The Role of Maritime Logistics Services in Promoting Foreign Trade: A Case Study of Skikda Port

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Abstract:

Logistics services have become one of the key elements that determine the efficiency and effectiveness of ports. Their investment and development, according to technological and economic changes, remain among the most critical success factors in enhancing the performance of foreign trade. This study aims to analyze the performance level of the logistics services provided by the Port of Skikda by examining its infrastructure and performance indicators, particularly the average vessel dwell time, as well as the extent to which modern technology is utilized in port management. Furthermore, the study evaluates the port's performance in terms of the volume of its commercial activities.

Keywords: Logistics services, Ports, Foreign trade, Port of Skikda
JEL Classification Codes: F14, L91, R41, O18

ملخص:

أصبحت الخدمات اللوجستية من العناصر الحيوية التي تحدد مدى كفاءة وفاعلية الموانئ، وتظل استثماراتها وتطويرها، وفقاً للمتغيرات التكنولوجية والاقتصادية، من أهم عوامل النجاح في رفع كفاءة التجارة الخارجية، نسعى من خلال هذه الدراسة الى تحليل مدى اداء الخدمات اللوجستية التي يتمتع به ميناء سكيكدة من خلال التطرق الى بنيته التحتية وادائه فيما يتعلق بمعدل مكوث السفن في المرفأ ومدى اعتماده على التكنولوجيا الحديثة في إدارة الميناء، اضافة الى تقييم اداءه من حيث حجم نشاطه التجاري.

كلمات مفتاحية: الخدمات اللوجستية، الموانئ، التجارة الخارجية، ميناء سكيكدة

تصنيفات JEL: F14, L91, R41, O18

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1. Introduction

Seaports represent fundamental pillars of the global economic structure, serving as vital nodes that connect markets and diverse geographical regions. They function as gateways to international trade, facilitating the movement of goods and services across nations while contributing to economic growth at both the national and global levels. Ports are distinguished by their capacity to streamline transportation, storage, and distribution processes, and by providing a favorable environment for various commercial activities, whether export or import, they help reduce costs and enhance the efficiency of trade operations. Moreover, ports play a central role in minimizing delivery times, thereby meeting demand more rapidly and effectively.

The development and modernization of port infrastructure are crucial indicators of a country's ability to adapt to global changes. By adopting advanced technologies and intelligent systems, ports can accelerate operations and improve the quality of the services provided. The significance of ports extends beyond purely economic dimensions, they also contribute to securing supply chains, ensuring the continuous flow of trade, and fostering regional economic development. Thus, investment in and development of ports play a decisive role in enhancing national competitiveness and integrating countries within the global trade network.

In the Algerian context, the Port of Skikda stands as one of the key pillars of foreign trade activity, particularly in the hydrocarbons sector. It has the potential to play a fundamental role in improving the efficiency of foreign trade by offering effective logistics services that enhance the competitiveness of national exports while reducing the costs of imported goods, factors that positively influence national economic growth.

1.1 Research Problem

In light of the above, this study seeks to answer the following main question:

What is the role of maritime logistics services in supporting foreign trade activity at the Port of Skikda?

1.2 Sub-questions:

- What are the main logistics activities provided at the Port of Skikda?
- What is the performance level of the logistics services offered at the Port of Skikda?

1.3 Resear Hypothesis:

- There are significant logistics services at the Port of Skikda that contribute to improving foreign trade performance; however, these services remain insufficient.

1.4 Resear Importance:

The importance of this research lies in highlighting the role of maritime port logistics services in promoting foreign trade. This is examined through the handling, storage, and shipping operations conducted at ports, as well as their performance in

terms of vessel dwell time and the degree of adoption of modern technology in port management. The Port of Skikda is taken as a case study to explore these aspects in depth.

