially mediates the relationship between innovative leadership practices and organizational performance, though its impact diminished when both leadership practices and digital transformation were included in the model. This outcome led to the rejection of the null hypothesis for the second objective, as the study demonstrated that digital transformation, while important, does not entirely account for the leadership-performance relationship.

The third objective sought to examine the moderating effect of the regulatory framework on the relationship between leadership and performance. The results were compelling, indicating that the regulatory environment plays a significant role in amplifying or constraining the effects of leadership practices on performance outcomes. This moderation was confirmed by the statistically significant interaction term, leading to the rejection of the null hypothesis for the third objective.

Finally, the fourth objective examined the moderated mediation effect of the regulatory framework on the mediating role of digital transformation. While the individual effects of innovative leadership practices, digital transformation, and the regulatory framework were supported, the interaction between the regulatory framework and digital transformation was not statistically significant. This result led to the rejection of the moderated mediation

hypothesis, indicating that regulatory factors do not significantly moderate the mediation pathway between leadership and performance via digital transformation.

The results of the study provide valuable insights into the complex interplay between leadership, technology, and regulation in shaping organizational performance in the aviation sector. They affirm that while leadership practices are central to performance improvement, the regulatory environment and digital transformation play important, albeit varying, roles in mediating and moderating these effects.

5.1.1 To determine the effect of innovative leadership practices on organizational performance of domestic commercial airlines in Kenya

The study established a strong and statistically significant positive relationship between innovative leadership practices (ILP) and organizational performance within the context of Kenya's domestic commercial airlines. The descriptive analysis revealed high composite mean scores across various ILP dimensions, which include strategic thinking, communication clarity, employee empowerment, and adaptability. These dimensions were assessed and perceived positively by the airline staff, indicating that leadership is seen as capable, forward-thinking, and adaptive to changes within the aviation sector. The results suggest that leadership in these airlines actively engages with strategic challenges and is adept at aligning their organizational goals with market dynamics.

Further, the correlation analysis demonstrated a robust positive association between ILP and performance indicators such as operational efficiency, market share growth, and customer retention. This correlation suggests that the more innovative the leadership, the better the performance outcomes in terms of efficiency and customer loyalty. These are essential measures of success for any business, particularly in the competitive and heavily regulated aviation industry.

Regression analysis further affirmed ILP as a significant predictor of performance, with a high beta coefficient and a strong model fit, with R^2 exceeding 0.60. The results indicated that over 60% of the variation in organizational performance could be explained by the presence and effectiveness of ILP. This highlights that innovation-driven leadership can directly enhance organizational outcomes by fostering strategic agility, proactive problem-solving, and vision alignment. These findings reinforce the theoretical assertions of the Resource-Based View

(RBV), which treats leadership as a critical organizational asset that can contribute to the sustained competitive advantage of firms. In this case, the ability of leadership to drive innovation and align teams toward a common vision enhances overall performance, making it a strategic advantage for the airline companies operating in Kenya.

5.1.2 To assess the mediating effect of digital transformation on the relationship between innovative leadership and organizational performance

The study confirmed a partial mediating effect of digital transformation in the relationship between innovative leadership and organizational performance. Descriptive findings revealed widespread adoption of key digital enablers, including cloud computing, mobile technologies, big data analytics, and artificial intelligence (AI). However, the maturity levels of these technologies varied across airlines, suggesting that while digital tools were being integrated into airline operations, some airlines were further along in their digital transformation journeys than others. Despite this variation, correlation analysis showed a positive association between both ILP and digital transformation (DT) with organizational performance.

Using Baron and Kenny's four-step method for mediation analysis, the study found that while ILP had a significant direct effect on performance, part of this effect was transmitted through digital transformation. When both ILP and DT were included in the regression model, ILP remained statistically significant, but the effect of digital transformation on performance became statistically insignificant. This confirmed partial mediation, indicating that while digital transformation plays a role in enhancing the leadership effect on performance, it does not fully explain or account for the leadership's influence.

This suggests that leadership remains the primary driver of organizational success, while digital transformation serves as an enabler that supports and amplifies leadership's impact. Digital tools, such as AI and data analytics, enhance operational efficiency and decision-making, but they are most effective when driven by strategic leadership that understands and aligns technological initiatives with organizational goals. Hence, leadership must remain at the forefront of driving digital initiatives for them to be successful, making leadership not just a predictor of performance but also a key driver of the technological transformations that enhance that performance.

5.1.3 To evaluate the moderating effect of the regulatory framework on the relationship between innovative leadership and organizational performance

The study found that the regulatory framework significantly moderates the effect of innovative leadership on organizational performance. Descriptive statistics highlighted divergent views regarding the regulatory framework. Some respondents expressed concern about bureaucratic delays, inconsistent enforcement, and limited flexibility for digital innovation within the regulatory environment. These concerns were reflective of the challenges that airlines face in navigating a complex and sometimes restrictive regulatory landscape.

Correlation analysis revealed a moderate positive relationship between regulatory clarity and organizational performance. This indicates that when regulatory frameworks are perceived as clear and supportive of innovation, they positively contribute to performance outcomes. On the other hand, when the regulatory environment is seen as restrictive or slow to adapt to technological changes, it weakens the effect that leadership can have on performance.

Moderation analysis demonstrated that the strength of the relationship between ILP and organizational performance was conditioned by the regulatory context. In environments where the regulatory framework was more enabling—characterized by timely licensing, adaptive safety oversight, and supportive regulations—the effect of leadership on performance was stronger. Conversely, in environments with rigid, outdated, or inconsistent regulations, the leadership's ability to drive innovation and operational improvements was weakened.

This finding affirms the relevance of Institutional Theory, which posits that organizational actions are influenced by external rules, norms, and expectations. The study suggests that the regulatory environment plays a pivotal role in either enabling or constraining the effectiveness of leadership practices. These results highlight the importance of fostering a regulatory environment that is flexible, adaptive, and supportive of innovation in the aviation sector. Policymakers and regulators need to ensure that their frameworks provide enough room for airlines to implement innovative strategies without being bogged down by overly strict or outdated regulations.

5.1.4 To examine whether the regulatory framework moderates the mediating effect of digital transformation on the relationship between innovative leadership and organizational performance

The final objective of the study examined a moderated mediation model, with digital transformation serving as the mediating variable between innovative leadership practices and organizational performance, and the regulatory framework acting as a moderator. The analysis did **not** support the presence of a significant moderated mediation effect. Although the individual mediation pathway (ILP → DT → OP) and the independent moderation pathway (RF on DT → OP) showed significance in separate tests, the combined interaction term (RF × DT) within the indirect effect path was statistically insignificant ($\beta = 1.661, p = 0.135$).

This result indicates that the regulatory framework does not meaningfully alter the strength of the mediating role that digital transformation plays in linking innovative leadership to organizational performance. In practice, this suggests that while leadership strongly drives both digital transformation and performance outcomes, the regulatory environment does not substantially amplify or weaken that mediated relationship. One possible explanation is that digital transformation efforts within Kenya's domestic airlines are often pursued independently of regulatory conditions, or that airline management has developed internal strategies to mitigate or navigate regulatory bottlenecks without significant disruption to technological initiatives.

From a theoretical perspective, the finding challenges the assumption, rooted in Institutional Theory, that external regulatory environments critically condition the effectiveness of organizational change initiatives such as digital transformation. In the Kenyan aviation context, the performance gains achieved through leadership-driven digital initiatives appear to be largely independent of the prevailing regulatory framework. This raises pertinent questions about whether current regulatory structures are sufficiently responsive to rapid technological changes, and whether their design actively supports or simply coexists with innovation efforts.

