Managing Genco Cargo To Land Transportation And Transportation Security Control For The Smoothness Of Cargo Supply Chain And Posts At Yogyakarta International Airport

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Abstract. Yogyakarta International Airport (YIA) is a relatively new airport that has been transporting cargo and posts to various destinations. The success of the supply chain process plays a crucial role in ensuring the smooth delivery of cargo and posts. This study aims to examine and determine the partial and simultaneous effects of the variables of genco cargo handling on land transportation and transportation security control on the smoothness of the cargo and posts supply chain at Yogyakarta International Airport (YIA). The research method used is quantitative, with the population of cargo handling teams from Regulated Agents at Yogyakarta International Airport consisting of 34 respondents. Data collection was carried out by distributing questionnaires offline. The results of the testing show that genco cargo handling has a partial effect on the smoothness of the cargo and posts supply chain, transportation security control has a partial effect on the smoothness of the cargo and posts supply chain, and genco cargo handling and transportation security control have a simultaneous effect on the smoothness of the cargo and posts supply chain at Yogyakarta International Airport. The contribution of genco cargo handling and transportation security control to the dependent variable, the smoothness of the supply chain, is 63.4%, while 36.6% is influenced by other variables not discussed in this study.variables not discussed in this study.

Keywords: Cargo Handling, Land Transportation, Avsec, Supply Chain

1 Introduction

1.1 Problem Background

Indonesia is an archipelagic country, as stated in the educational source from the Ministry of Education and Culture (Kemdikbud). The total area of Indonesia is 5,193,250 square kilometers, with a land area of approximately 1,919,440 square kilometers and a sea area of approximately 3,273,810 square kilometers.

The economy continues to grow even though the COVID-19 pandemic has hit Indonesia for around two years, starting in 2020. Restrictions on human movement may have occurred, but the movement of goods deliveries to fulfill human needs continues to operate, and it has even increased. Here are the factors influencing the growth of domestic cargo volume in Indonesia,

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as follows: The geographical condition of Indonesia, which consists mainly of islands and archipelagos, makes air transportation a more effective and efficient choice; The development of the aviation industry and economic growth in Indonesia has led to an increase in domestic cargo volume; The population growth rate is closely related to the domestic cargo volume; Management policies such as reducing the number of aircraft can affect cargo sales; The growth of the e-commerce business increases the demand for domestic cargo shipping.

The research was conducted at Yogyakarta International Airport (YIA), a relatively new airport in Indonesia inaugurated on August 28, 2020, but with rapid growth in passenger and cargo movements. As a busy airport, YIA must ensure that the cargo and posts supply chain processes run smoothly and safely. In the development of cargo and posts supply chain services, challenges that can hinder supply chain activities are inevitable. The challenges include cargo sent by cargo agents that arrive very close to flight schedules, leading to issues during inspections by regulated agents due to the tight timing of cargo delivery to the airport, incomplete accompanying cargo and posts documents, and delays in cargo and posts reaching the airport due to technical difficulties. It is necessary to examine these challenges to determine whether they hinder the smoothness of the cargo and posts supply chain process at Yogyakarta International Airport (YIA) and assess the level of influence among variables. Therefore, it must be ensured that cargo and posts deliveries are conducted safely and smoothly, considering factors such as security, technical aspects, and regulations that affect the delivery process to Yogyakarta International Airport. Thus, this journal is expected to provide a better understanding of the importance of safe and smooth cargo and posts delivery at Yogyakarta International Airport and provide recommendations to enhance the delivery process. According to Abbas Salim (1993), transportation is the activity of moving goods and passengers from one place to another. Meanwhile, according to Lukman (2021), Supply Chain Management (SCM) is a system between cross-functional companies that use information technology to assist, support, and manage various relationships between a company's core business processes and suppliers, customers, and business partners. Supply chain management involves the management of the flow of goods and services and encompasses all processes that transform raw materials into finished products.

The smoothness of the supply chain process, including the sequence of receiving, inspecting, loading, security control, and handing over cargo and posts at the airport, is the operation of a Regulated Agent. In the process of loading cargo and posts onto land transportation, in this case, trucks, it must be arranged precisely according to the flight schedule and the arrangement of airway bills must be observed. Similarly, in the security control process when transporting cargo and posts to the airport, attention must be paid to the level of danger posed to the cargo and posts inside the transporting truck.