2. The Nature of Maritime Port Logistics Services

2.1 Concept of Maritime Port Logistics Services:

Maritime port logistics services refer to a set of processes and activities encompassing the planning, management, and coordination of logistics operations related to the transportation and handling of goods within seaports. These services are responsible for organizing and monitoring the efficient flow of goods through port facilities—from the moment of cargo reception to its storage, handling, and subsequent distribution. Maritime port logistics are involved at every stage of the supply chain and play a crucial role in connecting different modes of transport and facilitating international trade. (logistic, 2023)

Alternatively, they can be defined as a wide range of activities involved in the movement of goods through ports, including storage, distribution, transportation, customs clearance, and shipping. Each of these functions is essential to ensuring the smooth flow of goods and their timely, cost-effective delivery to intended recipients. (USA, 2025)

2.2 The Role of Ports and Logistics Services in the Supply Chain:

Ports and logistics services play a vital role within the supply chain, and their main functions can be summarized as follows (Research, 2023):

- **Access and Unloading Point:** Ports serve as primary access points for ships and cargo vessels, marking the initial stage of goods entering the maritime supply chain.
- **Customs Procedures and Inspection:** Ports act as customs centers where inspection and clearance procedures are carried out to ensure compliance with applicable regulations and standards.
- **Storage and Inventory Management:** Ports provide storage and temporary warehousing areas for arriving goods, where inventory is managed efficiently, and storage locations are determined based on logistical requirements.
- **Reloading and Distribution:** Ports offer the infrastructure and services necessary for reloading, consolidating, and redistributing goods across various modes of transport.
- **Maintenance and Ship Repair Services:** Some ports provide ship maintenance and repair services, including engineering, mechanical, and electrical work for ships and vessels.

2.3 Best Practices in Improving Maritime Port Logistics Services:

Several successful practices ensure effective management of ports and logistics services. These include (Mahdi, 2023):

- **Enhancing Overall Efficiency:** Improving the overall efficiency of operations and services in ports and maritime logistics is a key priority. This requires better planning, organization, and effective management of maritime supply chains.
- **Technology and Automation:** The use of technology and the adoption of automation in ports and maritime logistics can significantly improve efficiency, accuracy, and processing speed.
- **Training and Staff Development:** Training and developing employees is a critical element in achieving high performance in port and logistics management.
- **Sustainable Development:** Sustainability should be a priority in port and logistics management, including the adoption of environmentally friendly practices.
- **Collaboration and Partnerships:** Cooperation among ports, logistics companies, government agencies, and trade partners enhances the performance of the maritime supply chain.
- **Strategic Planning:** Ports and maritime logistics systems should have strategic plans aimed at achieving long-term growth and development.

2.4 The Role of Modern Technology in Enhancing the Performance of Ports and Logistics Services:

Modern technology plays a crucial role in improving the management performance of ports and logistics services through several key aspects (Research, 2023):

- **Automation and Robotics:** Advanced technologies such as automation, robotics, and process management systems significantly enhance the efficiency of operations within ports and maritime logistics.
- **Advanced Communication and Information Technologies:** These technologies ensure a continuous flow of information and data among all stakeholders within the maritime supply chain. This reduces communication and coordination time, allowing for a faster response to unexpected challenges and changes.
- **Modern Storage and Distribution Technologies:** Innovations in storage and distribution improve cargo flow and reduce waiting and delay times at ports. For instance, the use of smart warehouse management systems and robots for loading and unloading contributes to the efficient organization of storage operations.
- **Electronic Shipping Technologies:** Digital shipping systems simplify and accelerate shipping procedures, customs clearance, and document exchange among concerned parties. This includes the use of electronic shipping platforms and digital signatures.

2.5 Factors Affecting Port and Logistics Management

Several factors influence the management of ports and maritime logistics, which can be summarized as follows (Mahdi, 2023, p. 5):

- **Traffic Volume and Patterns:** The volume and type of traffic handled at ports affect planning, organization, and the overall efficiency of operations.
- **Technology and Automation:** The adoption of technological solutions and automation in port and logistics management can enhance efficiency while minimizing human error.
- **Regulations and Legislation:** Local and international laws and regulations significantly impact port and logistics management. Compliance with these frameworks is essential for smooth operations.
- **Economic and Trade Challenges:** Fluctuations in global economic and trade conditions influence port and logistics management. Economic slowdowns or trade tensions may reduce shipping volumes and alter trade patterns.
- **Cost and Efficiency Balance:** Effective port and logistics management requires balancing cost and efficiency. Enhancing operational processes, optimizing resource utilization, and improving overall efficiency are vital for reducing costs and strengthening competitiveness.