Overall, the absence of a significant moderated mediation effect underscores the primacy of leadership in driving digital transformation and organizational performance, regardless of regulatory context. While regulation remains vital for ensuring compliance, safety, and operational stability, its influence in this specific pathway is minimal. For policy and practice, this suggests that regulators such as the Kenya Civil Aviation Authority could adopt more

innovation-friendly and adaptive regulatory measures to better align with technological advancements. For airline leaders, the implication is to continue prioritising internal innovation strategies and digital capability development, rather than relying on regulatory shifts to enhance the effectiveness of their transformation initiatives

The results are summarized in the table below.

Table 33: Summary of Research Findings

Objective	Hypothesis Tested	Key Statistical Results	Decision on Hypothesis	Main Interpretation & Theoretical Linkage
1. Effect of Innovative Leadership Practices (ILP) on Organizational Performance (OP)	H ₀₁ : ILP does not significantly affect OP in domestic commercial airlines.	- Descriptive: Mean ILP = 4.21, SD = 0.36 (high, consistent). - Correlation: $r = 0.800$, $p < 0.001$ (strong positive). - Regression: $B = 0.851$, $\beta = 0.800$, $t = 15.818$, $p < 0.001$; $R^2 = 0.640$; $F(1,141) = 250.216$, $p < 0.001$.	H ₀₁ Rejected	ILP strongly and significantly predicts OP, explaining 64% of its variance. Supports the Resource-Based View (Barney, 1991), positioning leadership as a valuable, rare internal resource, and aligns with Open Systems Theory where leaders adaptively align the firm to external conditions. Empirical support from Avolio & Bass (2004); Gumusluoglu & Ilsev (2009); Westerman et al. (2011).
2. Mediating Effect of Digital Transformation (DT) on ILP → OP	H ₀₂ : DT does not significantly mediate the ILP–OP relationship.	- Step 1: ILP → OP: $B = 0.851$, $t = 15.818$, $p < 0.001$, $R^2 = 0.640$. - Step 2: ILP → DT: $B = 0.446$, $\beta = 0.727$, $t = 12.589$, $p < 0.001$, $R^2 = 0.529$. - Step 3: DT → OP: $B = 1.088$, $\beta = 0.627$, $t = 9.555$, $p < 0.001$. - Step 4: ILP → OP (controlling DT): $B = 0.777$, $t = 9.932$, $p < 0.001$; DT → OP: $B = 0.166$, $t = 1.304$,	H ₀₂ Rejected (Partial Mediation)	DT partially mediates the ILP–OP link but does not replace the strong direct effect of ILP. Supports Resource-Based View (technology valuable but dependent on leadership orchestration) and Technological Determinism moderated by managerial strategy. Empirical parallels in Westerman et al. (2011), Kane et al.

		p = 0.194; R ² ↑ from 0.640 → 0.644.		(2015), Vial (2019), and Li et al. (2021).
3. Moderating Effect of Regulatory Framework (RF) on ILP → OP	H ₀₃ : RF does not significantly moderate the ILP–OP relationship.	- Step 1: ILP → OP: B = 0.851, t = 15.818, p < 0.001, R ² = 0.640. - Step 2: ILP → OP: B = 0.629, t = 10.505, p < 0.001; RF → OP: B = 0.534, t = 6.162, p < 0.001; R ² ↑ to 0.716. - Step 3: Interaction ILP × RF: B = 0.031, β = 0.146, t = 2.239, p = 0.027; R ² ↑ to 0.726; F = 122.979, p < 0.001.	H ₀₃ Rejected	RF significantly strengthens the ILP → OP effect. Leadership impact on performance grows under enabling and adaptive regulation. Supports Institutional Theory (external norms shape outcomes) and Open Systems Theory (external alignment enhances internal resources). Echoes findings by Gnan et al. (2021) and Ahn & Ahn (2022).
4. Moderated Mediation: RF on the ILP → DT → OP Path	H ₀₄ : RF does not significantly moderate the mediating effect of DT between ILP and OP.	- Step 1: ILP → DT: β = 0.727, t = 12.589, p < 0.001. - Step 2: ILP → OP: β = 0.868, t = 16.751, p < 0.001; DT → OP: β = -0.186, t = -3.068, p = 0.003; RF → OP: β = 0.258, t = 0.479, p = 0.633; DT × RF → OP: β = 1.661, t = 1.502, p = 0.135 (NS).	H ₀₄ Not Rejected	RF does not moderate the indirect ILP → DT → OP pathway. Leadership remains the dominant driver; DT partially mediates but its effect does not vary with regulatory support. Challenges stronger predictions of Institutional Theory, affirms Technological Determinism but shows its dependence on leadership. Aligns with Ahn & Ahn (2022) on muted regulatory impact when frameworks are rigid or outdated.

After thorough statistical evaluation and hypothesis testing, a refined conceptual framework was derived to represent the most statistically sound and theoretically coherent model. This optimized model preserves only those relationships that were empirically validated and conceptually relevant, thereby enhancing both explanatory power and policy relevance.

The model was optimized through hierarchical and stepwise regression procedures, in combination with Baron and Kenny's mediation approach and Hayes' moderated mediation framework. Variables retained include:

Independent Variable

Dependent Variable

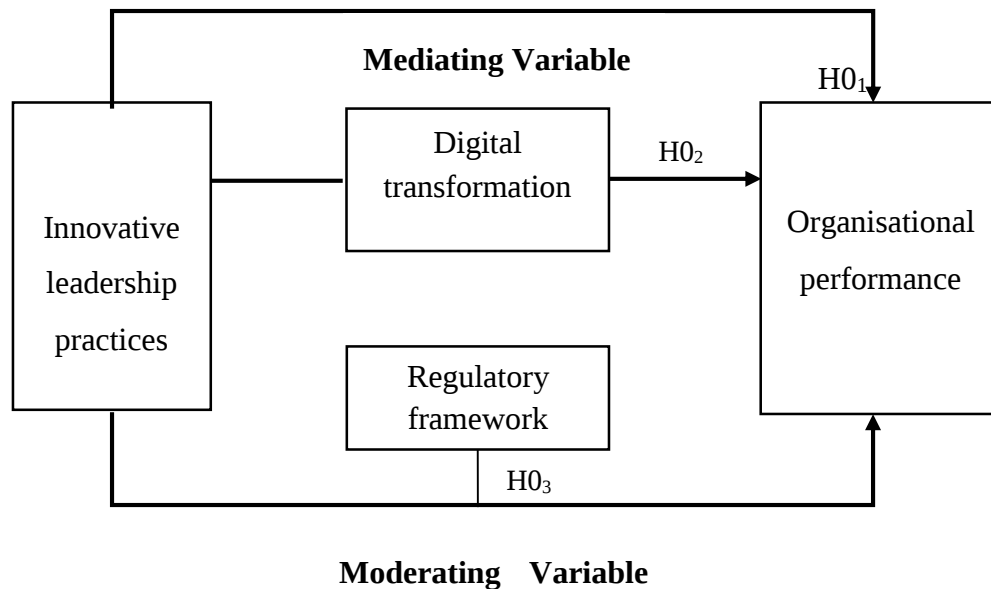


Figure 7: Optimal Conceptual Framework

Notably, while digital transformation mediates the influence of leadership on performance, the expected moderating effect of the regulatory framework on this mediation pathway did not meet statistical significance thresholds. As such, that path was excluded from the final model.

Despite this, the retention of three critical paths—direct, mediating, and moderating—validates the initial theoretical assumptions laid out in the original framework. The refined model confirms that ILP is the most foundational predictor, both in its direct impact on performance and in driving technological advancement. Moreover, the regulatory environment plays an amplifying role in strengthening leadership’s impact on outcomes, but not necessarily in enhancing the digital transformation pathway.

