Operational Factors Affecting Service Delivery in Margaret Ekpo International Airport, Calabar, Cross River State, Nigeria

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Abstract

The study examined operational factors affecting service delivery of Margaret Ekpo International Airport in Cross River State, Nigeria. The research was motivated by the scantiness of studies on the factors which shape the observed airport service quality from the managerial perspective. A total of 240 respondents were surveyed out of the 600 staff working at various units of the airport. Data were collected using a six-point Likert scale closed-ended questionnaire. Airport operational factors were represented by three variables (Personnel management, the level of adherence to Federal Airport Authority of Nigeria (FAAN) service policy and funding availability), while the dependent variable was represented by employees’ evaluation of service quality. The instrument was content-validated, while the Cronbach’s Alpha coefficient gave a reliability range of 0.54-0.744. The data generated was analyzed using simple linear regression analysis computed electronically with the aid of Statistical Package for Social Science version 21. The findings revealed that the level of adherence to FAAN service policy and funding of airport operations significantly affects staff response to customers’ needs at Margaret Ekpo International Airport; and the ambience of Margaret Ekpo International Airport. Personnel management did not show a significant effect on staff ability to provide information at Margaret Ekpo International Airport. The authors, therefore, recommend that airport management should ensure the availability and utilization of the airport’s service charter and improve on the funding streams of the airport through strategies such as private–public partnership funding model.

Keywords: Airport; Service; Quality; Personnel Management; Operational Factors; Service Policy; Service Delivery

1. Introduction

1.1. Background to the study

An airport is a place with facilities where aircrafts operate for passengers and non-passenger services. Passenger services involve booking, check-in, “wait-in,” boarding, deplane, and baggage claim. The range of services provided to anyone (corporate or individual) by service providers in any airport is broadly termed “airport service.” Such service includes but not limited to car parking service, restaurants, restrooms, internet access, and aeronautical services (Ching, 2014; Kadaifci and Topcu, 2013). The quality of airport service has been identified as a critical key driver of passenger satisfaction (Bogicevic et al., 2013). Several studies have identified factors such as neatness, efficient check-in and security procedures, display of flight information, better signage and terminal-amenities as contributors to passenger satisfaction (Ching, 2014; Kadaifci and Topcu, 2013; Correia, 2008; De Barros et al., 2007; Fodness and Murray, 2007; Chen and Chang, 2005). Conversely, the poor performance of these airport
service features contributes to passenger dissatisfaction (Bogicevic et al., 2013). Just like any other service, the quality of airport service, however, depends on a number of factors which may be internal or external to the airport. Analysis of the strengths and weaknesses as well as opportunities and threats to an airport suggest that factors such as dearth of facilities, substandard and dilapidated infrastructure, poorly accessible airport location, absence of clearly defined airport management model, maintenance and investment plan, operational hours restriction and limited operation capacity, flight shortage, economic recession, political and social instability and poor road network among others negatively affect the quality of airport service; while institutional goal and commitment to quality improvement programs, location of airport in tourists destination and cosmopolitan vicinity positively influence airport service quality (Capital, 2012; Environment and Resource Management Consultant Limited, 2013).

1.2. Statement of the problem

Civil airport operations require high-quality delivery because of the high cost of air travel relative to other means of transportation and socioeconomic class of its passengers. Poor airport service quality impinges on passengers’ satisfaction, sometimes with outburst of anger. Managers of airports, aviation authorities, and other service providers at the airport are continually seeking ways that they can improve passengers’ experiences at the airport. Research studies have concentrated on the service dimensions of the airport service or relational activities offer passengers by staff of the airports. There has been little or no study of the operational factors that affect airport performance and which indirectly serve as precursors of service quality in some cases. Thus, this study seeks to examine the operational factors affecting service quality delivery of airports in Nigeria. The operational factors are beyond the tangibility dimension of Parasuraman et al. (1985). The operational factors are the primary and internal elements which are critical to the performance of the organization and include personnel management system, adherence to airport service charter, and funding of airport operations. Through this study, airport regulatory agencies in Nigeria: Federal Airport Authority of Nigeria (FAAN), Nigeria Civil Aviation Authority and Federal Ministry of Aviation will be able to identify areas for intervention which would improve service quality delivery, result in revenue generation for the airport, attract investors, increase economic activity in the state and have a multiplier effect on the country’s national income. The specific objectives of this study are as follows:

