



### **Research Article**

# The Influence of Logistics Integration and Delivery Speed on the Growth of PT. Wahana Prestasi Logistik

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#### Abstract.

The competition between freight forwarding companies has made several companies try to improve their services. This study aimed to determine the effect of logistics integration and the delivery speed of goods on a company's growth, partially or simultaneously. The study used descriptive quantitative methods with a probability sampling technique (random). The population were 114 respondents who are customers of PT. Wahana Prestasi Logistik, which is spread across Bogor, Tangerang, and Bekasi (BOTABEK) areas. The results showed a positive and significant influence between logistics integration and the delivery speed of goods on the growth of PT. Wahana Prestasi Logistik.

Keywords: Logistics Integration, Delivery Speed, Company Growth

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# 1. INTRODUCTION

Entering the digital era, new business opportunities have begun to emerge, including in the field of shipping and receiving goods. With the development of technology in various activities, there are developments in the delivery process to the recipients of goods whose activities are getting faster, easier, cheaper and safer. This trend is supported by an information system that makes it easier to process data delivery so that it is more optimal and effective [1] & [2]. In addition, the people of Indonesia have already been familiar with the e-commerce business. The high level of enthusiasm of the Indonesian people in online buying and selling activities has led to an increase in freight forwarding services, which supports the development of e-commerce businesses and shipping companies. Several e-commerce and shipping companies cooperate with the hope of bringing a positive impact for both parties.

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Within PT. Wahana Prestasi Logistik enterprise, the delivery service begins to experience a decline in its service users, especially in local deliveries among regions in Indonesia. This gives rise to an unpleasant view and shows the dissatisfaction and unwillingness of customers to use the delivery service of PT. Wahana Prestasi Logistik even though it has influences on the growth in the capacity of the services. The company's growth is a description of the company's development and the increase in the company's total assets that reflect the growth of company resources measured by the difference in the value of total assets each year. Moreover, it shows the allocation of investment assets made by the company. As referred to the effect of the organization, it understands, studies, and decides an option for itself to cause an increase in sales, procurement, number of customers, number of assets, cooperation between organizations, and customer's trust.

The existence of these problems cannot be separated from the speed of distribution or delivery of goods by PT Wahana Prestasi Logistik which is deemed to be still less than optimal, [3] In the marketing channel, there is less visible logistics integration that does not meet the expectations of its service users. Additionally, the logistics integration has the meaning of a necessary process so that the desires of each party in obtaining capital, material, human, technology and information, meet the existence of guaranteeing a smooth flow of high quality As a result, it helps improve operational performance [4], [5][6]The cause of the problem can occur because the estimated time obtained by the service user is different, and the speed of delivery of goods is uneven for some areas.

Based on this phenomenon, the authors want to conduct a research with the title of "The Logistic Integration and Delivery Speed Influence on the Growth of PT. Wahana Prestasi Logistik." The research aims to analyse the influence, either simultaneously or partially, of the logistic integration and the delivery speed's Influence on the Growth of PT. Wahana Prestasi Logistik Bogor.

There are some researches having similarities and differences with this research as follows;

The logistics integration, supply chain performance partially or simultaneously, has a significant effect on distribution speed. Meanwhile, the distribution speed has a very notable influence on the company's growth [7] There is also a significant relationship between all variables of the research model. There is a positive relationship with good



significance between the supply logistics Integration and the inbound supply performance and between the supply logistics integration and the competitive performance. There is even a positive relationship between the inbound supply performance and the competitive performance ([6].

The online retailers can benefit significantly from not only managing delivery speed disclosures to increase sales, profits and customer's retention, but also reducing product returns [1] The participation of e-consumers has the potential to give a positive influence to logistics and freight forwarding organizations. The importance of increasing the dissemination of information on the environmental impact of long-distance shipping at the time of purchase is to increase consumer's awareness and to make shipping more sustainable [2]

The rental rates (in markets factor) are negatively related to the total production capacity. Meanwhile, the transportation fares (based on the market products) are positively related to the total production capacity [8]. In container shipping, large companies and carriers prefer to own their vessels rather than to charter them from the charter market. Then, the shipping market is driven by a competitive process where supply and demand interact to determine shipping rates. Excessive demand causes a shortage of ships, which also affects the increase in freight rates. In the end, larger firms tend to use growth strategies to make them more competitive and prosperous while forcing their weaker rivals to exit the industry [9]. The empirical evidence from these studies is well received, but more researches are needed in this area. Much push for the service growth has been a response to eroding margins in the product market and a way to gain revenue stability through business cycles. While the weaknesses of the pureproduct firm are well understood, the evidence of 'more services' is an effective way to address them adequately. Broader evaluations of the impact of service deployment on profitability across industries, countries, types of products and services, and a solid understanding of the environmental factors should be a high priority of the service growth research agenda. Establishing where the service growth strategy works and under what conditions is a first fundamental step to justify its effectiveness and will be instrumental in building the credibility for the research to influence practices [10].



