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# KỶ YẾU

## HỘI THẢO KHOA HỌC QUỐC TẾ

# PHÁT TRIỂN KINH TẾ XANH Ở VIỆT NAM

INTERNATIONAL CONFERENCE PROCEEDINGS  
GREEN ECONOMIC DEVELOPMENT IN VIETNAM

Tập 2



NHÀ XUẤT BẢN HÀ NỘI



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**Tháng 5 - 2023**

## LOGISTICS ACTIVITIES FOR TEXTILE ENTERPRISES IN BINH TRI THIEN REGION: DEVELOPMENT OF A VALID MEASUREMENT SCALE

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**Abstract.** *The scope of this research paper is to build a standardized scale of logistics activities in enterprises. The essence of logistics activities as proposed by council of logistics management is referring to efficient and effective movement and storage of goods, services, and its related information's from point of origin to point of consumption. However, how to assess the effective and efficient transportation and storage of goods, services, and information is the fundamental question that every organization seeks to resolve. With this overarching objective in mind, the researcher seeks to create a scale that takes secondary literature research and the opinion of logistics experts into account when assessing the logistical methods in textile enterprises in the Binh Tri Thien region. The study used exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) to develop and validate the scale using survey data from textile enterprises in the Binh Tri Thien area. A measurement scale for logistic activities of textile enterprises, which includes five dimensions: internal logistics, internal logistics, external logistics, support logistics and logistics costs.*

**Keywords:** *Logistics activities, textile enterprises.*

## HOẠT ĐỘNG LOGISTICS CHO DOANH NGHIỆP DỆT MAY KHU VỰC BÌNH TRỊ THIÊN: PHÁT TRIỂN THANG ĐO

**Tóm tắt.** *Phạm vi của bài báo nghiên cứu này là xây dựng thang đo chuẩn hóa hoạt động Logistics trong các doanh nghiệp. Bản chất của quản lý logistics theo đề xuất của hội đồng quản lý logistics là đề cập đến việc di chuyển và lưu trữ hiệu quả và hiệu quả hàng hóa, dịch vụ và các thông tin liên quan từ điểm xuất phát đến điểm tiêu thụ. Tuy nhiên, câu hỏi quan trọng mà mọi doanh nghiệp đều nhắm đến để trả lời là làm thế nào để đánh giá việc di chuyển và lưu trữ hàng hóa/dịch vụ/thông tin một cách hiệu quả và hiệu quả. Ghi nhớ mục tiêu rộng lớn này, nhà nghiên cứu nhằm mục đích phát triển thang đo dựa trên nghiên cứu tài liệu thứ cấp và ý kiến chuyên gia Logistics về cách các hoạt động logistics trong các doanh nghiệp dệt may. Nghiên cứu sử dụng số liệu khảo sát từ các doanh nghiệp dệt may tại khu vực Bình Trị Thiên để kiểm định thang đo thông qua phân tích nhân tố khám phá EFA và phân tích nhân tố khẳng định CFA. Nghiên cứu đã nhận diện 5 thành phần cấu thành nên hoạt động logistics: logistics nội bộ, logistics bên trong, logistics bên ngoài, logistics hỗ trợ và chi phí logistics.*

**Từ khóa:** *Hoạt động logistics, doanh nghiệp dệt may.*

## **Introduction.**

In recent times a lot of literature highlight the importance of logistics either as a source of competitive advantage (Bowersox, 1990; Williamson, Spitzer and Bloomberg, 1990; Christopher, 1998; Carvalho and Dias, 2000; Lai et al., 2006; West and Bengtsson, 2007; Sharma et al., 2007), or as a determinant for the success of firms (Bowersox, 1990; Post et al., 2002; Sadler and Sohal, 2005; Feng and Yuan, 2006). Some of those changes are: (i) the globalization of businesses (Christopher, 1998; HIDC, 1998; Evans, 2000); (ii) Shortening of Product life cycle (iii) Industrial competition (NEVEM-workgroup, 1989); and (iv) the appearance of new competitive priorities (Wheelwright, 1978). The appearance of those changes has highlighted the logistics importance since it makes possible that firms becomes more competitive than their competitors (Skinner, 1969). This is because through logistics firms reach easier the new competitive priority and agility (Wheelwright, 1978; Carvalho et al., 2001).

