IBN HALDUN UNIVERSITY
SCHOOL OF GRADUATE STUDIES
DEPARTMENT OF AIR TRANSPORT

MASTER THESIS

IMPACT OF AIRPORT SERVICE QUALITY ON CUSTOMER SATISFACTION UNDER PRIVATIZED AIRPORT: A SURVEY OF ADEN ADDE INTERNATIONAL AIRPORT'S PASSENGERS IN MOGADISHU, SOMALIA.

NUH ABDULLE FARAH

THESIS SUPERVISOR
PROF. ÜMİT HACIOĞLU

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by
NUH ABDULLE FARAH

A thesis submitted to the School of Graduate in partial fulfillment of the requirements for the degree of Master of Arts in Air Transport

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APPROVAL PAGE

This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Science in Air Transport Management.

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I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

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Signature:

ÖZ

ÖZELLEŞTİRİLMİŞ HAVAALANI ALTINDA HAVAALANI HİZMET KALİTESİNİN MÜŞTERİ MEMNUNİYETİ ÜZERİNDEKİ ETKİSİ: SOMALİ, MOĞADİŞU'DAKİ ADEN ADDE ULUSLARARASI HAVAALANI'NIN YOLCULARINA YÖNELİK BİR ANKET

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Hizmet kalitesi, özellikle havacılık endüstrisinde, müşterilerine yıllık milyarlarca dolarlık hizmetler sunan her hizmet sağlayıcısı için açık bir pazarda her endüstride önemlidir. Hizmet kalitesi, müşteri memnuniyeti üzerinde etkiye sahiptir; ayrıca, müşteri memnuniyeti hizmet sağlayıcıya geri dönecektir. Farklı kurumsal hedeflere ulaşmak için, özellikle varlık özelleştirildiğinde, müşteri memnuniyetine odaklanmak gereklidir. Bu çalışma, özelleştirilmiş bir havaalanında hizmet kalitesinin müşteri memnuniyeti üzerindeki etkisine odaklanmaktadır. Çalışmada, tanımlayıcı ve korelasyon analizi kullanıldı. Aden Adde Uluslararası Havalimanı'ndan ayrılan yolculardan 400'üyle anket yapıldı. Daha sonra, sosyal bilimler için bir istatistiksel paket olan SPSS kullanılarak veriler analiz edildi ve bulgular, havaalanı müşteri hizmetleri ile müşteri memnuniyeti arasında güçlü pozitif bir ilişki olduğunu gösterdi. Çalışmada aynı zamanda çoğu havalimanı yolcusunun, Aden Adde Uluslararası Havalimanı hizmetlerinden memnun olmadığı bulgusu tespit edildi.

Anahtar Kelimeler: Havalimanı Hizmet Kalitesi, Müşteri Memnuniyeti, Özelleştirme.

ABSTRACT

IMPACT OF AIRPORT SERVICE QUALITY ON CUSTOMER SATISFACTION UNDER PRIVATIZED AIRPORT: A SURVEY OF ADEN ADDE INTERNATIONAL AIRPORT'S PASSENGERS IN MOGADISHU, SOMALIA.

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Service quality is essential for every service provider with an open market in every industry, especially aviation, which generates billions of dollars for the services that it provides to its customers annually. The quality of the service has an impact on customer satisfaction; in contrast, customer satisfaction will impact back on the service provider. To achieve various corporate goals, it is necessary to focus on customer satisfaction precisely when the entity is privatized. This study focuses on the "impact of airport service quality on customer satisfaction under a privatized airport." The study employed descriptive and correlation analysis. The study conducted 400 questionnaires from passengers who departed from Aden Adde International Airport. Later, we analyzed the data using a statistical package for social science (SPSS), and the findings indicated a strong positive relationship between Airport customer services and customer satisfaction. The study also showed that the majority of the passengers of the airport were not satisfied with the services of Aden Adde International Airport.

Keywords: Airport Service Quality; Customer Satisfaction; Privatization.

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LIST OF SYMBOLS AND ABBREVIATIONS

AAIA Aden Adde International Airport

ASQ Airport Service Quality

GDP Global Gross Domestic Product

PLS Partial Least Squares

PRM Passengers with Reduced Mobility

SEM Structural Equation Modeling

SPSS Statistical Package for Social Science

CHAPTER I

INTRODUCTION

This chapter will introduce the study. The first topic is the background of the study, which includes an overview of aviation. The second will focus on the problem statement, which identifies the main issues and gaps this study aims to address. This will be followed by several other topics, such as research objectives, research questions, the scope of the study, and finally, the significance of the study.

1.1. Background of the Study

The air transport industry is a worldwide organization of business aircraft administrators, manufacturers of airplanes, airports, and air navigation specialist cooperatives. Its work is to connect the worldwide economy, create many jobs, and connect many people around the world; it creates many opportunities for people, such as economic growth. Aviation transport is estimated to be over 33% of the value of worldwide cargo. Moreover, it adds to the world $3.5 trillion, representing 4.1% of global gross domestic product (GDP). If a chance that aviation was a nation, it would exceed many countries' GDP and equal the 17th countries such as Indonesia and the Netherlands. Employment: Aviation supports 87.7 million occupations all over the world, direct or indirect. In the future: By 2038, worldwide air transport is expected to help 143m positions and contribute $6.3 trillion to the worldwide economy (Aviation Benefits Beyond Borders, 2020).

In aviation, Airports are one of the main pillars in this industry; they offer many services such as;- infrastructure, aircraft services, cargo and Passenger handling, and more (Vogel, 2019). Airports served over 38 million flights in 2019 and 4.5 billion scheduled passengers that year, 3% more than in 2018 (ICAO, 2019). However, airports face challenges in generating and sustaining their income, as they cannot cover their costs without nonaeronautical revenue sources. In 2018, airports received more

than $180 billion in revenue, increasing 1.4%. However, their global average revenue/cost per passenger was $18.49 and $14.11 respectively, which included $7.44 from non-aeronautical revenues and $9.99 from Aeronautical revenue sources. (Lioutov, 2021). Therefore, In recent years, many Airports have undergone privatization, where private companies take over the management and operations of Airports from the government. Some researchers argue that privatization enhances airport performance. (Howell et al., 2022) mentioned that it increases the number of passengers per flight by around 20%; likewise, the total number of passengers increases by around 84%. It generates new routes, especially international routes, by around 46% and reduces flight cancellations. Although privatization policies are often motivated by the idea that private companies will perform better due to more substantial incentives and more commercial focus, opponents of privatization argue that it may result in a private monopoly that provides poor services and overcharges customers while also causing environmental and social harm. Additionally, employees may experience worse working conditions, and compromises may be made with health and safety(Graham, 2011).

1.2. Problem Statement

In Somalia, some companies have been privatized to provide certain services on behalf of the Somali government, but it resulted in different outcomes. For example, the Somali government received more than 3.5 million dollars in 2019 from a privatized Airport (Ministry of Finance, 2021). On the other hand, FAVORI reported a more than 482% increase in passengers from 2013 to 2019 (Favori LLC, 2019). In contrast, the previous company that managed the AAIA, SKA, was replaced due to allegations of non-compliance with the agreed terms (Hiiraan, 2013). The current airport management company, Favori LLC, was accused of labor rights abuse by the Federation of Somali Trade Unions during a labor strike (FETSU, 2020). although this country has one of the lowest GDP per capita worldwide (World Bank, 2021), the Airport shuttle bus company called Sahal Hospitality Services, which operates at KM4 to Aden Adde International Airport (AAIA), charges $11 a distance, around 1.7 km to the passengers. Since this is the only company providing such services, it is not feasible for the ordinary public to seek alternative options. Whereas less than $ 12 can get you a ticket to fly with (Ryanair) from London to Milan (as shown in Table 1.1), which is

approximately 1,200 km (Exchange-Rate, 2023; Keydmedia, 2020; Maal magazine, 2016; Mataan, 2017).

Like AAIA, some Airports operate with less competitive marketplaces than many other Airports, which might result in users having few other options to choose from; this lack of competition may lead to these Airports potentially abusing their market power by not paying enough attention to service quality (Halpern & Mwesiumo, 2021). Hence, does AAIA's service quality meet customer expectations? However, there is still an unanswered question about the impact of Airport service quality on customer satisfaction under the privatized period at AAIA. Thus, since this airport was privatized more than ten years ago and no research has yet been done about passenger satisfaction, there is a knowledge gap that makes it essential to investigate this topic.

Table 1.1. Ticket Prices from London to Milan

From	To	Flight type	Departure Date	Fare
Bristol	Bydgoszcz	One way	Mon 20 Mar	£9.99
London	Milan	One way	Tue 21 Mar	£9.99
London	Szczecin	One way	Sat 18 Mar	£9.99
London	Venice	One way	Tue 21 Mar	£9.99
London	Dublin	One way	Sat 25 Mar	£9.99

Source: (Ryanair, 2023)

1.3. Purpose of the Study

The study aims to investigate the impact of service quality on customer satisfaction in privatized Airports while using a survey questionnaire to identify the satisfaction level of AAIA passengers in Mogadishu, Somalia.

1.4. Research Objectives

i. To identify the demographic factors influencing customer satisfaction with Aden Adde International Airport under privatization.
ii. To recognize the satisfaction scores of different indicators of Airport service quality.
iii. To identify the relationship between customer satisfaction and AAIA's accessibility, aviation, and non-aviation services after privatization.

1.5. Research Questions

i. How does customer satisfaction with the Aden Adde International Airport under privatization vary by demographic?
ii. Which indicators of Airport service quality have the highest and lowest satisfaction scores among customers of Aden Adde International Airport under privatization?
iii. What is the relationship between the airport services quality: accessibility, aviation, and non-aviation services, and the satisfaction of departing passengers at AAIA?

1.6. The Scope of the Study

This study will be conducted in the capital city of Somalia. The study aims to examine customer satisfaction with airport service quality under privatization and identify their level of satisfaction. The research will use a quantitative approach with a survey design to collect data from a sample of passengers who have used AAIA during the privatization.

1.7. Significance of the Study

This research is significant for most of the airport stakeholders. For instance, this study provides valuable insight into the government, which is already aware of the airport's flight volume and financial performance. However, this study also helps them understand customer satisfaction and the service quality of the airport, which could be helpful in future contract negotiations. In addition, this research benefits airport

management companies by offering independent findings on how airport passengers are satisfied with their services. Furthermore, this research contributes to academic literature and recommends future studies.

