
Impact of Digitalization on the Management of the Maritime Industry in Africa: The Banjul Port Experiences

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ABSTRACT: Efficiency is hampered by Banjul Port's laborious operational procedure, which lacks an integrated platform for stakeholders and adequate information flow. Consignees experience bottlenecks as a result, and freight clearance takes longer. All facets of human life are being impacted by the present digital revolution in society and business. Sadly, due to long truck turnaround times and poorly planned landward access to the port via trucks scheduled arrivals at the port gate, which causes vehicle gate congestion, the Gambia Ports Authority currently operates primarily manually. The Banjul port's efficiency has declined due to increased ship calls, causing a backlog of congested ships at anchorage. These delays cause shippers to charge demurrage, negatively impacting retail prices and causing a high cost of living for the population. Through creative approaches and methods, this study investigates how The Gambia Ports Authority may use digitalisation to improve port and terminal operations' efficiency. Using the Gambia Ports Authority as a case study, the project aims to investigate how digitalisation affects Banjul Ports management and explore the potential of port digitisation to reduce congestion and increase maritime industry efficiency. Questionnaires were used to survey workers of the Gambia Ports Authority, including major importers and exporters, goods forwarders, shipping lines, clearing agents and haulage vehicle owners. Frequency distribution tables and regression analysis using SPSS were used to present the data. The study reveals operational challenges faced by Ports users, including inadequate berth facilities, traffic capacity, and open storage capacity, and recommends modern, automated equipment for efficient service delivery.

KEYWORDS: Gambia Ports Authority, Banjul, Efficiency, Gambia, Banjul Ports, Ships, Congestions

INTRODUCTION

Society and the business world are currently undergoing a digital transformation with all areas of human life being influenced. This development is experienced by everyone (Verlag, 2017). The digital transformation requires the development of new solutions and adoption of new practices. The COVID-19 pandemic has created many challenges for the international supply chain and consequently for the global ports and terminals that handle the flow of traffic. In 2020 especially, the operations at ports and terminals were put under a lot of pressure as alternative operational processes were adopted to handle the containers, cargo and vessels that flow through their facilities. The COVID-19 precautionary measures, the worst being lockdowns and the disease burden, affected workforces, limiting the operational output of personnel and making clear the need for ports to deplore technology to enhance their operations. Ports and terminal management and operational teams have had to resort to reliance on digitalisation by automated and integrated systems to run and manage their operations (Butcher, 2019).

To deliver effective services in the port and terminal operations, this study focusses on how The Gambia Ports Authority may employ digitisation as a solution. With a 16.3 million Dalasis share capital, the Gambia Ports Authority (GPA) is now government owned after being established by an Act of Parliament of the Republic of The Gambia in 1972 (GambiaPorts.com, 2021). This Act required the GPA to offer the Gambia's citizens and inhabitants marine and shipping services, including as harbour facilities, cargo handling equipment, and storage. Because of its location in the nation's capital city, the port is often called the Port of Banjul. The services provided includes, among others, the importation and exportation of food items, and other commodities such as vehicles, petroleum products and electronic items. These commodities are shipped in and out of the country through the Port of Banjul via container ships, tankers, role-on / role-off and ocean-going vessels. The terminal is equipped with a limited number of facilities to manage the inbound cargo ships and containers.

As a seaport serving the Gambian population and some of the neighbouring countries, the Gambia Ports Authority has an active

Impact of Digitalization on the Management of the Maritime Industry in Africa: The Banjul Port Experiences

staff roll of 1,165 and a total of 15 departments and / or sections involved in its operations and service provision (GPA Annual Report, 2020). Some of the departments that are crucial to the overall operations of the Port of Banjul include Traffic/Shorehandling Department, Harbours /Shipping Department, Mechanical/Electrical Department, Finance Department and Directorate (Administration and Internal Audit) Department. The GPA is an active member of organizations such as the Port Management Association for West and Central Africa (PMAWCA), the International Maritime Organization (IMO), amongst other regional and global shipping and maritime organisations. The GPA is also either directly or indirectly managing the affairs of other government agencies also involved in maritime and shipping services such as the Gambia Ferry Services, Banjul Shipyard and Banjul Fisheries Jetty.