1.2 Problem Statement and Limitations

Does the handling of genco cargo to land transportation partially affect the smoothness of the cargo and posts supply chain at Yogyakarta International Airport? Does security control of land transportation partially affect the smoothness of the cargo and posts supply chain at Yogyakarta International Airport? Is there a simultaneous influence of the handling of genco cargo to land transportation and security control of land transportation on the smoothness of the cargo and posts supply chain at Yogyakarta International Airport?
Based on the background of the problem, this research is limited to:The influence of handling

genco cargo to land transportation on the smoothness of the cargo and posts supply chain at Yogyakarta International Airport. Security control of transportation on the smoothness of the cargo and posts supply chain at Yogyakarta International Airport. The simultaneous influence of handling genco cargo to land transportation and security control of transportation on the smoothness of the cargo and posts supply chain at Yogyakarta International Airport.

2 Literature Review

2.1. Supply Chain

A supply chain is a system of interconnected activities that involve coordination, scheduling, and control, comprising organizations, retailers, e-commerce, and end customers (end-users). According to the Council of Supply Chain Management Professionals (2023), supply chain management is defined as activities that encompass planning, execution, and control of activities related to the flow of goods and services, from raw material procurement to the delivery of finished products to end customers. The goal is to achieve effective integration between various functions in the supply chain to gain competitive advantage. The purpose of implementing a supply chain system is to control the shipping procedures, allowing companies to enhance customer service by avoiding errors. Smooth cargo and posts delivery to the airport is a quality that must be maintained; any disruption during cargo handling or transportation can lead to delays in loading cargo and posts onto the aircraft, and may even result in the cargo and posts being left behind (failed to be flown). One can imagine the significant financial losses that cargo and posts senders would have to bear. According to the Republic of Indonesia Law Number 1 of 2009 concerning Aviation, "kargo" is defined as any goods transported by an aircraft, including animals and plants, excluding mail, aircraft necessities during flight, baggage, or unclaimed goods. According to the Republic of Indonesia Law Number 38 of 2009 concerning Mail, "pos" refers to written communication services and/or electronic mail, parcel services, logistics services, financial transaction services, and postal agency services for the public interest. Cargo and mail handled in aviation are goods (cargo) that meet the standards for air transport, both in terms of cargo dimensions and cargo content, which are in accordance with cargo genco standards. According to the Republic of Indonesia Law Number 1 of 2009 concerning Aviation, an "Bandar Udara" (Airport) is a defined area on land and/or water with specific boundaries used as a location for aircraft to land and take off, passenger embarkation and disembarkation, cargo loading and unloading, and as a hub for intermodal and multimodal transportation, equipped with aviation safety and security facilities, as well as essential and other supporting facilities. According to Annex 14, an airport is an area or region, whether on land or water, that includes a building along with installations and equipment dedicated to the arrival, departure, and movement of aircraft. YIA Airport began full operation on March 29, 2020, and was inaugurated by President Joko Widodo on August 28, 2020. This airport features modern architecture and futuristic design, making it one of the largest airports in Indonesia, serving both domestic and international routes. The development of YIA Airport aims to provide a new airport in Yogyakarta capable of accommodating the increasing number of air travelers to the region. It was also built as a gateway for tourists visiting Yogyakarta, which is one of Indonesia's prime tourist destinations.

2.2. Security Control. Based on the Republic of Indonesia Minister of Transportation's Decision Number KM 211 of 2020, "Pengendalian Keamanan" (Security Control) is a way to

identify Prohibited Items, which include weapons, explosives or dangerous equipment, hazardous substances or materials that could be used for illegal activities, in order to prevent them. One of the security control processes is the transportation of cargo and mail to the airport using truck fleets. Within a single truck, there is a driver and Basic Avsec personnel. Basic Avsec personnel must be ready to provide security escort for the cargo and mail being transported until they safely reach the airport. According to the Republic of Indonesia Minister of Transportation's Decision Number KM 211 of 2020, "Keamanan Penerbangan" (Aviation Security) is a condition that provides protection to aviation from unlawful actions through the integration of human resources, facilities, and procedures. Aviation security is carried out by ensuring that cargo and mail are not infiltrated by individuals with the intention of disrupting or sabotaging them.