CHAPTER II

LITERATURE REVIEW

This chapter reviews the literature on how Airport service quality affects customer satisfaction. It provides two main sections, which are theoretical and conceptual background and Empirical studies.

2.1. Theoretical and Conceptual Background

Assessing customer satisfaction is a subjective process that heavily relies on individual expectations. It can be experienced in various scenarios and applied to products and services. The satisfaction level also depends on the customer's experience of interacting with the organization and the outcome they receive. Ultimately, customer satisfaction is determined by the relationship between the customer and a product or service provider. It is widely believed that customer satisfaction ratings are the best indication of a company's future profitability. (Cengiz, 2010a).

Ensuring customer satisfaction can bring many benefits to the product/service provider, such as gaining their trust, being on the leading edge of the market, and increasing revenue (Bin et al., 2020). Therefore, to achieve various corporate goals, it is necessary to focus on customer satisfaction (Ringle et al., 2011).

On the other hand, research studies have shown that the quality of service provided is an essential factor in predicting customer satisfaction (Hasfar et al., 2020; Khamis & AbRashid, 2018). Service providers globally recognize that consistent service quality is vital to customer loyalty and satisfaction. This reduces the cost of acquiring new customers and increases market share (Vazifehdust & Farokhian, 2013). By providing high-quality services, companies can increase customer satisfaction and build better relationships (Hasfar et al., 2020).

This study will employ the conceptual model in Figure 2.1, where customer satisfaction is the dependent variable on the right and Airport service quality is the independent variable on the left.

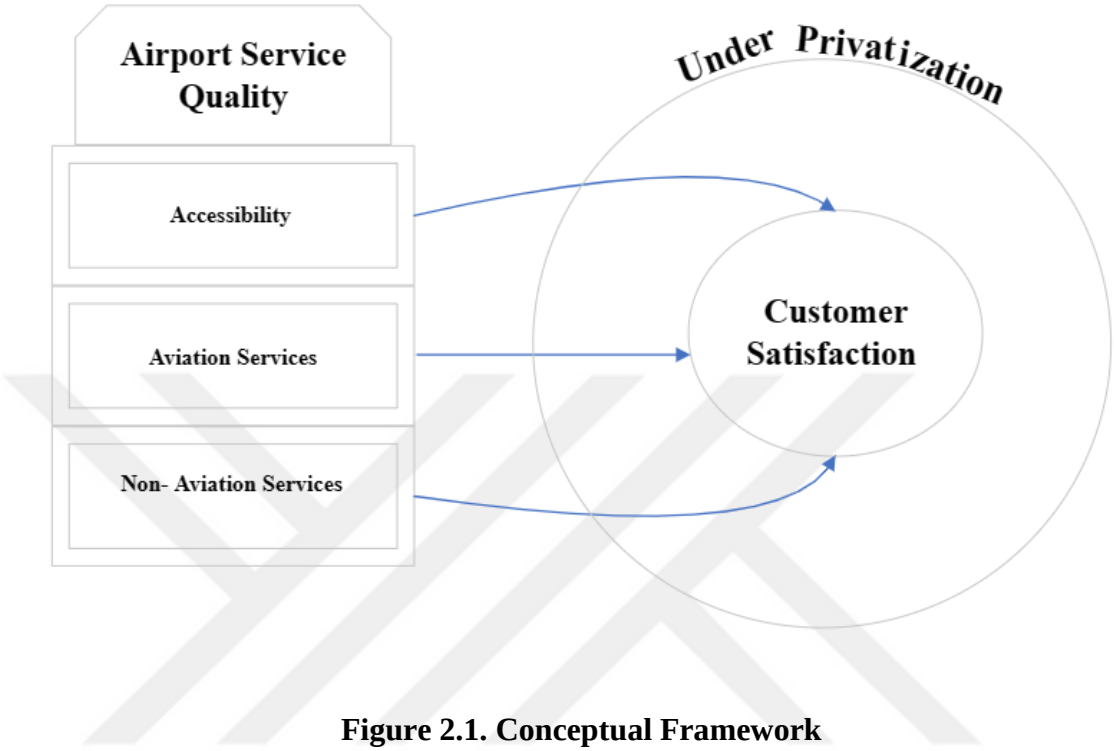

Figure 2.1. Conceptual Framework

Source: (Author, 2023)

For my study, I have adapted the design of (Gitto & Mancuso, 2017) by categorizing Airport services into two types, aviation services, and non-aviation services, using Skytrax data. This company conducts annual surveys of the Airports.

To measure service quality, many models are used in various industries worldwide, including SERVQUAL (Jogoo & Cim, 2018), who argued that though this model is standard in various industries, it has limitations when it comes to addressing the unique characteristics of the aviation industry. Similarly, (J.-W. Park et al., 2006) pointed out that neither SERVPERF nor SERVQUAL covers all dimensions of aviation services. Therefore, the author has chosen the Airport Service Quality (ASQ) tool, which can assess various areas, including departure, arrival, and more, based on specific needs. Its objective is to identify services that impact passenger satisfaction. According to (Isa et al., 2020), This tool is valid for measuring Airport service quality.

Thus, this study will use (ACI) tool, precisely the eight dimensions of departure, which are Accessibility, Security, Check-in, Passport/ID control, food and beverage, Airport Facilities, Wayfinding, and Overall satisfaction. as the study focuses on departure passengers.

However, before grouping the eight dimensions into two categories, I identified a significant problem that most Airport passengers worldwide do not usually face when accessing the Airport. At Aden Adde International Airport, a private company operates a shuttle bus service between the Airport and its station, which is about 1.7 km away from the Airport (as shown in Figure 2.2). Ordinary passengers are not allowed to use a taxi or their private cars to reach the Airport; they must use the shuttle bus, which is expensive at 11$ per ride, according to (Goobjooge, 2016; Maal magazine, 2016) Figure 2.3. Before boarding the shuttle bus, passengers undergo thorough machine inspections of both their belongings and themselves. Upon disembarking from the bus, additional checks are immediately conducted, during which their luggage is placed on the floor for inspection by trained sniffer dogs (as seen in Figure 2.4). These procedures occur outside the Airport building.

Meanwhile, (Chen et al., 2015; Lopez-Valpuesta & Casas-Albala, 2023) argued that the accessibility dimension is essential for passengers' satisfaction. (Oh & Park, 2014) also found that Accessibility is one of the most important factors when choosing an Airport. Additionally, (Bao et al., 2016) reported that a 1% increase in Accessibility would lead to a 2% increase in passenger traffic.(Paliska et al., 2016) Added that when accessibility decreases, the market share of the Airport also decreases. (Kouwenhoven, 2008) mentioned that a 1% increase in ticket price would reduce the passenger's demand by 1%. Similarly, the Airport switch elasticity was also -1, meaning that a 1% increase in the ticket price at an Airport would cause 1% of passengers to choose another Airport. Therefore, it is evident that both accessibility and price impact passengers. My study analyzed this dimension separately while grouping the other dimensions under aviation and non-aviation services.

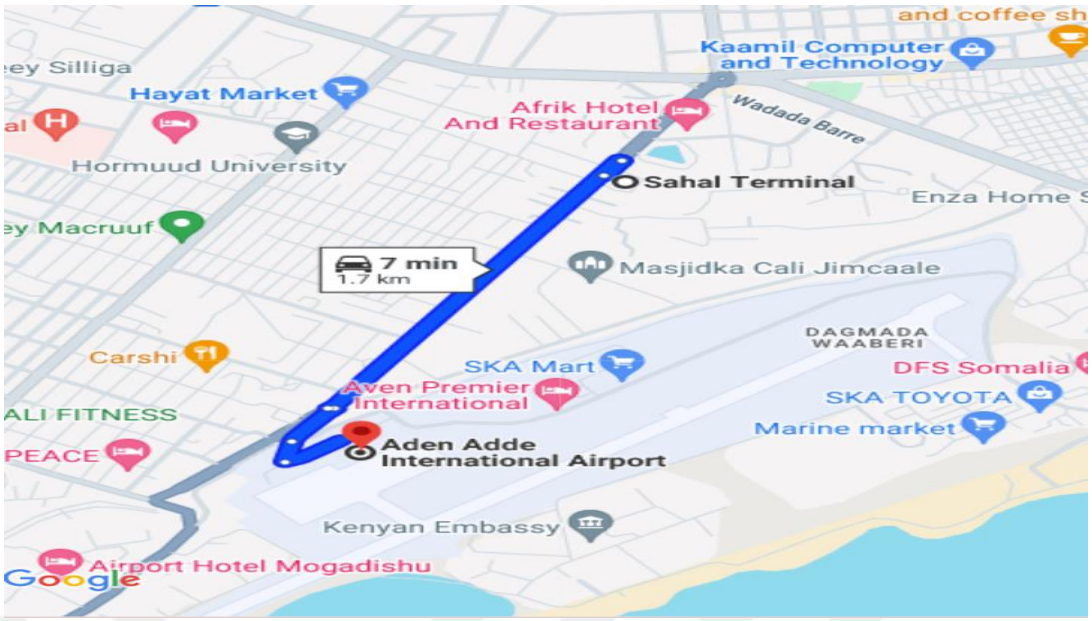

Figure 2.2. The Distance between AAIA and the Bus Station

Source: (Google Maps)

Figure 2.3. AAIA Shuttle Bus Ticket

Source: (Maal magazine, 2016)

Figure 2.4. Inspections At AAIA

Source: (Ghedi, 2016)

2.2. Empirical Studies

Crisis times are when passenger satisfaction in aviation may decline, and it is essential to evaluate it, especially during the COVID-19 crisis. However, the impact of the COVID-19 pandemic on airport passenger satisfaction is an underexplored topic in the academic literature at Saville, Spain. (Lopez-Valpuesta & Casas-Albala, 2023) The study aimed to fill this gap by assessing passenger satisfaction at the Airports from 2015 to 2021, considering the passenger characteristics and the Airport attributes. The study used a large dataset from Airport Service Quality surveys and analyzed it using ordered logistic regression. The study reveals that passenger satisfaction varies according to nationality, travel motive, and destination. Moreover, the study shows that indicators including Cleanliness and Comfort, Check-in, Information and Accessibility, and Security are essential. Specifically, Cleanliness and Comfort are the most essential factors for passenger satisfaction during health emergencies. Finally, the study observed a decline in passengers' satisfaction with the Airport in 2021, following the positive trend observed during the 1st year of the pandemic.