All retained pathways had statistically significant p-values (< 0.05), and the model recorded high R^2 values and significant F-statistics in ANOVA tests, affirming strong model fitness and explanatory adequacy. These results demonstrate a cohesive theoretical structure underpinned by empirical validation.

The optimized model provides a structured roadmap for future research and practical implementation. For airline managers, it confirms that investment in innovative leadership capacity and supportive regulatory alignment are key levers for performance improvement. For policymakers and regulators, the model underscores the need to craft agile, innovation-aligned aviation regulations that can sustain technological advancement without stifling operational flexibility.

In conclusion, the final conceptual model captures the dual importance of internal strategic leadership and external regulatory adaptation in driving organizational success within the evolving digital landscape of Kenya's commercial airline sector.

5.2 Conclusion

The central purpose of this study was to examine the influence of innovative leadership practices on the organizational performance of domestic commercial airlines in Kenya, with a focus on the mediating role of digital transformation and the moderating influence of the regulatory framework. Drawing from the Resource-Based View (RBV), Technological Determinism, and Institutional Theory, the study sought to determine how leadership innovation, technology adoption, and regulation interact to shape performance outcomes in one of the most dynamic and tightly regulated service sectors. The conclusions presented here are organized around the study's four specific objectives and integrate statistical evidence with theoretical interpretation and practical implications.

The first objective of this study was to determine the effect of innovative leadership practices on the organizational performance of domestic commercial airlines in Kenya. The study concluded that innovative leadership practices play a decisive and foundational role in driving performance outcomes. Leaders who demonstrate strategic vision, adaptability, employee empowerment, and clear communication create an environment that fosters operational efficiency, customer loyalty, market competitiveness, and sustained organizational growth. The statistical results—particularly the large standardized coefficient ($\beta = 0.851$, $p < 0.001$) and an explanatory power of $R^2 = 0.640$ —underscore that leadership innovation accounts for a substantial portion of performance variance.

This evidence validates the Resource-Based View proposition that leadership constitutes a rare, valuable, and inimitable organizational resource capable of generating durable competitive

advantage (Barney, 1991). In the Kenyan aviation context, where airlines operate within narrow profit margins and are exposed to fluctuating fuel prices, regulatory scrutiny, and technological disruption, leadership that promotes creativity and learning becomes a strategic differentiator. Such leadership does not merely manage operations—it shapes the adaptive capacity of the organization. The study therefore concludes that innovative leadership is the central internal driver of organizational success.

At a managerial level, this conclusion emphasizes the need for airlines to institutionalize leadership development and succession planning as integral strategic functions. Investing in the systematic identification, training, and mentoring of leaders who can combine operational discipline with innovation orientation will yield long-term dividends. Leadership programs should incorporate scenario planning, digital literacy, and change management modules to prepare managers for emerging disruptions such as automation, artificial intelligence, and sustainability requirements.

Furthermore, the study's findings imply that leadership is not a support function but a core strategic capability—akin to fleet management or financial control—that determines whether organizational strategy is executed successfully. Airlines that deliberately nurture innovation-oriented cultures—characterized by open communication, trust, and empowerment—are more likely to achieve superior service reliability and customer satisfaction. From a policy standpoint, these findings suggest that the Civil Aviation Authority and aviation training institutions should complement technical licensing with leadership and innovation certification programs to build national capacity for strategic airline management.

In conclusion, the first objective confirms that the long-term competitiveness and resilience of Kenya's domestic airlines depend on visionary and empowering leadership. Such leadership anchors performance improvement in human creativity and organizational learning, thereby fulfilling the RBV's assertion that people and culture are the ultimate sources of sustainable advantage.

The second objective was to examine whether digital transformation mediates the relationship between innovative leadership practices and organizational performance. The study concluded that digital transformation acts as a partial mediator in this relationship. The regression results showed that innovative leadership significantly predicts both digital transformation ($\beta = 0.727$, $p < 0.001$) and performance ($\beta = 0.851$, $p < 0.001$), while digital transformation independently

predicts performance ($\beta = 1.088$, $p < 0.001$). However, when leadership and digital transformation were considered simultaneously, the effect of technology weakened and lost statistical significance, while leadership remained strong. The model's R^2 increased only marginally from 0.640 to 0.644, indicating that digital transformation enhances but does not replace the influence of leadership.

This pattern confirms the Resource-Based View argument that technology alone cannot confer advantage without complementary intangible assets—such as leadership vision, culture, and organizational learning—to deploy it effectively. It also resonates with Technological Determinism interpreted through a managerial lens: technology sets the stage for change, but leadership determines the trajectory and impact of that change. Digital tools—such as data analytics, artificial intelligence, predictive maintenance systems, and mobile applications—improve efficiency and decision-making only when guided by leaders who align them with strategic goals and employee capabilities.

From a managerial perspective, this conclusion holds several implications. First, airlines must approach digital transformation as a strategic leadership initiative, not merely as an information-technology function. Leadership should frame digitalization within broader business objectives—enhancing safety, reducing operational costs, and improving passenger experience. Second, the findings underscore the need for integrated leadership-technology strategies. Investments in advanced systems will produce sustainable gains only when accompanied by cultural change, employee training, and cross-functional collaboration orchestrated by leadership. Third, the partial mediation outcome signals that leadership remains the principal determinant of success even in technologically intensive contexts. Airlines that treat technology as a complement to leadership rather than a substitute will likely sustain stronger competitive positions.

At the policy level, this conclusion suggests that national initiatives such as Kenya's Digital Economy Blueprint should emphasize leadership readiness in tandem with technological adoption. Regulators and policymakers should facilitate leadership forums, innovation labs, and industry collaborations that promote shared learning on digital strategy execution. By equipping leaders with digital governance competencies, the aviation sector can ensure that technological innovation translates into measurable performance improvements.

In summary, while digital transformation enhances the efficiency and quality of airline operations, it does not autonomously create performance gains. The study concludes that leadership-driven digital transformation—anchored in strategic intent, empowerment, and cultural alignment—is the most effective route to sustainable performance in Kenya’s domestic aviation sector.

The third objective sought to establish whether the regulatory framework moderates the relationship between innovative leadership practices and organizational performance. The study concluded that the regulatory environment significantly shapes how leadership innovation translates into organizational outcomes. The moderating effect was statistically significant ($\beta = 0.031$, $p = 0.027$), indicating that leadership’s influence on performance is either amplified or constrained depending on the quality of regulation.

This conclusion aligns with Institutional Theory, which posits that organizational behaviour and performance are conditioned by external institutional pressures—such as legal requirements, professional standards, and policy frameworks. In Kenya’s aviation sector, regulations governing safety, airworthiness, licensing, and operations exert strong influences on managerial discretion and innovation. When the regulatory framework is adaptive, transparent, and consistent, it enables leaders to experiment with new technologies and processes confidently. Conversely, when regulation is fragmented or bureaucratic, it introduces compliance burdens that stifle creativity and slow decision-making.

The study therefore concludes that effective regulation acts as an enabler of leadership innovation rather than a constraint. Regulators such as the Kenya Civil Aviation Authority (KCAA) have an important role beyond oversight: they shape the institutional environment that determines how leadership can translate strategic vision into performance. Streamlined procedures for digital certification, data sharing, and innovation approval would empower airlines to adopt modern technologies faster. For airline executives, this finding underscores the importance of proactive regulatory engagement—developing partnerships with oversight bodies, participating in policy dialogues, and aligning strategic initiatives with evolving regulatory expectations.

