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The Effect of Loading and Unloading Costs, Vessel Arrival Punctuality and Container Availability on Re-Use Intention

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Abstract: The effect of Loading and unloading Costs, Vessel Arrival Punctuality, and Container Availability on Re-use Intention is a scientific article in the literature study within the scope of the field of science. The purpose of this article is to build a hypothesis of the influence between variables that will be used in further research. Research objects in online libraries, Google Scholar, Mendeley and other academic online media. The research method with the research library comes from e-books and open access e-journals. The results of this article: 1) Loading and unloading Costs has an effect on Re-use Intention; 2) Vessel Arrival Punctuality has an effect on Re-use Intention; and 3) Container Availability has an effect on Re-use Intention.

Keyword: Re-use Intention, Loading and unloading Costs, Vessel Arrival Punctuality, Container Availability

INTRODUCTION

Backgorund Of The Problem

The development of trade activities and distribution of goods via sea routes has led to an increasing dependence on port and maritime transport services. In this context, the quality of service received by service users is not only influenced by carring capacity but also by various operational aspects directly experienced during the shipping procces. Each stage of service passed by the user indirectly forms a perceptions regarding the level of reliability and professionalism of the service provider.

One aspect than often becomes a primary concern is the loading and unloading costs charged to service users. Costs perceived as less competitive or disproportionate to the service received are often viewed as an additional burden. This condition has the potential to decrease satisfacion levels, especially if transparency and efficiency in the loading and unloading process have not been fully realized. Therefore, the amount of loading and unloading costs is seen as a factor than can influence the decisions of service users in determining the continuity of service usage.

In addition to costs, vessel arrival punctuality is also an important factor in supporting the smooth distribution of goods. Delays in vessel arrivals can cause a chain reaction, such as

delays in the loading and unloading process, increased operational costs , and disruption of subsequent delivery schedules. Schedule uncertainty that occurs repeatedly has the potential to reduce that level of trust service users have in the service provider, thereby decreasing the intention to re-use the service

On the other hand, container availability also plays a strategic role in ensuring the smooth shipping process. Limitations in available containers often lead to shipping delays and operational inefficiencies. If container needs cannot be met on time, it will affect the comfort and certainty of service for users regarding the overall service quality.

Based on these conditions, the intention of service users to re-use maritime transport servives is not only determined by a single factor but by a combination of various interrelated operational aspects. Loading and unloading costs, vessel arrival punctuality, and container availability collectively shape the perceived service experience . therfore, a comprehensive study is needed yo uderstand the influence of these three factors on re-use intentiton, which can serve as a basis for efforts to improve service quality and business sustainability in the maritime transport service sector.

Based on empirical experience , many students and authors find it difficult to find sipporting articles for their scientific work as prior research or relevant studies. Relevant articles are needed to strengthen te theory being studied, to observe the relationships or influences between variables, and to build hypotheses. This articles discusses the influence of loading and unloading costs, vessel arrival punctuality, and container availability on re-use intention, a literature review study in the field of science

Based on the background, the purpose of writing this articles is to build hypotheses for further research specifically to formulate: 1) The Influence of Loading and unloading Cosst on Re-Use Intention; 2) The Influence Punctuality on Re-Use Intention; And 3) The Influence of Container Availability on Re-Use Intention.

METHOD

The method for writing this literature review article employs the Literature Study And Systematic Literature Review (SLR) methods. Both methods are analyzed qualitatively, with sources of infomation derived from online applications such as Google Scholar, Mendeley, and other academic platforms.

A Systematic Literature Review (SLR) is a procces to identify, evaluate, and analyze all existing evidence, with the aim of answering specific research questions

In qualitative analysis, the literature study must be applied consistently in accordance with the methodological assumptions used. One of the reasons why qualitative analysis is utilized is because the reasearch is exploratory in nature

RESULTS AND DUSCUSSION

Results

Bassed on the background, objectives, and methods, the result of this article are as follows:

Intention to Use Services Again

According to (Schiffman & Kanuk, 2004) in (fryda Lucyani, 2022), intention to re-use a product or service is a sign that comsumers are satisfied an a loyal attitude toward using our product or service will arise because they are confident in that product or service. Repurchase intention is an impulse shown by comsumer toward their wilingness to be loyal and use a product or service again