2.6 The Impact of Efficient Ports and Logistics Services on the Economy

The performance of efficient ports and effective logistics services has a significant impact on the economy through the following aspects (Research, 2023):

- **Key Nodes in Global Supply Chains:** Ports serve as vital connection points within global supply chains, facilitating the smooth movement of goods and commodities across the seas.
- **Drivers of Economic Growth:** Effective port management promotes economic growth by stimulating maritime trade and investment. As entry and exit points for goods and commodities, ports play an essential role in supporting trade expansion and industrial activity.
- **Enhancing Fair and Balanced International Trade:** Efficient port management contributes to promoting fair and balanced international trade. Through robust infrastructure and high-quality logistics services, ports help developing countries access global markets and improve their international competitiveness.
- **Job Creation and Employment Opportunities:** The port management and maritime logistics sector provides important employment opportunities across a wide range of functions, including administration, logistics operations, planning, technology, security, and safety.
- **Promoting Sustainable Development:** Port and maritime logistics management aim to achieve sustainable development through efficient resource

utilization, the development of alternative and renewable energy sources, improved waste management, and the reduction of negative environmental impacts from maritime activities.

3. The Infrastructure of Logistics Services at the Port of Skikda

The Port of Skikda represents a vital artery connecting the Saharan energy fields to European markets. In addition to its energy-related role, the port also handles containers and grain cargo—activities that complement its primary energy function.

3.1 Overview of the Port of Skikda

The Port of Skikda is considered one of the most important ports on Algeria's eastern coast. It combines commercial, energy, and industrial activities, serving as a vital link between the Saharan energy fields and European markets. Alongside its role in energy exports, the port also manages the handling of containers and grain shipments, which serve as complementary activities to its energy operations.

The Skikda Port Authority, abbreviated as E.P. Skikda, is a joint-stock company operating under the laws and regulations governing business autonomy. It has a capital of 9,000,000,000 Algerian Dinars and is wholly owned by the SERPORT Group (Port Services Group). The enterprise was established under Decree No. 82-284 dated August 14, 1982, and its legal status was later amended to that of a joint-stock company on March 21, 1989 (Skikda, 2025).

The main characteristics and features of the Skikda Port Authority can be summarized as follows:

Table (1): Characteristics of the Mixed Port (Old Port) and the New Port

Characteristics	Port Mixte (Old Port)	Nouveau Port (New Port)
Geographical Position	Longitude East: 07° 47' 03'' Latitude North: 36° 54' 11'' The Mixed Port (Old Port) is sheltered to the west by Mount Stora, to the east by the New Port (El Djedid), and to the south by the city of Skikda.	Longitude East: 07° 47' 03'' Latitude North: 36° 54' 11'' The New Port (El Djedid) is sheltered to the west by the Mixed Port (Old Port), to the east by Mount Filfila, and to the south by the Skikda industrial zone.
Access Channel	Main entrance: 120 m wide, 15 m deep	Main entrance: 250 m wide, 21 m deep
Turning Circle	360 m in diameter	550 m in diameter
Protected Water Area	43.3 ha Outer harbor basin: 26 ha with an average depth of 12.00 m.	61 ha with an average depth of 13.00 m

	Inner basin: 17.3 ha with an average depth of 10.00 m.	
Protective Structures	Main breakwater: 1,625 m Secondary breakwater: 300 m	Main breakwater: 1,875 m Secondary breakwater: 650 m
Quay Length	2,180 linear meters	240 linear meters
Berthing Facilities	14 general cargo berths 3 petroleum jetties	1 general cargo berth 7 petroleum jetties
Anchorage	Anchorage area with a sandy seabed, well protected from east and northeast storms. Anchorage north of the main breakwater of the Mixed Port with a depth of over 40 meters, reserved for general cargo vessels. The western part of the Mixed Port is reserved for hydrocarbon and gas vessels with depths exceeding 60 meters.	

Source: Port Company of Skikda, https://skikda-port.com/information-nautiques/

3.2 Activities and Missions of the Skikda Port Authority

The various activities and missions of the Skikda Port Authority can be summarized as follows: (Skikda, Activity and missions, 2025)

- Management and operation of port tools and facilities.
- Execution of towing, piloting, and mooring operations.
- Carrying out stevedoring and cargo handling activities.
- Implementation of port police and security missions.
- Execution of maintenance, development, and renewal of port superstructures.
- Development, in coordination with other relevant authorities, of maintenance and construction programs for port infrastructure expansion and creation.