In Asia, (Cao et al., 2023) explored how to make Urumqi Airport in Xinjiang, China, a more passenger-centered Airport by analyzing its facilities and services. To achieve that, the authors distributed a 2007 questionnaire to passengers in various areas of the

Airport. 63% were departure passengers, 28% were arrival passengers, and 9% were transfer passengers. They used the cloud model, extended the contributive rule method to service satisfaction, and assessed each item's importance. The study shows that baggage, safety, and flight delay services were the main concerns of passengers, while catering, shopping, and airport traffic were also unsatisfied services and required enhancement. Finally, the study presented that terminals in the same airport could receive different passenger satisfaction levels; for example, Urumqi Airport Terminal 1 received lower satisfaction than Terminals 2 and 3.

In Ambon, Indonesia, a study was conducted (Saraswati et al., 2022) to assess customer satisfaction with Pittimura Ambon Airport. The study aimed to identify reasons behind the fluctuation of customer satisfaction results and provide suggestions to improve the score. The authors used survey data from the Indonesian Air Carrier Association and applied the customer satisfaction index. The study found that the airport's customer satisfaction index score varied during the last five years (2017-2022). Terminal building development and enhancement projects conducted between 2018 and 2019 adversely affected passenger comfort, resulting in a drop in the customer satisfaction score. However, the score significantly increased in 2020, indicating project success. In 2021, the index score indicated 4.63, signifying the highest satisfaction because passengers received high scores for some factors, including terminal cleanliness. The study also stated shopping facilities, cafes, and restaurants as the aspects with the lowest score, suggesting that improvements are needed to enhance customer satisfaction.

On the other hand, in Indonesia, a quantitative study by (Fadly V’delon Syam et al., 2022) aimed at how passenger satisfaction and loyalty in the Airport industry are influenced by service quality, passenger experience, and facilities. The data was gathered from 100 passengers at Soekarno Hatta Airport, especially Terminal 2. They used Sem-Pls to analyze the data. The result shows that passenger loyalty is significantly affected by passenger experience and satisfaction, not service quality and facilities. The study also revealed that the effect of facilities and service quality on passenger loyalty is mediated by passenger satisfaction and experience.

In Istanbul, Turkey, (Ayodeji & Rjoub, 2021) conducted a study to assess the impact of waiting for time satisfaction and self-service technology on achieving sustainable customer loyalty in two international Airports. The authors distributed 735 questionnaires. The investigators used partial least squares structural equation Modeling (PLS-SEM) to study the data. The results show that the perceived experience from the waiting time and the use of self-service technology are the key factors that affect passenger's satisfaction with the waiting time. Additionally, the study found a direct and significant positive relationship between self-service technology, waiting time satisfaction, and customer loyalty. Thus, the study suggested improving satisfaction and detecting the reasons for the long waiting time to enhance customer loyalty.

Honolulu International Airport in the United States of America (Bae & Chi, 2021) conducted a study using content analysis to explore passengers' experience of Airport service quality. The authors analyzed 1341 comments published from 2004 to 2019 on the Skytrax website to identify the most commonly mentioned areas about this airport. The study showed that passengers were dissatisfied with the cleanliness of the facilities, staff courtesy, and signage at the Airport. Dissatisfied travelers' most frequently stated words were staff, security, check, line, and flight. On the other hand, the satisfied passengers often stated terminal, cleanliness, staff, time, and immigration. The study findings provide valuable insights into the customers' perspective. They may help Airport managers enhance Airport service quality and upgrade Airport facilities, which could lead to a more positive passenger experience.

A study was conducted by (Isa et al., 2020) at Kuala Lumpur International Airport, especially Terminal 2, to explore the dimensions of Airport service quality based on an Airport service quality survey and identify the most influential factor for overall satisfaction. The data for this study was taken from the Airport operator who conducted an Airport service quality survey for terminal 2 in 2016 with 1626 participants. Then, the data was analyzed using the Pls-Sem method. The results showed that eight dimensions, namely, Airport environment, accessibility, facilities, passport, check-in, security, finding your way, and arrival services, were valid to measure for the Kuala Lumpur Airport Terminal 2 users. The Airport environment was the most significant

factor in determining passengers' overall satisfaction at Terminal 2 and should be prioritized by the Airport for continuous improvement.

A study was conducted in Dubai, United Arab Emirates by (Awad et al., 2020). It Aimed to assess the perception of passengers of Terminal 3 at Dubai International Airport regarding the quality of Airport services. The authors identified factors influencing passengers' satisfaction and impression of the Airport, such as Terminal Services, check-in, accessibility, assurance and empathy, and service availability. The study sample consisted of 275 travelers who had experienced airport services. The authors apply various analytical methods, such as the Structural Equation Model (SEM) and confirmatory factor analysis (CFA), to examine the data. The result revealed that most passengers are satisfied with the Airport services and that assurance, empathy, availability, and check-in are the main drivers of satisfaction and impression. The authors also found that nationality affects travelers' experience of the Airport and that Middle Eastern passengers are more satisfied and have more positive impressions than Asian passengers. Unexpectedly, the authors found that accessibility does not significantly impact satisfaction or impression. At the same time, the purpose of the trip does not moderate the relationship between satisfaction and Airport service quality. Additionally, the study indicates a strong correlation between satisfaction and impression. Finally, the authors recommend future research to include more terminals and increase the sample size.

Whereas (Allen et al., 2020) explored service quality in medium air terminal in Italy, using the Sem-Mimic approach, to collect data from the passengers at Lamezia Terme Airport, the authors conducted in-person interviews over two years, from 2015 to 2016. The sample size of the survey was 2,224 respondents. The study shows that control and environment are the major factors that affect passenger satisfaction, and they suggested that the companies that manage Airports should invest more in improving the availability of information, cleanliness of the terminals, Info Point, and security team. It also found that technology and food services were the most satisfying factors.

A study was conducted to compare the satisfaction levels of service quality among different Airport users (Hong et al., 2020). They focused on three dimensions of

service quality: outcome, interactional quality, and physical environment (servicescape). They collected data from 2 groups of respondents: passengers and Airport employees. The authors used simple random sampling to survey 138 passengers who were either arriving or departing from the terminal. The authors also used snowball sampling to survey 110 Airport employees who provided direct service to the passengers. The result showed significant differences in the perception of service quality between the two groups. Passengers valued service quality's interaction and outcome aspects more, while employees emphasized the interaction and physical environment aspects more. The study also found that Airport service quality positively impacted passengers' intention to reuse the Airport. Finally, the authors suggested that an effective service training program should be implemented to decrease the gap in satisfaction levels.

In addition, (Kim & Park, 2019) investigated how technology-based self-service factors such as convenience, customization, enjoyment, Functionality, and security influence passengers' perceived value through self-efficacy and waiting time and how these perceived values affect satisfaction and behavioral intention. The authors conducted 400 questionnaires from passengers who used self-service technologies and analyzed the Stimulus Organism Response model. The results indicated that all technology-based self-service factors except security positively impacted perceived value, and higher perceived value increased satisfaction and behavioral intention. However, technology-based self-service satisfaction at an airport did not significantly influence overall Airport satisfaction. Furthermore, the study revealed that the physical environment was more important than the personal service environment during the waiting process in the technology-based self-service environment at an airport. This implies that providing more customized technology-based self-service and convenience facilities is essential for service quality.

Furthermore, (Ryu Park, 2019) examined how different types of experience in Incheon International Airport, South Korea, influenced the passengers' pleasure and satisfaction. They collected data from 416 passengers through a survey and used a structural equation model to test their hypotheses. They found that escapist and aesthetic experiences positively affected pleasure, affecting Airport image and satisfaction. Additionally, satisfaction had a significant positive effect on the Airport's

image. Based on these findings, they suggested that enhancing the escapist and aesthetic aspects of the airport experience could increase the passengers' pleasure and satisfaction and create a favorable perception of the airport.

Additionally, a study by (J. W. Park & Ryu, 2019) was conducted at the same Airport, especially Terminal 2, but the focus of the study was to examine how the Airport terminal environment's social and physical aspects affect the Airport passengers' behavioral intention. The study also explores how the servicescape's two aspects relate to the Airport image's satisfaction and cognition. The data was gathered over two months by surveying passengers who had used Terminal 2 of Incheon Airport. The sample consisted of 283 respondents, and the data was analyzed using equation modeling with SPSS 18 and AMOS 21. The results revealed that only the physical aspect of servicescape significantly impacted satisfaction and cognition, and Airport image was greatly influenced by satisfaction and cognition. Moreover, the result indicated that the physical part of the servicescape had a different effect on cognitive satisfaction depending on the respondents' gender. The study suggested that cognitive and practical satisfaction are critical factors for shaping the airport's image and that airport managers should pay attention to elements that can enhance the satisfaction of airport passengers.

In Italy, (Bellizzi et al., 2018) have studied passenger satisfaction at Lamezia Terme Airport. They used a questionnaire developed by the Airport managing company to collect data from 3,313 passengers through face-to-face interviews. They applied and ordered a logit model to analyze it. The result showed that different passengers have different preferences and expectations at the Airport. For instance, leisure passengers valued comfort and related aspects more than business or education travelers, who cared more about technical features of the journey, like the availability of information at the Airport terminal. Moreover, the arrival time and nationality of the passengers also affected their satisfaction levels. Passengers who arrive at the Airport more than 2 hours before their flight prioritized terminal cleanliness, while foreign passengers prioritized display information because they might be less familiar with the Airport. The study highlighted the importance of understanding the heterogeneity of passenger preferences and expectations at the Airport.

Another study in Korea, by (K. Park & Park, 2018), examined how the servicecape of Airport transfer facilities influences the behavioral intentions of transfer travelers, using Incheon International Airport as a case study. They served 305 non-Korean transfer passengers as respondents using an Incheon International Airport transfer lounge. The survey lasted for 12 days. The authors analyzed the data with a structural equation model. The authors found that cleanliness, functionality, and amusement positively affected the perceived service space. This significantly affected emotional response and passenger satisfaction and influenced the passengers' Airport image and behavioral intentions. The study also indicated that perceived servicescape significantly affected emotional response and passengers' satisfaction. Moreover, emotional response positively influenced customer satisfaction, and customer satisfaction significantly affected the Airport's image. While Airport image positively influenced behavioral intentions, it indicated that travelers with a favorable image of Incheon International Airport were more likely to use it again and recommend it to others as a transfer Airport.