1. To determine the extent to which personnel management strategies affect staff ability to provide information at Margaret Ekpo International Airport;
2. To access the extent to which the level of adherence to FAAN service affect staff responsiveness to customers’ needs at Margaret Ekpo International Airport;
3. To determine the effect of funding availability on ambience of Margaret Ekpo International Airport.

Although the factors that affect service quality can be categorized into two-personal factors and operational factors, the study concentrates only on operational factors such as personnel management (staff training, remuneration, employment of efficient manpower, and employee relationship), adherence to FAAN service policy (such as formulation of service guidelines, application of FAAN SERVICOM local charter and ensuring service control measures) and funding provisions (such as government funding, private investment, and airport internally generated revenue). This is because operational factors are objective in nature unlike personal factors that are usually subjective in nature.

2. Review of Related Literature

This section discusses relevant theoretical framework on which the study is based. It also discusses various concepts of airport service quality. The section concludes by proffering a conceptual model for this paper.

2.1. Theoretical framework

The study is based on the systems theory of organization. The systems theory was developed by biologist Ludwig von Bertalanffy in the 1930s who recognized the need of any organization to interact
with its external environment (Hayajneh, 2007). According to the system theory of management, the organization receives inputs, transforms them and exports the outputs to the environment (Chikere and Nwoka, 2015). Hence, it can be said that a system consists of inputs, throughputs, output and feedback (Figure 1).

Systems theory, concepts, and principles can be explored to understand and explain airports and their operation. The airport as a system has inputs (aviation policies, financial resources, human resources, facilities and equipment, information) which are then processed. Throughput is the processes used by the system to convert inputs from the environment into products or services that are usable by either the system itself or the environment. This includes ticketing, baggage handling, check-in, airport mobility, flight information, and other airport activities. The output is the product or service which results from the system’s throughput or processing. The outputs in this study are quality service delivery and customer’s airport experience which can be measured either by the SERVQUAL scale model (Parasuraman et al., 1985) or the SERVPERF model (Cronin and Taylor, 1992). The feedback here can be referred to the customers’ perception of the airport service delivery. The information generated, whether positive or negative provides the standards and benchmarks for evaluating and improving the airport’s performance. This study, however, is limited in scope to the operational factors such as personnel management, adherence to service charter and funding. The output indicators are measured from the point of view of the service providers.

2.2. Conceptual framework

The concept of service quality varies with organizations and disciplines. According to Gržinić (2007), two basic approaches to service quality have been identified in the early nineties of the twentieth century. The first approach is “technical” and product oriented, while the second approach is customer related. These two approaches have been recognized as results of managerial efforts to consider the aspect of quality when providing services from two angles: On one hand, the manager tends to abide by the set standards, while on the other hand he wishes to satisfy the customers.

The first approach is production oriented and tends to the consistency of service byimpeding or minimizing the influence of the personnel directly involved in providing a service. This school of thought defines service quality as a way to manage business processes to ensure total satisfaction to the customer on all levels (internal and external). It is an approach that leads to an increase of competitiveness, effectiveness and flexibility of the entire company (Gržinić, 2007). The second approach to service quality is consumer oriented. Expectations are the basis for satisfaction. The managerial view of service concept is a series of elements that require a trained coordination and control, while the service itself is strictly standardized. This paper adopts the production oriented approach to service quality.