In the cargo and mail inspection process conducted by Regulated Agents, reliability in inspection and delivery is supported by the following capabilities: Human Resources Capability: The Avsec team, consisting of personnel with Basic, Junior, and Senior ranks, possesses valid licenses to ensure the reliability of cargo and mail inspections; The Dangerous Goods team, all personnel have DG type A licenses; The Quality Control team is equipped with Avsec management certificates, QC Avsec Inspector, and Avsec Instructor certificates. The Quality Control team is equipped with Avsec management certificates, QC Avsec Inspector, and Avsec Instructor certificates.

2.2.1. Ownership of Aviation Security Facilities : Organic or non-organic detectors, such as X-ray machines, are used to inspect the contents of cargo and mail and can immediately analyze whether there are hazardous items inside the cargo; Explosive detectors, such as the Explosive Vapors Detector (EVD), are used to check cargo for the presence of explosive substances; Metal or non-metal detectors, such as Walk-Through Metal Detectors (WTMD), which are gate-shaped. These are used to inspect individuals entering restricted security areas to determine if they are carrying metal items that could be considered threats or hazardous materials. Hand-Held Metal Detectors (HHMD) serve the same purpose but are used for manual inspections; People traffic detectors, such as CCTV, monitor human movements around the clock, ensuring that only authorized personnel are present in the inspection area.

2.2.2. Documentation Owned by the Company as Operating Foundations: Having an operating permit issued by the Director General of Civil Aviation is a guarantee of a company's legitimacy; Possessing an approved Cargo and Mail Security Program (PKKP) by the Director of Aviation Security is a program for conducting cargo and mail security inspection processes; Having Standard Operating Procedures (SOP) as guidance and instructions for the steps in working, this is used as a guideline for personnel to work effectively and avoid errors in the work process.

2.3. Smoothness. According to the Kamus Besar Bahasa Indonesia (Big Indonesian Dictionary), "Kelancaran" means smoothness, which can be described as a situation in which something moves quickly, smoothly, and without obstacles. The smoothness of cargo and mail deliveries to Yogyakarta International Airport is highly anticipated by both senders and recipients. The smoothness of a single point from the Regulated Agent to the Airport certainly greatly affects the success of the delivery route process until it reaches the hands of the recipient at another airport. **Cargo handling**. According to the Kamus Besar Bahasa Indonesia (Big Indonesian Dictionary), "penanganan" refers to the process, method, or act of handling; management. Based on the Republic of Indonesia Law Number 1 of 2009 concerning Aviation, "kargo" is defined as any cargo carried by an aircraft, including animals and plants, except for

mail, aircraft necessities, baggage, or unclaimed goods, and "Kargo genco" or "General Cargo (Genco)" refers to a category of cargo that generally has characteristics that are not hazardous, not easily damaged, spoiled, or deceased. Items falling under the general cargo category do not require special handling as long as the transportation requirements meet the applicable terms and conditions. According to Neldy (in Utami, 2022), air cargo is an air cargo load carried by aircraft, and its delivery can be done by airlines or agents, whether it is sent between cities, islands, domestically, or internationally, and, of course, it is equipped with supporting documents in accordance with IATA guidelines. Regarding this matter, it is related to the cargo terminal as a place and supporting facility for processing air cargo shipments, both domestic and international, while paying attention to the security and safety of the cargo supply chain industry sector and complying with procedures standardization. Cargo handling is a series of work processes carried out to complete a specific task or job. In the context of cargo handling in this journal, handling includes the process of preparing cargo and mail arrangements after they have been examined using x-ray machines or manual inspection and inspecting the contents for explosive materials using EVD units, until they are loaded onto truck fleets (land transportation) for transport to the destination, which is Yogyakarta International Airport Kulon Progo.