The government, to establish The Gambia as a globally competitive export and processing centre, launched The Trade Gateway Project (TGP) within the Port of Banjul, by constructing a bonded warehouse complex. This has resulted in increased operations at the port, which now handles about 80% of The Gambia's total foreign trade in both volume and weight terms (GPA Annual Report, 2011). The Gambia has also been used as a transit point for some of the countries within the sub-region including the Southern Senegalese region of Cassamance, Mali, Guinea and Guinea Bissau. Due to the size of these sub-regional countries as well as the factor of some being landlocked like Mali, they import and export some of their commodities through the Port of Banjul, and then transport them across the border by trucks. With a population of about 2.4 million people (in 2022), the use of the Port of Banjul by the neighbouring countries has enabled the port to handle traffic throughput of over 2.8 million metric tons annually (GPA Annual Report, 2019). The Gambia's strategic location in the sub region offers the Port of Banjul unique opportunities that led to the increase in volume of cargo and vessels handled.

With this ever-expanding use of the facilities of the Port of Banjul, management needs to continuously undertake the necessary maintenance and investment to tackle the congestion issue of the Gambia Ports Authority in order to sustain their competitive edge within the sub- region. The Authority's management requires timely, reliable and relevant information concerning the operations of the port in a given period to be able to make appropriate decisions especially in relation to investment and focus. The Port's Authority is assisted in its decision making regarding the operations of the ports by the policy of producing quarterly management accounts. This is crucial since the port of Banjul's operations and processes involves key departments and units, which all support the Banjul port's ability to operate effectively and efficiently.

The Port of Banjul Feasibility Studies and Master Plan, as updated in 2008 was developed to take stock of the ongoing trends of the Gambia Ports Authority in terms of CAPEX i.e., cargo handling capacity, facilities and equipment requirements that the port of Banjul will need. The master plan was developed to ensure that the port of Banjul delivers optimum output and to provide strategic plans to cater for the increasing demands for the Port's facilities in the years ahead. This study, aimed at analysing the performance and operational efficiency of seaports with particular focus on the operations of the Port of Banjul. Specifically, it identified the challenges and problems hindering the operations of the Port, as well as assessed the potentials of the GPA's workforce and infrastructure involved in the operations of the Port of Banjul. The recommendations of the study are very crucial for the operations of the Port's Authority.

RESEARCH PROBLEM

Firstly, the efficiency of the Banjul port has deteriorated over the years mainly due to the increase in ship calls creating a backlog of ships congested at anchorage. As a result of this congestion, ships mostly wait for about two weeks at anchorage before they can be berthed to discharge or load their cargo. This delay is a cost to the shippers that are charged with a demurrage, which in turn is forwarded to the consignees. These demurrage charges have been steadily impacting negatively on the retail prices of commodities resulting to a high cost of living for the population.

Secondly, due to steady increase in the volume of containerized cargo handled, the Port of Banjul is also faced with a challenge of stacking space available for containers bound for the Port. The demand for more stacking capacity continues to rise due to an approximate 20% increase in cargo throughput over the past four years with a total limited space of 63,000m² available (GPA Report on Efficiency Improvement 2021). Since Terminal Operating System (TOS) is not in place, delay in locating of containers is another contributing factor. The Gambia Ports Authority is currently mainly on manual operations resulting from long truck turnaround time and poor programming of landward access to the port via trucks scheduled arrivals at the port gate causing vehicle gate congestion.

Finally, the cumbersome ways of the procedural operational process in the Banjul port have also hindered the efficiency of the Ports operations. There is no integrated platform between the port stakeholders and a proper flow of information among participating actors as well. Given the current process of clearing cargo from the Port of Banjul, consignees experience avoidable bottlenecks. This in turn causes huge delays as to when cargo is to be moved out of the port premises to create the much-needed space for other arriving cargo. The process involves the fact that consignees must receive their bill of lading first and later proceed to Gambia Revenue Authority (GRA) to get the cargo evaluated. This involves a lot of back and forth for the consignees and their

Impact of Digitalization on the Management of the Maritime Industry in Africa: The Banjul Port Experiences

agents between the port premises and the GRA offices.