At a broader policy level, the findings call for regulatory modernization in step with global aviation trends. As the industry embraces automation, sustainability, and digitalization, regulators must shift from compliance policing to facilitative governance. Establishing

sandboxes or pilot programs for testing emerging technologies—such as AI-based maintenance systems or blockchain ticketing—would allow airlines to innovate within controlled environments. This adaptive regulatory posture would strengthen the synergy between leadership innovation and performance outcomes, ensuring that Kenya’s aviation sector remains regionally competitive.

The fourth objective aimed to determine whether the regulatory framework moderates the mediating role of digital transformation in the relationship between innovative leadership practices and organizational performance. The study concluded that the regulatory environment does not significantly influence the strength of the indirect effect of leadership on performance through digital transformation. While leadership strongly drives both digital adoption and performance, and digital transformation enhances this link to a modest degree, the regulatory framework neither strengthens nor weakens this indirect pathway ($\beta = 1.661, p = 0.135$).

This conclusion reveals that Kenya’s current regulatory system—though effective in ensuring safety and compliance—has not yet evolved into a mechanism that actively promotes or accelerates digital transformation. Regulatory policies appear to operate in parallel rather than interactively with technological innovation processes. Consequently, airlines cannot rely on external regulatory reforms to amplify the performance benefits of digital adoption. Instead, they must focus on internal leadership capabilities, strategic alignment, and cultural readiness to unlock technology’s full potential.

The implication for regulators is that existing frameworks need to move beyond compliance to become innovation enablers. This may involve developing policy instruments that incentivize digital investments, create collaborative platforms for industry knowledge exchange, and embed digital readiness standards in licensing and oversight protocols. From an airline perspective, the finding emphasizes self-reliance: organizations should cultivate internal governance systems and leadership competencies that ensure digital transformation delivers value irrespective of regulatory inertia. Over time, closer dialogue between regulators and industry stakeholders could align policy objectives with technological realities, enabling regulation to evolve as a catalyst rather than a constraint.

Overall, the study demonstrates that leadership remains the most powerful internal determinant of organizational performance in Kenya’s domestic aviation sector. Digital transformation

operates as a critical but secondary enabler, while the regulatory framework serves primarily as a contextual variable that conditions the effectiveness of leadership. Together, these three elements form a dynamic system: leadership provides direction and motivation; technology supplies tools for execution; and regulation defines the external boundaries of action.

The overarching conclusion is that the performance of domestic airlines depends on how effectively these elements are integrated. Leadership that is strategically visionary, technologically literate, and institutionally aware will produce resilient and high-performing organizations. For managers, this calls for deliberate efforts to build leadership pipelines equipped for digital and regulatory complexity. For policymakers, it calls for adaptive regulation that supports innovation and knowledge exchange. For scholars, it highlights the need for continued empirical exploration of how leadership, technology, and institutional forces interact in emerging-market contexts.

By illuminating these relationships, the study contributes to theory, practice, and policy: it reinforces RBV by validating leadership as a rare strategic asset; it extends Technological Determinism by framing digital transformation as a leadership-mediated process; and it advances Institutional Theory by evidencing how regulation contextualizes internal capabilities. Ultimately, Kenya's domestic aviation industry will sustain competitiveness not through technology or policy alone, but through innovative, digitally enabled, and institutionally attuned leadership that transforms constraints into opportunities and strategy into enduring performance.

5.3 Recommendation

In light of the study's findings, three strategic priorities emerge for enhancing the performance of Kenya's domestic commercial airlines: strengthening innovative leadership, positioning digital transformation as a core business strategy, and reforming the regulatory environment to better support innovation. Airlines must institutionalize innovative leadership as a central capability. Leadership development should prioritize strategic thinking, adaptability, clear communication, and employee empowerment. Structured leadership programs, mentorship initiatives, and succession planning frameworks should be embedded into corporate strategy to ensure a continuous pipeline of leaders who can navigate market volatility, technological disruption, and regulatory complexity. Embracing systems thinking will further help leaders

understand how operational, technological, and market factors interact, enabling them to anticipate change and drive organizational agility.

Digital transformation must move beyond isolated IT upgrades and become a strategic, organisation-wide agenda. Airlines should create clear digital roadmaps aligned with business goals, integrating technologies such as predictive analytics, artificial intelligence, and mobile customer platforms into core operations. Digital metrics—including adoption rates, cost savings, and customer engagement—should be embedded into performance management systems to ensure accountability. Importantly, technology adoption should be led by cross-functional teams rather than siloed departments, fostering a culture of collaboration and innovation.

The regulatory framework should evolve from primarily enforcing compliance to enabling innovation. The Kenya Civil Aviation Authority should modernise licensing and operational guidelines to accommodate emerging technologies, reduce bureaucratic delays, and introduce regulatory sandboxes where airlines can test digital solutions safely. Regulators should also provide practical guidance and capacity-building support for airlines adopting new technologies.

Finally, the study recommends the creation of a multi-stakeholder national aviation innovation council to unite policymakers, regulators, airlines, technology providers, and academia. This platform could align leadership development, digital strategies, and regulatory reform, fostering an adaptive, competitive, and technology-driven aviation industry capable of sustaining growth in a challenging global market.

5.4 Implications of the Current Study

5.4.1 Implication for Policy

The findings of this study strongly suggest a pressing need for policy realignment in Kenya's aviation sector to foster innovative leadership, enhance digital capabilities, and modernize the regulatory environment. As the aviation industry becomes increasingly digitalized and globally competitive, it is essential that policies evolve in tandem with technological advancements and leadership requirements to ensure that domestic airlines can compete effectively on both regional and international stages. The results from the study provide robust evidence of the pivotal role that leadership, digital transformation, and regulatory frameworks play in shaping

organizational performance. This section proposes a set of strategic policy interventions to address the gaps identified by the study and to position Kenya's aviation industry for long-term success.

First and foremost, the Kenya Civil Aviation Authority (KCAA), in collaboration with the Ministry of Transport and Infrastructure, should prioritize the development of national leadership capacity frameworks that are specifically tailored to the unique challenges and opportunities of the aviation sector. These frameworks should mandate the inclusion of strategic thinking, innovation training, and succession planning for airline executives, ensuring that leadership appointments are competency-based and aligned with the strategic imperatives of the Fourth Industrial Revolution (4IR). These frameworks should promote leadership practices that foster adaptability, vision alignment, and communication clarity, traits identified in the study as essential for effective leadership in the context of rapidly evolving technological and regulatory landscapes.

The establishment of leadership capacity frameworks can provide a more structured and systematic approach to leadership development, addressing the immediate needs of the aviation sector while also preparing it for future challenges. Leadership development programs should focus on critical skills such as digital fluency, data-driven decision-making, and systems thinking. As noted in the study, digital transformation is deeply interwoven with leadership effectiveness. Therefore, equipping leaders with the skills to understand and leverage technological advancements will enable them to drive organizational change and align the digital transformation agenda with broader strategic objectives. The implementation of structured succession planning frameworks will also ensure continuity of leadership excellence, preparing the next generation of airline executives to navigate the complex challenges facing the sector.

Second, the study confirmed that digital transformation plays a crucial mediating role in the relationship between leadership practices and organizational performance. To support the widespread adoption of digital technologies, the State Department for Transport, in collaboration with ICT authorities, should introduce fiscal incentives and capacity-building programs to support the integration of cloud computing, mobile technologies, artificial intelligence (AI), and big data analytics within the aviation industry. These incentives could take the form of grants, subsidized training programs, or accelerated depreciation for digital

infrastructure investments, which would help alleviate the cost barriers that many domestic carriers face in adopting new technologies.