2.3.1. Preparation of cargo and mail arrangements, with the following processes : Application of Security Check Labels (SCL) on cargo and mail. After the inspection is completed, it is followed by affixing a mark in the form of a Security Check Label (SCL), which serves as evidence that the cargo has been thoroughly inspected by Junior Aviation Security (Avsec). The Security Check Label (SCL) is placed and affixed by Basic Aviation Security (Avsec) in the areas where the outer packaging seals are opened (on the left and right sides as well as the top). The placement of cargo and mail, cargo and mail that have been provided with Security Check Labels (SCL) are placed on pallets. This is done to facilitate the movement of the cargo to the queue arrangement before being loaded onto the truck fleet. The movement or transfer of cargo and mail is carried out by porters using hand pallets or hand lifts. The arrangement of cargo and mail, cargo and mail that have been placed on pallets are arranged or grouped according to the Air Waybill (AWB) and the scheduled flight group, and this arrangement is guided by the acceptance team. The preparation for loading cargo and mail onto trucks (land transportation), basic avsec has already prepared to bring the Consignment Security Declaration (CSD) document that has been signed by the Junior Aviation Security officer who inspected it with an x-ray machine, Air Waybill (AWB), Notification of Contents (PTI), Proof of Weight (BTB), cargo and mail handover documents.

2.3.2. The loading of cargo and mail into the truck fleet (land transportation), the checker conducts cargo inspection and gives instructions to the porter team to load the cargo into the truck and arrange it according to dimensions. After the cargo is stacked, the guard, namely Basic Avsec, conducts a re-inspection for compliance with stacking and the documents to be taken to the Airport. If everything is in order, the truck box door is closed, a security label is affixed to the door cover, and a box lock is sealed. The seal number and label must be recorded in the cargo handover document. **Land Transportation.** According to Adisasmita (in Siti Fatimah, 2019), transportation is a means of connection or linking between production areas and markets, or it can be said to bring production areas and markets closer together, or often said to bridge producers with consumers. The role of transportation is very important, namely as a means of connection, bringing closer, and bridging between parties who mutually need each other. Land transportation includes all forms of vehicles that use roads to transport passengers or goods. Transportation creates space and time utility because the value of goods becomes higher at the destination compared to the place of origin. In addition, these goods are transported quickly, ensuring they arrive at the destination on time to meet the needs.

3 Research Methodology

The research started in July 2023, and this research method employs quantitative methods. According to Sugiono (2016), a population is a "generalization area consisting of objects or subjects with certain quantities and characteristics determined by researchers to be studied and then drawn conclusions from." The population in this study is the cargo handling team at the Regulated Agent, with a total population of 34 respondents excluding the Manager and Director. There are 10 questions for each variable. According to Suharsimi Arikunto (1996), when the sample size is less than 100 people, it is better to take the entire sample from the total population, making it a population study. For this journal, the opinion of Suharsimi Arikunto is adopted because the sample size is less than 100 people.