3.3 Port Quays

The quays of Skikda Port are distributed between its two main sections: the old (mixed) port and the new port, each with its own characteristics and functions. These can be summarized as follows:

a. Quays of the Old (Mixed) Port

As shown in Table (2), the old port includes several quays with diverse uses, allowing it to accommodate various types of vessels. Notably, Quay No. 1 at Berth 13 has the greatest depth 12.5 meters enabling it to receive relatively large ships. Conversely, *Berth 5* located at *Quay 6* is the longest, with a length of 166 meters, which allows it to host a higher number of vessels. However, some quays have shallower depths, which limit their ability to accommodate large ships.

Table (2): Technical Characteristics of General Cargo Quays at the Old (Mixed) Port of Skikda

Quay No.	Berth No.	Berth Length	Water Depth	Type of Cargo
1	13	160 m	11.00 m	Grains, containers, miscellaneous goods, metal products, packages.
2	12	155 m	9.00 m	Grains, containers, miscellaneous goods, metal products, packages.
3	11	155 m	7.50 m	Asphalt, containers, miscellaneous goods, metal products, vehicles.
4	10	130 m	7.00 m	Containers, miscellaneous goods, metal products, vehicles.
	9	140 m	6.80 m	Containers, miscellaneous goods, metal products.
5	8	140 m	6.50 m	Containers, miscellaneous goods, metal products.
	7	135 m	6.00 m	Containers, miscellaneous goods, metal products.
	6	125 m	6.00 m	Containers, miscellaneous goods, metal products.
6	5	166 m	6.50 m	Passengers, vehicles, miscellaneous goods, containers.
7	4	160 m	9.90 m	Grains, miscellaneous goods, metal products.
	3	80 m	7.00 m	Grains, containers, miscellaneous goods, metal products.
8	2	142 m	9.80 m	Grains, containers, miscellaneous goods, metal products.
	1	142 m	9.50 m	Vehicles, grains, containers, miscellaneous goods, metal products.
9	Eastern berth	145 m	9.80 m	Grains, containers, miscellaneous goods, metal products, packages.
	Western berth	145 m	9.80 m	Grains, containers, miscellaneous goods, metal products, packages.

Source: Port Company of Skikda, Skikda Port Guide, 2022, https://skikda-port.com/wp-content/uploads/2022/03/Guides-des-ports-de-Skikda.pdf

As for the hydrocarbon transport quays, the port includes three main berths, which are presented in the following table:

Table (3): Technical Characteristics of Hydrocarbon Transport Quays at Skikda Old (Mixed) Port

Berthing Position	Deadweight (Tons)	Berth Length (m)	Vessel Length (m)	Water Depth (m)	Handling Capacity (m^3/h)	Products	Connection Diameter
P1-AP	35,000 T	200 m	195 m	13.00 m	2,500	Gasoline	12 inches
P2-AP	35,000 T	200 m	195 m	13.00 m	2,500	Diesel	12 inches
P3-AP	50,000 T	230 m	225 m	14.00 m	2,500	Naphtha	12 inches

Source: Port Company of Skikda, Skikda Port Guide, 2022, https://skikda-port.com/wp-content/uploads/2022/03/Guides-des-ports-de-Skikda.pdf

From Table (3), it can be observed that the port contains three berthing sites dedicated to hydrocarbon transport, each specialized in handling a specific type of fuel. The third berth (P3) is the largest, with the capacity to accommodate large vessels and a deadweight tonnage of up to 50,000 tons, in addition to being the deepest among them. Despite their differences, all three berths share the same handling capacity.

b. Berths of the New Port:

The new port primarily focuses on hydrocarbon transport, comprising seven berths for hydrocarbons and one berth dedicated to general cargo, as presented in the following table:

Table (4): Technical Characteristics of Hydrocarbon Berths at the New Port of Skikda

Berths	Deadweight (Tons)	Berth Length	Vessel Length	Water Depth	Handling Capacity (m^3/h)	Products	Connection Diameter
P1-NP	50,000 Tx	230 m	225 m	12.50 m	2,500 / 4,000	Naphtha, diesel, jet fuel, gasoline	10–12 inches
P2-NP	50,000 Tx	230 m	225 m	13.00 m	2,500 / 4,000	Naphtha, diesel, jet fuel, fuel oil	10–12 inches
P3-NP	100,000 Tx	270 m	265 m	14.50 m	4,000 / 6,500	Crude oil, fuel oil	16 inches
P4-NP	40,000 Tx	180 m	175 m	12.00 m	400	Butane, propane	6–10 inches
A1-NP	30,000 Tx	140 m	135 m	12.00 m	300 / 600	Aromatic products,	8–10 inches