LITERATURE REVIEW

In the research on “port expansions, congestion, and spatial competitions for container import” in the United States port (Fan, 2012), which utilized the network flow intermodal mode to assess congestion, it was found that port congestion can form in a variety of ways and that it poses serious difficulties in terms of increasing traffic divert and port costs. Some suggestions for enhancing the ports were offered by the study. The extension of ports and port terminals was among the suggested changes. These will lead to a decrease in shipping fees, congestion expenses, and consumer wait times.

Another study on digitalisation in ports in the Latin American Region was commissioned by the RBD Latin team, and carried out by Holland House Colombia and STC International (2020). The study planned to match the needs and demands for digitalisation within the port sector in the Latin American region with the purpose of identifying opportunities for Dutch companies along and the potential challenges. It also aimed to assess the state of play of port digitalisation in selected countries of the Latin American (LATAM) region mainly, Argentina, Chile, Peru, Colombia, Panama, Costa Rica and Mexico. Desk research and interviews were conducted on Dutch organisations to assess their perception of the Latin region, their main strengths and the possibilities for business expansion. The study concludes that port digitalisation is more than an IT project. It is therefore necessary to consider several dimensions in the course of the execution of a particular digital project, and previous network building phases which are of great importance in the Latin region. Neagoe (2017), in a research study on Port Terminal Congestion Management in Australia, points out that port terminal gate congestion leads to significant economic losses for transport operators and green-house gasses emissions. According to Neagoe, this problem is further driven by stakeholders’ narrow perspective in addressing the issue. This is supported by the literature for port integration in supply chains and congestion management approaches. Though theoretical solutions have proposed significant potential efficiencies and cost savings that can be achieved, yet, practical implementations still struggle to achieve significant results.

Moreover, in 2018 investigation carried out in the Kingdom of Bahrain by Alhameedi is titled "Performance Evaluation and Solutions for Port Congestion Focused on the Container Terminal: A Case Study of Khalifa Bin Salman Port (KBSP)". The study's overall goal was to shed light on how well container terminals performed, with a focus on reducing port congestion problems. The performance of the KBSP container terminal was examined using a combination of qualitative and quantitative data collection techniques. According to the research, throughput at Khalifa Bin Salman Port (KBSP) increased noticeably, however this led to congestion at the port because it exceeded the ideal capacity for throughput given the resources at hand. Dang (2012) in France also researched on “Efficiency of world ports in container and bulk cargo (oil, coal, ores and grain)”. Port efficiency is a key driver of port competitiveness and can play an important role in boosting regional development. The analysis in this report provides several insights into where and how to gain port efficiency. The analysis also shows the importance of size of ports for port efficiency. The crude oil, iron-ore and grain ports have higher efficiency scores at larger total port size, this implies that the size is more efficient because they can drive technological development. Finally, regional patterns were found to emerge across commodities. Terminals in China are among the most efficient in the handling of coal bulk and containers with terminals in Southeast Asia. By contrast, the ones in Latin America are the most efficient grain and iron-ore terminals and the most efficient crude-oil transshipment terminals are mostly found in the Gulf region. Further, Australia is also found to perform well in handling coal bulk and grains.