4 Results and Discussion

4.1 Validity Test Results

Table 1. Variable X1 Genco Cargo handling to Land Transportation

		X11	X12	X13	X14	X15	X16	X17	X18	X19	X110	TOTAL
X11	Pearson Correlation	1	,207	,209	-,012	,264	,089	,325	,142	,248	,159	,537**
	Sig. (2-tailed)		,241	,235	,947	,131	,616	,061	,424	,157	,369	,001
	N	34	34	34	34	34	34	34	34	34	34	34
X12	Pearson Correlation	,207	1	,126	-,013	,139	-,076	,295	,194	,073	,000	,388*
	Sig. (2-tailed)	,241		,479	,942	,433	,667	,090	,273	,681	1,000	,023
	N	34	34	34	34	34	34	34	34	34	34	34
X13	Pearson Correlation	,209	,126	1	,490**	,015	,057	,087	-,127	,210	,147	,427*
	Sig. (2-tailed)	,235	,479		,003	,934	,751	,626	,473	,233	,406	,012
	N	34	34	34	34	34	34	34	34	34	34	34
X14	Pearson Correlation	-,012	-,013	,490**	1	-,076	,488**	,112	,288	,128	,159	,537**
	Sig. (2-tailed)	,947	,942	,003		,669	,003	,527	,099	,472	,369	,001
	N	34	34	34	34	34	34	34	34	34	34	34
X15	Pearson Correlation	,264	,139	,015	-,076	1	-,047	,432*	,144	,329	,000	,522**
	Sig. (2-tailed)	,131	,433	,934	,669		,790	,011	,415	,058	1,000	,002
	N	34	34	34	34	34	34	34	34	34	34	34
X16	Pearson Correlation	,089	-,076	,057	,488**	-,047	1	-,005	,291	-,101	,125	,426*
	Sig. (2-tailed)	,616	,667	,751	,003	,790		,978	,094	,571	,480	,012
	N	34	34	34	34	34	34	34	34	34	34	34
X17	Pearson Correlation	,325	,295	,087	,112	,432*	-,005	1	,079	,249	,000	,534**
	Sig. (2-tailed)	,061	,090	,626	,527	,011	,978		,657	,155	1,000	,001
	N	34	34	34	34	34	34	34	34	34	34	34
X18	Pearson Correlation	,142	,194	-,127	,288	,144	,291	,079	1	,090	,115	,525**
	Sig. (2-tailed)	,424	,273	,473	,099	,415	,094	,657		,615	,518	,001
	N	34	34	34	34	34	34	34	34	34	34	34
X19	Pearson Correlation	,248	,073	,210	,128	,329	-,101	,249	,090	1	,379*	,487**
	Sig. (2-tailed)	,157	,681	,233	,472	,058	,571	,155	,615		,027	,003
	N	34	34	34	34	34	34	34	34	34	34	34
X110	Pearson Correlation	,159	,000	,147	,159	,000	,125	,000	,115	,379*	1	,345*
	Sig. (2-tailed)	,369	1,000	,406	,369	1,000	,480	1,000	,518	,027		,046
	N	34	34	34	34	34	34	34	34	34	34	34
TOTAL	Pearson Correlation	,537**	,388*	,427*	,537**	,522**	,426*	,534**	,525**	,487**	,345*	1
	Sig. (2-tailed)	,001	,023	,012	,001	,002	,012	,001	,001	,003	,046	
	N	34	34	34	34	34	34	34	34	34	34	34

Table 2. Variable X_2 Transportation Security Control

		X21	X22	X23	X24	X25	X26	X27	X28	X29	X210	TOTAL
	Pearson Correlation	1	-,087	,127	,150	,018	,102	-,064	,212	,171	,086	,357*
X21	Sig. (2-tailed)		,625	,473	,397	,918	,568	,719	,229	,334	,627	,038
	N	34	34	34	34	34	34	34	34	34	34	34
	Pearson Correlation	-,087	1	,190	-,033	,051	,005	,369*	,081	,306	-,022	,423*
X22	Sig. (2-tailed)	,625		,281	,855	,776	,980	,032	,648	,078	,904	,013
	N	34	34	34	34	34	34	34	34	34	34	34
	Pearson Correlation	,127	,190	1	,111	,293	,044	,081	-,044	,062	,045	,381*
X23	Sig. (2-tailed)	,473	,281		,533	,093	,803	,647	,804	,729	,801	,026
	N	34	34	34	34	34	34	34	34	34	34	34
	Pearson Correlation	,150	-,033	,111	1	,258	-,094	,015	,064	,034	,084	,378*
X24	Sig. (2-tailed)	,397	,855	,533		,141	,598	,931	,719	,850	,636	,028
	N	34	34	34	34	34	34	34	34	34	34	34
	Pearson Correlation	,018	,051	,293	,258	1	,410*	,223	-,111	,202	,251	,538**
X25	Sig. (2-tailed)	,918	,776	,093	,141		,016	,205	,533	,251	,152	,001
	N	34	34	34	34	34	34	34	34	34	34	34
	Pearson Correlation	,102	,005	,044	-,094	,410*	1	,244	,061	,432*	,464**	,528**
X26	Sig. (2-tailed)	,568	,980	,803	,598	,016		,164	,732	,011	,006	,001
	N	34	34	34	34	34	34	34	34	34	34	34
	Pearson Correlation	-,064	,369*	,081	,015	,223	,244	1	,075	,048	,072	,445**
X27	Sig. (2-tailed)	,719	,032	,647	,931	,205	,164		,672	,787	,686	,008
	N	34	34	34	34	34	34	34	34	34	34	34
	Pearson Correlation	,212	,081	-,044	,064	-,111	,061	,075	1	,325	,236	,441**
X28	Sig. (2-tailed)	,229	,648	,804	,719	,533	,732	,672		,061	,179	,009
	N	34	34	34	34	34	34	34	34	34	34	34
	Pearson Correlation	,171	,306	,062	,034	,202	,432*	,048	,325	1	,645**	,659**
X29	Sig. (2-tailed)	,334	,078	,729	,850	,251	,011	,787	,061		,000	,000
	N	34	34	34	34	34	34	34	34	34	34	34
	Pearson Correlation	,086	-,022	,045	,084	,251	,464**	,072	,236	,645**	1	,563**
X210	Sig. (2-tailed)	,627	,904	,801	,636	,152	,006	,686	,179	,000		,001
	N	34	34	34	34	34	34	34	34	34	34	34
	Pearson Correlation	,357*	,423*	,381*	,378*	,538**	,528**	,445**	,441**	,659**	,563**	1
TOTAL	Sig. (2-tailed)	,038	,013	,026	,028	,001	,001	,008	,009	,000	,001	
	N	34	34	34	34	34	34	34	34	34	34	34