According to Srivasta and Sharma (2013) in (Lestiana, 2018), the intention to re-use a service is an action the refers to a person’s decision to use a product or service again, and the decisions invloved in future activities with the service provider, as well as what types of activities can be performed

Based on several definitions of re-use intention proposed bt these experts and literature, it can be concluded that re-use intention is an action and a feeling of satisfaction shown by comsumers toward the use of a product or service, thereby creating a loyal attitude that leads someone to make a decision to re-use the service from that particular service or product

According to Tjiptono (2004:130), definiting the intention to use a service is a costomer's desire to use it again in the future. There are several indicators of the intention to use a service again, as follows :

1. Service
   Service is an activity offered by an organization or individual to customers. Service is not physical and cannot be seen or touched. The service provided must be in the form of actions so thai it can be felt by customers
2. Benefits
   Benefits are the value obtained by customers after experiencing and using the service provided by service providers, so that with the value received, consumers can feel satidfied with what they get
3. Facilities
   Facilities are everything that is deliberately perpared by the service provder for customers to use and enjoy, with the aim of providing maximum satisfaction

Based on the results of this literature synthesis, it can be concluded that the dimensions, indivators, and factors that influence the intention to use the service again include the service offered by employees to customers

Loading and Unloading Costs

According to , Dewi, Pratiwi, Nainggolan, Susanti, et al. (2021:38) in (Pratiwi et al., 2023), costs are understood as a form of burden in the form of duties or taxes imposed on traded commodities when crossing the customs area of a country, as part of the regulation and supervision of national trande activities

According to Sasono (2012; 131) in (FIRMANSYAH, 2019), loading and unloading activities are the process of unloading imported goods and inter-island goods from ships to the nearest land near the ship, usually called a pier. After that, the goods are transported to the nearest warehouse using trucks, forklifts, or hand trucks. This activity is an important part of logistics management and is monitored by port administrators. Loading and unloading activities also play a crucial role in determining economics flows, where increased income has an impact on increased consumption, although not in equal proportions

Based on various definitions and literature reviews, oit can be concluded that loading and unloading costs are economic burdens arising from the process of moving goods from ships to land in trade and logistics activities at ports. The more effective the loading and unloading process is, the greater its contribution to the smooth distribution of goods and economic activity

According to Suyono (2005: 310-311) in (FIRMANSYAH, 2019), the scope of loading and unloading activities includes :

1. Stevedoring
   Stevedoring is an activity carried out to move cargo from a ship to a dock, barge, or transports vehicle, or vice versa, as par of the initial stages of cargo gandling at a port.
2. Cargodoring
   Cargodoring is a process carried out after cargo is released from the ship's lifting equipment, then tranported form the dock area to a warehouse or storage yard to be sorted and arranged, or returned in the opposite direction as required for operational needs.
3. Receiving/Delivery
   Receiving or *delivery* refers to activities carried out to move goods from the storage location in the warehouse or storage yard, then handed over and arranged on transport

vehicles at the warehouse or storage yard entrance, or the reverse process in the goods distribution flow.

Based on the result of the literature review, the scope of loading and unloading costs is a series of integrated processes that regulate the movement of goods form the time they are unloaded from the ship until they are ready for distribution to the end user. These three stages are interreleated and form a service flow that determines the smooth distribution of goods, efficient port operations, and the reliability of the overall logistics system.

Punctuality of Ship Arrivals

Accordinng to Decree 73/ AP005/DRJD/2003 ARTICLE 9 in (Mawardi et al., 2024), arrival time is when teh ship docks at the port to carry out loading activities or when passengers board, and departure time is when the ship leaves the port

According to Handoko (2010) in (Hafizha et al., 2019), punctuality iis defined as the process experienced by customers form the moment they order a product until the product is actually received by the customers, where speed and accuracy of delivery are important factors in the customers experience

Based on the synthesis of various reviewed litetarure, puctuality can be defined as the alignment between the schedule and the actual time od a service. Punctuality is reflected in the service provider's ability to ensure that activities proceed according to plan, starting form the ship arriving and departing on schedule without delay, thereby providing comfort, trust, and a positive service experience for customers

Punctuality is a key factor that must be adhered to by maritime transportation companies. Punctuality incluedes the timeliness of ships in transporting passengers from the port jetty to their destination, which involves many aspects, including fleet readiness, crew readiness, weather, wind, and waves. Therefore, proper time management is necessary to ensure that ships arrive at their destinations according to the scheduled time so as not to disappoint passengers. Oil drilling is certainly affected(Anggraheny Nirmala Jati, n.d.)