Berths	Deadweight (Tons)	Berth Length	Vessel Length	Water Depth	Handling Capacity (m^3/h)	Products	Connection Diameter
						xylene, gasoline	
M1-NP	45,000 Tx	220 m	215 m	12.00 m	4,000	Methane	12 inches
M2-NP	45,000 Tx	220 m	215 m	12.00 m	4,000	Methane	12 inches

Source: Port Company of Skikda, Skikda Port Guide, 2022, https://skikda-port.com/wp-content/uploads/2022/03/Guides-des-ports-de-Skikda.pdf

We observe from Table (4) that there are several berths with a high degree of diversity, reflecting the port's capacity to handle a wide range of hydrocarbon products. The significant variation in handling rates indicates differences in the nature of the products managed as well as the specific equipment used at each terminal.

As for the general cargo berth at the New Port of Skikda, its technical characteristics are presented in the following table:

Table (5): Technical Characteristics of the General Cargo Berth at the New Port of Skikda

Berth	**Length of Berth**	**Length of Vessel**	**Water Depth**	**Nature of Cargo**
General Cargo Berth	240 m	200 m	11.00 m	Large packages, pipe equipment, miscellaneous goods

Source: Port Company of Skikda, Skikda Port Guide, 2022, https://skikda-port.com/wp-content/uploads/2022/03/Guides-des-ports-de-Skikda.pdf

From Table (5), it can be observed that the new port contains only one berth dedicated to general cargo, while the old port has nine different berths. However, the length of the berth at the new port is the longest, reaching 240 meters, whereas the lengths of the old port's berths range between 80 and 166 meters, with most being under 160 meters. Consequently, the new port demonstrates a higher capacity to accommodate a larger number of vessels.

In contrast, regarding hydrocarbons, the situation is reversed: the new port possesses seven hydrocarbon berths, compared to only three berths at the old port, each dedicated to a specific product. Thus, it can be concluded that the new port's operations are primarily focused on hydrocarbon activities.

3.4 Cargo Handling, Loading, and Unloading:

The cargo handling department provides services related to the loading and unloading of vessels, including the management of cargo handling and discharge operations. "Loading and unloading" encompass all procedures designed to ensure the receipt, labeling, and identification of loaded or unloaded goods onshore, as well as their secure storage until they are either loaded or delivered to the consignee.

These services are provided in accordance with the general terms and conditions outlined in the official tariff schedule and may also be subject to a specific request and/or commercial agreement.

Table (6): Cargo Handling and Unloading Equipment at the Port of Skikda

Power and Capacity	Number	Type of Vehicles / Equipment
01T to 45T	81	Lift trucks
01T to 04T	35	Small tonnage lift trucks
07T to 12T	14	Medium tonnage lift trucks
16T to 45T	32	High tonnage lift trucks
45T	17	High tonnage lift trucks (including Reachstackers)
120T/H	02	Grain grabs (Grains jumps)
1 to 4 m^3 / 2 to 3T	15	Public works equipment (mini loaders, back loaders, loaders, and shovels)
40T to 500T	20	Harbour cranes
60T to 500T	8	Cranes on motor carriers
40T to 202T	12	Port lattice cranes
32T to 120T	29	Transfer equipment
32T to 90T	15	Port tractors
20T to 120T	14	Trailers
—	—	HCM XL – Mobile scanners

Source: Port Company of Skikda, logistics, https://skikda-port.com/en/logistics/

3.5 Towage and Pilotage Service:

The towage service provides technical assistance to vessels entering or leaving the port, berthing, or moving within the harbor. It also includes refueling services at sea. The towage contract begins as soon as the tugboat approaches close enough to commence towing operations immediately and comes under the direct influence of the maneuvers of the vessel being towed. The towage operation ends when the tugboat moves far enough away from the vessel it has just assisted. Towage services include the following: (Skikda, Activities & Services, 2025)

- Operations consisting of pulling or pushing the vessel.
- Manoeuvres to berth, unberth, or set sail the vessel.