Pabedinskaitė and Akstinaitė (2014) explained that the services provided by airports could be divided into two groups, namely, aviation and non-aviation services. Aviation services involve the
provision, maintenance and operation of the infrastructure required for the aircraft to take off, land, and stand, the provision and maintenance of the equipment and information technologies required for baggage handling and check-in of passenger, aviation safety services, etc. Aviation services also include ground handling services such as preparation of the aircraft for flight, luggage loading, and passenger transport. The non-aviation services include car parking, commercial activities at the airport (catering, commerce), business lounges, rent, advertising, and so on. Direct customers of aviation services are air-lines, and those of non-aviation services - passengers. According to Seyanont (2011), airport service customers include airlines, airport tenants, airport service operators, and consumers of airline and air cargo operations.

Whereas the Airport Cooperative Research Program (2013) classify airport customers to include passengers, employees, aircraft owners and pilots, airport tenants, and visitors who are dropping off, greeting passengers, or visiting other airport tenants. In addition, there are many tenants as well as third-party contractors and consortiums that are also an airport’s internal customer. The Federal Aviation Administration Code of Federal Regulations (14 CFR) defines airport tenants to mean any person other than an aircraft operator, or foreign air carrier that has an agreement with the airport operator to conduct business on airport property. Thus, it could be claimed that there are three closely interrelated actors operating in the air transport services sector: The airport, airlines and passengers (Pabedinskaitė and Akstinaitė, 2014).

Service charter is define as “a public document that states out basic information on the service provided, the standards of service that customers can expect from an organization and how to make complaints or suggestions for improvement” (European Union, 2007). Charters when used properly in organizations provide a framework to bring about a cultural change toward better customer orientation.

2.3. Empirical Review

Onchari et al. (2014) investigated the effect of recruitment strategies (personnel management strategies) of employees on service delivery of local authorities (LAs) in Kenya. The study showed that the LAs have not embraced many of the strategies of recruitment such as internet, use of employment agencies, referral, and employment consultants. The study also found that the effect of LAs’ personnel management strategies on service delivery was descriptively below average. Similarly, Ye and Liang (2001) examine the role of employees on service delivery on two hotels (Haibin Hotel and Westin Hotel) in China. Data were collected from managers using telephone interview and employees using questionnaire. The study revealed that personnel strategies such as: Hire the right person, develop people, provide the needed support system, employee retention, and employee satisfaction were identified descriptively as having critical factors in service delivery of the hotels. Jagoda and Balasuriya (2012) in their study revealed that the largest gap in airport service quality lies with the assurance aspect. The study showed that of the facilitating organizations operating at airports, passengers are least satisfied with the services offered by the immigration department, banks and duty free shops. The study further revealed that over 50% of the problems/issues affecting the service quality dimensions are largely human related.

Mwania (2015) conducted a study on the influence of customer service charter on service delivery in Nairobi Water and Sewage Company using a stratified sample of 336 employees and 384 customers. The study findings showed that service charter variables explained about 86.2% of service delivery in the water and sewage management company. The study found that there was a weak positive significant correlation between the three service charter variables and service delivery.

Wanjau et al. (2012) that explored the factors affecting provision of service quality in the public health sector in Kenya, focusing on employee capability, technology, communication, and financial resources. A total of 103 respondents were surveyed and the data generated was analyzed using regression analysis. The results that were low employees capacity, low technology adoption, ineffective communication channels, and insufficient fund affect service delivery to patients in public health sector affecting health service quality perceptions, patient satisfaction and loyalty. A study by the Air Transport and Airport Research (2010) aimed at examining air accessibility in European Airports revealed that good ground access in combination with the airside connectivity can create valuable
synergies, which are exploited by airport operators in concepts often referred to as “airport cities.” The intermodal connectivity is a value in itself, as it increases the attractiveness of the airport as a location for business activities, ranging from logistics to knowledge-intensive services. For airport operators, real estate projects therefore develop into an important business segment, creating often higher profit margins than the primary function of an airport, which is the provision of infrastructure and services for airlines (Air Transport and Airport Research, 2010).

From extensive discussion on the literature review, a conceptual framework on which this study is pivoted is presented in Figure 2.