At Melbourne Airport, Australia, (Jiang & Zhang, 2016) conducted a study on passenger experience. The authors collected 715 questionnaires from arriving and departing passengers during September 2014. They used multivariate analysis of variance to compare the perceptions and expectations of different demographic groups. The result indicated that passengers had higher expectations than their perceptions for all services, especially Airport accessibility, Wi-Fi and internet access, immigration waiting time, charging facilities, and Airport parking. They also found that women had higher expectations than male for services related to convenience, comfort, enjoyment, baby-changing facilities, and business travel. Thus, passengers were unsatisfied with these services, as they did not meet their expectations. Unsatisfied passengers may hurt the Airport's reputation and customer loyalty.

A study at Kuala Lumpur International Airport in Malaysia was conducted by (Ali et al., 2016) to study the impact of the physical environment of the Airports on passengers' satisfaction. This study employed a non-probability sampling method to collect data from 271 questionnaires. The structural analysis findings showed that the airport's physical environment significantly affected passengers' satisfaction.

Additionally, the study found that national identity in the Airport moderated between the passenger's satisfaction and the physical environment.

A study by (Bogicevic et al., 2016) explored passengers' satisfaction with the Airport experience, influenced by physical servicescape features. At first, they identified six servicescape dimensions, including scent, seating, cleaning, design, functionality, and air/lighting, to evaluate passengers' responses. Then, they distributed 311 questionnaires to adult passengers who used United States of America Airports during the last six months. The findings identified that enjoyable scents and design positively influence passengers' satisfaction; in contrast, defective air and lighting and lousy functionality were negatively related to passengers' anxiety, Leading to low satisfaction. Finally, the study provides insights for Airport management to improve passengers' satisfaction and reduce anxiety by addressing the impact of physical servicescape on passengers.

A study by (Sakano et al., 2016) examined how passengers' perception of Airport security is influenced by their satisfaction with the screening process and public transit safety. The study used data from the 2009 Omnibus Household Survey conducted by the United States Bureau of Transportation Statistics. The study focused on 344 passengers who had experienced Airport screening. The result showed that passengers who were more satisfied with the screening process also perceived higher levels of Airport security. Moreover, passengers who perceived public transit as safer also perceived high levels of Airport security. The study also found that passengers who did not use public transit and female passengers had lower perceptions of Airport security. The study concluded a causal relationship between screening satisfaction and security perception. The study suggested that future research should explore whether the speed and efficiency of the screening process affect passengers' perception of security.

Moreover, (Gitto & Mancuso, 2017) investigated how sentiment analysis of online websites can enhance airport services. They used data from Skytrax, which annually awards the best Airport in the world. They performed an exploratory analysis to examine the potential advantages of using sentiment analysis to measure the passengers' perceived service quality. The authors focused on the five large European

airports, including Madrid Barajas, London Heathrow, Amsterdam Schiphol, and Paris Charles de Gaulle. The findings were based on 895 sentences from travelers' evaluations of these Airports, collected from September 2013 to February 2014. They classified the Airport services into two categories: aviation and non-aviation services. They found that non-aviation services received 33% positive, 29%negative, and 38% neutral opinions, with shop and food and beverage being the most commented-on services. On the other hand, aviation services received 56% positive, and the rest was equally divided between negative and neutral sentiments, with baggage services and check-in being the most critical services. The authors concluded that Airports could use websites to understand better and satisfy their passengers' needs.

A study conducted by (Del Fiaco et al., 2016) in Brazil aimed to compare public and private administration Airports based on how users rated the check-in service and how long they waited in line at check-in. They analyzed data from the Civil Aviation Secretariat (SAC), which conducts quarterly user satisfaction surveys at around 15 Airports, including Guarulhos, Congonhas, Brasilia, Santos Dumont, and Viracops, with public and private administration. Using a standard questionnaire, the surveys are based on direct interviews with the passengers in the lounge and departures. The sample size is determined annually according to the domestic and international passenger flow. The data collected from 2013 to 2015 involved 0.041% of all passengers at these Airports. The study found no correlation between how users rated the check-in queue time and how long they waited in line at check-in. Linear regression analysis showed that privately administrated Airports generally had higher satisfaction ratings than public Airports but also longer average check-in queue times. However, there was a trend for privately administrated Airports to approach the efficiency of publicly administrated Airports regarding average check-in queue time. The study also reported that privately administrated Airports had higher mean and lower variance of perception scores than public Airports.

Moreover, (Bezerra & Gomes, 2015) Explored dimensions of service quality related to the Airport and assessed how it affects travelers' overall satisfaction with Airports in Brazil. They used data from a survey conducted by the Brazilian government in 2013, which collected responses from 1568 passengers who departed from Guarulhos International Airport on international flights. They applied exploratory analysis to

identify the service quality dimensions and ordinal logistic regression to estimate their effects on overall satisfaction ratings. The result showed that the dimensions of Check-in, Ambiance, Security, Prices, and Basic Facilities positively affected overall satisfaction, while convenience had a negative effect. The dimension of Accessibility surprisingly had no significant effect. The result also indicated that passengers who arrived earlier at the Airport or traveled less frequently were more likely to be satisfied with the Airport. Finally, the study suggested that passengers value the Ambient condition and the Prices of goods at the Airport and that these factors should be considered to improve service quality.

A study published in the Tourism Review (Bogicevic et al., 2013) investigated the indicators that affect passengers' satisfaction in the Airport industry—using the Two-Factor theory as a framework. They collected and analyzed 1,095 online reviews of passengers who visited 33 common destinations from 2010 to 2013; using a content analysis method and visual data mining techniques, they identified 14 factors of Airport service quality that the reviewers, such as Check-in, Security check, Dining options, Parking, Baggage, Stuff, Shopping, Signage, Cleanliness, Seating, charging points, Internet and Wi-Fi frequently mentioned. They classified these attributes as dissatisfiers or satisfied passengers depending on whether they were mentioned more often in negative or positive reviews. The three most mentioned words were staff, around 24%; baggage, around 16.5%, and shopping, with around 14% of all reviews. The authors found that Cleanliness and a Pleasant environment were the main satisfiers, while Security, Signage, and Dining options were the main dissatisfiers. They also discussed the implication of their findings for the airport managers, suggesting that they should focus on improving the dissatisfied factors while maintaining satisfied factors to enhance passengers' satisfaction.

A study conducted in Austin, Texas bye (Zuniga-Garcia & Machemehl, 2021) compared the presence or absence of transportation network companies and their effect on traffic flow to and from the airport using intelligent transportation systems; they found that traffic speeds in the airport access area were higher when transportation companies were not operating the operations of these companies resulted in a speed reduction of 9% for the morning peak hour and 18% for the afternoon peak hour at the airport which implies a total passenger cost of more than $150 and more than $400.00

per hour in the morning and afternoon respectively. (Bezerra & Gomes, 2020) Conducted a study in Brazil after a year and found that airport service quality substantially affects customer satisfaction; however, they also found that choosing cost to other airports is highly more substantial when accessibility to the airport is more accessible than this airport. (Bao et al., 2016) also revealed that a 1% increase in accessibility would lead to a 2% increase in passenger traffic and a significant improvement in airport competitiveness.

But like passengers of AAIA, which is the nearest international airport, is far more than a 5-hour drive away; some Airports operate with less competitive marketplaces than many other Airports, which might result in users having few different options to choose from; this lack of competition may lead to these Airports potentially abusing their market power by not paying enough attention to service quality (Halpern & Mwesiumo, 2021)

Different authors found different results of airport service qualities that related to passengers. (Bakir, 2023) mentioned that among the many dimensions measured for airport service quality, accessibility was the most significant one. (Kováčiková et al., 2023) Found that waiting time at passport control, followed by waiting time at security inspections and easiness of flight connections, were substantial for the passenger. (Rubio-Andrada et al., 2023) Investing in information technology improves customers' experience, and female respondents value using technology to use all airport processes. (Oliveira et al., 2023) They have indicated that passengers who experience flight delays are less likely to be satisfied with their airport experience. Still, they can feel better with access to good food and drinks and a fast internet connection at the airport. The researchers also added that dissatisfaction with the airline services can create dissatisfaction in the airport. Finally, (Liao et al., 2022) concluded that the dimension's importance depends on the airport's type.

Hence, this study will investigate the level of satisfaction of the customers overall, demographically, and the relationship between airport service quality and customer satisfaction under privatized airports.

CHAPTER III

RESEARCH AND METHODOLOGY

This chapter focuses on research methodology, including research design, research papulation sample size and sampling procedure, research instrument, reliability and validity, data gathering, data analysis, and ethical consideration.

3.1. Research Design

Research design is a plan that guides how a researcher will collect, measure, and analyze data to answer their study question (Sekaran & Bougie, 2016). Descriptive research aims to explain the characteristics of a studied population without examining the causal means behind a specific event. It does not attempt to explain "why" something happens. (Manjunatha, 2019).

This study employed a descriptive, correlation, and survey research design. This design was considered more effective in investigating the impact of Airport service quality on customer satisfaction under privatization at AAIA in Mogadishu, Somalia. The independent variable is Airport service quality measured by the group of its dimensions (Accessibility, Aviation, and Non-aviation services), while the dependent variable is customer satisfaction. Additionally, this study also uses a quantitative approach.

3.2. Target Population

(Barnsbee et al., 2018) Refers to the target population, a specific group of people, in which the intervention aims to conduct a study to reach a result. The population of this study is departure passengers of Aden Adde International Airport who used the Airport's services during the privatization period. The Airport has two types of departure passengers: domestic and international. The author relies on the 2019

passengers' data as the only latest source of information for this study. Therefore, the number of departing passengers in that year, 395,057, is used as the population size for the analysis.

3.2.1. Sampling and Sampling Size

Since the 18th century, the concept of sampling has been around. It refers to the process of choosing a group of individuals from the target population to evaluate the attributes of the entire population. A sample that is too large may increase the complexity of the study; likewise, if the sample is too small, it is a problem too; too small and too large samples may provide inaccurate findings (Singh & Masuku, 2014). Thus, this study aimed to select the optimal sample size to avoid those problems. We determined that 400 was the appropriate sample size based on two different ways, which we will present below.

The first method adapted from the (Yamane, 1973)

formula. $\boldsymbol{n = \frac{N}{1+N(e)^2}}$

N= Population. [395,057]

n = Samp size. [?]

e = Error [0.05]

$\boldsymbol{n = \frac{395{,}057}{1+395{,}057\times(0.05)^2}}$ **= 399.5954**

Thus, after rounding, the result is **n = 400.**

The second method was the (Israel, 1992) table, which provides sample size using precision level and the target population. In this case, our target population is more than 100,000 passengers; thus, using 5%, our sample size shows 400 passengers.