Puncuality can be identified through nine key indicators :

1. Clear informations is provided regarding passenger waiting times at the post prior to departure
2. Detailed information is provided regarding the time set for passenger to board the ship before departure
3. Information media in the form of pocket books or leaflets are provide as a means of communicating schedules and travel conditions
4. Ships depart from the port according to the scheduled time
5. The ship's arrival at the destinations post is realized on time so that operational activities can run orderly and smoothly
6. The ship departure process is carried out based on the previously planned schedule procedure
7. The ship's arrival time is realized in accordance with the time promised to service users
8. Ship arrival at the port is carried departure time than 30 minutes before the specified departure time
9. The ship's readiness at the port is confirmed at least 30 minutes before the schedule departure time(Anggraheny Nirmala Jati, n.d.)

Based on the result of the literature synthesis, it can be concluded that punctuality in maratime transportation services is not determinet by the departure adn arrival of ships according to schedule, but also by the clarity of the time information received by passengers and the operational readiness of the ship before departure. The delivery of clear and easily accessible information, adherence to the established schedule and the readiness of the ship at least 30 minutes before departure time area important factors in ensuring that all operational activities run orderly, smoothly, and provide certainty of service for service users.

Availability Of Containers

According to Regulation of the Minister of Transportation of the Republic of Indonesia Number 14 of 2007 in (Marsudi & Arifin, 2019), a container is defined as a container or box that meets the technical requirements set by the International Standard Organization (ISO) and functions as a means of transporing goods. The materials used for containers are generally a combination of steel and copper, equipped with lockable doors and corner fittings and twist locks on each side. The purpose of these corner fittings and twist locks is to facilitate the process of connecting or disconnecting containers from one another.

According to Wahyu Agung Prihartanto (2014) in (Shyahnda & Wiryawan, 2024), he explains the definition od a shipping container. According to him, a shipping containers is a crate or container that has a special shape, usually made form natural materials such as wood, copper, or iron. The definition of "packaging" itself is interpreted as the activity of packing or wrapping something. So, a shipping container, or what is commonly referred to as a container, is a large rectangular box made of a mixture of steel and copper or other materials such as aluminum or fiberglass, which is designed to be strong enough to withstand various weather and environmental conditions

Based on the synthesis of various literature reviews, shipping containers can be defined as transport containers that are useful for protecting and facilitating the movement of goods in transportation and logistics activities. With their standardized and functional design, shipping containers play an important role in keeping goods safe while supporting the smooth distribution of the supply chain

Analysis od factors causing container damage :

1. Human Factors As The Dominant Cause
   Human factors are consistently seen as the most dominant cause of container damage. Conditions such as operator fatigue, limited techincal training, low compliance with standard operating procedures, and weak implementatiton of a work safety culture are the main sources of error in the handling process. Operational situations that demand high speed and taking steps outside of regulations. In occupational safety studies, such risky behavior is understood as a from od adaptive response to high work pressure, but has the potential to increase the risk of damage and accindents
2. Technical Factors And Equipment Reliability
   The technical condition of loading and unloading machines is closely related to how often containers are damage. Machines that are rarely inspected, are too old, or have poor control settings increase the likelihood of operational disryptions. Reseacrh using sensors revealed that irregular spreader movements can cause collisions to be much harder
3. Environmental Factors And Operational Conditions
   The ever-changing environmental at ports, especially extreme weather ans exposure to highly corrosive sea air, worsens the condition od containers. High winds and heavy rain reduce visibility and make it difficult for operators to control the movement of cargo. In addition, exposure to sea air also accelarates damage to steel structures. Many sources indicate that when loading and unloading operations are carried out in bad weather conditions, the risk of damage increases, especially at terminals with high activity volumes
4. Work System And Operational Management Factors
   Inefficient work system, such as high idle time, poor coordination between departements , and the absence of a standard damage reporting system, are systematic factors that are often overlooked. These conditions create pressure in operations, causing work to be done in a hurry and safety procedures to be ignored (Ruslin et al., 2025)

Based on the results of this literature review, it can be concluded that container damage is caused by a combination of human, techincal, environmental, and work system factors. Human error is triggered by fatigue, work pressure, and low compliance with procedures, while environmental factors such as extreme weather and exposure to sea air increase the risk

of damage. Meanwhile, ineffective work systems and management create operational pressure, often leading to safety and accurancy being neglected

Review Relevant Articles

Review relevant articles as a basic for establishing research hypotheses by explaining previous research results, explaining similarities and differences with the research plam, from previous relevant research as shiwn in Table 1 below.