Today's logistics activities are not only associated with warehouse activities, freight forwarding, but also planning and arranging the flow of raw materials and materials from suppliers to manufacturers, then moving goods from production to the final consumer, creating a connection throughout society in ways that optimize, reduce transportation and storage costs. A well-executed logistics chain will help solve both inputs and outputs for businesses effectively, three products and services to the right place, at the right time with minimal costs while still satisfying the requirements of society and consumers. Therefore, logistics activities have, are and will have a great influence on the business performance of enterprises.

The main objective of this paper is to build a set of logistics activities in textile enterprises. To attain this, we propose a performance measurement system in a logistics context and test some linkages between logistics activities in the enterprises.

## **1. Literature Review**

### ***1.1. Logistics activities***

Logistics is described as activities (services) related to logistics and transportation, including jobs related to supply, transportation, production tracking, warehousing, distribution procedures, customs, so logistics is a collection of activities of many industries and stages in a complete process (Liyan Zuo, 2016), (Doan Thi Hong Van, 2010). Thus, it can be understood that logistics are services related to activities that ensure the optimization of the entire production and business process, including from input supply to product consumption, which are self-organized by enterprises, implemented or outsourced (Đặng Đình Đào, 2003) (Lê Công Hoa, 2013) (Hu Mingming, 2010). Quality of logistics activities for textile enterprises is constituted by transportation services, supply of raw materials and necessary elements for production, transportation services, distribution of raw materials and finished products from home. Machines to users and other logistics services such as packaging, delivery, warehousing, procedures, paperwork, information services. Based on classifications of

logistics activities in textile enterprises, research the research and identification of logistics activities includes the following activities:

**Internal logistics:** In the flow of segmented materials within the factory, raw materials are transported from the warehouse to the production site, and they are handled during production. This activity is also known as internal logistics. The task of internal logistics is to establish relationships between production departments in the enterprise. Therefore, internal logistics must transport raw materials and semi-finished products to parts in the production process. Effective internal logistics activities will help businesses save costs and increase business efficiency (Nguyễn Đình Hiền, Đặng Đình Đào, 2013) (Lê Công Hoa , 2013) (Trần Văn Hòa, 2014).

**Inbound logistics:** Inbound logistics activities are responsible for transporting and supplying materials and elements needed for production from the supplier to the factory or production site. Inbound logistics is also responsible for regulating the relationship between the company and its material suppliers (Angelisa Elisabeth Gillyard, 2003). The input logistics activities directly affect the revenue, cost, and competitive advantage of the business (Lê Công Hoa , 2013).

**Outbound logistics** is the process of transporting and distributing raw materials and finished products from the factory to the user. Outbound logistics is also responsible for establishing relationships between the company and its customers. In addition to directly affecting costs, revenue, and output logistics, it also directly affects the competitive position of enterprises (Lê Công Hoa , 2013) (Lai, 2002) (K. Kavčič, 2016).

**Support logistics** is the process of transporting and distributing raw materials and finished products from the factory to the user. Support logistics is also responsible for establishing relationships between the company and its customers. In addition to directly affecting costs, revenue, and output logistics, it also directly affects the competitive position of enterprises.

*Logistics costs:* Whether outsourcing or self-service, businesses always must incur costs for logistics activities, which may include transportation costs, inventory costs, warehousing costs, order processing costs. goods and information systems, ordering costs, etc (Yuehua Yuan, 2018). The cost level will directly affect the business performance of textile enterprises. The more reasonable the cost of logistics activities, the higher the business efficiency and vice versa (Nguyễn Xuân Hào , 2015).

### ***1.2. The role of logistics activities with business efficiency of enterprises***

Manufacturing enterprises in general and textile enterprises create products supplied in the market to make profits. Therefore, logistics activities also have a close relationship in improving the competitiveness and operational efficiency of these enterprises. Especially in improving the competitiveness and operational efficiency of enterprises in specific markets:

Logistics activities improve production, use rationally, save resources, reduce costs for the production process, improving the competitiveness of enterprises (Angelisa Elisabeth Gillyard, 2003) (Krauth, 2005).