It is stated that this sample size can be determined by applying specific criteria. Table 3.1, provides the minimum number of respondents the researcher has to analyze. This sample does not include missing questionnaires. (Singh & Masuku, 2014).

Table 3.1. Sample Size Table

Size of the Population	Sample Size
500	222
1000	286
2000	333
3000	353
4000	364
5000	370
7000	378
9000	383
10000	385
15000	390
20000	392
25000	394
50000	397
100000	398
>100,000	400

Source: (Israel, 1992)

3.2.2. Sampling Procedure

This study will conduct probability sampling techniques, particularly stratified random sampling. (Sekaran & Bougie, 2016) Mention that this sampling design is the most suitable and efficient option when different strata within the population have distinct characteristics and require specific information. In this study, the primary strata are our departure passengers at AAIA.

3.3. Research Instrument

The primary data of this study was an online questionnaire; electronic questionnaires are a helpful technique when many questions have to be answered by a sample spread across different locations or when conducting interviews is challenging or expensive (Sekaran & Bougie, 2016). The questionnaire of this study is a modified version of the

survey conducted by (SKYTRAX, n.d.) for the passengers of Adis Ababa Bole Airport in Ethiopia and Jomi Kenyata Airport in Kenya, which are neighboring countries to Somalia.

3.4. Reliability and Validity

Reliability tests how consistently a measuring instrument measures whatever concept it is measuring. On the other hand, validity refers to the extent to which the instrument accurately captures the concept it is designed to measure. In other words, validity relates to measuring the correct concept, while reliability relates to consistently measuring the concept. (Sekaran & Bougie, 2016) Thus, the research uses a pilot test for the questionnaire design with the representative from the target population before administering it to the large sample. Then, the data collection would run (Cronbach Alpha) to test the reliability of the items. At the same time, Validity is measured using Pearsons's correlation coefficient table with Statistics Package for Social Sciences (SPSS).

3.5. Data Gathering Procedure

Data was collected from two areas: primary and secondary sources. Primary data was obtained from AAIA departure passengers, and secondary data was obtained from reviewing related literature, such as internet sources, journals, and published books. The author distributed a small sample for pilot testing. Then, the author conducted reliability and validity tests to evaluate the quality of the questionnaire. After passing these tests, the author administered the questionnaire online and required the respondents to answer all questions to avoid missing data. The researcher tried to retake the questionnaire within three weeks. Once the desired sample size is achieved, the author collected, organized, summarized, and analyzed the data using SPSS.

3.6. Data Analyses

The researcher employs descriptive analysis to examine the data and identify the levels of satisfaction and dissatisfaction among the target passengers. Furthermore, correlation analysis is used to identify the relationship between customer satisfaction

and Airport service quality services. The analysis also reveals which strata are very satisfied or dissatisfied and which services have the highest satisfaction rate.

3.7. Ethical Consideration

The researcher proposed himself to the respondents and explained the purpose of the study. This was done to elicit informed consent. Furthermore, the researcher ensured that the respondents' identities are kept anonymous and that confidential information is protected during the study.

CHAPTER IV

ANALYSIS AND FINDINGS

The study set out to investigate the impact of airport service quality on customer satisfaction under a privatized airport in Mogadishu, Somalia. This chapter presents the findings of the study. The chapter is divided into many parts. The first part contains the respondents' rates. The second part will discuss reliability and validity, flowed by information from the respondents and data presentation.

4.1. Response Rate

The research had a total respondent of 400 to whom questionnaires were administered.

Table 4.1. Response Rate

Target	Response	Percentage
400	400	100%

Source: Author, 2023

4.2. Reliability and Validity

Table 4.2. Reliability

	Cronbach's alpha	N of items	Comment
Airport accessibility	0.917	5	Accepted
Aviation Services	0.951	8	Accepted
Non-Aviation service	0.948	8	Accepted

Table 4.2. (cont.)

Satisfaction	0.944	5	Accepted
Overall	.981	26	Accepted

Source: (Author, 2023)

As stated earlier, the author tested the reliability of all question items with the Likert scale form using Cronbach's alpha, and the result is shown in Table 4.2.

4.3. Information on the Background of Respondent

This section provides background information on the participants to identify their characteristics and demonstrate the population distribution in the study.

Table 4.3. Demographic Analysis

Demography	Category	Frequency	Percent
Sex	Male	229	57.2%
	Female	171	42.8%
	Total	400	100%
Passport	Somali	342	85.5%
	Other	58	14.5%
	Total	400	100%
PRM	Yes	98	24.5%
	No	302	75.5%
	Total	400	100%
Age	18 – 25	40	10%
	26 -35	203	50.7%
	36 – 45	111	27.8%
	46 & over	46	11.5%
	Total	400	100%
Mode	Bus	263	65.8%
	Taxi	67	16.7%
	Private car	51	12.8%
	Other	19	4.7%
	Total	400	100%

Table 4.3. (cont.)

Trips of last 12 months	0 -2 trips	231	57.8%
	3 - 5 trips	100	25%
	5+ trips	69	17.2%
	Total	400	100%
Trip Purpose	Business	110	27.5%
	Leisure	144	36%
	Other	146	36.5%
	Total	400	100%
Travel With	Family	118	29.5%
	Alone	240	60%
	Other	42	10.5%
	Total	400	100%
Earliness	Less than 2 Hours	110	27.5%
	2 - 3 hours	168	42.0%
	More than 3 hours	122	30.5%
	Total	400	100.0%
Terminal	Domestic	213	53.25%
	International	187	46.75%
	Total	400	100.0%

Source: (Author, 2023)

Table 4.3 presents the demographic characteristics of the respondents who participated in this study. The study was conducted among 400 departure passengers who used the Aden Adde International Airport (AAIA) in Mogadishu, Somalia.

In terms of sex, 229 out of 400 respondents were male, which represents 57.25% of the total respondents. On the other hand, 171 respondents were female, representing 42.75% of the total. The results indicate that male passengers dominated the departure passengers of AAIA in Mogadishu, Somalia.

The study also investigated the passport distribution of passengers who traveled and used the departure area of AAIA in Mogadishu, Somalia. Out of 400 passengers, 85.5% had Somali passports, while 14.5% had other passports.

Regarding Passengers with Reduced Movement (PRM), 98 out of 400 respondents were disabled passengers, which means 24.5%. At the same time, 302 respondents were not passengers with a disability, which represents 75.5%.

The age group of the respondents was categorized into four groups 40 respondents were between the ages of 18 to 25, which means it was 10%. Also, 203 respondents were from 26 to 35 of the total respondents, which was 50.7%, and 111 of the respondents ages were between 36 to 45, in percentage wise it is equivalent to 27.8%. Lastly, the remaining 46 respondents were above 46 years, which is 11.5%. According to the AAIA passenger respondents' age groups, most were between 26 and 35.

Also, the study identified that most departure passengers used buses to come to the airport, 263 passengers, which equals 65.8%. In contrast, 16.7% used a taxi to reach the airport, which equals 67 respondents, and 51 respondents used private cars to reach the airport, representing 12.8%. In contrast, the remaining 4.8% of 19 respondents selected the option "other."

When asked if they traveled in the last 12 months, 57.75% of the respondents, which equals 231, selected 0 to 2 trips. 25% of the total respondents, representing 100 passengers, selected that they travel three to five trips in the last 12 months. The remaining 69 respondents, representing 17.25%, indicated other travel frequencies.

Regarding the purpose of the last trip, 110 respondents, representing 27.5% of the total respondents, traveled for business purposes. On the other hand, 144 respondents, representing 36% of the total respondents, traveled for leisure. The remaining respondents indicated other options, such as family visiting, education, and medical reasons.

Most of the respondents 240 passengers, or 60% traveled alone, while 118 respondents, which represent 29.5% of all respondents, traveled with their families; the remaining 42 respondents, which represent 10.5% of all respondents, traveled with others,

Regarding the time of arrival at the airport before the flight, 27.5% of the respondents arrived at the airport less than two hours before their flight, while 42% arrived at the airport two to three hours before their flight, the remaining 30.5% arrived more than three hours before their flight.

Finally, the respondents used two terminals representing where they are traveling as international or domestic. 53.25%, representing 213 respondents, used the domestic terminal. In contrast, the remaining 187 respondents used the international terminal, which equals 46.75%.

4.4. Data Presentation and Analysis

After background information, the researcher presented the descriptive analysis of the respondents' opinions.

4.4.1. Demographic Satisfaction

The first objective of this study was to identify the variation in customer satisfaction with AAIA by demographic. The author will present each demographic's satisfaction, dissatisfaction, or neutrality in this section. This will be compared to the dimensions of service quality and all services.

Table 4.4 illustrates the differences in satisfaction between males and females in the first-dimension accessibility; 31.9% of male respondents were unsatisfied, which was lower than the percentage of unsatisfied female respondents, which was 36.2%, while 38.9% of male respondents rated the accessibility as neutral. In comparison, 32.7% of female respondents rated it as neutral. The remaining respondents were satisfied with the accessibility, with 29.3% male and 31% female. For the second-dimension aviation services, female respondents were more unsatisfied than male respondents, rated 35.1% and 32.8%, respectively. In comparison, 39.3% of male and 33.9% of female respondents rated aviation services as neutral. The remaining 27.9% of male and 31% of female respondents were satisfied. In the third-dimension non-aviation services male respondents were more satisfied with a rate of 34.1%, while female respondents were only satisfied at 31%. However, female respondents, 36.3% were unsatisfied; in

contrast, male respondents rated unsatisfaction at 32.3%. The remaining respondents rated the non-aviation services as neutral, with 33.6% male and 32.7% female. Finally, when testing the satisfaction of all airport services, 33.9% of female respondents were satisfied, 29.8% were neutral, and 36.3% were unsatisfied. While male respondents rated 33.6% satisfaction, 33.2% were neutral, and 33.2% were unsatisfied, most female respondents were unsatisfied, while most male respondents were satisfied.