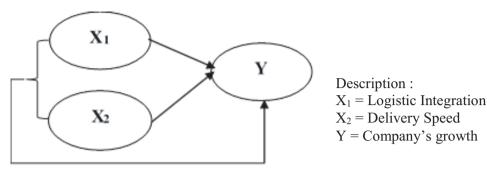


Figure 1

## 2. METHOD

This research uses descriptive quantitative research methods, using primary data sources obtained based on the withdrawal of questionnaires to customers who are respondents in Bogor, Tangerang, and Bekasi (Botabek) areas.

The population of this research was the service users of PT. Wahana Prestasi Logistik with 100 respondents. Meanwhile, the sampling technique used was probability sampling (random), with the required sample in the form of the average level of satisfaction of service users of PT. Wahana Prestasi Logistik Bogor, Tangerang and Bekasi, on logistics integration from the user's perspective regarding opinions on costs, logistics operations and effective information systems. In addition, it was also about the user's view of the delivery speed felt by the 100 respondents. Respondents were determined by an area (cluster sampling). According to [11] the sampling area (cluster sampling) is used if the object or source of the research data is very wide so that the sampling is based on a predetermined population area.

TABLE 1: Predetermined Population Area.

No.	Variables	Source	Indicators	Scale
1.	Logistic Integration	[12]	Logistic Service Provider Service Fee Information System	Likert
2.	Delivery Speed of Goods	[1]	Transportation Mileage Estimated Arrival Time Punctuality	Likert
3.	Company's Growth	[10]	Total Assets Customer's Trust Sales Increase	Likert

Source: The Data Was Processes by the Authors (2021)



## 3. DISCUSSION AND RESULT

Based on the results of the distribution of the questionnaire obtained:

Of the 114 samples of respondents taken, 58% of respondents are women and 42% of other respondents are men. This shows that female customers have a larger proportion compared to male customers. Then, the average age group of respondents is in the productive age group, which is 20-30 years with a percentage of 62%, then the elderly age group (50 years and over), and the rest comes from the age group below 20-50 years). This shows that the average service user or customer of PT. Wahana Prestasi Logistik is a young age group and an elderly age group. Furthermore, the average respondents are dominated by Tangerang area, with the percentage obtained at 55.68%, and the rest comes from Bogor and Bekasi areas.

Based on the results of the validity test of the research instrument for variables X1, X2, and Y, it is found that there is validity. This means that all instruments can be submitted in a questionnaire. Then, supported by the results of the reliability test, it produces Cronbach's Alpha values, which the value of all variables is 0.80; with respective variable of X1 = 0.880, X2 = 0.904 and Y = 0.914. Therefore, all research instruments are reliable to be studied. Based on the test results, the correlation coefficient of influence on X1 is 0.804 based on the guideline of interpretation value of correlation values in the range of "0.80 - 1.00". It means that the level of relationship between X1 and Y is included in the "very strong" level of relationship. Then, based on the test results, the correlation coefficient value against X2 is 0.885 based on the guideline for interpreting the value of the correlation value in the range of "0.80 - 1.00". It means that the level of the relationship between X2 and Y is included in the "very strong" relationship. Furthermore, based on the multiple correlation test, it is known that the significant value is <.000, and it is said that the correlation among variables and the value of R square = 0.793 means that there is a "strong" relationship between the variables (X1) and (X2) to (Y).

Then, a multiple analysis test was carried out, the classical basic regression analysis shows that the results of several variables involved meet the qualifications of the requirements and classical assumptions by testing the significance of the model and its interpretation. Based on the results that have been obtained from the regression coefficients, a regression equation is made as follows:

In which

Y : Company's Growth



X<sub>1</sub>: Logistic Integration

X<sub>2</sub>: Delivery Speed

The multiple linear regression equation means that every 1 unit increase in the application score on the X1 (Logistics Integration) variable of 0.192 will be followed by an increase in Y (Company Growth) of 0.227. These results are in accordance with the previous research by [7] which states that logistics integration (X1), supply chain performance (X2) partially or simultaneously have a significant effect on distribution speed (Y). With the good and increasing logistics integration, it can bring benefits from the operational side of a partner, including the use of minimal costs, lead time, risk and sales, distribution, service to customer's satisfaction which can be achieved with maximum results [13] It is followed by a multiple linear regression equation which means that for every 1 unit increase in the application score on the X2 (Shipping Speed) variable of 0.789, it will be followed by an increase in Y (Company Growth) of 0.227 with the assumption that X1 (Logistics Integration) is in a constant state. These results are in accordance with the previous research by [1] which contends that retailers, including shippers, get significant benefits from well-managed delivery speed information, so it can increase sales, profits, and customer's retention which these factors also support the growth of their business.