Digital transformation has the potential to significantly enhance operational efficiency, improve customer experiences, and increase revenue streams for airlines. However, the high initial costs and ongoing maintenance expenses associated with advanced technologies can be a deterrent for many carriers, particularly smaller ones. By providing financial incentives and support for training, the government can facilitate a smoother transition to a more digitally advanced sector. This would not only help improve the competitive standing of Kenya's airlines but also ensure that the sector keeps pace with global trends in aviation technology. Encouraging investments in digital infrastructure will enable airlines to improve operational efficiencies, reduce maintenance costs, and enhance customer experience, aligning with the broader goals of sustainability and profitability.

In terms of regulatory oversight, the study has shown that regulatory rigidity in Kenya's aviation industry has been a significant hindrance to performance improvements. The KCAA must address this issue by revising outdated components of the country's aviation regulatory framework. This revision should reflect the rapidly changing technological realities, including digital advancements, and allow for more context-driven innovation. Specifically, regulations should be designed to encourage the use of new technologies, such as AI for predictive maintenance, cloud-based systems for operational management, and cybersecurity measures for protecting digital data. However, these innovations must be integrated into a regulatory framework that maintains high safety and compliance standards.

The KCAA can achieve this by adopting principles of risk-based oversight, performance-based auditing, and adaptive licensing regimes that respond to emerging technologies and industry practices. By embracing a more flexible and forward-thinking regulatory approach, the KCAA can help airlines implement innovations without facing significant regulatory hurdles. Furthermore, the creation of regulatory sandbox environments would allow airlines to test new technologies and business models within a controlled and compliant space. This could help mitigate the risks associated with untested innovations while also enabling the industry to stay ahead of global competitors.

Lastly, to harmonize the various efforts to foster leadership innovation, digital transformation, and regulatory adaptation, a multi-stakeholder "Aviation Innovation Council" should be

established under the National Air Transport Policy. This council would bring together key stakeholders, including airline executives, civil aviation regulators, digital innovators, academic institutions, and consumer protection bodies, to engage in continuous dialogue on the systemic enablers of organizational performance in aviation. By facilitating collaboration among stakeholders, the council can ensure that leadership development, digital strategy, and regulatory reform evolve in tandem with the needs of the aviation sector. This collaborative approach would help align policy interventions with industry realities and foster a more unified approach to achieving long-term sustainability and performance improvements within the sector.

5.4.2 Implication for Practice

From a practical standpoint, the findings of this study have significant implications for airline managers, department heads, and operational teams within Kenya's aviation sector. The study provides evidence-based strategies for enhancing internal capacity, optimizing digital transformation efforts, and navigating the regulatory environment more effectively. The practical recommendations outlined below offer actionable insights for airline executives seeking to improve organizational performance and achieve competitive advantage in the dynamic global aviation landscape.

The first critical step is for airline management to establish formal innovation units or roles within their organizations. These units should foster cross-functional leadership thinking, encouraging collaboration and the generation of new ideas that can drive operational efficiency and enhance customer satisfaction. By creating structured innovation programs, airlines can cultivate a culture of experimentation, where employees are empowered to propose and test new ideas in a controlled, low-risk environment. Additionally, performance incentives linked to innovation outcomes can help motivate employees to contribute to the organization's transformation efforts. Leadership behaviors that promote adaptability, strategic foresight, and open communication should be emphasized, as these are critical to driving innovation and organizational change.

The findings from the study also emphasize the importance of developing comprehensive digital transformation roadmaps. Airlines should move beyond fragmented, isolated digital initiatives and focus on creating integrated, strategic plans that align with their operational and customer service goals. These roadmaps should prioritize investments in technologies such as

real-time data analytics, predictive maintenance systems, mobile booking interfaces, and AI-driven customer interaction tools. By leveraging these technologies, airlines can not only enhance operational efficiency but also improve the overall customer experience, ultimately driving higher customer retention and satisfaction.

Furthermore, the study highlights the need for digital transformation metrics to be embedded in performance management systems. By tracking and measuring key performance indicators (KPIs) such as digital adoption rates, customer digital engagement, and improvements in cost efficiency, airlines can institutionalize accountability for digital transformation initiatives. This will ensure that technology-driven improvements are aligned with the organization's overall strategic goals and contribute to long-term sustainability.

Given the moderating role of regulatory frameworks identified in the study, airlines must proactively develop internal regulatory affairs teams that are responsible for engaging with aviation regulators, monitoring compliance updates, and influencing policy where appropriate. These teams will play a crucial role in ensuring that the organization remains compliant with evolving regulations while also advocating for regulatory changes that support innovation. Airlines should also participate in collaborative regulatory sandbox initiatives, which would allow them to co-develop adaptive solutions with oversight bodies. This collaborative approach can help streamline the adoption of new technologies while ensuring that regulatory requirements are met.

In line with the principles of Open Systems Theory, domestic airlines should adopt flexible organizational structures that enable rapid reconfiguration in response to regulatory, market, or technological shifts. By adopting scenario planning, real-time monitoring tools, and decentralized decision-making models, airlines can enhance their ability to respond to changing conditions and maintain performance continuity under volatile circumstances. This adaptability will be essential in navigating the uncertainties of the aviation industry, particularly in light of the ongoing challenges posed by the COVID-19 pandemic and other external disruptions.

Lastly, airlines should invest in ongoing leadership development programs that align with the demands of digital transformation and regulatory change. By partnering with aviation academies and business schools, airlines can offer leadership coaching, executive simulation training, and international exposure programs that equip management teams with the skills required to lead in a digital-first, highly regulated environment. These programs should

incorporate modules on data governance, stakeholder management, change leadership, and regulatory negotiation, all of which are critical for navigating the complexities of the modern aviation landscape.

5.4.3 Implications for Theory

The theoretical contributions of this study extend the body of knowledge in strategic management, digital innovation, and regulatory economics. By applying multiple theoretical lenses—including Resource-Based View (RBV), Open Systems Theory, Technological Determinism, and Institutional Theory—this study provides valuable insights into the role of leadership, technology, and regulatory frameworks in driving organizational performance within the aviation sector.

The study confirms that innovative leadership, as an intangible strategic asset, directly enhances organizational performance. This finding extends the Resource-Based View (RBV) by incorporating digital transformation as a complementary asset that enhances the utility of leadership capabilities in dynamic environments. RBV posits that resources that are valuable, rare, inimitable, and non-substitutable contribute to competitive advantage. In this context, innovative leadership is treated as a strategic asset that helps organizations respond to technological disruptions and leverage digital capabilities to achieve superior performance. By viewing leadership as a resource that can be deployed in conjunction with digital technologies, organizations can enhance their overall effectiveness and competitiveness.

The study also demonstrates how external factors, such as the regulatory environment, shape internal organizational effectiveness. This supports the view of Institutional Theory that organizations must maintain permeability to environmental factors, especially regulatory stimuli, to survive and thrive. By adapting leadership strategies in response to regulatory pressures and opportunities, organizations can navigate the complexities of the external environment and leverage these factors to enhance internal capabilities.

Furthermore, the study provides empirical support for the idea that digital transformation is not an environmental pressure but a conduit for performance change. This aligns with a “leadership-activated” model of technological determinism, where organizational agents play a central role in activating the performance potential of technology. In this view, technology is

not seen as an independent force driving change, but rather as a tool that can be strategically harnessed by leadership to enhance organizational performance.

Lastly, the study expands Institutional Theory by highlighting the moderating role of regulatory frameworks in shaping the impact of internal capabilities on organizational performance. By demonstrating how institutional logics condition the effectiveness of leadership and digital transformation initiatives, this study introduces the concept of “institutional agility,” which refers to an organization’s ability to adapt to changing regulatory environments while maintaining alignment with performance objectives. This concept warrants further theoretical exploration, particularly in regulated service sectors such as aviation, where the interplay between leadership, technology, and regulation is critical to organizational success.