Table 3. Variable Y Smooth Cargo and Posts YIA Supply Chain

		Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	TOTAL
	Pearson Correlation	1	,200	,425*	,217	,142	,161	,419*	,154	,331	,016	,609**
Y1	Sig. (2-tailed)		,256	,012	,217	,424	,362	,014	,383	,056	,927	,000
	N	34	34	34	34	34	34	34	34	34	34	34
	Pearson Correlation	,200	1	,188	,151	,214	,047	,086	,122	,104	-,007	,453**
Y2	Sig. (2-tailed)	,256		,287	,394	,224	,793	,629	,491	,559	,967	,007
	N	34	34	34	34	34	34	34	34	34	34	34
	Pearson Correlation	,425*	,188	1	,448**	,109	,130	,270	-,237	,026	-,063	,426*
Y3	Sig. (2-tailed)	,012	,287		,008	,538	,464	,122	,178	,885	,722	,012
	N	34	34	34	34	34	34	34	34	34	34	34
	Pearson Correlation	,217	,151	,448**	1	,095	,175	,125	-,082	,161	,170	,459**
Y4	Sig. (2-tailed)	,217	,394	,008		,593	,321	,480	,643	,364	,336	,006
	N	34	34	34	34	34	34	34	34	34	34	34
	Pearson Correlation	,142	,214	,109	,095	1	,190	,164	,397*	,038	,118	,571**
Y5	Sig. (2-tailed)	,424	,224	,538	,593		,281	,354	,020	,832	,508	,000
	N	34	34	34	34	34	34	34	34	34	34	34
	Pearson Correlation	,161	,047	,130	,175	,190	1	,164	,144	,038	,223	,452**
Y6	Sig. (2-tailed)	,362	,793	,464	,321	,281		,354	,416	,832	,205	,007
	N	34	34	34	34	34	34	34	34	34	34	34
	Pearson Correlation	,419*	,086	,270	,125	,164	,164	1	,107	,270	,114	,518**
Y7	Sig. (2-tailed)	,014	,629	,122	,480	,354	,354		,547	,122	,520	,002
	N	34	34	34	34	34	34	34	34	34	34	34
	Pearson Correlation	,154	,122	-,237	-,082	,397*	,144	,107	1	,207	,239	,503**
Y8	Sig. (2-tailed)	,383	,491	,178	,643	,020	,416	,547		,240	,174	,002
	N	34	34	34	34	34	34	34	34	34	34	34
	Pearson Correlation	,331	,104	,026	,161	,038	,038	,270	,207	1	,510**	,499**
Y9	Sig. (2-tailed)	,056	,559	,885	,364	,832	,832	,122	,240		,002	,003
	N	34	34	34	34	34	34	34	34	34	34	34
	Pearson Correlation	,016	-,007	-,063	,170	,118	,223	,114	,239	,510**	1	,408*
Y10	Sig. (2-tailed)	,927	,967	,722	,336	,508	,205	,520	,174	,002		,017
	N	34	34	34	34	34	34	34	34	34	34	34
	Pearson Correlation	,609**	,453**	,426*	,459**	,571**	,452**	,518**	,503**	,499**	,408*	1
TOTAL	Sig. (2-tailed)	,000	,007	,012	,006	,000	,007	,002	,002	,003	,017	
	N	34	34	34	34	34	34	34	34	34	34	34