• Conveying and assisting in the execution of other manoeuvres during the tug's navigation.

The pilotage service consists of assistance provided to captains in managing the entry and exit of vessels from ports, waterways, and inland passages.

Pilotage service is mandatory for all vessels except the following: (Skikda, Activities & Services, 2025)

• Sailing vessels with a net tonnage of less than 100 tonnes.

• Mechanically propelled vessels with a net tonnage of less than 100 tonnes.

• Mechanically propelled vessels used exclusively for the improvement, maintenance, and monitoring of ports and their access channels, such as tugs, carriers, dredgers, and barges.

• Lighthouse and beacon vessels.

Table (7): Maritime Assistance Equipment of Skikda Port

Capacity	Number	Type of Floating Equipment
1700 to 6000 HP	10	Tugs Boats
1700 to 2300 HP	2	of which: Capacity – 2,500 HP
3000 to 6000 HP	8	Capacity + 2,500 HP
350 to 1100 HP	7	Piloting Boats
230 to 300 HP	10	Mooring Boats
15 m³ / 25 m³	2	Recuperation Barges
262 HP	4	Pushing Boats

Source: Port Company of Skikda, logistics, https://skikda-port.com/en/logistics/

3.6 Algerian Port Community System Platform (APCS):

The APCS platform is a digital information exchange system designed for the benefit of all users of Algerian ports. It became operational in 2021, developed by a multidisciplinary team from the SERPORT Group, with the aim of ensuring better customer relationship visibility, accurate information management, increased activity, and better control over port transit time and costs.

Through this platform, the Port Services Group (SERPORT) seeks to provide its subsidiaries with a value-added communication network, enabling all port sector stakeholders, customs authorities, and other actors to exchange information, data, and various messages in complete confidentiality and security. The Port Community System also enables the management of the physical, administrative, commercial, and customs control of goods, allowing for the completion of various port-related administrative and customs procedures. (System, 2024)

The creation of this platform aims to reduce costs and improve information management, as part of Algeria's program to modernize and digitalize its ports, through the dematerialization of existing procedures and the development of port infrastructure.

The main advantages of the APCS platform are as follows: (System, avantages strategique, 2024)

Optimal management of information flow.

- Dematerialization of documented information processes.
- Improvement of port logistics services.
- Elimination of demurrage penalties.
- Reduction of logistics costs.
- Control over import and export operations flow.
- Increased reliability and improved operational performance.
- Enhanced communication among stakeholders.
- Better service quality.
- Secure and confidential information exchange.
- Improved port transit services.
- Increased port processing capacity.
- Real-time control of goods (physical and administrative).
- Promotion of exports through simplified procedures.
- Facilitation of exchanges with platforms in the Mediterranean Basin and beyond (EDI and FAL documents).
- Increased competitiveness of foreign trade stakeholders.

In summary, logistics services aim to facilitate the transportation of goods and increase supply chain efficiency by providing the necessary services and infrastructure to support goods flow. They strive to achieve an optimal balance between time, cost, and quality in shipping, storage, and distribution services.

4. The Activity of Logistics Services and Foreign Trade at the Port of Skikda

There are various logistics service activities carried out at the Port of Skikda, which play a fundamental and significant role in supporting foreign trade operations, as outlined below:

4.1 Maritime Traffic (Number of Docked Ships):

The total number of ships docked at the Port of Skikda in 2023 reached 2,124 vessels, representing an increase of 5% compared to 2022, when 2,061 ships were recorded.

This growth is particularly noticeable in: Passenger/car ferries, which increased by 89%, Bitumen carriers, which rose by 42%, and General cargo vessels, which increased by 27%. These figures indicate a positive improvement in foreign trade activity at the port level.

It is also worth noting that oil tankers occupy the largest share of total vessel traffic at the port, with 721 tankers recorded in 2024, marking a 1% increase compared to 2023 (which recorded 712 tankers).

This confirms that oil transport remains the port’s main activity.