Jahn, Kersten and Ringle (2017) in Germany researched on Digitalisation in Maritime and Sustainable Logistics. This work developed a classification scheme for vehicle dispatching on container terminals. Based on the classification and developments in the research area identified, there are two main approaches. One is the dispatching approach that aims at a vehicle-task allocation or sequence; it focuses on the system boundary horizontal transport separately, and applies a dynamic online solution method. The other, the scheduling approach, aims at a detailed schedule for the vehicles; it potentially extends the system boundary by quay and / or yard side and applies a static offline solution method. Maneno's (2019) study in Tanzania assessed the causes generating congestion in ports using Dar es Salaam port as a case study. This study's main objective was to identify the variables contributing to the Port of Dar es Salaam congestion. In specifically, the research was designed to look into the variables that restrict the port's ability to operate, including employees, equipment, management, policy, infrastructure, information, and technical systems, as well as paperwork and customer procedures. A variety of data collection techniques were used, including desktop reviews, surveys, questionnaires, interviews, and observations. The Tanzania Port Authority and the United Republic of Tanzania's government must take action, according to the research, to ease congestion and enhance port operations. Similar to this, Mlimbila (2018) employed quantitative techniques and surveys to gather information for their study on the use of information technologies in improving port logistics performance in the port of Dar es Salaam in Tanzania. They concluded that using information systems resulted in lower tracking and shipping costs, improved delivery, higher trade volumes, and the elimination of organizational incapacity. The research also offered several suggestions for improving the ports, such as expanding the use of information

Impact of Digitalization on the Management of the Maritime Industry in Africa: The Banjul Port Experiences

technology by port personnel.

In various African ports, including those in South Africa, Nigeria, Kenya, and Egypt, a research on the consequences of port congestion on logistics and supply chain operations was conducted (Gidado, 2015) shows that the common port congestion scenarios, their dimensions and the various factors that trigger congestion in the ports of Lagos, Durban, Mombasa and the catchment ports of the Suez Canal is the concept of variations in turn-around time of ships and cargo vis-à-vis the port's capacity and relative efficiency level. The results provided some explanations on the consequences arising from these on notable African logistics and supply chain networks. The results showed that planning, regulation, capacity, efficiency, or a combination of these factors alone or together account for all of the congestion in African ports. The study therefore recommends that African ports should enhance their regulatory mechanisms and improve capacity and efficiency level in order to shoulder the ever-increasing challenges of port congestion in years ahead. Pudji Rahmanto's (2016) study on the Kandangan Dry Port in Surabaya, Indonesia, identified three key factors for revitalization: government support, regulation, value-added service, and adoption of cutting-edge technologies. These elements should be prioritized during the rebuilding process to alleviate congestion in the terminal. A 2011 investigation of traffic congestion difficulties at the Port of Tin Can Island in Nigeria by Oyatoe revealed that there was also a limited berth for handling goods in the port. However, the study discovered some elements that contribute to port congestion while speaking with port stakeholders. Poor handling tools, inadequate infrastructures, inexperienced personnel, processes for cargo clearance, unskilled labor, and shift work are some of these factors (Claudio, 2019).

In addition, a Simulation Framework for Optimising Truck Congestions in Marine Terminals was a study carried out in an Iranian port. The study's primary goal was to decrease truck traffic and turnaround times at the port's entrance. The study evaluates truck arrival patterns, weighbridge service patterns, and truck admittance trends. All necessary functions were incorporated into the study using Taylor II simulation software. Three strategies produced superior results after examining the waiting time and queue histogram patterns (Kiani, Syareh, & Nooramin, 2010). Andersen (2019) conducted research in Ghana on "Digitalisation and port efficiency: capacity development between Danish and Ghanaian public and private actors." This study is on the digitalisation of Tema Port services in Ghana. The first stage is to map stakeholders' definitions of and interest in a Tema port that is both secure and efficient. The financial gain of everyone cooperating to keep the port operating efficiently is then determined. A qualitative research approach was used to interview pertinent stakeholders. According to Colley's 2019 study, Banjul Port is inefficient and congested, which raises the cost of commodities and ship stays. Similar to ports in West Africa, the report suggests a change from a public service model to a landlord one.

THEORETICAL REVIEW LEAN APPROACH

The term Lean Production System was first used in the title of an article published in 1988 (based on a Master's thesis written by a student at the MIT Sloan School of Management) to describe the philosophy and method of continuous improvement developed at Toyota and codified in the Toyota Production System. The roots of this system extend back in time to Edward Deming and Henry Ford, and its modern corollaries include statistical process control, as well as six-sigma and "just-in-time" process improvement approaches. The lean approach demands a commitment to a set of principles that allow people and organizations to become and remain efficient. Wherever possible, all forms of waste are eliminated. The work environment is neater, better organized, and safer. Less effort is required to provide services, and less investment and fewer resources in personnel, supplies and equipment are needed for the same levels of productivity. Products and services are created in less time with fewer defects. Consequently, fewer suppliers, products, and inventories are required.

