Research Article

The Implementation of `Halal Logistics' During the COVID-19 Pandemic to Optimize the Transportation of Halal Products at PT BGR Logistics, Jakarta

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Abstract.
One of the several disruptions caused by the COVID-19 virus is business transportation and logistics problems. Handling logistics and quality service is one of the keys to the success of selling halal products on the market. PT BGR Logistics is currently implementing a halal logistics system, especially in the Warung Pangan application, which is one of its businesses. This study aimed to determine whether the implementation of halal logistics during the pandemic can improve service quality. Hopefully, this article can be used as a reference for the future of PT BGR Logistics and by the general public. This study used a quantitative method with a sample of Warung Pangan application users as buyers around JABODETABEK.

Keywords: Halal Logistics, Halal Product, Disruption Covid 19,Service Quality

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1. Introduction

The implementation of the Large-Scale Social Restrictions (PSBB) has caused disruption to logistics transportation. Minister of Transportation Regulation (Permenhub) Number 25 of 2020 prohibits land, sea, and air travel to and from the red zone area of Covid-19 transmission between April 14 and May 31, 2020. This pandemic has had a negative impact on supply chains including reducing their efficiency and performance (Guan et al.,2020; Ivanov, 2020a; Sodhi,2016; Pratiwi et al., 2019) known as the ripple effect. There was a decrease in demand for sea transportation by 2.31% and air transportation by 15%. People also become aware of cleanliness, health, and hygiene of goods and food consumed. In addition,halal products are products that are highly trusted because their cleanliness and health are guaranteed.

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The Indonesian Population Census (SP2020) results in September 2020 recorded a population of 270.20 million people. As a result of the SP2020, the population increased by 32.56 million people compared to the results of the SP2010. The proportion of the Muslim population in Indonesia is 87.2% of the total population in the country. That percentage is equivalent to 227 million people. The number was quite large in 2010 Indonesia accounted for 13.07% of the world's Muslim population. This number is greater than Pakistan, Bangladesh, and India (Demografi and Statistik, 2021). The halal industry also has a great opportunity because the majority of the population in Indonesia is Muslim. During the pandemic, non-Muslims are also interested in halal products because they believe that their products are not harmful to the body and are good for their health (AyoAsik,com). During the COVID-19 pandemic, there has been a shifting behavior from the direct shopping to the online shopping, the e-commerce sector experienced growth during the pandemic. In 2020, payments for halal products in the e-commerce market were mostly in the form of electronic money and bank transfers, which respectively controlled a market share of 42.10% and 23.08%. In March 2021, the number of digital financial transactions in the Indonesian banking industry reached 553.5 million, up 42.47% from the same period last year. The transaction value also rose 26.44% year by year to IDR 3.025 trillion (bisniswisata.co.id, mei 07,2021)

The halal logistics business and halal products are predicted to be the positive opportunities in the next few years (Hua & Jing,2015). The goods delivery service provider needs to improve the quality in terms of the information technology for effective, efficient and fast delivery services to handle the flow of information exchange, capital flows, and trade flows. The establishment of Halal Logistics is the intention to protect halal integrity for Muslims as the end consumers. The halal logistics system must ensure that products are guaranteed to be halal during the process of logistics activitiesin ware-houses, depots, terminals, transportation equipment, and packaging . Halal logistics will ensure consistency of halal handling as expected by the Muslim community referring to the Law No. 33 of 2014, which regulates halal product guarantees. The Indonesian Halal Certification Institute,the food, drugs, and cosmetics institute of the Indonesian Ulema Council (LPPOM MUI), is responsible for halal inspection and certification. The main functions of LPPOM MUI are to conduct halal assurance system, halal audit, fatwa commission, scientific research and assessment field, and training and promotion of halal products. Halal certificate is a written fatwa of MUI which states that the product is halal and follows the Islamic sharia. Halal-certified products or logistics

processes must ensure their halal status during production, logistics processes, and delivery to customers (Bakar dan Hamid, 2013). Currently, there are two Halal Industrial Estates (KIH) in Indonesia, namely the 500-hectare Cikande Modern Industrial Estate in Serang, Banten, with a focus on the food, pharmaceutical and cosmetic industries. Another one is the Safe N Lock Industrial Area in Sidoarjo, East Java, with an area of 9.95 hectares, and the focus is on the consumer's goods, cosmetics, and food and beverage industrial sectors. Additionally, there is also another halal area being prepared, named the Bintan Inti Industrial Estate, Batamindo, Jakarta Pulogadung, Surya Borneo, Makassar, Tenayan, and Subang Industrial Estate. Based on The State of Global Islamic Economy (SGIE) Report 2020/2021, Indonesia managed to climb one place to the 4th rank in 2020, Referring to the trade data from international ASEAN countries and the countries involved in the Organization of Islamic Cooperation (OIC)in 2019. Surprisingly, only Indonesia experienced a positive trade balance of US$2.068 billion. Meanwhile, in terms of export value, Indonesia ranks 4th which has reached US$21.588 billion (Bisnis,com. Desember 09,2020).