Tabel 1: Relevant Research Results

No	Author (Tahun)	Hasil Riset Terdahulu	Persamaan Dengan Artikel Ini	Perbedaan Dengan Artikel Ini	H
1	(FIRMANSYAH, 2019)	Loading and unloading costs and service quality have a postive and significant effect on the intention to use the service again	Both studied the effect of loading and unloading costs on the intention to use the service again	Researcher Firmansyah added the variable of servive quality, while this article uses the punctuality of ship arrivals and the availability of containers	H1
2	(Pratiwi et al., 2023)	Loading and unloading costs have a positive and significant effect on users' decisions and interest in trading activities	Both use loading and unloading costs as the main variable	Purba et al. focused on customs and trade aspects, while this article focuses on the intention to use the service again	H1
3	(Marsudi & Arifin, 2019)	Punctuality of ship arrivals affects port operational effectiveness and user satisfaction	Both studied the puntuality of ship arrivals	Researchers Marsudi & Arifin did not directly examine the intention to use the service again	H2
4	(FIRMANSYAH, 2019)	The accuracy of loading and unloading processes and dship arrivals affects the amooth flow of goods at the port	Both place timeliness as an important operational factor	Previous researchers focused more on the technical aspects of loading and unloading, while this article links it to the intention to use the service again	H2
5	(Marsudi & Arifin, 2019)	Container availability affects the smoothness of distribution and logistics services	Both use the variable of contanier availability	Previous studies focused on the smoothness of logistics, while the article links it to the intention to use the service again	H3
6	(Shyahnda & Wiryawan, 2024)	Adequate container availability improves perceptions of service quality and distribution reliability	Both studies examine container availability as an important service factor	Previous reseacrhers focused on service quality, while this article focuses on the intention to use the service again	H3

Discussion

Based on the discussion in this literature review article, a review of relevant article was conducted. Each finding form previous studies was analyzed to understand the relationship

and direction of influence between the variables studied. Through this procces, this article not only summarizes the results od previous studies but also develops a systematic line of thinking as a basis for designing a conceptual framework and direction for further research. This approach is expected to provide a comprehensive overview and serve as a logical foundation for developing a more structured research plan

The Effect of Loading and Unloading Costs on Intention to Use Service Again

Loading and unloading costs are expenses inccured by customers for a series activities involving the trasnfer of goods form ship to land and vice versa in port areas, which include the use of labor, loading and unloading equipment, and other supporting processes in the logistics system.

The main principles in determining loading and unloading costs are efficiency and suitabiloty between the costs paid and the benefits of the services received by service users. Costs that are structured transparently reflect the quality of management.

The review results show that loading and unloading costs affect the intention to use the service again. Loading and unloading costs are perceived as good. The intention to use the service again is reflected through indicators of willingness to reuse the service. Willingness to reccomend the service to others, and the tendency to make the service provider the first choice.

That in order to increase the intention to use services again, factors that influence loading and unloading are needed, including the effeciency of operational processes, the condition and avaialability of loading and unloding equipment, labor productivity, and port management policies. Inefficiency in any of these aspects has the pontential to increase costs and decrease the positive perception of service users.

These finding are in line with results of studies by (FIRMANSYAH, 2019) and (Pratiwi et al., 2023) which state that loading and unloading costs have a positive effect on the intention to use the service again.

The Effect Of Ship Arrival Punctuality On The Intention To Use Dervices Again

Ship arrival punctuality can be understood as the degree od comformity between the planned ship arrival schedule and the actual arrival time at the port, which reflects operational reliability and the effectiveness of port service management.