QUEUING THEORY

Queuing theory was first introduced in the early 20th century by Danish mathematician and engineer Agner Krarup Erlang. His mathematical analysis culminated in his 1920 paper "Telephone Waiting Times", which served as the foundation of applied queuing theory. Queuing theory (or queueing theory) refers to the mathematical study of the formation, function, and congestion of waiting lines, or queues. Queuing theory scrutinizes the entire system of waiting in line, including elements like the customer arrival rate, number of servers, number of customers, capacity of the waiting area, average service completion time, and queuing discipline. Queuing discipline refers to the rules of the queue, for example whether it performs based on a principle of first-in-first-out, last-in-first-out, prioritized, or serve-in-random-order.

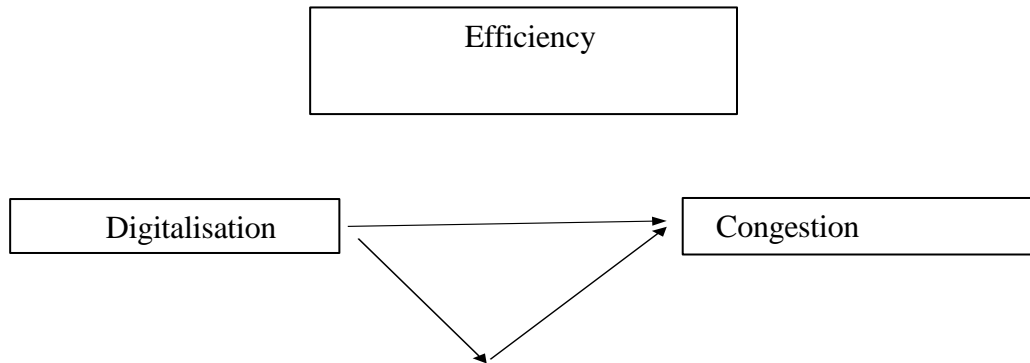
CONCEPTUAL MODEL

The model established the relationship of Digitalisation and Congestion with a mediating variable Efficiency. Digitalisation is ultimately an enabler of potential cost reduction, minimizing organizational waste, reducing risks, and optimizing processes across multiple actors thereby reducing congestion. Likewise, efficiency refers to the ratio of output to input or benefit to cost. In case of prostration of Time, Cost and Capacity constitute the overall efficiency, which has a considerable effect on congestion. The main architect in gaining efficiency in port operations with this model is the introduction of digitalisation, which in turn will lead to

Impact of Digitalization on the Management of the Maritime Industry in Africa: The Banjul Port Experiences

improved congestion. Observation has shown that a decongested port is an efficient port which can be achieved with digitalisation, while the reverse is the case with a congested port as in the model below.

Figure 2.1-Conceptual Model



Dependent Variable (DV)

Independent Variable (IV)

Mediating Variable

Source: Researcher’s Model, 2025

RESEARCH DESIGN

This study uses a survey research design, utilizing quantitative methods to examine the impact of digitalisation on Banjul Port congestion and efficiency. The research design aims to provide a framework for the study, focusing on the choice of research approach and the analysis of data collected through both close and open-ended questionnaires.

ANALYSIS OF FINDINGS AND DISCUSSION

The study aimed to explore the effects of digitalization on the management of Banjul Ports and the challenges it presents. Respondents were asked to identify physical, organizational, cargo handling, and storage service issues that hinder the efficient operations of Banjul Port. The result from the physical attributes shows that, 9.4% of the respondents said they are faced with the challenge of limited depth of the port's access channel, 68.8% of the respondents said they are faced with the challenge of lack of sufficient berth facilities, 6.3% of the respondents are faced with the challenge of inadequate or insufficient infrastructure, 10.9% of the respondents said they are faced with the challenge of insufficient or outdated handling equipment, 3.1% of the respondents believe they are faced with the challenge of inadequate open storage space to accommodate the growing volume of container traffic, and 1.6% of the respondents said they are faced with the challenge of Insufficient foreland and hinterland connectivity as in table 1 below. In analysing these findings, the responses revealed that lack of sufficient berth facilities is seen as the biggest operational challenge faced by the majority of the respondents who use the Port of Banjul.