3.1 Discussion of Validity Test

Based on tables 1 to 3, the validity test for variables X1, X2, and Y as a whole is as follows:
a. Pearson Correlation Value > the value of the tabled r. For a tabled r value of 0.339, it is considered valid.
b. Significance value < 0.05, is considered valid overall.
By being declared valid, further calculations for autocorrelation and regression analysis can be carried out

Table 4. Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,796[a]	,634	,611	1,855	2,201

Discussion of Autocorrelation Test:
a. According to Kurniawan (2014), autocorrelation test is a condition in which there is a correlation of residuals for observations arranged over time. This test is conducted to determine whether there is a correlation between one disturbance factor and another (non-autocorrelation).
b. The assessment criterion is that if du < DW < 4 - du, then there is no positive or negative autocorrelation. Therefore, based on the SPSS analysis results in table 4, the Durbin Watson value is 2.201, which can be interpreted with du = 1.585 as follows: 1.5805 < 2.118 < 2.4194, which means there is no positive or negative autocorrelation. We can proceed with the regression analysis calculations.

Regression Test Results.

Table 5. Coefficients
Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,726	5,240		,711	,482
	Managing Genco Cargo to Land Transportation	,480	,169	,448	2,835	,008
	Transportation Security Control	,441	,170	,409	2,592	,014

a. Dependent Variable: The Smoothness of Cargo Supply Chain and Posts

Regression Test Discussion.

$$Y = 3{,}726 + 0{,}480X_1 + 0{,}441X_2$$

a. The constant value of 3.726 indicates that if the independent variables, Handling of Genco Cargo (X1), and Control of Land Transportation Security (X2) are both equal to 0, then the value of Supply Chain Smoothness (Y) is 3.726. This means that systematically, if the independent variables Handling of Genco Cargo (X1) and Control of Land Transportation Security (X2) are absent or each of their values is 0, then the Purchase Decision (Y) is 3.726.

b. The regression coefficient for Handling of Genco Cargo (X1) is 0.480, which means that the Handling of Genco Cargo variable has a positive impact on supply chain smoothness, indicating a direct relationship. If the Handling of Genco Cargo variable increases by one unit, the supply chain smoothness will increase by 0.480 units. Likewise, if the Handling of Genco Cargo variable decreases by one unit, the supply chain smoothness will decrease by 0.480 units.

c. The regression coefficient for Control of Land Transportation Security (X2) is 0.441, which means that the Control of Land Transportation Security variable has a positive impact on supply chain smoothness, indicating a direct relationship. If the Control of Land Transportation Security variable increases by one unit, the supply chain smoothness will increase by 0.441 units. Conversely, if the Control of Land Transportation Security variable decreases by one unit, the supply chain smoothness will decrease by 0.441 units.

Discussion of t-Test:

a. The results of hypothesis testing for Handling of Genco Cargo (X1) on Supply Chain Smoothness (Y) show that the calculated t-value is greater than the tabulated t-value, with $2.835 > 2.03693$, and the significance level is $0.008 < 0.05$. This means that the hypothesis in this research rejects the null hypothesis (H0) and accepts the alternative hypothesis (Ha). The extent of the impact of Handling of Genco Cargo (X1) on Supply Chain Smoothness (Y) is indicated by the regression equation as follows: $\hat{Y} = 3.726 + 0.480X1$. Thus, it can be concluded that Handling of Genco Cargo has a partial influence on Supply Chain Smoothness.

b. The results of hypothesis testing for Control of Land Transportation Security (X2) on Supply Chain Smoothness (Y) show that the calculated t-value is greater than the tabulated t-value, with $2.592 > 2.03693$, and the significance level is $0.014 < 0.05$. This means that the hypothesis in this research rejects the null hypothesis (H0) and accepts the alternative hypothesis (Ha). The extent of the impact of Control of Land Transportation Security (X2) on Supply Chain Smoothness (Y) is indicated by the regression equation as follows: $Y = 3.726 + 0.441X2$. Therefore, it can be concluded that Control of Land Transportation Security has a partial influence on Supply Chain Smoothness.