Table 4.4. Ratings of All Service Dimensions by Sex

		Unsatisfied	**Neutral**	**Satisfied**	**Total**
Accessibility by Sex	Male	31.9%	38.9%	29.3%	100%
	Female	36.3%	32.7%	31.0%	100%
Aviation services by Sex	Male	32.8%	39.3%	27.9%	100%
	Female	35.1%	33.9%	31.0%	100%
Non-aviation services by Sex	Male	32.3%	33.6%	34.1%	100%
	Female	36.3%	32.7%	31.0%	100%
all dimensions by Sex	Male	33.2%	33.2%	33.6%	100%
	Female	36.3%	29.8%	33.9%	100%

Source: (Author, 2023).

The researcher also examined by nationality testing the passengers' responses to the services they received and their customer satisfaction, as shown in Table 4.5; the table indicates that passengers holding non-Somali passports were more satisfied than Somali passengers; the non-Somali passengers rated accessibility at 44.8%, aviation services at 39.7%, non-aviation services at 53.4%, and their overall satisfaction at 46.6%. In contrast, Somali passengers rated accessibility at 27.5%, aviation services at 27.5%, non-aviation services at 29.2%, and overall satisfaction at 31.6%. The proportion of dissatisfied passengers was higher among the Somali respondents: 35.4% for accessibility, 36% for aviation services, 36.8% for non-aviation services, and 37.4% for their overall rating. The non-Somali respondents rated their dissatisfaction at 24.1%, 20.7%, 17.2%, and 17.2% for accessibility, aviation services, non-aviation services, and overall ratings, respectively. The remaining passengers were neutral.

Table 4.5. Ratings of All Service Dimensions by Nationality

		Unsatisfied	Neutral	Satisfied	Total
Accessibility by Nationality	Somali	35.4%	37.1%	27.5%	100.0%
	Other	24.1%	31.0%	44.8%	100.0%
Aviation service by Nationality	Somali	36.0%	36.5%	27.5%	100.0%
	Other	20.7%	39.7%	39.7%	100.0%
Non-aviation services by Nationality	Somali	36.8%	33.9%	29.2%	100.0%
	Other	17.2%	29.3%	53.4%	100.0%
All dimensions by Nationality	Somali	37.4%	31.0%	31.6%	100.0%
	Other	17.2%	36.2%	46.6%	100.0%

Source: (Author, 2023).

Table 4.6. Ratings of All Service Dimensions by PRM

		Unsatisfied	**Neutral**	**Satisfied**	**Total**
Accessibility by PRM	Yes	42.90%	35.70%	21.40%	100%
	No	30.80%	36.40%	32.80%	100%
Aviation services by PRM	Yes	44.90%	41.80%	13.30%	100%
	No	30.10%	35.40%	34.40%	100%
Non-aviation services by PRM	Yes	50.00%	26.50%	23.50%	100%
	No	28.80%	35.40%	35.80%	100%
All dimensions by PRM	Yes	49.00%	30.60%	20.40%	100%
	No	29.80%	32.10%	38.10%	100%

Source: (Author, 2023)

Table 4.6 shows the passengers with reduced mobility, and the study found that most PRM passengers were unsatisfied with the services: accessibility at 42.9%, aviation services at 44.9%, non-aviation services at 50%, and their overall service satisfaction was unsatisfied at 49%. In contrast, most respondents without disability rated accessibility 35.7% and aviation services 35.4% as neutral, while they rated satisfaction with non-aviation services 35.8%, and they rated the overall services satisfied 38.1%.

Table 4.7. Ratings of All Service Dimensions by Age

		Unsatisfied	Neutral	Satisfied	Total
Accessibility by Age	18 – 25	67.5%	22.5%	10.0%	100%
	26 -35	21.2%	38.9%	39.9%	100%
	36 – 45	36.0%	37.8%	26.1%	100%
	46 and older	54.3%	32.6%	13.0%	100%
Aviation services by Age	18 – 25	65.0%	20.0%	15.0%	100%
	26 -35	23.2%	42.4%	34.5%	100%
	36 – 45	36.0%	36.9%	27.0%	100%
	46 and older	47.8%	28.3%	23.9%	100%
Non-aviation services by Age	18 – 25	65.0%	17.5%	17.5%	100%
	26 -35	23.2%	37.9%	38.9%	100%
	36 – 45	36.9%	36.0%	27.0%	100%
	46 and older	47.8%	19.6%	32.6%	100%
All dimensions by Age	18 – 25	70.0%	15.0%	15.0%	100%
	26 -35	21.7%	35.5%	42.9%	100%
	36 – 45	37.8%	33.3%	28.8%	100%
	46 and older	52.2%	26.1%	21.7%	100%

Source: (Author, 2023)

Table 4.7 compares different age groups and their satisfaction levels with the services they received. Passengers aged 18 to 25 were the most dissatisfied with all dimensions of the services: 67.5% were dissatisfied with the accessibility, 65% were dissatisfied with aviation services, and 65% were dissatisfied with non-aviation services. On the other hand, passengers aged 26 to 35 were the most satisfied with airport services; 39.9% were satisfied with accessibility, 34.5% were satisfied with aviation services, and 38.9% were satisfied with non-aviation services. The overall airport service satisfaction levels for each age group are as follows: respondents aged 18 to 25 were 70% unsatisfied, 15% were neutral, and 15% were satisfied. For the age group of 26 to 35, 21.7% were unsatisfied, 35.5% were neutral, and 42.9% were satisfied. In the third age category, 36 to 45, 37.8% of respondents rated the services unsatisfactory, 33.3% were neutral, and 28.9% were satisfied. The last age category, 46 and older

passengers had the second highest percentage of unsatisfied respondents at 52.2%, with 26.1% being neutral and 21.7% being satisfied.

Table 4.8. Ratings of All Service Dimensions by Mode

		Unsatisfied	Neutral	Satisfied	Total
Accessibility by Mode	Bus	41.4%	35.4%	23.2%	100%
	Taxi	26.9%	23.9%	49.3%	100%
	Private car	13.7%	52.9%	33.3%	100%
	Other	5.3%	47.4%	47.4%	100%
Aviation services by Mode	Bus	39.5%	30.0%	30.4%	100%
	Taxi	28.4%	41.8%	29.9%	100%
	Private car	21.6%	54.9%	23.5%	100%
	Other	5.3%	68.4%	26.3%	100%
Non-aviation services by Mode	Bus	38.8%	32.7%	28.5%	100%
	Taxi	26.9%	25.4%	47.8%	100%
	Private car	21.6%	47.1%	31.4%	100%
	Other	26.3%	31.6%	42.1%	100%
All dimensions by Mode	Bus	40.7%	28.1%	31.2%	100%
	Taxi	26.9%	28.4%	44.8%	100%
	Private car	19.6%	51.0%	29.4%	100%
	Other	15.8%	42.1%	42.1%	100%

Source: (Author, 2023)

The above table 4.8 presents the respondent's modes of transportation to the airport and their satisfaction levels with various dimensions of the airport services. The results indicate that Bus users were the most unsatisfied group; 41.4% rated dissatisfaction with accessibility, 39.5% with aviation services, and 38.8 with non-aviation services. On the other hand, taxi users were the most satisfied group, with 49.3% with accessibility, and 47.8% non-aviation services. Also, they were the second most satisfied group, 29.9% with aviation services. Private car users tended to have neutral opinions on all dimensions. Regarding overall satisfaction, most categories rated this: 40.7% of bus users were unsatisfied, 44.8% of taxi users were satisfied, 51% of private car users were neutral, while others were rated neutral and satisfied equally, 42.1%.

Table 4.9. Ratings of All Service Dimensions by Earliness

		Unsatisfied	Neutral	Satisfied	Total
Accessibility by Earliness	less than 2 Hours	31.8%	30.0%	38.2%	100%
	2 - 3 hours	20.2%	45.2%	34.5%	100%
	More than 3 hours	54.1%	29.5%	16.4%	100%
Aviation services by Earliness	less than 2 Hours	29.1%	37.3%	33.6%	100%
	2 - 3 hours	20.8%	42.3%	36.9%	100%
	More than 3 hours	55.7%	29.5%	14.8%	100%
Non-aviation services by Earliness	less than 2 Hours	30.9%	28.2%	40.9%	100%
	2 - 3 hours	20.2%	43.5%	36.3%	100%
	More than 3 hours	55.7%	23.8%	20.5%	100%
All dimensions by Earliness	less than 2 Hours	30.0%	30.9%	39.1%	100%
	2 - 3 hours	20.2%	36.9%	42.9%	100%
	More than 3 hours	58.2%	25.4%	16.4%	100%

Source: (Author, 2023)

Table 4.9 compares passenger arrival times before their flight and their satisfaction with airport services. The passengers were divided into three categories based on their arrival time. Category 1 included passengers who arrived less than 2 hours before their flight. Most of these passengers rated their satisfaction with accessibility at 38.2% and non-aviation services at 40.9%. However, they rated aviation services as neutral at 43.3%. Category 2 included passengers who arrived 2 to 3 hours before their flight. These respondents rated all dimensions as neutral, including accessibility (45.2%), aviation services (42.3%), and non-aviation services (43.5%). Category 3 included passengers who arrived at the airport more than 3 hours before their flight. These passengers were mostly dissatisfied with accessibility (54.1%), aviation services

(55.7%), and non-aviation services (55.7%). Regarding overall satisfaction, category 2 was rated the highest at 42.9%, followed by Category 1 at 39.1%. However, most respondents in category 3 rated their satisfaction as unsatisfactory at 58.2%.

Table 4.10. Ratings of All Service Dimensions by Terminal

		Unsatisfied	Neutral	Satisfied	Total
Accessibility by Terminal	Domestic	51.2%	31.6%	17.2%	100%
	International	14.7%	41.4%	44.0%	100%
Aviation services by Terminal	Domestic	52.2%	28.7%	19.1%	100%
	International	13.6%	46.1%	40.3%	100%
Non-aviation services by Terminal	Domestic	52.2%	28.7%	19.1%	100%
	International	14.1%	38.2%	47.6%	100%
All dimensions by Terminal	Domestic	53.6%	24.9%	21.5%	100%
	International	13.6%	39.3%	47.1%	100%

Source: (Author, 2023)

Table 4.10 categorizes the respondents by the terminal they used, corresponding to their domestic or international destination. The domestic travelers who used the airport's domestic terminal expressed more dissatisfaction than the international passengers. They gave low ratings to accessibility (51.2%), aviation services (52.2%), and non-aviation services (53.6%). On the other hand, the international respondents gave higher ratings to accessibility (44%) and non-aviation services (47%) and were neutral about aviation services (46.1%). There was a clear difference in the overall satisfaction levels, with most domestic passengers being dissatisfied with the services (53.6%) and most international passengers being satisfied with the services of the airport (47.1%).

