

## INNOVATIONS IN LOGISTICS: NIGERIAN CASE

### ІННОВАЦІЇ В ЛОГІСТИЦІ: ПРИКЛАД НІГЕРІЇ

### ИННОВАЦИИ В ЛОГИСТИКЕ: ПРИМЕР НИГЕРИИ

**Abstract.** Innovation in logistics is a continuous process which is being adopted by many in the developing and developed countries around the world. However, an idea, drive and motivation to further improve this sector adding a significant value to the way and the processes to better satisfying customers and businesses in developing countries, Nigerian to be precise is the utmost reason for this research.

**Анотація** Інновації в логістиці - це безперервний процес, який впроваджується багатьма в країнах, що розвиваються і розвинених країнах по всьому світу. Ідеї і мотивація для подальшого поліпшення цього сектора, що додає значну цінність способам і процесам, що дозволяє краще задовольняти потреби клієнтів і підприємств у розвитку країн, зокрема Нігерії, знаходяться в центрі уваги даного дослідження.

**Аннотация.** Инновации в логистике - это непрерывный процесс, который внедряется многими в развивающихся и развитых странах по всему миру. Идеи и мотивация для дальнейшего улучшения этого сектора, добавляющего значительную ценность способам и процессам, позволяющим лучше удовлетворять потребности клиентов и предприятий в развитии стран, в частности Нигерии, находятся в центре внимания данного исследования.

Logistics plays a major role in the economy of several countries at large, it is an inevitable segment in the supply chain and distribution of goods manufactured or bought to the final consumers.

However, every developed or developing country is strengthening this aspect of their economy.

During the early occurrence of the covid-19 pandemic, many businesses and aspect of the economy was put on hold but logistics was considered very essential in order for medical equipment's, and other essential materials to fight the event, got to the right people, at the right place, at the right time, in the right conditions.

In addition, countries with high manufacturing, importation and exportation power like America, china etc. are innovatively inculcating technological approaches to make logistics more expeditious in a world of fast rising E-commerce's businesses and online shopping.

The Nigeria freight and logistics market has been on a slow growth trend for the past many years but is expected to grow at a CAGR of around 4 % in the coming years. Over the past few years, Nigeria has experienced slow down due to poor infrastructure and logistical issues along with delayed custom procedures and congestion on the roads. Research and markets et, al (2020)

Furthermore, the Nigerian government has prohibited the imports of 41 products due to recession in 2016-2017 and has been focusing on building manufacturing and industrial units thereby increasing logistics demand. Research and markets et, al (2020)

The key element in a logistics chain is transport, which connects the separated activities.

However, Nigeria being the largest economy in Africa has been able to adopt various modes of effectively and efficiently transporting freights, some of which includes: pipeline, train, road, water and air etc.

Pipelines transportation service is the most dependable of all modes of transport because there are few interruptions to cause transit time variability as weather is not a significant factor and the pumping equipment's are highly reliable. Ballou et al (2004),

However, in Nigeria, this mode of transportation is majorly used for gas and petroleum products.

Furthermore, Road transport can be viewed as a public utility, which supplies essential goods and services, where essential means they cannot be cut off without danger of total or partial collapse of an economy. Dieter Bos et al (2003). This is a major mode of transport in Nigeria. However, this infrastructure needs to be developed and new innovative integration of road network must be implemented to boost the logistic sector in Nigeria.

On the other hand, Abuja Rail Mass Transit commonly known as Abuja Light Rail is a light rail transport system in the Federal Capital Territory of Nigeria. It is the first rapid transit system in the country and in West Africa and the second of such system in sub-Saharan Africa (after Addis Ababa Light Rail) in 2018 and further constructions of other lines to connect mega cities are in progress, this will also play a major role in improving the logistic market in the country. Railway technology, et al (2020).

The air and sea transport are also very effectively used in Nigeria due to high importation and exportation power, However, innovative approaches are also needed to reduce waiting time during clearance at the borders.