5.5 Suggestions for Future Research

The findings of this study open several avenues for future research, especially given the methodological limitations and the scope of the study. The exploration of innovative leadership, digital transformation, and the moderating role of regulatory frameworks in Kenya’s domestic aviation sector provides a solid foundation for expanding this area of inquiry. However, due to the specific focus on Kenya’s domestic airlines and the constraints of the study’s design, there are numerous opportunities for future research to build upon the existing work and contribute deeper insights into these crucial relationships. This section outlines several key areas where future research could contribute to further understanding and refinement of the constructs explored in this study, as well as their applicability to broader contexts.

One of the primary areas for future research lies in expanding the scope of this study beyond Kenya’s domestic airlines to include regional and international airlines based in Kenya and East Africa. The results of this study were specifically tailored to the dynamics of domestic airlines, focusing on leadership practices, digital transformation, and regulatory environments within Kenya. However, it remains unclear whether the findings hold true in a regional or international context. This limitation presents an opportunity to examine whether the relationships identified in this study are consistent across different types of airlines operating in the region, including larger international carriers and smaller regional ones.

Cross-market comparisons would be valuable as they could provide insights into how regional and international airlines adapt to technological changes and regulatory frameworks. These airlines often operate in a more complex regulatory environment, dealing with both domestic and international aviation rules, which may offer different challenges and opportunities compared to local carriers. Additionally, international airlines might have more advanced digital transformation initiatives and leadership structures that could be juxtaposed against the findings of this study. This broader research could contribute to the generalizability of the study's findings and offer a more comprehensive understanding of leadership and digital transformation within the aviation sector, particularly in emerging markets such as East Africa. By incorporating regional and international carriers into future research, scholars can gain a more nuanced understanding of how leadership practices, digital transformation, and regulatory frameworks intersect in various types of airline operations. The findings could also provide valuable insights into how cross-border regulations, geopolitical issues, and international partnerships influence the performance outcomes of airlines operating within and outside of the region. This would help to further establish the global relevance of the study's conclusions and offer practical recommendations for airline executives and regulators across the region and beyond.

The study presented in this thesis focused on innovative leadership practices, digital transformation, and regulatory frameworks as core constructs. However, these variables may not fully capture the complexity of the mechanisms that drive organizational performance within the aviation sector. Future research could extend this study by introducing new mediators and moderators that may further explain the relationship between leadership, technology, and performance.

One potentially valuable mediator to explore is organizational culture. Organizational culture plays a fundamental role in shaping the behaviors, values, and norms within an organization, which can, in turn, affect how leadership practices are perceived and implemented. Future studies could examine the role of culture in mediating the relationship between leadership and performance, particularly in organizations undergoing digital transformation. Organizational culture may either facilitate or hinder the adoption of new technologies, depending on whether the culture encourages innovation, flexibility, and learning or whether it is resistant to change.

This exploration could help uncover how cultural elements such as trust, communication styles, and openness to change influence the success of leadership-driven digital initiatives.

Another potentially impactful factor to consider as a moderator is customer experience orientation. As airlines increasingly integrate digital tools to enhance customer service, the role of customer-centric leadership and organizational strategies in shaping the customer experience could be critical. Customer experience orientation could moderate the relationship between innovative leadership and organizational performance by influencing how well digital transformation efforts align with customer expectations and satisfaction. Research in this area could offer insights into how leadership can create a customer-centric culture that maximizes the impact of digital technologies on service delivery and, ultimately, organizational performance.

By introducing these additional mediators and moderators into the model, future studies could further enrich our understanding of the complex relationships that exist between leadership, technology, and performance outcomes. This expanded framework would provide a more comprehensive view of the factors influencing success in the aviation industry and other sectors that are similarly undergoing digital transformations.

Another promising direction for future research lies in adopting a longitudinal approach to studying the relationships between leadership, digital transformation, and organizational performance. This study focused on cross-sectional data, providing a snapshot of the impact of leadership and digital technologies on performance at a particular point in time. However, leadership and digital transformation are dynamic constructs that evolve over time. To fully understand how these factors influence organizational performance in the long term, longitudinal studies are needed to track the evolution of leadership practices and digital transformation strategies over an extended period.

Longitudinal research would allow researchers to examine how leadership influences digital adoption and organizational outcomes over time, capturing both short-term and long-term effects. This approach would also shed light on the processes through which organizations adapt to technological change and the role that leadership plays in guiding these transformations. For example, it would be valuable to explore how leadership drives digital transformation in the initial stages of implementation and whether the impact of leadership and digital tools changes as the organization matures in its use of technology. Moreover,

longitudinal studies could track how regulatory changes influence organizational practices over time, providing deeper insights into the interaction between leadership, technology, and the regulatory environment.

By examining the temporal dimensions of these relationships, future studies could provide more robust and context-rich findings that help practitioners and policymakers navigate the challenges and opportunities of managing digital transformation in a rapidly changing environment. Longitudinal research could also highlight patterns of success and failure over time, offering valuable lessons for other organizations undergoing similar transformations.

While this study employed a quantitative approach to assess the relationships between leadership, digital transformation, and organizational performance, future research could benefit from incorporating mixed-methods approaches. Qualitative methods, such as case studies and focus groups, can provide deeper insights into the behaviors, motivations, and decision-making processes that underpin leadership actions and digital transformation strategies.

For instance, qualitative research could help uncover the subtleties of leadership behavior in organizations that are actively engaged in digital transformation. Engaging participants drawn from different organizational levels could reveal how leadership practices influence organizational climate, employee engagement, and the adoption of new technologies. Participant perspectives could also shed light on how organizational culture, staff attitudes, and group dynamics shape the success or failure of digital initiatives.

Additionally, qualitative approaches can provide a better understanding of regulatory interactions within the aviation sector. Participants from airlines and regulatory bodies could share experiences on how frameworks are developed, implemented, and perceived in practice, as well as how these regulations affect operational flexibility and strategic choices. Such perspectives would enrich the understanding of how regulatory environments influence performance outcomes.

A mixed-methods approach would also allow for the triangulation of data, helping to validate and complement the quantitative findings of the study. The qualitative evidence gathered from participants could inform the development of more tailored survey instruments, while the quantitative data would provide statistical confirmation to support or challenge qualitative

interpretations. This integrated approach would yield a richer and more holistic view of the factors driving organizational performance in the aviation sector.

While this study focused on the aviation sector, future research could examine how similar constructs operate in other regulated service sectors such as banking, healthcare, or energy. These industries share many of the same characteristics as aviation, including complex regulatory environments, the need for digital transformation, and the importance of strong leadership. By applying the framework developed in this study to other sectors, researchers could identify patterns, divergences, and sector-specific requirements for innovation and performance.

For example, in the banking sector, leadership practices and digital transformation have become critical drivers of competitive advantage, particularly in the wake of fintech disruption. In healthcare, digital technologies are transforming service delivery, and strong leadership is essential for integrating new technologies while maintaining patient care standards. Similarly, in the energy sector, regulatory frameworks shape how companies invest in and deploy digital technologies, particularly in areas like smart grids and renewable energy.

Comparing the findings from different sectors would help establish the broader applicability of the study's framework and identify best practices that can be applied across industries. It would also shed light on how regulatory pressures and technological innovations are mediated by leadership in different contexts, helping to build a more generalized theory of leadership in regulated service sectors.