Results of Simultaneous Hypothesis Test (F test).

Table 6. Anova

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	185,169	2	92,584	26,896	,000[b]
	Residual	106,714	31	3,442		
	Total	291,882	33			

a. Dependent Variable: The Smoothness of Cargo Supply Chain and Posts

Discussion of Simultaneous Hypothesis Test (F test).

Table 6 shows the results of the F-test. In the significance level (sig.) column, a value of 0.000 < 0.05 was obtained, indicating that the hypothesis in this study, H0, is rejected, and Ha is accepted. The magnitude of the influence of Handling of Genco Cargo (X1) and Control of Land Transportation Security (X2) on Sup- ply Chain Smoothness (Y) is significant. Therefore, it can be concluded that Handling of Genco Cargo and Control of Land Transportation Security have a simultaneous effect on Supply Chain Smoothness.

Test Results of Coefficient of Determination (R^2)

Table 7. Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Esti- mate
1	,796[a]	,634	,611	1,855

a. Predictors: (Constant), Transportation Security Control, Managing Genco Cargo to Land Transportation

Discussion of Coefficient of Determination Test (R2).

Based on table 7, the coefficient of determination (R2) is 0.634 or 63.4%. This indicates that the contribution of the independent variables, Handling of Genco Cargo (X1), and Control of Land Transportation Security (X2), to the dependent variable, Supply Chain Smoothness (Y), is 63.4%. Meanwhile, 36.6% is influenced by other variables not discussed in this study.

4 Conclusion

The results of hypothesis testing for Handling of Genco Cargo on the Smoothness of Cargo and Mail Supply Chains show a significance level of 0.008 < 0.05, which means that the hypothesis in this study rejects H0 and accepts Ha. Therefore, it can be concluded that Handling of Genco Cargo has a partial influence on the Smoothness of Cargo and Mail Supply Chains at Yogyakarta International Airport. The cargo and mail loading and handling

processes carried out by the cargo handling team meet the standard operating procedures (SOP) set by the company as a Regulated Agent for cargo and mail security inspection.
The results of hypothesis testing for Control of Land Transportation Security on the Smoothness of Cargo and Mail Supply Chains show a significance level of 0.014 < 0.05, which means that the hypothesis in this study rejects H0 and accepts Ha. Therefore, it can be concluded that Control of Land Transportation Security has a partial influence on the Smoothness of Cargo and Mail Supply Chains at Yogyakarta International Airport. The security control process for land transportation carried out by the Avsec team and truck drivers is conducted in accordance with standard operating procedures (SOP) and they remain vigilant for any disruptions during the journey to the airport.

Handling of Genco Cargo and Control of Land Transportation Security have a simultaneous influence on Supply Chain Smoothness, as evidenced by the F-test results. In the significance level (sig.) column, a value of 0.000 < 0.05 was obtained. The cargo handling process, initiated after x-ray machine inspection and followed by loading onto trucks with an adequate number of personnel, ensures that cargo and mail can be loaded onto trucks promptly. The support of a sufficient number of truck fleets for transportation to the airport and a reliable data network system are crucial aspects of the process for printing accompanying documents for cargo and mail that will be sent to the airport. The security control process for land transportation, conducted by Avsec personnel and truck drivers, begins with a vehicle readiness check by the driver and the inspection of accompanying documents by Avsec. The inspection of truck labels and truck seals serves as an assurance that the truck is securely sealed. They remain vigilant and alert throughout the journey to the airport, and if any security threats arise, they must be prepared to implement contingency plans to safeguard the cargo and mail. The smoothness of the Cargo and Mail Supply Chain, characterized by an uninterrupted journey without delays in cargo handling and security control, ensures that cargo and mail arrive at the airport on time and are handed over to the cargo terminal. The success of cargo and mail delivery at Yogyakarta International Airport contributes to the overall success of the cargo and mail supply chain process.

5 Recommendations

The cargo handling team should continue to maintain its performance, work in accordance with the applicable SOPs, and remain vigilant in responding to aviation security threats. For future research, improvements can be made from different perspectives or assignment.

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