1. Physical Attributes

	Frequency	Percent	Valid Percent	Cumulative Percent
Limited depth of port access channel	6	9.4	9.4	9.4
insufficient berthing options	44	68.8	68.8	78.1
Infrastructure that	4	6.3	6.3	84.4

Impact of Digitalization on the Management of the Maritime Industry in Africa: The Banjul Port Experiences

is insufficient or not adequate	7	10.9	10.9	95.3
inadequate or obsolete handling tools	2	3.1	3.1	98.4
insufficient open storage space to accommodate the rise in container traffic	1	1.6	1.6	100.0
Foreland and hinterland connectivity is insufficient	64	100.0	100.0	
Total				

Source: Field Survey, (2025)

The result from the organisational attributes also shows that, 18.8% of the respondents said they are faced with the challenge of Informational services that are insufficient or lacking integration (informational single window), 6.3% of the respondents said they are faced with the challenge of inadequate or absent information system synchronization with other ports, 7.8% of the respondents are faced with the challenge of Insufficient coordination of the different port services, 32.8% of the respondents said they are faced with the challenge of Insufficient oversight, regulation, and monitoring of port services and 34.4% of the respondents said they are faced with the challenge of Insufficient capacity to handle increasing traffic (congestion) as depicted in table 4.7 below. In analysing these findings, the responses revealed that insufficient capacity to absorb traffic growth (congestion) is seen as the biggest operational challenge faced by the majority of the respondents who use the Port of Banjul.

Table 2. Organisational Attribute

	Frequency	Percent	Valid Percent	Cumulative Percent
Informational services that are insufficient or lacking integration (informational single window)	12	18.8	18.8	18.8
Inadequate or absent information system synchronization with other	4	6.3	6.3	25.0
	5	7.8	7.8	32.8

Impact of Digitalization on the Management of the Maritime Industry in Africa: The Banjul Port Experiences

ports	21	32.8	32.8	65.6
Insufficient coordination of the different port services				
Insufficient oversight, regulation, and monitoring of port services	22	34.4	34.4	100.0
Insufficient capacity to handle increasing traffic (congestion)	64	100.0	100.0	
Total				

Field Survey, (2025)

The cargo handling service results also reveal that, as indicated in table 3 below, 21.9% of respondents said they face the challenge of inadequate container scanning service, 65.6% said they face the challenge of inadequate open storage to support container stacking, and 10.9% said they face the challenge of inadequate warehousing facilities in their organisation. The majority of respondents who utilise the Port of Banjul said that the most operational difficulty they experience is the lack of enough open storage to accommodate container stacking, according to the analysis of these findings.

Table 3. Cargo Handling Service

	Frequency	Percent	Valid Percent	Cumulative Percent
Insufficient container scanning service	14	21.9	21.9	21.9
lack of sufficient open storage to support container stacking	42	65.6	65.6	87.5
Insufficient warehousing facilities	7	10.9	10.9	98.4
others	1	1.6	100.0	100.0
Total	64	100.0		

Field Survey, (2025)

The cargo storage service's results also reveal that 43.8% of respondents said they face the challenge of not having enough open storage space for containerised shipments, 28.1% said they face the challenge of inadequate handling equipment in container yards

Impact of Digitalization on the Management of the Maritime Industry in Africa: The Banjul Port Experiences

(such as inadequate trailer trucks, reach-stackers, and front-end loaders), 9.4% said they face the challenge of not having enough container stacking separation per shipping line, and 18.8% said they face the challenge of port employees at container terminal. In analysing these findings, the responses revealed that lack of open storage space for containerized shipment is seen as the biggest operational challenge faced by the majority of the respondents who use the Port of Banjul.