Logistics activities ensure supply at the right time and place, helping the production process to go smoothly flow, contributing to improving product quality and lowering product prices (Krauth, 2005) (Lai, 2002).

Logistics activities help managers make decisions about the source of raw materials, the quantity to be supplied and the optimal time to minimize the costs incurred, ensuring the efficiency of production and business activities (production and business). (Angelisa Elisabeth Gillyard, 2003) (Krauth, 2005) (Lai, 2002).

Logistics activities contribute to increasing the business value of enterprises through the implementation of additional circulation services (services that continue the production process in the distribution and circulation stage). Logistics is a service with a much larger scale and complexity than pure transportation and forwarding (Angelisa Elisabeth Gillyard, 2003). In the past, the freight forwarder only provided customers with simple, pure, and individual services. Today, due to the development of production and circulation, the details of a product can be supplied by many countries, and conversely, a product of an enterprise can be consumed in many countries, many markets. different markets, so the services that customers require from distributors, transport and forwarding businesses must be diverse (Krauth, 2005).

The research determines that the quality of logistics activities are influenced by the following factors:

**\* *Internal logistics of the enterprise***

According to author Le Van Bay, the task of internal logistics is to establish relationships between production departments in the company.

Therefore, internal logistics must transport raw materials and semi-finished products to parts of the production process. Effective internal logistics activities will help businesses save costs and increase business efficiency. Thus, the relationship between service quality internal logistics and business efficiency is positive. The research proposed 3 items in internal logistics.

**\* *Inbound logistics to supply raw materials***

Inbound logistics activities tasks are transporting, supplying raw materials and necessary factors for production from suppliers to factories or production places. Inbound logistics is also responsible for regulating the relationship between the company and its material suppliers. It is clear that inbound logistics activities have a direct impact on the business's revenue, costs, and competitive advantages. Each relationship between this factor and the efficiency of production and business activities is in the same direction. The research proposed 5 items in the inbound logistics.

**\* *Criteria for evaluating outbound logistics***

The quality of finished product distribution logistics or outbound logictis is understood as the process of transporting and distributing raw materials and finished products from the factory to the user. Outbound logistics is also responsible for establishing relationships between the company and its customers. In addition to directly

affecting costs, revenue, and output logistics, it also directly affects the competitive position of enterprises. The research proposed 5 items in the outbound logistics.

**\* *Other logistics support***

In the process of performing logistics activities, businesses may encounter many problems such as faulty goods purchased or exported, delayed delivery times, damaged goods, the search process, linking with other customers. external logistics service company... These factors greatly affect the cost, revenue, profit, competitive position of the business. These factors directly affect the business efficiency of enterprises. Authors such as Le Van Bay, Doan Thi Hong Van, Angelisa Elisabeth Gillyard all determined that this factor has a positive impact on business efficiency. The research proposed 6 items in logistics support.

**\* *Cost of using logistics services***

Whether outsourcing or self-service, businesses always have to spend money on logistics activities. The level of costs will directly affect the business performance of textile enterprises. The more reasonable the cost of logistics activities, the higher the level of business efficiency and vice versa. The research proposed 5 items in the logistics cost.