**Nigeria profile.** Nigeria, also known as the giant of Africa is located in West Africa on the Gulf of Guinea between Benin and Cameroon. Nigeria has an area of 923,768 square kilometers, including about 13,000 square kilometers of water. Nigeria shares borders with Cameroon (1,690 kilometers) in the east, Chad (87 kilometers) in the northeast, Niger (1,497 kilometers) in the north, and Benin (773kilometers) in the west.( Library of Congress, et al 2008)

*Innovation.* When it comes to innovation, we expect new ideas, change and transformation in a certain sphere. However, researchers have been able to define innovation in various ways. To give a few;

According to Rogers in (1997), he defined innovation as “an idea, practice or object that is perceived as novel by an individual or other unit of adoption” (Rogers 1997).

According to Tidd in (1997), he summarized the concept of innovation as “the process of turning opportunities into practical use” (Tidd, Bessant et al. 1997).

Wissema in 2005 gave a more closely related general accepted idea that Innovation is an important factor for firms in gaining sustainable competitive advantage is the definition of innovation given by.

However, he went further to define innovation as “the successful introduction of something new. Successful as shown by the acceptance in the market or other use” (Wissema et al., 2005).

In the logistic business, innovation and innovative ideas and strategy should be concurrent to better satisfy customers, handle goods and develop the system.

*Logistic business.* The term business logistics has evolved since the 1960s due to the increasing complexity of supplying businesses with materials and shipping out

Products in an increasingly globalized supply chain, leading to a call for professionals called "supply chain logisticians". Daneshjo Naqib, et al., 2013

However, the logistics business comprises of various parts, which includes: Storage, warehousing and materials handling, Packaging and unitization, Inventory, Transport, Information and control.

The main focus of this research is directed towards the transportation segment in the logistics business, which is key and inevitable.

*Major Mode of transportation. Sea transport.* The seaport is very important in countries that demonstrate high outbound logistics such as Nigeria.

According to the Nigerian port authority, there are only 6 seaports serving the country with over 200millions population approximately. These seaports are the Lagos Port Complex and Tin Can Island Port in Lagos; Calabar Port, Delta Port, Rivers Port at Port Harcourt, and Onne Port.

However, according to Eleagu, Greene Ifeanyi et al 2018, Time management, Multiple security arrangement/duplication of function of security agencies within the ports, Poor maintenance of equipment in the port, leading to low availability rate of equipment, lack of co-ordination among the departments/security agencies within the port complex, Unnecessary bottleneck in the administrative

procedure leading to corruption and acceptance of gratification before services are rendered to customers/ports user

*Air transport.* It is interesting how quickly and efficiently cargo and freight can be delivered using this form of transport, however, it can be very expensive.

According to Wikipedia, Nigeria has 31 airports and 26 of the airports are operated by the Federal Airports Authority of Nigeria. (FAAN), five of which are functional international airports.

The establishment of these airports catalyzed the efficiency of the big players in the logistics business.

*Rail transport.* Rail transport plays a good role in freight movement, however lack of maintenance and neglect of this infrastructure in Nigeria resulted to the decline of it's contribution to the logistic business.

However, according to Wikipedia, there are two major railway lines, which are the Lagos-Kano Standard Gauge Railway, and the Warri-Ajaokuta-Itakpe Standard Gauge Railway operated by the Nigerian Railway Corporation.

Ongoing constructions are happening, which will give a boost to the logistic business in Nigeria.

*Pipelines Transport.* Oil companies and firms to transport crude oil, petroleum products and the likes mostly use this transport system; they are the safest way to transport highly flammable products and this line are highly reliable.

According to G. T. Arosanyin , this mode of transport was functional in Nigeria since 1973 and till date is has played a major role in the oil and gas sector of the economy.

*Road transport.* The negligence of road infrastructure in Africa and Nigeria as the country of research focus has contributed to the slow development in this sector. However, the road transport sector is inevitable in the logistics market.

The Nigerian road network consist of highways, roads and bridges however, adequate maintenance and attention need be focused towards this sector.

The road transport is the cheapest and one of the fastest ways to get products and goods to the final consumer.

Due to the fast rising generation of Ecommerce and online shopping, road transportation is the go to delivery option for business and shoppers.

The focus of this research lies solely within the road transport logistics and how innovation in this business can expediently improve the sector and better serve customers.

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