PT BGR Logistics is one of the companies that has started implementing a halal logistics system to support processes in one of its businesses, namely Warung Pangan that sell various foodstuffs such as oil, instant noodles, milk, syrup, and mineral water. Application-based platform called Warung Pangan become one of the e-commerce portals for food ingredients.
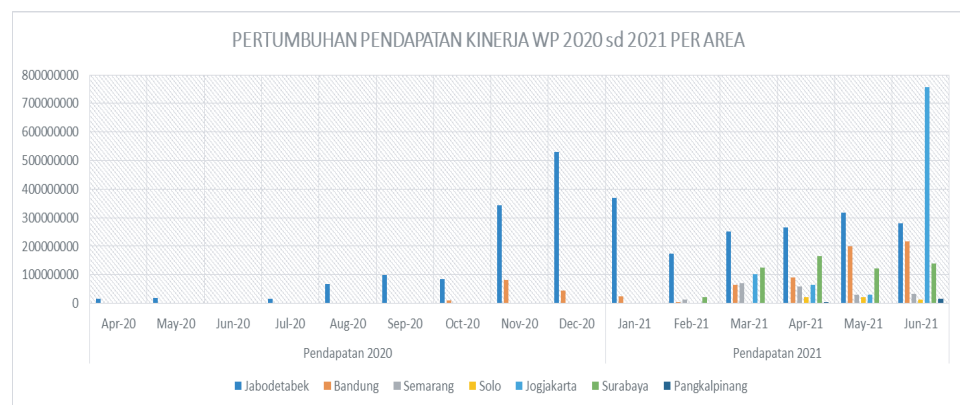
Source : PT BGR Logistics (persero), Jakarta.2021

Figure 1

Table I

Table 1: *Source : PT BGR Logistics (persero), Jakarta.2021.*

Area	Total Registration	Total Verification	Total Order	Total income	income percentage
Jabodetabek	16367	11448	7655	2,841,691,410	52.65%
Bandung	7206	5422	2252	737,180,628	13.66%
Semarang	1408	1279	728	205,187,720	3.80%
Solo	477	414	108	56,941,350	1.05%
Jogjakarta	1480	1238	597	958,398,700	17.75%
Surabaya	4283	3953	2755	575,038,050	10.65%
Pangkalpinang	64	41	22	23,626,250	0.44%

The graphs and data above show that there is growth in performance with the implementation of halal logistics during the covid 19 pandemic cumulatively from July 2020 to June 2021, the largest percentage is in the Greater Jakarta area of 52.65%. This is enough to prove that the implementation of halal logistics can improve company's performance, especially during the pandemic where everyone prioritizes cleanliness and health.

2. Method

This type of research used quantitative methods. Quantitative research methods can be interpreted as the research methods that are based on the philosophy of positivism, used to examine certain populations or samples, and the data collection usesthe research instruments andthe quantitative/statistical data analysiswith the aim of testing predetermined hypotheses. (Sugiyono, 2019:6).

2.1. Research location and time

This research was conducted at PT Bhanda Ghara Reksa (Persero) which is headquartered on Jl Kali Besar Timur No. 5-7 pinangsia, Tamansari, Jakarta. This research was conducted from June 2021 to July 2021.

2.2. Population

According to Sugiyono (2019:126) Population is a generalization area consisting of objects/subjects that have certain quantities and characteristics determined by the

researcher to be studied, and then conclusions are drawn. The population in this study are users of the Warung Pangan application PT . BGR Logistics Indonesia.

2.3. Sample

According to Sugiyono (2019:127) the sample is part of the number and characteristics possessed by the population. According to Sugiyono (2019:137) The sample measurement technique in research can use the saturated sampling technique, which is a sample that represents the total population. This study uses a sample of users of Warung Pangan application PT.BGR Logistics Indonesia of 42 samples.

2.4. Data Source

The data sources directly provide data to data collectors (Sugiyono, 2019:296). Primary data in this study were obtained directly from original sources through information obtained from interviews and questionnaires.