**Methodology**

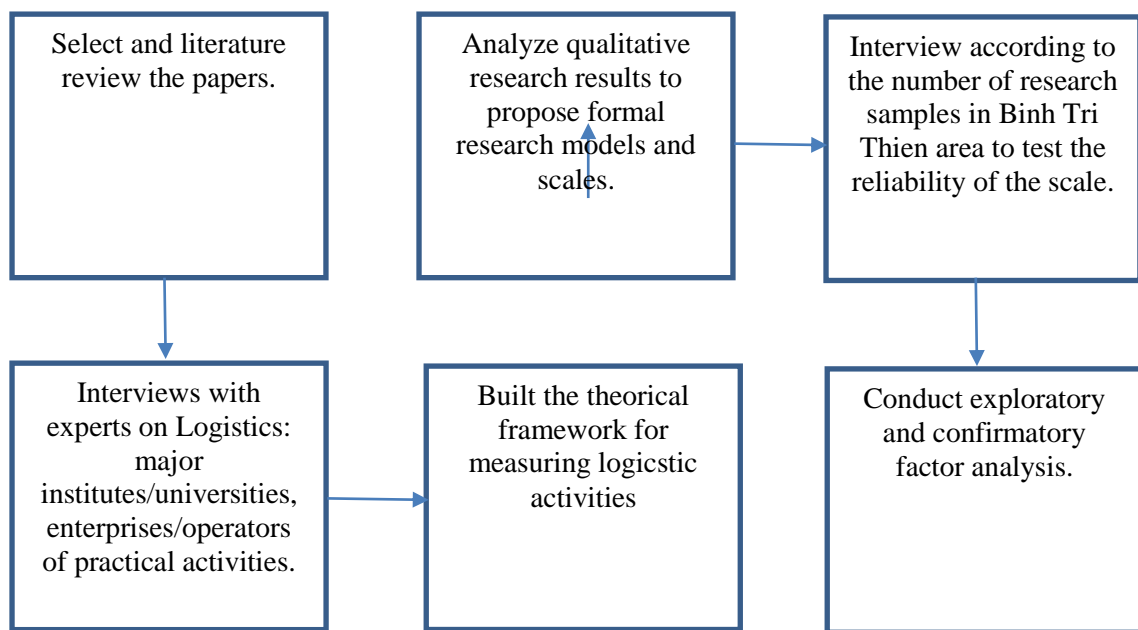
- Developing theoretical framework and research process: The research team collects and evaluates major domestic and foreign scientific works related to the topic, thereby building a theoretical framework and process. research consistent with the research objectives of the topic.

- Development of a measurement scale: On the basis of a theoretical model (from the overview) and through in-depth interviews with authorities, to develop a measurement scale suitable to the current situation of the epidemic.

- Scale development: research develops from the existing scale of previous research. Qualitative research is carried out as a basis for building models and supplementing explanations for research results from quantitative data. The internal consistency approach evaluates the scale's reliability using the Cronbach's Alpha coefficient. Before examining exploratory and confirmatory factor analysis components, apply the Cronbach's Alpha reliability coefficient approach to exclude unsuitable variables.

Finally, the research conducts exploratory and confirmatory factor analysis to develop and validate the scale using survey data from textile enterprises in the Binh Tri Thien area.

In order to achieve the stated research objectives and using the above-mentioned approach, the study proceeds according to the following procedure.



**Figure 1. Research process**

*Source: Proposed by authors*

## 2. Qualitative research results

To check the validity of the logistics activities scale, the author chooses a method of interviewing how experts are managers and employees who are in charge of logistics activities in textile enterprises and supply companies. logistics service for interview. The interview subjects consisted of 12 people, the content of the interview was carried out according to the questionnaire, the interview time was conducted in 30-1h/subject. At the end of the interview, the respondents and the author reached a high consensus on the criteria as well as the additional and revised contents. This is an important basis in designing the main scale for the quantitative research of the thesis. The results of the interview are as follows:

The experts invited to interview assess the factors of logistics activities that affect the business performance of enterprises. In which, the group of factors that have the greatest influence are:

- Transportation activities, ordering, relationships between businesses and raw material suppliers (10/12 people listed).
- Transportation activities, delivery to partners and distribution system. (12/12 people listed).
- Packing, forwarding, payment procedures (12/12 people listed).
- Capacity of enterprises in production management (10/12 people listed).
- Expenses for transportation and outsourcing activities (12/12 people listed).
- Relationship between businesses and partners (7/12 people listed).

In general, the factors that experts consider have high similarities in the factors proposed by the synthesis thesis. When considering the grouping of evaluation criteria for the general factor, it also received high agreement from the interviewers.