The main priciples of ship arrival punctuality include certainty, consistency in operational implementation, and the port system's ability to minimize delays through good planning and condition between relevant parties

The review results show that ship arrival punctuality affects the intention to use the service again, because schedule accuracy is the basis for service users in planning logistics and distribution activities. This is reflected in indicators of the intention to use the service again, as well as the tendency to make the service provider the first choice in subsequent operational activities.

Factors affecting the punctuality of ship arrivals include weather and sailing conditions, the effectivness of coordination between relevant agencies, and the readiness of port facilities and equipment. Therefore, uncertainty in any of these factors has the potential to cause delays that impact the entire logistics chain.

These finding are in line with the results of studies by (Marsudi & Arifin, 2019) and (FIRMANSYAH, 2019), which state that punctuality has a positive effect on the intention to use the service again

The Effect of Container Availability on the Intention to Use Service Again

Container availability can be defined as the condition in which the number and type of containers that are ready for use are sufficient to meet the operational needs of service users,

both for loadning and unloading and for the distribution od goods. This availability is the most important aspect in logistics activities because it is realted to the semooth flow of goods and the certainty of services received by service users

The main princples of container availability include sufficient quantity, ease of accses, and timeliness of supply. Containers that are available in proper condition and in accordance with needs will minimize operational obstacles and suppport oberall logistics activities

The review results show that container availability affects the intentation to use the service again because servise users are highly dependent on the certainty of container availability. The availability of contianers makes it easier for service users, thereby encouraging them to use the service again. This is reflected i indactors of the intention to use the service again, such as the tendency to reuse the service, the willingness to recommend the service to others, and making the service provider the first choice for future operational activities

Factor that influence container availability incluede container inventory management, shipment demand levels, distribution effectivness, and coordination between shipping companies and service user. An imbalance between demand and availability can cause delays and reduce the perceptions of service quality

The finding are in line with the results of studies by (Marsudi & Arifin, 2019) and (Shyahnda & Wiryawan, 2024), which state that container availability has a positive effect on the intention to reuse service

Conceptual Framework of the Study

Based on the problem formulation, relevant studiesn and discussion, the conceptual framework of this article is as shown in Figure 1.

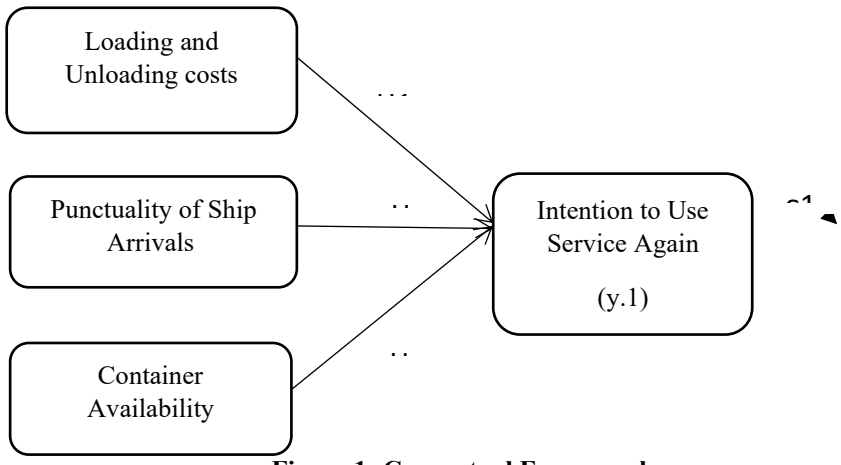

Figure 1: Conceptual Framework

Based on the conceptual framework above, the following can be concluded: loading and unloading costs, ship arrival puntuality, and container availability affrect the intention to use the service again. In addtion to the three exogenous variables that affect the intention to use the service again, there are many other variables, inculuding :

1) Service quality : (Ayunani et al., 2023)
2) Port facility quality : (Syafri et al., 2023)
3) Brand image : (Isyanto & Wijayanti, 2022)

CONCLUSION

Based on the objectives, result, and discussion, the conclusion of thus article is to formulate hypotheses for futher research, namely:

1) Loading and unloading costs affect the intention to use the service again
   If the perception of reasonable costs that are in line with the services received can encourage users to return to use the same service
2) The timeliness of ship arrivals affects the intention to use the service again
   Timely service can create trust and comfort for service users
3) The availability of containers affects the intention to use the service again
   Sufficient availability ensures the smooth distribution process and reduces operational obstacles for service users

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