Table (8): Number and Type of Docked Ships at the Port of Skikda during 2022–2023

Types of Vessels	**2022**	**2023**	**VAR %**
Cargoes	308	393	+27
Grain carriers	84	82	-2
Container carriers	432	360	-16
RO/RO	109	86	-21
Ferry-boats	49	93	+89
Oil tankers	712	721	+1
Butane carriers	75	97	+29
Methane carriers	206	212	+3
Bitumen carriers	38	54	+42
Others	48	26	-45
Total	**2,061**	**2,124**	**+5**

Source: : Port Company of Skikda, Annual Port Statistics Repor,2024, https://skikda-port.com/wp-content/uploads/2024/09/Annuaire%202023.pdf

4-2- Container Activity:

It can be observed from the table that the number of imported containers increased in 2024 compared to 2023, recording a 5% rise. Similarly, the number of exported containers also increased by 11% in 2024 compared to 2023. This resulted in a total rise in the number of handled containers, from 163,546 containers in 2023 to 175,841 containers in 2024, marking a notable increase of 8%.

In addition, the total container tonnage rose by 1%, increasing from 1,290,060 tons in 2023 to 1,302,444 tons in 2024. This improvement may indicate an enhancement in the logistics services provided for container handling on the one hand, and on the other, it may reflect a positive trend in foreign trade activities.

Table (9): Container Activity at Skikda Port (2023–2024)

Category	**Number of Containers**	**Difference**		
	2023	**2024**	**%**	**In Numbers**
Inbound				
Full	85422	89355	+5	+3933
Empty	22	2	-91	-20
Total	85444	89357	+5	+3913
Total Weight (Tons)	1096664	1084565	-1	-12099
Outbound				
Full	2080	2,770	+33	+690
Empty	76022	83714	+10	+7692
Total	78102	86484	+11	+8382

Category	**Number of Containers**	**Difference**		
Total Weight (Tons)	193396	217879	+13	+24483
Grand Total				
Full	87502	92125	+5	+4623
Empty	76044	83716	+10	+7672
Overall Total	163546	175841	+8	+12295
Total Weight (Tons)	1290060	1302444	+1	+12384

Source: Documents provided by Skikda Port Company, 2025.

4-3- Average Berthing Time of Vessels:

From Table (10), it is observed that the average berthing time of vessels at the port increased in 2024 compared to 2023 for all types of goods — particularly for general cargo, where the rate rose from 1.01 days per vessel in 2023 to 2.17 days per vessel in 2024.

Similarly, the average number of days vessels remained docked also increased during 2024 compared to 2023 across all cargo categories, reaching an average of 3.43 days per vessel in 2024, which is relatively high.

This increase in the berthing time at Skikda Port may be attributed to insufficient port infrastructure and limited logistical services, which caused longer loading and unloading operations. Furthermore, the port has experienced a significant rise in overall trade activity, both in imports and exports, in recent years — contributing to the prolonged stay of vessels in the port.

Table (10): Average Berthing Time of Vessels at Skikda Port (2023–2024)

Type of Vessel	**Average Waiting Time in Harbor (days)**		**Average Berthing Time at Quay (days)**	
	2023	**2024**	**2023**	**2024**
General Cargo	1.76	4.03	4.18	5.27
Hydrocarbons	0.33	0.48	1.55	1.75
All Types	1.01	2.17	2.80	3.43

Source: Documents provided by Skikda Port Company, 2025.

To ensure the efficiency of the logistical services at Skikda Port, greater emphasis should be placed on investing in infrastructure and providing modern handling equipment. Such measures would help reduce vessel waiting time in the harbor and berthing duration, thereby improving the rate of vessel processing for both import and export operations, which in turn would lower operational costs and enhance the overall performance of the port.

4-4- Volume of Exports and Imports

According to Table (11), there is a noticeable fluctuation in the total volume of imports over the study period, as some years recorded a decline in import volumes. This could be attributed to the COVID-19 pandemic or to the restrictive import policies implemented by the government.

In contrast, the year 2024 recorded the highest import volume, reaching 3,844,337 tons, representing an increase of 19% compared to the previous year.

Specifically, the volume of general goods imported in 2024 amounted to 3,007,526 tons, reflecting an 11% increase over the previous year, while the volume of imported hydrocarbons reached 836,811 tons, showing a significant increase of 60% compared to 2023.