Secondary sources are sources that do not directly provide data to data collectors, for example through other people or through documents (Sugiyono, 2019:296). Secondary data sources in this study were books, journals and the official website of PT BGR Logistics.

2.5. Temporary Hypothesis

H_0= Not related between variable X_1 and variable X_2 to variable Y.

H_1 = Provisional conjecture there is a positive influence of the X_1 variable on the variable Y.

H_2= Provisional conjecture there is a positive influence of the X_2 variable on the variable Y.

H_3 = Provisional conjecture there is a positive influence between the X_1 variable and X_2 variable on the variable Y.

3. Discussion

PT BGR Logistics has a vision to become a logistics company that provides integrated, reliable and trusted solutions. PT. BGR Logistics is very focused on developing SCM for food security by creating warung Pangan application and on buying products by using the BGR access platform. The development of SCM is also guided by halal logistics standards in order to better meet the demands of Indonesian consumers. The use of halal logistics in Warung Pangan has proven to be effective, at the beginning from July 2020 to June 2021. Consequently, it grew by IDR. 5,398,064,108, and has covered 23 cities and 32,994 active MSME partners, and has sold 395 products. (Source : PT BGR Logistics (persero), Jakarta.2021).

3.1. Result

1. **VALIDITY** =0,05 (42 − 2) = (r$_{table}$ 0,3044)

Correlations

		X1.1	X1.2	X1.3	X1.4	X1.5	X1.6	TOTAL_X1
X1.1	Pearson Correlation	1	.156	.529**	.647**	.661**	.501**	.802**
	Sig. (2-tailed)		.323	.000	.000	.000	.001	.000
	N	42	42	42	42	42	42	42
X1.2	Pearson Correlation	.156	1	.039	.000	-.014	.164	.325*
	Sig. (2-tailed)	.323		.808	1.000	.928	.298	.036
	N	42	42	42	42	42	42	42
X1.3	Pearson Correlation	.529**	.039	1	.612**	.621**	.725**	.822**
	Sig. (2-tailed)	.000	.808		.000	.000	.000	.000
	N	42	42	42	42	42	42	42
X1.4	Pearson Correlation	.647**	.000	.612**	1	.665**	.485**	.782**
	Sig. (2-tailed)	.000	1.000	.000		.000	.001	.000
	N	42	42	42	42	42	42	42
X1.5	Pearson Correlation	.661**	-.014	.621**	.665**	1	.512**	.789**
	Sig. (2-tailed)	.000	.928	.000	.000		.001	.000
	N	42	42	42	42	42	42	42
X1.6	Pearson Correlation	.501**	.164	.725**	.485**	.512**	1	.792**
	Sig. (2-tailed)	.001	.298	.000	.001	.001		.000
	N	42	42	42	42	42	42	42
TOTAL_X1	Pearson Correlation	.802**	.325*	.822**	.782**	.789**	.792**	1
	Sig. (2-tailed)	.000	.036	.000	.000	.000	.000	
	N	42	42	42	42	42	42	42

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Figure 2: X_1 = Declared Valid because the indicators of each question exceed the r$_{table}$ which is 0.3044.

X_2 = Declared Valid because the indicators of each question exceed the r$_{table}$ which is 0.3044.

Y = Declared Valid because the indicators of each question exceed the r$_{table}$ which is 0.3044.

1. **REABILITY**

2. The result is that the Halal Logistics variable can be trusted because Cronbach alpha is > 0.60.

Correlations

		X2.1	X2.2	X2.3	X2.4	TOTAL_X2
X2.1	Pearson Correlation	1	.915**	.306*	.412**	.877**
	Sig. (2-tailed)		.000	.049	.007	.000
	N	42	42	42	42	42
X2.2	Pearson Correlation	.915**	1	.269	.365*	.855**
	Sig. (2-tailed)	.000		.084	.017	.000
	N	42	42	42	42	42
X2.3	Pearson Correlation	.306*	.269	1	.679**	.673**
	Sig. (2-tailed)	.049	.084		.000	.000
	N	42	42	42	42	42
X2.4	Pearson Correlation	.412**	.365*	.679**	1	.728**
	Sig. (2-tailed)	.007	.017	.000		.000
	N	42	42	42	42	42
TOTAL_X2	Pearson Correlation	.877**	.855**	.673**	.728**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	42	42	42	42	42

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Figure 3:

Correlations

		X2.1	X2.2	X2.3	X2.4	TOTAL_X2
X2.1	Pearson Correlation	1	.915**	.306*	.412**	.877**
	Sig. (2-tailed)		.000	.049	.007	.000
	N	42	42	42	42	42
X2.2	Pearson Correlation	.915**	1	.269	.365*	.855**
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	N	42	42	42	42	42
X2.3	Pearson Correlation	.306*	.269	1	.679**	.673**
	Sig. (2-tailed)	.049	.084		.000	.000
	N	42	42	42	42	42
X2.4	Pearson Correlation	.412**	.365*	.679**	1	.728**
	Sig. (2-tailed)	.007	.017	.000		.000
	N	42	42	42	42	42
TOTAL_X2	Pearson Correlation	.877**	.855**	.673**	.728**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	42	42	42	42	42

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Figure 4

Correlations

		Y.1	Y.2	Y.3	Y.4	TOTAL_Y
Y.1	Pearson Correlation	1	.681**	.625**	.344*	.812**
	Sig. (2-tailed)		.000	.000	.026	.000
	N	42	42	42	42	42
Y.2	Pearson Correlation	.681**	1	.771**	.592**	.900**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	42	42	42	42	42
Y.3	Pearson Correlation	.625**	.771**	1	.609**	.898**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	42	42	42	42	42
Y.4	Pearson Correlation	.344*	.592**	.609**	1	.741**
	Sig. (2-tailed)	.026	.000	.000		.000
	N	42	42	42	42	42
TOTAL_Y	Pearson Correlation	.812**	.900**	.898**	.741**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	42	42	42	42	42

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Figure 5

Reliability Statistics

Cronbach's Alpha	N of Items
.808	6

Figure 6

1. The result is that the Covid 19 Disruption variable can be trusted because Cronbach alpha is > 0.60

Case Processing Summary

		N	%
Cases	Valid	42	100.0
	Excluded[a]	0	.0
	Total	42	100.0

a. Listwise deletion based on all variables in the procedure.

Figure 7

Reliability Statistics

Cronbach's Alpha	N of Items
.792	4

Figure 8

1. The result is that the service quality variable can be trusted because Cronbach alpha is > 0.60

Case Processing Summary

		N	%
Cases	Valid	42	100.0
	Excluded[a]	0	.0
	Total	42	100.0

a. Listwise deletion based on all variables in the procedure.

Figure 9

Reliability Statistics

Cronbach's Alpha	N of Items
.852	4

Figure 10

1. **T . test**

(Formula : t_{table}= t(a/2 ; n-k-1) = t (0,025 : 39) = 2,023

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.744	1.648		1.665	.104
	Halal_logistik(X1)	.452	.093	.611	4.851	.000
	Distruption_covid(X2)	.221	.108	.258	2.048	.047

a. Dependent Variable: Pelayanan_yang_baik(Y)

Figure 11

1. Testing (H_1): It is known that the sig value for the influence of the X_1 variable on the Y variable is 0.000 < 0.05, and the t_{count} value is 4.851 > t_{table} 2.023. It can be concluded that H_1 is accepted. Which means that there is an effect of variable X_1 on variable Y.

2. Testing (H_2): It is known that the sig value for the effect of the X_2 variable on the Y variable is 0.047 < 0.05, and the t_{count} value is 2.048 > t_{table} 2.023, so it can be concluded that H_2 is accepted, meaning that there is an effect of the X_2 variable on the varibale Y.

3. **F . test**

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	305.058	2	152.529	35.653	.000^b
	Residual	166.847	39	4.278		
	Total	471.905	41			

a. Dependent Variable: Pelayanan_yang_baik(Y)

b. Predictors: (Constant), Distruption_covid(X2), Halal_logistik(X1)

Figure 12

Testing (H_3): Based on the output above, it is known that the significance value for the effect of variable X_1 and variable X_2 simultaneously on variable Y is 0.000 < 0.05, and F_{count} value is 35.653 > F_{table} 3.23. So, it can be concluded that H_3 is accepted, meaning that there is an effect of variable X_1 and variable X_2 simultaneously on variable Y.

1. **Coefficient determination**

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.804[a]	.646	.628	2.06836

a. Predictors: (Constant), Distruption_covid(X2), Halal_logistik(X1)

Figure 13

Based on the output above, it is known that the Adjusted R square value is 0.628. This means that the influence of the Variables X_1 and X_2 simultaneously on the variables Y is 62.8%, the remaining of 37.2% is influenced by other factors.