Table 4.11. Ratings of All Service Dimensions by Last 12 Month Trips

		Unsatisfied	Neutral	Satisfied	Total
Accessibility by Last 12-month Trips	0 -2 trips	27.3%	40.3%	32.5%	100%
	3 - 5 trips	32.0%	37.0%	31.0%	100%
	More than five trips	58.0%	21.7%	20.3%	100%
Aviation services by Last 12-month Trips	0 -2 trips	25.5%	40.3%	34.2%	100%
	3 - 5 trips	34.0%	41.0%	25.0%	100%
	More than 5 trips	60.9%	20.3%	18.8%	100%
Non-aviation services by Last 12-month Trips	0 -2 trips	28.1%	36.4%	35.5%	100%
	3 - 5 trips	33.0%	33.0%	34.0%	100%
	More than 5 trips	55.1%	23.2%	21.7%	100%
All dimensions by Last 12-month Trips	0 -2 trips	26.4%	35.1%	38.5%	100%
	3 - 5 trips	36.0%	32.0%	32.0%	100%
	More than 5 trips	59.4%	20.3%	20.3%	100%

Source: (Author, 2023)

The passengers requested information about their travel history over the past 12 months. As shown in Table 4.11, it was categorized into three groups based on the number of trips taken. The first group, consisting of those who traveled between 0 and 2 times, rated accessibility (40.3%), aviation services (40.3%), and non-aviation services (36.4%) as neutral. The second group, consisting of those who traveled between 3 and 5 times, rated accessibility and non-aviation services as neutral (37% and 41%, respectively) and rated non-aviation services as satisfactory. The third group, consisting of those who traveled more than 5 times, was the most dissatisfied with accessibility (58%), aviation services (60.9%), and non-aviation services (55.1%). Overall, passengers who traveled 0-2 times were most satisfied (38.5%), those who traveled 3-5 times were most dissatisfied (36%), and those who traveled more than 5 times were mainly dissatisfied (59.4%) with airport services.

Table 4.12 shows three categories in which the author studied their satisfaction. The first category is those who traveled for business reasons, the second category is those who traveled for leisure, and the last category is others, such as those who traveled for educational, medical, family, and more. Surprisingly, the first two categories, business and leisure, were rated most of their responses unsatisfied for accessibility (45.5%) and (38.25), aviation services (48.2%) and (35.4%), non-aviation services (47.3%) and (36.1%). In contrast, the third category was rated neutral for accessibility and aviation services (43.8%) and (45.2%), respectively, while they rated satisfactory for the non-aviation services (41.1%). Overall satisfaction, most business travelers rated unsatisfactory (46.4%), Leisure travelers rated unsatisfactory (39.6%), and other respondents rated satisfied (40.4%).

Table 4.12. Ratings of All Service Dimensions by Trip Purpose

		Unsatisfied	**Neutral**	**Satisfied**	**Total**
Accessibility by Purpose	Business	45.5%	26.4%	28.2%	100%
	Leisure	38.2%	36.1%	25.7%	100%
	Other	20.5%	43.8%	35.6%	100%
Aviation services by Purpose	Business	48.2%	29.1%	22.7%	100%
	Leisure	35.4%	34.7%	29.9%	100%
	Other	21.2%	45.2%	33.6%	100%
Non-aviation services by Purpose	Business	47.3%	28.2%	24.5%	100%
	Leisure	36.1%	33.3%	30.6%	100%
	Other	21.9%	37.0%	41.1%	100%
All dimensions by Purpose	Business	46.4%	29.1%	24.5%	100%
	Leisure	39.6%	26.4%	34.0%	100%
	Other	20.5%	39.0%	40.4%	100%

Source: (Author, 2023)

The last demographic item analyzed was the travel companions of the respondents' last trip, as shown in Table 4.13. The respondents were categorized into three groups: those who traveled with their family, those who traveled alone, and other respondents.

Those who traveled with their family were unsatisfied with accessibility (36.4%) but neutral with aviation services (39%) and satisfied with non-aviation services (37.3%). Those who traveled alone rated accessibility as neutral (34.6%) and aviation and non-aviation services as unsatisfactory (35.8% and 35.4%, respectively). In the third category, other respondents mostly rated all three dimensions as neutral, with 52.4%, 57.1%, and 42.9%, respectively. The overall satisfaction rate for those who traveled with their family and those who traveled alone was unsatisfactory for the services at (35.6%) and (35%), respectively. The other respondents rated neutral with 52.4%.

Table 4.13. Ratings of All Service Dimensions by Traveled with

		Unsatisfied	Neutral	Satisfied	Total
Accessibility by Traveled With	Family	36.4%	33.9%	29.7%	100%
	Alone	32.9%	34.6%	32.5%	100%
	Other	31.0%	52.4%	16.7%	100%
Aviation services by Traveled With	Family	32.2%	39.0%	28.8%	100%
	Alone	35.8%	32.5%	31.7%	100%
	Other	26.2%	57.1%	16.7%	100%
Non-aviation services by Traveled With	Family	33.1%	29.7%	37.3%	100%
	Alone	35.4%	33.3%	31.3%	100%
	Other	28.6%	42.9%	28.6%	100%
All dimensions by Traveled With	Family	35.6%	30.5%	33.9%	100%
	Alone	35.0%	28.8%	36.3%	100%
	Other	28.6%	52.4%	19.0%	100%

Source: (Author, 2023).

4.4.2. Satisfaction Ratings of Different Indicators

Table 4.14 presents the study's second objective, which aims to identify the satisfaction ratings of different indicators of airport services. The study will list and provide relevant information and discuss later for those who receive high and low ratings. In the first dimension, the author measured five indicators: accessibility options, convenience of accessibility, price, availability of parking, and availability of baggage trolleys/carts upon arrival at the airport. In the second service dimension, the author

measured eight indicators: waiting time at security, waiting time in the check-in area, flight screens, help counters, staff language skills, passenger services for those with reduced mobility, efficiency of passport and ID inspections, and baggage handling process. in the third dimension, the author measured eight indicators: clarity of signs, availability of ATM's, terminal congestion, airport temperature, shop/restaurants, cleanliness, and availability of seats.

Table 4.14. Satisfaction/Dissatisfaction with Indicator

Indicator		**Unsatisfied**	**Satisfied**
Accessibility	Price	69%	15.6%
	cart/trolls	67.3%	17.85
	Parking	65.4%	13.15
	Convenience	62.3%	15.45
	Options	58.5%	21.1%
Aviation Services	flight screens	65.6%	15.95
	waiting time at the security	62.2%	21.35
	Waiting time in the check-in area?	54.3%	26%
	Help counters	54%	23%
	PRM service	51.9%	26.3%
	Passport inspection efficiency	51.2%	27.95
	Baggage handling	51%	27.5%
	Staff’s language	49%	26.7%
Non-Aviation Services	Baby changing rooms	70.1%	13.35
	Clarity of signs	61.9%	15.85
	ATM	61.6%	16.85
	Congestion	56.2%	19.8%
	Temperature	56.2%	25.5%
	Coffee shops	51.5%	28.7%
	Cleanliness	51%	31.9%
	Seats	48.7%	29.0%

Source: (Author, 2023).

4.4.3. Satisfaction Ratings of the Service Dimensions

The researcher also analyzed how airport service dimensions differed when examining passenger satisfaction, and the results are presented below charts.

The first dimension of this study was accessibility, As shown Figure 4.1. The study found that 34% of all respondents were not satisfied with the accessibility of the airport, while 30% of the respondents were satisfied with accessibility, and the remaining 36% responded neutral.

The second dimension of service quality was Aviation-related services such as check-in baggage handling. Most respondents were not satisfied with service-related aviation; 34% were unsatisfied, 37% were neutral, and only 29% were very or somehow satisfied. As shown in Figure 4.2.

The last dimension of airport service was non-aviation services; again, the passengers rated higher satisfaction than others, but the dominant respondents were unsatisfied. 33% of all respondents were satisfied with this dimension, 33% were neutral, and 34% were unsatisfactory as shown in Figure 4.3.

Figure 4.1. Satisfaction/Dissatisfaction with Accessibility

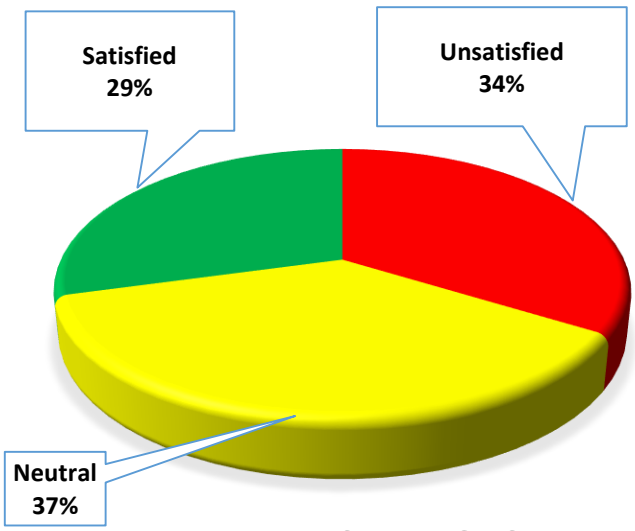

Figure 4.2. Satisfaction/Dissatisfaction with Aviation Services

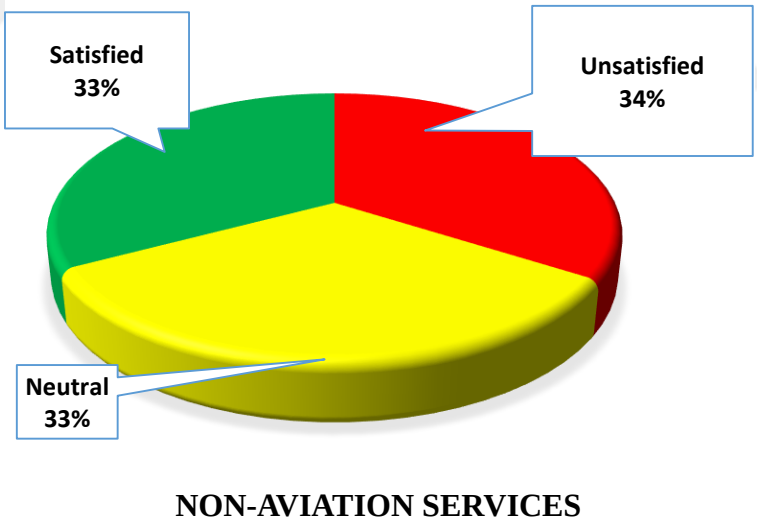

Figure 4.3. Satisfaction/Dissatisfaction with Non-aviation Services

The author also analyzed the satisfaction of all airport services As shown in Fig 4.4. The study indicated that most respondents were not satisfied with airport services, 34.5%. While 33.8% were satisfied with airport services, and the remaining 31.7% were neutral.