The conceptual model expresses the following three null hypotheses:
1. Personnel management strategies do not have a significant effect on staff ability to provide information at Margaret Ekpo International Airport.
2. The level of adherence to FAAN service charter does not significantly affect staff response to customers’ needs at Margaret Ekpo International Airport.
3. Funding availability does not significantly affect the ambience of Margaret Ekpo International Airport.

3. Methodology

The study employed survey research design. The population of the study comprised the 600 airport staff at Margaret Ekpo International Airport (FAAN Database, 2016). Since this population is known, the Taro Yamane Formula was used to arrive at a sample of 240 respondents using an error margin of 5% (0.05). In selecting this sample, simple random sampling technique was employed to give every member of the population equal opportunities of being selected for the study. The scope of this study is limited to Margaret Ekpo International Airport. The study also hinges only on the opinion of the service providers at the airport. Hence, the unit of analysis of the study is staff of different service points of the Margaret Ekpo International Airport. The data for the execution of this study were mainly obtained from primary source. The primary data were gotten from the respondents through the deployment of a structured questionnaire consisting of six-point Likert scale. Content-validation was used for the instrument validity, while Cronbach’s Alpha coefficient was used to confirm the reliability after carrying out a pilot survey on 30 airport staff. The Cronbach’s alpha score for the five constructs are: Personnel management = 0.54, adherence to service policy and charter = 0.682, institutional funding = 0.744, service quality = 0.621. Data analysis techniques employed was the simple linear regression because it ascertains the causal relationship between the independent and dependent variables. This analysis was computed electronically with the aid of Statistical Package for Social Science version 21.

Figure 2: Conceptual model of the relationship between airport operational factors and service quality (adapted and modified from Hayajneh, 2007)
4. Results and Discussion

Out of the 240 questionnaires distributed, 217 were completed and returned, while 23 questionnaires were not returned. Descriptive statistics shows that employees’ rated the operational factors of the airport above well above average for items under personnel management and adherence to service charter/policy and just average for most of the items under airport funding (Table 1).

4.1. Result of hypothesis one

Table 2 shows the effect of personnel management on staff ability to provide information. The correlation between both variables indicates a weak degree of correlation (0.111) between personnel management and staff ability to provide information to customers. The $R^2$ value (0.012) indicates that only 1.2% of the dependent variable (ability to provide information) can be explained by the change in the independent variable (personnel management). This is quite insignificant. The results of the F test show that the regression model does not predicts the change in the dependent variable significantly ($F = 2.697; P>0.05$). Further analysis also shows that personnel management has a very weak and not significant effect on staff ability to provide information ($t = 1.642$). Therefore, we accept the null hypothesis and conclude that personnel management does not have a significant effect on staff ability to provide information at Margaret Ekpo International Airport. This is in line with the result of the study by Jagoda and Balasuriya (2012) which revealed that the largest gap in airport service quality lies with the assurance aspect. From the result of this analysis, it can be deduced that the personnel management strategies of Margaret Ekpo International airport did not show significant positive effect on service delivery. Since the airport employees’ rating of the personnel management strategies is fairly high (3.0), the lack of significant correlation between personnel management strategies and service delivery can be attributed to the fact that personnel management strategies does have direct influence on service delivery, but rather serves as a hygiene factor which when not properly handle will negatively affect the service delivery of the airport.

4.2. Results for hypothesis two

Table 2 shows the effect of FAAN service policy on staff responsiveness to customers’ needs at Margaret Ekpo International Airport. The correlation between the both variables indicates a fairly strong correlation (0.414) between FAAN service policy and staff responsiveness to customers’ needs at Margaret Ekpo International Airport. The $R^2$ value (0.172) indicates that 17.2% of the dependent variable (Staff response to customers’ needs) can be explained by the independent variable (FAAN service policy). The goodness fit of the models as indicated by the $R^2$ is poor. This means that there are other critical factors that were not factor in this model. The F test result shows that FAAN service policy is explanatory factor to staff level of responsiveness to airport customers ($F = 44.602; P > 0.05$). Further analysis shows that service policy has a positive significant relationship with staff response to customers’ needs ($t = 6.678, P < 0.05$ and $\beta = 0.414$). Therefore, we reject the null hypothesis and conclude that the level of adherence to service policy has significant positive effect on staff responsiveness to customers’ need sat Margaret Ekpo International Airport. This result corroborates the results of the study by Mwania (2015) on the influence of customer service charter on service delivery in Water and Sewage Company in Nairobi. This study showed that service charter has a weak positive significant effect on service delivery as indicated in Mwania (2015). In Margaret Ekpo International Airport, one of the resources provided by the FAAN is the FAAN Service Charter 2009 which clearly stipulates guidelines on service delivery. This service charter is adopted by all federal airports in Nigeria.