1. **Multiple regression equation**

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.744	1.648		1.665	.104
	Halal_logistik(X1)	.452	.093	.611	4.851	.000
	Distruption_covid(X2)	.221	.108	.258	2.048	.047

a. Dependent Variable: Pelayanan_yang_baik(Y)

$$Y = a + (b_1x_1) + (b_2x_2) = 2{,}744 + 0{,}452 + 0{,}221$$

Figure 14

$Y = a + (b_1x_1) + (b_2x_2) = 2{,}744 + 0{,}452 + 0{,}221$

Table XIV

3.2. The results of the hypothesis:

1. H_1 = There is an influence of Halal Logistics (X_1) on Quality Service (Y)

2. H_2 = There is an influence of the Covid-19 Disruption (X_2) on Quality Service (Y).

3. H_3 = There is a simultaneous effect of Halal Logistics (X_1) and Covid-19 Disruption (X_2) on Quality Services (Y).

4. Conclusion

We conclude that:

1. The application of halal logistics during the Covid-19 Disruption is still effective to improve company's performance because the company gains public trust in the products purchased and halal products are guaranteed in terms of the cleanliness, safety, and health.

2. The use of e-commerce increases during the pandemic as a result of the disruption caused during this pandemic.

3. PT BGR Logistics implements halal logistics and makes sales based on the applications that experienced a cumulative growth in the period of July 2020 - June 2021 during the pandemic.

References

[1] Aldista DI, Atmaja D, Kurniawan J, Lestari R. The Effects of the Implementation of Halal Critical Activities on the Quantity of the Order Received By Company Which Has Run Iso Case Study: Pt Ych Indonesia, 2018;147(Grost):880–891. https://doi.org/10.2991/grost-17.2018.78.

[2] Arianto Patunru, GO, PA. Penanganan Gangguan Rantai Pasok Pangan di Masa Pembatasan Sosial terkait Pandemi Covid-19. Journal Ekonomi. 2020;(3):1–8.

[3] Ashari RT. Pengembangan Sistem Logistik Produk Halal di Indonesia. Halal Research Journal. 2021;1(1):8–19.

[4] Notiasari GM, Nabilah SF. Hidayat DR, Sitorus PP, Gultom S. The Promotion Strategy To Increase Public Awareness of Halal Logistics In Indonesia Glob. Res. Sustain. Transp. Logist. 2018. p. 1224–1232, 2018, doi: https://doi.org/ISSN2662-5778.

[5] Hua W, Jing Z. An empirical study on e-commerce logistics service quality and customer satisfaction. WHICEB Proceeding,2015. p. 269-275.

[6] Pratiwi SW, Suparwan, SNA. Pengaruh Integrated Marketing Dan Relationship Marketing Terhadap Loyalitas Pelanggan. Jurnal Manajemen Bisnis Transportasi Dan Logistik (JMBTL). 2019; 5(2):207–212. https://doi.org/ISSN. 2407-635X

[7] Priyabrata Chowdhury, S. K. Studi rantai pasokan terkait pandemi COVID-19:. Penelitian Transportasi Bagian E. 2021;148.

[8] Saragih NI, Hartati V, Fauzi M. Tren, Tantangan, dan Perspektif dalam Sistem Logistik pada Masa dan Pasca (New Normal) Pandemik Covid-19 di Indonesia. Jurnal Rekayasa Sistem Industri. 2020;9(2):77–86.

[9] Sari NK, Hasby F, Hidayat RD, Sugiharti E. The Implementation of Halal Logistic System on Cosmetic Product [ALTR]. Advances in Transportation and Logistics Research. 2019;2(1):778–82.

[10] Saribanaon E, Purba O, Agushinta L. Efektifitas Pelaksanaan Logistik Halal. Jurnal Manajemen Bisnis Transportasi Dan Logistik. 2019;5(3):319–330. Retrieved from http://library.itl.ac.id/jurnal

[11] Soon JM, Chandia M, Mac Regenstein J. Halal integrity in the food supply chain. Br Food J. 2017;119(1):39–51.

[12] Sugiyono. Metode Penelitian Kuantitatif, Kualitatif, dan R&D. Bandung: Alfabeta; 2019

[13] Zulfakar MH, Anuar MM, Talib MS. Conceptual Framework on Halal Food Supply Chain Integrity Enhancement. Procedia Soc Behav Sci. 2014;121:58–67.

[14] Zulfakar MH, Jie F, Chan C.. Halal Food Supply Chain Integrity: From a Literature Review to a Conceptual Framework. Proceedings of the 10th ANZAM Operations, Supply Chain and Services Management Symposium. 2012;61(4):1–23.

[15] www.AyoAsik.com (download on July 24,2021)

[16] www.Bisnis.com (download on July 24,2021)