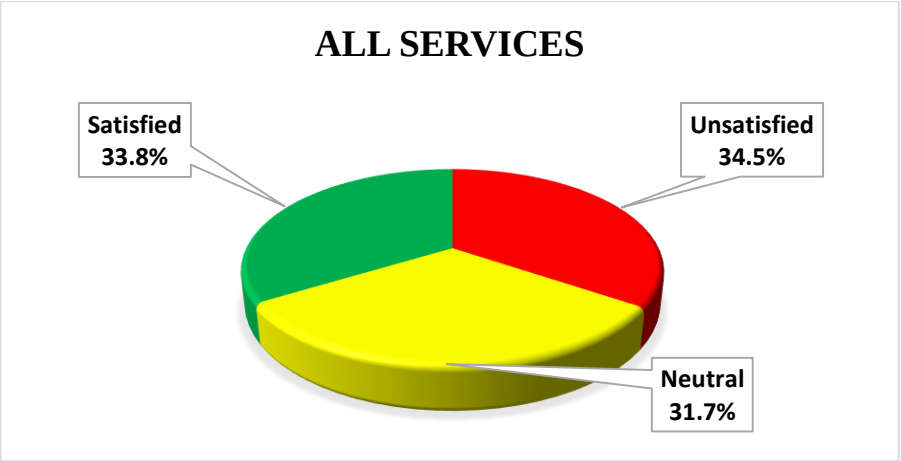

Figure 4.4. Satisfaction/Dissatisfaction with All Services

4.4.4. Correlation Analysis

The third objective of our study was to identify the relationship between customer satisfaction and airport services.

Table 4.15. Correlation

		Accessibility	Aviation Service	Non-Av. Services	Satisfaction
Accessibility	Pearson Correlation	1	0.859	0.812	0.784
	Sig. (2-tailed)		0.000	0.000	0.000
	N	400	400	400	400
Aviation service	Pearson Correlation	0.859	1	0.894	0.884
	Sig. (2-tailed)	0.000		0.000	0.000
	N	400	400	400	400
Non-AV. Service	Pearson Correlation	0.812	0.894	1	0.865
	Sig. (2-tailed)	0.000	0.000		0.000
	N	400	400	400	400
Satisfaction	Pearson Correlation	0.784	0.884	0.865	1
	Sig. (2-tailed)	0.000	0.000	0.000	
	N	400	400	400	400

Source: (Author, 2023)

The correlation between airport service quality and customer satisfaction is presented in Table 4.15, which consists of the three dimensions of airport service quality and satisfaction. The correlation between Accessibility and Satisfaction, as shown in the table above, is 0.784, a strong positive correlation between them. The second test of the correlation between satisfaction and Aviation services is 0.884, which shows a strong positive correlation. The third is non-aviation services and satisfaction. This is also found that there is a strong positive correlation between them. Therefore, these correlations show a strong and positive correlation between airport service quality and customer satisfaction. If one variable increases, the other variable tends to increase.

CHAPTER V

DISCUSSION AND IMPLICATIONS

In this study, we found a strong positive correlation between airport services and customer satisfaction, which means an increase in airport service quality also increases customer satisfaction. However, most respondents were not satisfied with airport services, with only 33.8% being satisfied. This suggests there is a need to improve airport services to increase customer satisfaction.

Our findings also indicated that aviation services were not satisfactory for most respondents, with only 29% of them being satisfied; this is different from the study of (Gitto & Mancuso, 2017), who found that respondents rated aviation services 33% positive, 29% negative and 38% neutral.

Furthermore, most respondents were not satisfied with non- aviation services, with only 33% being satisfied. This differs from the result of (Gitto & Mancuso, 2017), who found that 56% of the respondents rated non-aviation services positively. This suggests that there is a need for improvement in aviation services to increase satisfaction.

The study analyzed how demographics varied their satisfaction, and it was found that most respondents (65.8%) used buses to reach the airport. This is in contrast to a study conducted in Saudi Arabia by (Alhussein, 2011), where only 2.3% of the respondents used buses, while others used limousines (55.6) and taxis (42.1%). The result also showed that bus users were the most unsatisfied respondents, while taxi users were the most satisfied with all airport services. The study also found that passengers who arrived at the airport earlier were less satisfied than others. This is contrary to the findings of (Bezerra & Gomes, 2015), which indicated that passengers who arrived earlier are more likely to be satisfied. They added that less frequent fliers were also more likely to be satisfied. At this point, this study also found that less frequent fliers are more satisfied than frequent fliers.

The study also found that domestic passengers were more dissatisfied than international passengers. (Cengiz, 2010b) defined customer satisfaction as the comparison of services received to the customer's satisfaction, which means that customer satisfaction depends on the customer's expectations. Therefore, the researcher assumes that local passengers expect their airport to be like other airports they have heard of or used before, and when they did not receive the services they expected, they would not be satisfied. In contrast, international passengers were mostly satisfied, which could be because they may have wrong expectations about the airport services, and the services they received exceeded their expectations and became satisfied.

The study also analyzed indicators that received the highest satisfaction and dissatisfaction from airport passengers. The study found that cleanliness was the highest satisfied service indicator, followed by the availability of seats, choice of coffee and restaurants, efficiency of passport and ID inspections, baggage handling process, and staff language skills. In contrast, the highest dissatisfied indicators were baby changing rooms, followed by airport shuttle bus ticket price, baggage trolls, flight screens, airport parking availability, and airport convenience. Surprisingly, four of the first highest dissatisfaction indicators are from the dimension of accessibility. There is no indicator from the accessibility in the top ten of the satisfied indicators, which hints at how much the respondents were dissatisfied with the services of this area.

Finally, this study has several implications for both theory and practice. It enriches the existing literature on airport service quality and passenger satisfaction by focusing on the services of a privatized airport, an underexplored area. It also contributes to the aviation literature of the region, particularly Somalia, where more research is needed.

The study provides valuable insights for the authorities and managers. It can assist the authorities in their negotiation and decision-making processes regarding the impact of service quality on customer satisfaction and encourage them to apply it instead of only concentrating on other aspects, such as revenue and infrastructure improvements.

The study also helps the managers understand their customers' satisfaction level and the areas that need improvement. It urges the managers to discuss with the authorities

how to enhance the services, such as improving the ways ordinary passengers can access the airport, which is currently limited to a shuttle bus with unsatisfactory prices, which is one of the primary sources of customer dissatisfaction. Furthermore, airports that aim to create a positive impression should increase their satisfaction levels by introducing innovations and addressing the areas of dissatisfaction, such as baby change rooms, which are very important for families traveling with children, expanding parking areas, adding flight information screens, and providing baggage trolleys. These measures can enhance the customer experience and the image of the airport. Implementing these makes the airport more competitive and attractive for domestic and international travelers.

CHAPTER VI

CONCLUSIONS

6.1. Conclusions

The conclusion drawn from the study's findings shows that the airport services of Aden Adde are not satisfactory. However, the passenger volume at the airport has risen since this company started working at the airport and is projected to grow further soon. This is attributed to the improved security situation in Somalia and its recent integration into the East African Community (EAC), a regional bloc of over 300 million people with free movement across borders. However, the airport seems to suffer from a shortage or inadequacy of essential services. Hence, there is a need to introduce new services or upgrade the existing ones to meet the increasing demand and ensure customer satisfaction.

Similarly, the study showed that there was a relationship between airport service quality and customer satisfaction, this implies that the more service quality, the more customer satisfaction.

Finally, the study analyzed the satisfaction of Aden Adde International Airport, which is under privatized. The result revealed that it was shallow; those services were provided by two different private companies, which offer accessibility to the airport and other services. The findings indicated that the customers rated the services of these companies poorly, which means that privatization of airport services did not meet their expectations.

6.2. Recommendations

First, for the Somali government, I recommend encouraging researchers to conduct studies in the country and make insensitive data available to the researchers.

Additionally, the government should monitor the contracts given to private companies to ensure they are fulfilling their obligations and providing quality customer service. I also recommend to the government to increase ways passengers can reach the airport and control pricing situations, the government should consider investing in public transportation infrastructure and regulating private contractors of transportation services.

For the company that manages the airport, I recommend increasing the quality of their services rated unsatisfactory while also increasing other services and adding other missing services that can enhance customer satisfaction. The company should also conduct surveys to understand how customers perceive their services and identify areas for improvement.

For researchers, mainly Somali researchers, I recommend studying more about Somalia aviation to reduce the lack of data in this sector. By conducting more research in this field, researchers can help improve the aviation industry.

6.3. Suggestion for Further Research

This study has focused on the impact of airport service quality on customer satisfaction under a privatized airport at Aden Adde International Airport, mainly since this study focused only on departure passengers of the airport. However, there are still many avenues for further research in this area. Some of the possible future directions are:

A comparative analysis of passenger satisfaction between Adden Adde International Airport and other non-privatized airports in the country/region to examine the relative advantages and disadvantages of privatization.

A comprehensive study of passenger satisfaction across all airport areas, such as Domestic, Arrivals, and Transfers, to identify the specific aspects of airport service quality that affect passenger satisfaction.

An evaluation of the factors influencing passenger satisfaction or dissatisfaction with the airport, such as accessibility, to understand the underlying reasons for passenger perception and expectations.

An investigation of employee satisfaction at the airport under privatization, to explore the effects of privatization, to explore the effects of privatization on employee motivation, performance, and well-being.

6.4. Limitations of the Study

This study has some limitations that should be acknowledged. First, the survey was conducted only among the departure passengers of the airport, which may affect the generalizability of the findings. The reason for this choice was to avoid confusing the participants, as the services evaluated in the survey are unique in the departure area, such as check-in, boarding, baggage handling, staff courtesy, and lounge access. Therefore, the questionnaire was designed specifically for departure passengers because they can provide complete feedback on these airport services. Second, the survey was administered online, which may pose challenges regarding response rate. The online mode was selected because the target population was vast, and the target location was far from the researcher, making it difficult to reach them in person.

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