Table (11): Evolution of Export and Import Volumes through Skikda Port during the Period (2019–2024) (in tons)

Category	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
General Cargo Movement	2942481	2601541	2700500	1701337	4015618	4318569
Intended for Import	2692127	2414838	2274810	1071223	2718003	3007526
Intended for Export	250354	186703	42690	630114	1297615	1311043
Hydrocarbons Movement	21087917	18510423	19364086	7916680	19675,413	19999282
Intended for Import	1080791	1039373	1008341	203303	524642	836811
Intended for Export	20007126	17471050	18355745	7713377	19150771	19162471
Total Movement	24030398	21111964	22064586	9618017	23691031	24317851
Total Imports	3772918	3454211	3283151	1274526	3242645	3844337
Total Exports	20257480	17657753	18781435	8343491	20448386	20473514

Source: Documents provided by Skikda Port Company, 2025.

Regarding ttal exports at the port level, they reached 20,473,514 tons in 2024, marking the highest volume recorded during the study period. Of this total, 19,162,471 tons were hydrocarbons and 1,311,043 tons were general cargo. It is evident that the hydrocarbons sector dominates export volumes compared to general goods, which indicates that the core activity of Skikda Port is centered on hydrocarbon transportation, reflecting Algeria's heavy reliance on hydrocarbon exports as a key driver of its foreign trade.

The growth of international trade and the continuous development of vessel characteristics pose significant challenges for ports, especially those with aging infrastructure. To maintain a competitive position among regional and international

ports, it is essential to modernize port infrastructure, including deepening basins and access channels, reclaiming quays, upgrading handling equipment, and other improvements.

Accordingly, the Skikda Port Authority, like most ports worldwide, is committed to implementing these improvements to ensure the sustainability of general cargo and hydrocarbon transport activities. To achieve this objective, a medium-term development plan has been established to enhance the port's logistical performance and operational efficiency, which includes the following key initiatives. (Skikda, Port in figures, 2025):

- Accommodating vessels with deep drafts (up to 12.50 meters);
- Constructing a new LNG loading berth capable of handling carriers with a capacity of up to 220,000 m^3;
- Establishing a new container terminal in the *Château Vert* area, equipped with modern handling equipment, thereby increasing storage capacity by 120%, from 4,600 to 10,240 TEUs;
- Ensuring optimal safety during maneuvers (berthing and unberthing) and while ships are docked;
- Reducing waiting times both at anchorage and at the quay, thereby minimizing demurrage and operational costs.

5. Conclusion

The Port of Skikda represents a vital artery of Algeria's economy, particularly in the field of hydrocarbon exports, as it is one of the largest oil ports in the country. Moreover, it plays an active role in the movement of general cargo and containerized goods, thereby achieving significant growth in port activities. The port continues to pursue service quality improvement through its various development projects, particularly the expansion of the petroleum terminal and the modernization of infrastructure, which are expected to enhance its competitiveness and improve logistical performance in the future.

The main findings can be summarized as follows:

- The Port of Skikda constitutes a key pillar of the Algerian economy, especially in the hydrocarbon sector, and contributes significantly to foreign trade flows involving general goods and containers.
- The volume of total exports and imports at the port showed notable growth during the study period, although certain years experienced a decline—likely due to the COVID-19 pandemic or the restrictive import policies implemented by the government.
- The port provides adequate infrastructure and diverse logistical services that facilitate the movement of goods and support international trade—ranging from storage and distribution to transport, customs clearance, and shipping—though it still lacks the capacity to accommodate very large vessels.
- Skikda Port is witnessing major development projects, including the expansion of the oil terminal and the construction of new LNG loading stations, aiming to increase handling capacity and enhance operational efficiency.

- The average berthing time of vessels at the quay reached three days, which exceeds international standards.
- The implementation of the Algerian Port Community System (APCS) marks a significant step toward digitalization and information exchange with relevant stakeholders, although administrative procedures remain lengthy and slow.

Based on these findings, the following recommendations are proposed:

- Develop and expand port infrastructure, including increasing berth capacity and depth, and adopting advanced operational management technologies.
- Digitize core operational processes—such as loading/unloading, customs clearance, and stakeholder integration—to enhance efficiency and transparency.
- Improve multimodal connectivity by linking the port to road and railway networks to establish integrated logistics hubs.
- Invest in technological infrastructure, including automation and digital transformation, to strengthen efficiency and competitiveness.
- Provide continuous training and capacity building for human resources in the fields of port management, logistics, and maritime transport.

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