4.3. Result of hypothesis three

Table 2 shows the effect of airport funding on airport ambience. The correlation between both variables indicates a weak positive correlation (0.38) between availability of funds and ambience of Margaret Ekpo International Airport. The $R^2$ value (0.144) indicates that 14.4% of the dependent variable (airport
<table>
<thead>
<tr>
<th>Statements</th>
<th>Poor (%)</th>
<th>Fair (%)</th>
<th>Average (%)</th>
<th>Good (%)</th>
<th>Excellent (%)</th>
<th>Don’t know (%)</th>
<th>Mean rating</th>
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</thead>
<tbody>
<tr>
<td>Recruitment of efficient manpower</td>
<td>7 (3.2)</td>
<td>14 (6.5)</td>
<td>84 (38.7)</td>
<td>91 (41.9)</td>
<td>14 (6.5)</td>
<td>7 (3.2)</td>
<td>3.4</td>
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<tr>
<td>Training and orientation on service quality</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>63 (29.0)</td>
<td>126 (58.1)</td>
<td>21 (9.7)</td>
<td>7 (3.2)</td>
<td>3.8</td>
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<tr>
<td>Remuneration of personnel</td>
<td>0 (0)</td>
<td>7 (3.2)</td>
<td>49 (22.6)</td>
<td>119 (54.8)</td>
<td>7 (3.2)</td>
<td>35 (16.1)</td>
<td>3.7</td>
</tr>
<tr>
<td>Relationship among colleagues</td>
<td>0 (0)</td>
<td>14 (6.5)</td>
<td>14 (6.5)</td>
<td>119 (54.8)</td>
<td>70 (32.3)</td>
<td>0 (0)</td>
<td>4.1</td>
</tr>
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<td>Availability of service delivery guidelines</td>
<td>7 (3.2)</td>
<td>0 (0)</td>
<td>77 (35.5)</td>
<td>98 (45.2)</td>
<td>28 (12.9)</td>
<td>7 (3.2)</td>
<td>3.7</td>
</tr>
<tr>
<td>Clear rules on service delivery</td>
<td>0 (0)</td>
<td>14 (6.5)</td>
<td>35 (16.1)</td>
<td>119 (54.8)</td>
<td>35 (16.1)</td>
<td>14 (6.5)</td>
<td>3.9</td>
</tr>
<tr>
<td>Orientation on FAAN service charter</td>
<td>0 (0)</td>
<td>14 (6.5)</td>
<td>56 (25.8)</td>
<td>112 (51.6)</td>
<td>14 (6.5)</td>
<td>21 (9.7)</td>
<td>3.6</td>
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<td>Availability of service quality control measures</td>
<td>0 (0)</td>
<td>7 (3.2)</td>
<td>84 (38.7)</td>
<td>77 (35.5)</td>
<td>14 (6.5)</td>
<td>35 (16.1)</td>
<td>3.5</td>
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<tr>
<td>Availability of government funding</td>
<td>21 (9.7)</td>
<td>7 (3.2)</td>
<td>63 (29.0)</td>
<td>42 (19.4)</td>
<td>0 (0)</td>
<td>84 (38.7)</td>
<td>2.9</td>
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<td>Availability of private investors’ funding</td>
<td>14 (6.5)</td>
<td>7 (3.2)</td>
<td>7 (3.2)</td>
<td>28 (12.9)</td>
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<td>161 (74.2)</td>
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<td>Release of funds</td>
<td>35 (16.1)</td>
<td>0 (0)</td>
<td>63 (29.0)</td>
<td>21 (9.7)</td>
<td>7 (3.2)</td>
<td>91 (41.9)</td>
<td>2.7</td>
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<tr>
<td>Internal revenue generated from ancillary services (tax from airport taxis, parking fee, shopping outlets etc., trolley fee)</td>
<td>0 (0)</td>
<td>14 (6.5)</td>
<td>21 (9.7)</td>
<td>35 (16.1)</td>
<td>7 (3.2)</td>
<td>140 (64.5)</td>
<td>3.5</td>
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<tr>
<td>Accessibility of airport</td>
<td>0 (0)</td>
<td>7 (3.2)</td>
<td>28 (12.9)</td>
<td>140 (64.5)</td>
<td>42 (19.4)</td>
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ambience) can be explained by the variation in the independent variable (availability of funds). The goodness fit of the models as indicated by the $R^2$ is poor. This means that there are other critical factors that were not factor in this model. The $F$ test shows that funding of airport operations is explanatory factor of airport ambience ($F = 9.629; P < 0.05$). Further analysis shows that availability of funds have a significant positive relationship with airport ambience ($t = 3.103, \beta = 0.207$). Therefore, we reject the null hypothesis and accept that funding availability significantly affect the ambience of Margaret Ekpo International Airport.