4. Cargo Storage service

	Frequency	Percent	Valid Percent	Cumulative Percent
Lack of open storage space for containerized shipment	28	43.8	43.8	43.8
Lack of adequate handling equipment in container yards	18	28.1	28.1	71.9
(inadequate trailer trucks, reach-stackers, and front-end loaders)	6	9.4	9.4	81.3
Lack of container stacking Separation per shipping line	12	18.8	18.8	100.0
Lack of professionalism on the part of port employees at container terminals, including operators and tally clerks	64	100.0	100.0	
Total				

Impact of Digitalization on the Management of the Maritime Industry in Africa: The Banjul Port Experiences

Field Survey, (2025)

The Correlation Between Digitalisation and Efficiency on Congestion

With a significant level at 1% and a standard error of 0.262, the results in the table below demonstrate that there is a negative relationship between digitalisation and congestion. The coefficient of organisational attributes is 0.125 at 5% significant level and a standard error of 0.060, and the coefficient of physical attributes is 0.17 at 10% significant level and a standard error of 0.092. These results suggest that digitalisation has a more significant level, which is less than 0.05.

Table 5: Correlation Results

Variable	Dependent Variable: Congestion	Coefficient
Constant	(0.491)	4.413***
Digitalisation	(0.262)	1.343***
Physical Attributes	(0.092)	0.17*
Organisational Attribute	(0.060)	0.125**
Cargo Handling Service	(0.146)	0.082
Cargo Storage service	(0.08)	-0.005

Standard errors are in parenthesis

***, **, * Significant levels at 1 percent, 5 percent and 10 percent

The findings of regression in the table below also show that when the independent variable digitalisation increases by one unit this will have a negative impact on congestion, signifying that digitalisation and congestion has a negative correlation.

Table 6: Regression Results

	Congestion	Digitalisation	Physical Attributes	Organisational Attribute	Cargo Handling Service	Cargo Storage Service
Congestion	1.000					
Digitalisation	-.510	1.000				
Physical Attributes	.116	.211	1.000			
Organisational Attribute	.249	-.016	.098	1.000		
Cargo Handling Service	.040	.102	.169	.015	1.000	

Test of Hypothesis

Regression analysis was employed in this study to evaluate the hypothesis about the connection between congestion and digitisation. According to the developed null hypothesis, there is no connection between congestion and digitisation. According to the alternate hypothesis, Banjul Ports operations' congestion and digitalisation are related. Nonetheless, the results in the preceding table verified that, with a standard error of 0.262, there was a 1% significant level of association between digitalisation and congestion. Given that the significant threshold at 1% is less than 0.05, this suggests that there is a negative association between digitisation and congestion. Therefore, with this evidence from the regression analysis, the null hypothesis will be rejected, and the researcher accepted the alternative hypothesis that state that there is relationship between digitalization and congestion.

CONCLUSION

The Port of Banjul faces operational challenges due to insufficient berth facilities, insufficient capacity to absorb traffic growth,

Impact of Digitalization on the Management of the Maritime Industry in Africa: The Banjul Port Experiences

insufficient organizational attributes, and insufficient open storage for container stacking and containerised cargoes, according to respondents' responses. According to the physical attributes results, 9.4% of respondents stated that they face the challenge of the port's access channel's limited depth, 68.8% stated that they face the challenge of inadequate berth facilities, 6.3% stated that they face the challenge of inadequate or insufficient infrastructure, 10.9% stated that they face the challenge of outdated or insufficient handling equipment, 3.1% stated that they face the challenge of lacking open storage space to handle the increasing volume of container traffic, and 1.6% stated that they face the challenge of inadequate foreland and hinterland connectivity. In analysing these findings, the responses revealed that lack of sufficient berth facilities is seen as the biggest operational challenge faced by the majority of the respondents who use the Port of Banjul.

RECOMMENDATIONS

Port Management should invest in advanced, automated machinery for efficient cargo handling, reducing human intervention and errors, and minimizing inefficiency to an acceptable level.

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