Finally, future research could explore the role of external stakeholders in shaping the digital transformation journey of organizations. This could include examining the influence of customers, investors, suppliers, and technology partners on the adoption and implementation of digital tools. In particular, research could investigate how customer expectations around digital experiences influence leadership decision-making and the types of technologies that are prioritized within organizations.

Furthermore, examining the role of technology vendors and strategic partnerships in the digital transformation process could reveal important insights into how collaboration and innovation ecosystems shape organizational strategies. These partnerships may provide organizations with access to cutting-edge technologies, expertise, and resources that enable them to accelerate

their digital transformation efforts. Understanding the role of external stakeholders in the transformation process would be valuable for organizations seeking to align their internal strategies with broader market trends and external expectations.

In conclusion, the suggestions for future research outlined above provide valuable directions for extending the current study and deepening our understanding of the relationships between leadership, digital transformation, and regulatory frameworks. By exploring these avenues, future research can contribute to a more comprehensive theory of organizational performance in regulated service sectors, offering practical insights for practitioners, policymakers, and scholars.

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APPENDICES

Appendix I: Letter of Introduction

Dear Sir/Madam,

I am a postgraduate student at Management University of Africa pursuing a Doctor of Philosophy in Management and Leadership. I am conducting research on **“INNOVATIVE LEADERSHIP PRACTICES, DIGITAL TRANSFORMATION, REGULATORY FRAMEWORK AND ORGANISATIONAL PERFORMANCE OF COMMERCIAL DOMESTIC AIRLINES IN KENYA”**

In view of the above, I am requesting you to answer the questions, which are provided in the questionnaires attached here-with. I also request you to provide me with the necessary documentation and information regarding innovative leadership practices, digital transformation, regulatory framework and organisational performance of commercial domestic airlines in Kenya. This will help me collect the necessary data which will help me to achieve the objectives of the study.

The information so collected through this questionnaire will be treated with utmost confidentiality and will be used exclusively for this research purpose only. Your response and cooperation in this matter will be highly appreciated. Thank you in advance.

Yours Faithfully,

Onesmus Kipngetich

DML/21/00149/2/22

Appendix II: Consent Form

Title of the Study:

Innovative Leadership Practices, Digital Transformation, Regulatory Framework and Performance of Commercial Domestic Airlines in Kenya

1. Purpose of the Study

You are invited to participate in a research study that seeks to examine how innovative leadership practices, digital transformation, and regulatory frameworks influence the performance of domestic commercial airlines in Kenya. The study will generate findings that may guide policy, management practice, and academic understanding in the aviation sector.

2. Procedures

If you agree to participate, you will be asked to complete a questionnaire. The questionnaire will require approximately 20–30 minutes to complete. No sensitive personal information will be collected beyond professional details relevant to the study.

3. Voluntary Participation

Your participation in this study is entirely voluntary. You may decline to answer any question, withdraw at any time, or choose not to participate without any negative consequences.

4. Risks and Benefits

- **Risks:** This study poses minimal risks, limited to the time spent completing the questionnaire.
- **Benefits:** You may not receive direct personal benefit. However, your participation will contribute to knowledge that may improve airline performance and inform regulatory policies.

5. Confidentiality

All information you provide will be treated with strict confidentiality. Data will be coded and aggregated so that no individual or organization can be identified in the final report. The responses will be used solely for academic purposes.

6. Ethical Approval

This study has been reviewed and approved by the University Ethical Review Board and the National Commission for Science, Technology and Innovation (NACOSTI).

7. Consent Statement

I have read (or have had read to me) the information above. I understand the purpose of the study, the procedures involved, the risks, and the benefits. I voluntarily agree to participate in this study.

Participant's Name: _____

Signature/Thumbprint: _____ **Date:** _____

Researcher's Name: _____

Signature: _____ **Date:** _____

Appendix III: Research Questionnaire

I am a PhD student at the Management University of Africa pursuing a PhD in Management and Leadership. As part of this study, I am carrying out research aimed at enhancing organisational performance of domestic commercial airlines in Kenya. The attached questionnaire is designed to collect information on innovative leadership practices, digital transformation, regulatory framework and organisational performance of domestic commercial airlines. I am seeking your views as part of the respondents that I have selected. The questionnaire will take about 20 minutes to fill. Kindly spare your time to complete the questionnaire as honestly as possible. Please read the instructions carefully and fill in all the questions as accurately as possible by ticking the box that matches your answer. The information given will be for academic use only. Neither you nor your organisation will be mentioned in the research findings. You are kindly requested to give honest responses to every question.

SECTION A: GENERAL INFORMATION

Please Tick As Appropriate

1. Gender?

Male [] Female []

2. What is your age bracket?

Below 20 Years [] 21 - 30 Years [] 31 - 40 Years [] 41–50 [] 51 - 60 Years [] 60 – 65 Years []

3. What is your education level?

K.C.S.E [] Diploma [] Bachelor's Degree [] Master's Degree []

Doctorate [] Others []

4. How long has your firm been in the airline industry?

Less than 5 Years [] 5-10 years [] 11-15 Years [] 16-20 Years []
Over 20 Years []

5. What is your current position in the airline company?

Managing Director [] Lead Legal Counsel [] Chief Operating Officer []

Head of Department []

SECTION B: INNOVATIVE LEADERSHIP PRACTICES

Please tick the appropriate answer for each of the questions: *Note: 5=Strongly Agree*

4=Agree 3=Not Sure 2=Disagree, 1=Strongly Disagree

NO	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	Strategic Thinking and Vision					
1	The airline leadership communicates a long-term vision focused on innovation and continuous improvement.					
2	The leadership team regularly analyzes industry trends to identify opportunities for innovation in our domestic operations.					
3	The leadership's vision for innovation is clearly linked to the overall strategic goals of our airline					
4	The staff are confident that their airline's leadership has a well-defined plan for achieving its long-term vision for innovation within the domestic market					
5	The leadership team actively seeks input from employees across different departments when developing the vision for innovation in our domestic operations.					
	Employee empowerment and collaboration					

NO	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
6	The staff are comfortable sharing new ideas for improving our airline's domestic operations, even if they differ from the traditional way of doing things.					
7	The airline leadership provides clear opportunities for employees from different departments to collaborate on innovative projects related to domestic travel.					
8	The staff are confident that their ideas would be considered if I proposed a new approach to improve our domestic travel services.					
9	The airline leadership provides employees with the resources and support needed to develop and implement their innovative ideas for domestic operations.					
10	The staff feels a sense of teamwork that encourages innovation in the domestic commercial market.					
	Learning and adaptability					
11	The airline leadership encourages experimentation with new approaches to improve our domestic travel services, even if they may not always be successful.					
12	We are regularly encouraged to learn from industry best practices to improve our domestic operations					
13	The airline leadership openly discusses past failures related to innovation as learning					

NO	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	opportunities for future improvements within the domestic market.					
14	Am comfortable admitting mistakes made while working on innovative projects for domestic travel, knowing it will be seen as a chance to learn and improve					
15	The airline actively tracks and measures the effectiveness of its innovative efforts in the domestic market, allowing for adjustments and course corrections as needed.					
	Communication and transparency					
16	The airline leadership clearly communicates the objectives of innovative projects related to domestic travel services.					
17	Am well-informed about the rationale behind the airline's decisions to implement innovative practices within the domestic market.					
18	The leadership team regularly shares updates on the progress and outcomes of innovative initiatives for domestic travel.					
19	The leadership team is transparent about any challenges or setbacks encountered during the implementation of innovative practices for domestic flights					
20	The airline leadership fosters open communication regarding innovation efforts in the Kenyan domestic airline market.					