This result is in agreement with a study on public health sector service delivery by Wanjau et al. (2012) who found that inadequate funding practices such as fixed budgets in hospitals led to inequities and fails to respond to new demands and priorities. Centralized budget systems contributed to technical inefficiency by prevented staff from optimizing the deployment of inputs perpetuating poor quality of service in service organization.

### 5. Conclusion

The research results have shown that there are basically two operational factors which shape the service delivery of airport. These factors are adherence to airport service policy and availability of operational funds. The results also showed that personnel management though necessary in every organization does not significantly affect the ability of staff to provide information.

The result of the analysis has shown that the level of adherence to the FAAN service policy is important as it improves responsiveness (promptness and willingness in responding to customers’ needs) which is a crucial aspect of service quality dimension; and also projects the airport as being
customer-oriented. This study has also supported the fact that airport ambience positively contributes to the overall ambience of the airport including facilities and infrastructure. The weak coefficient of determination indicates that operational factors are just a part of the airport system that influences employees’ perception of serve quality. While it is important that service industry prioritize customers’ satisfaction by measuring their perception and expectation of service performance, it is also pertinent not to neglect the managerial and operational factors that play a key role in shaping the service quality delivery.

6. Policy Implications

From the findings and conclusion of the study, the following recommendations are made:

i. The Margaret Ekpo Airport Management should make the airport service charter the Bible and Quran of the organization. Staff should be encouraged to imbibe the customers’ requirements and walk the talk with the charter as the guiding principles of operation.

ii. With respect to funding, rather than airport management relying on the Federal Government allocation which may not be sufficient enough to provide all the facilities and equipment needed to improve airport service delivery, it is advisable that the airport revenue sources are diversified. One way is by engaging in real estate development such as hotel and lodging accommodations for non-resident passengers who may need to sleep over in order not to miss their flights. FAAN should consider the use of private public partnership funding model to improve the funding stream of the airport necessary to improve on the ambience and product quality of the airport.

iii. Since personnel management factors have been identified as hygiene factors in service delivery of the airport, all related matters should be effectively management in order not affect the service delivery process. This is critical to producing high quality service outcomes and effective service quality improvement necessary for airport growth.

7. Contribution to Knowledge

There are plethora of studies in service quality management in airports. These studies are mainly focused on the service quality evaluation of airports from the passengers’ perspective. This study in recognition of the fact that service quality as perceived by the passenger is a product of the system or operation has provided insight into the operational factors that act as precursors to service delivery in Margaret Ekpo International Airport. The study has also contributed to available literature in service marketing of airports in Nigeria which is in dearth.

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