However, there is also an assumption that delivery speed becomes less important due to other factors such as the low performance of operators in some companies so that customers are accustomed to low delivery speeds [14]. Consequently, the speed of delivery is not the most visible factor of the company's growth. The growth of logistics service providers can increase if it is balanced with an increase in services (from other factors) that need to be provided to consumers or customers, of course, which is more profitable for them in the use of freight forwarding services [15].

## 4. CONCLUSION

Based on the results and discussion above, it can be concluded that there is a positive and significant influence and relationship from the existence of logistics integration on company's growth. This means that if logistics integration is improved, the company's growth will also increase significantly, especially in the growth of services provided by PT. Wahana Prestasi Logistik. Furthermore, the delivery speed has a positive and significant impact on the company's growth. Also, if the delivery speed increases, the



company's growth of PT. Wahana Prestasi Logistik will also increase. Lastly, there is a relationship on logistics integration and the speed of simultaneous delivery of goods to the growth of the company from PT. Wahana Prestasi Logistik that have a positive and significant impact. In addition, if both work well together, they will be very helpful in increasing the company's growth.

## References

- [1] Cui R, Sun T, Lu Z, Golden J. Sooner or Later? Promising Delivery Speed in Online Retail. *SSRN* Electronic Journal. 2020;1–39.
- [2] Nogueira GP, de Assis Rangel JJ, Shimoda E. Sustainable last-mile distribution in B2C e-commerce: do consumers really care? Cleaner and Responsible Consumption. 2021 Dec;3:100021.
- [3] David. Kiriman Wahana Belum Sampai, Saat Diminta Solusi Malah Disuruh Tambah Biaya Ongkir. Sep. 08, 2021. Availhttps://mediakonsumen.com/2021/09/08/surat-pembaca/kiriman-wahanaable: belum-sampai-saat-diminta-solusi-malah-disuruh-tambah-biaya-ongkir
- [4] Mufidah A, Alif Z, Hutauruk PS, et al. The Evaluation of Distribution Channels in Managing **Excess** Inventories in **Pandemic** Covid-THE **EVALUATION** OF **DISTRIBUTION CHANNELS** IN MANAGING **EXCESS INVENTORIES** IN PANDEMIC COVID-19. 2020. p. 424-435. Available: https://proceedings.itltrisakti.ac.id/index.php/ATLR/article/view/297
- [5] Kaye I. Transportation. Rural Society in the U.S.: Issues for the 1980s. Routledge; 2019. pp. 156–63.
- [6] Attia A. Supply logistics integration in the Saudi food industry. Bus Process Manag J. 2018;24(4):1007–22.
- [7] Bawono AT, Rumambi FJ, Rante JZ. PENGARUH INTEGRASI LOGISTIK DAN KINERJA RANTAI PASOK TERHADAP KECEPATAN DISTRIBUSI BARANG DAN DAMPAKNYA PADA PERTUMBUHAN PERUSAHAAN PT. YICHENG LOGISTICS. 2019;05(02):15–24.
- [8] Ferdiansyah A, Adrianto L, Sartono B. Pemodelan Dinamik dan Peramalan Tarif Angkutan Pelayaran Curah Kering. War. Penelit. Perhub. 2018;29(2):201–18.
- [9] Lun YH, Pang KW, Panayides PM. Organisational growth and firm performance in the international container shipping industry. Int J Shipp Transp Logist. 2010;2(2):206– 23.



- [10] Kowalkowski C, Gebauer H, Oliva R. Service growth in product firms: Past, present, and future. Ind Mark Manage. 2017;60(1):82–8.
- [11] D. Sugiyono, Metode penelitian kuatintatif, kualitatif dan R & D / Sugiyono. 2018.
- [12] Chiung LL, Ming YL Integration, supply chain resilience, and service performance in third-party logistics providers. *Logistics*. 2018.
- [13] Prajogo D, Olhager J. Supply chain integration and performance: the effects of long-term relationships, information technology and sharing, and logistics integration. Int J Prod Econ. 2012 Jan;135(1):514–22.
- [14] Tontini G, Söilen KS, Zanchett R. Nonlinear antecedents of customer satisfaction and loyalty in third-party logistics services (3PL). Asia Pac J Mark Log. 2017;29(5):1116–35.
- [15] Simarmata J, Sitorus MR, Kosasih SC, Suvittawat A. Service Innovation for Business Growth: Case Study of Thai and Indonesian Logistic Entrepreneurs. 2018. p. 1486–1495.