SECTION C: DIGITAL TRANSFORMATION

Please tick the appropriate answer for each of the questions: Note: 5=Strongly Agree

4=Agree 3=Not Sure 2=Disagree, 1=Strongly Disagree

NO	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	Cloud Computing					
1	The airline has adopted cloud-based solutions to store and manage data related to domestic flight operations					
2	Cloud computing has improved the accessibility of data for employees working on domestic travel services within our airline					
3	Cloud computing has played a significant role in improving the efficiency of domestic flight operations at our airline.					
4	The airline leverages cloud-based solutions to collaborate and share data more effectively across different departments involved in domestic travel					
	Big Data Analytics					
5	The airline actively collects and analyzes large amounts of data related to domestic flight operations.					
6	Big data analytics helps us gain valuable insights into customer behavior within the Kenyan domestic market.					

NO	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
7	Big data analytics has played a significant role in improving the efficiency of our domestic flight operations.					
8	Our airline utilizes insights from big data analytics to make data-driven decisions regarding domestic travel services and pricing strategies.					
	Artificial intelligence (AI)					
9	The airline has implemented AI-powered solutions to automate certain tasks related to domestic flight operations					
10	Artificial intelligence has helped to improve the accuracy of domestic flight operations at our airline.					
11	The airline utilizes Artificial intelligence to personalize the customer experience for domestic travelers (e.g., targeted offers, recommendations)					
12	Artificial intelligence has played a role in optimizing pricing strategies and revenue management for domestic flights in our airline.					
	Mobile Technologies					
13	The airline offers a user-friendly mobile app that allows passengers to manage their domestic flight bookings easily.					
14	Mobile technology has significantly improved the convenience of booking and managing domestic flights for our customers.					

NO	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
15	The airline utilizes mobile technology to provide passengers with real-time updates on their domestic flights (e.g., boarding times, delays).					
16	Mobile technologies have enhanced the overall customer experience for domestic travelers using our airline.					

SECTION D: REGULATORY FRAMEWORK

Please tick the appropriate answer for each of the questions: *Note: 5=Strongly Agree
4=Agree 3=Not Sure 2=Disagree, 1=Strongly Disagree*

NO	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	Operation of Aircraft Regulations					
1	The current Operation of Aircraft Regulations in Kenya is effectively communicated to pilots and operational staff involved in domestic flights.					
2	The Operation of Aircraft Regulations in Kenya strike a good balance between ensuring safety and allowing for efficient domestic flight operations.					
3	The regulations provide clear guidelines for the use of new technologies in domestic aircraft operations within the Kenyan airspace.					

NO	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
4	The regulatory framework allows for flexibility in implementing safety measures while adhering to the Operation of Aircraft Regulations for domestic flights.					
5	The Operation of Aircraft Regulations in Kenya contributes to a safe and efficient operating environment for domestic commercial airlines.					
	Personnel Licensing Regulations					
5	The Personnel Licensing Regulations in Kenya ensure the key personnel operating domestic flights possess the necessary qualifications and experience specific to the Kenyan domestic market.					
6	The process for obtaining and maintaining personnel licenses for domestic airline operations in Kenya is clear, and efficient					
7	The licensing regulations require continuous training personnel involved in domestic flights, which is relevant to the evolving needs of the domestic aviation industry.					
8	The Personnel Licensing Regulations in Kenya are effective in fostering a culture of maintaining a high standard of professionalism among domestic airline personnel.					
9	The regulations allow for flexibility in licensing requirements to accommodate new technologies					

NO	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	or procedures within domestic airline operations, while still prioritizing safety.					
10	The Personnel Licensing Regulations in Kenya contribute to a safe, reliable, well-trained workforce, ultimately impacting the positive organizational performance of domestic commercial airlines					
	Air Operator and Administration Regulations					
11	The regulations ensure that domestic airlines in Kenya maintain a robust safety management system that identifies and mitigates potential risks.					
12	The Air Administration Regulations in Kenya allow for sufficient oversight and enforcement to ensure adherence to safety standards by domestic airlines.					
13	The regulations require domestic airlines to have clear maintenance procedures in place for their aircraft, contributing to overall operational reliability.					
14	The regulations require domestic airlines to have clear maintenance protocols in place for their aircraft, contributing to overall operational reliability.					
15	The Air Operator Regulations in Kenya provide a clear and comprehensive framework for the safe and efficient operation of domestic commercial airlines.					

NO	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
16	The Air Administration Regulations in Kenya play a significant role in promoting a well-managed operating environment for domestic commercial airlines, ultimately impacting their performance.					

SECTION E: ORGANIZATIONAL PERFORMANCE

Please tick the appropriate answer for each of the questions: *Note: 5=Strongly Agree*

4=Agree 3=Not Sure 2=Disagree, 1=Strongly Disagree

NO	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	Sales volume					
1	The airline effectively meets customer demand, resulting in increased sales volume.					
2	Promotional strategies implemented by the airline positively impact sales volume					
3	The quality of service provided by the airline contributes to higher sales volume.					
4	The airline's pricing strategy is competitive and enhances sales volume					

NO	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
5	The airline's marketing efforts effectively attract new customers, leading to increased sales volume.					
	Customer retention					
6	The airline provides consistent and high-quality service that encourages me to remain a loyal customer					
7	The airline effectively communicates with customers, making me feel valued and appreciated.					
8	Loyalty programs offered by the airline positively influence my decision to continue flying with them.					
9	The airline promptly addresses any issues or complaints I have, which enhances my likelihood of returning.					
10	Our airline offers competitive pricing and attractive promotions that cater to the needs of domestic travelers.					
11	Our airline prioritizes customer satisfaction and builds strong customer loyalty within the Kenyan domestic market					
	Market Share					
12	The airline effectively attracts new customers, leading to an increase in market share.					
13	The airline's pricing strategy is competitive enough to capture a larger market share					

NO	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
14	The airline's marketing efforts effectively promote our services compared to competitors, enhancing our market share.					
15	The airline's service quality positively contributes to maintaining and expanding our market share.					
16	The airline successfully differentiates itself from competitors, which helps improve our market share.					
17	Customer feedback is actively used to improve services, contributing to a stronger market share for our airline.					
	Efficiency					
18	The airline optimally utilizes resources, ensuring high operational efficiency.					
19	The airline maintains timely flight schedules, which contributes to overall efficiency.					
20	The airline effectively manages turnaround times to maximize operational efficiency					
21	Staff training and development initiatives improve the efficiency of our operations.					
22	The use of technology in our airline enhances operational efficiency.					
23	The airline regularly reviews processes to identify areas for efficiency improvements.					

..... **THANK YOU**.....

Appendix IV; List of Domestic Commercial Airlines in Kenya

No.	Airline Name
1	Kenya Airways Plc,
2	Airkenya Express
3	Fly540,
4	East African Safari Air,
5	Mombasa Air Safaris Ltd,
6	Safarilink Aviation
7	748 Air Services
8	SafeAir
9	Yellow Wings
10	Astral Aviation Ltd
11	African Express Airways
12	Freedom Airlines Express Ltd
13	Skyward Express Ltd
14	Jetways Airlines,
15	Renegade Air
16	Jambojet Ltd
17	ALS Ltd

Source: Kenya Civil Aviation Authority as of December 2023

Appendix V: NACOSTI Permit

 REPUBLIC OF KENYA Ref No: 496623	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION Date of Issue: 26/March/2025
RESEARCH LICENSE	
	
This is to Certify that Mr., Onesmus Kipnetich of The Management University of Africa, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in on the topic: INNOVATIVE LEADERSHIP PRACTICES, DIGITAL TRANSFORMATION, REGULATORY FRAMEWORK AND PERFORMANCE OF COMMERCIAL DOMESTIC AIRLINES IN KENYA for the period ending : 26/March/2026.	
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