For the measurement criteria for the factor, the results are suggested as follows:



**\* Internal Logistics Scale:**

**Table 1. Official scale for assess the internal logistics**

Code	Criteria	Opinions	Source
LNB1	The inventory of raw materials and finished products are adequate.	Additional	Le Van Bay, Doan Thi Hong Van
LNB2	The company's departmental coordination process works properly.	Keep the original	
LNB3	Enterprises have adequate transportation, human resources, warehouses, and capital to support production and business activities.	Keep the original	

*Source: Combine research from authors.*

After qualitative research, in the Internal Logistics quality scale the expert agreed to keep 2 items LNB2 and LNB3 but substituted LNB1: “*The inventory of raw materials and finished products are adequate*”.

**\*Inbound Logistics Scale:**

In the Inbound Logistics scale, LDV4 is suggested to add in the scale “The information on the raw material suppliers' catalogs is comprehensive”, all 5 items are kept.

**Table 2. Official scale to assess the inbound logistics**

Code	Criteria	Opinions	Source
LDV1	The process of transporting materials for efficient manufacturing.	Keep the original	Le Van Bay, Doan Thi Hong Van, Nguyen Xuan Hao, Angelisa Elisabeth Gillyard.
LDV2	It is simple to order production materials.	Keep the original	
LDV3	Ordering time and raw material transportation to ensure production and business progress	Keep the original	
LDV4	The information on the raw material suppliers' catalogs is comprehensive.	Additional	Nguyen Dinh Dao, Doan Thi Hong Van, Nguyen Xuan Hao, Angelisa Elisabeth Gillyard.
LDV5	The company has a good working relationship with the raw material supplier.	Keep the original	
LDV6	Less product errors (technical errors, packaging errors, excess, or missing product errors, etc.) in the trading process with material suppliers	Keep the original	

*Source: Combine research from authors.*

\* *Outbound Logistics Scale:*

All experts decided to keep all the 5 items in the outbound logistics scale.

**Table 3. Official scale to assess the quality of outbound logistics**

Code	Criteria	Opinions	Source
LDR1	Packaging and transportation of finished products to partners and convenient sales locations	Keep the original	Le Van Bay, Doan Thi Hong Van, Nguyen Xuan Hao, Angelisa Elisabeth Gillyard.
LDR2	The packaging and preservation of finished goods is excellent.	Keep the original	
LDR3	The time of delivery/shipping to the point of sale is always on time.	Keep the original	
LDR4	The company maintains positive relationships with its distributors/partners.	Keep the original	
LDR5	Few mistakes and misunderstandings (quantity, product design, location, object, etc.) in delivery	Keep the original	Nguyen Dinh Dao, Doan Thi Hong Van, Nguyen Xuan Hao, Angelisa Elisabeth Gillyard.

*Source: Combine research from authors.*

\* *Support Logistics Scale:*

**Table 4 Official scale to assess the support logistics**

Code	Criteria	Opinions	Source
LHT1	The company has a comprehensive and up-to-date information system about its partners and customers. => Customer and partner information is complete and up to date.	Alter the wording	Le Van Bay, Doan Thi Hong Van, Nguyen Xuan Hao, Angelisa Elisabeth Gillyard.
LHT2	Efficient order processing, order processing, complaint handling	Keep the original	
LHT3	Procedures for goods delivery and receipt, convenient and easy payment	Keep the original	
LHT 4	The company is very adaptable in terms of product specifications, delivery time, location, and so on.	Keep the original	

LHT5	Find professional logistics service providers quickly and easily.	Keep the original	Nguyen Dinh Dao, Doan Thi Hong Van, Nguyen Xuan Hao, Angelisa Elisabeth Gillyard.
LHT6	Businesses can benefit from outsourced logistics services.	Keep the original	

*Source: Combine research from authors.*

All experts decided to keep all the 5 items in the outbound logistics scale. However, in the LHT1 items is suggested to alter the wording: “Customer and partner information is complete and up to date”.

**\* Logistics Cost Scale**

After qualitative research, in the logistics cost scale, the expert agreed keep 5 items from CPL1 to CPL5 and added the CPL6: “It is reasonable to rent a warehouse and inspect the goods”.

**Table 5. Official scale for assessing logistics costs**

Code	Criteria	Opinions	Source
CPL1	Shipping cost is reasonable	Keep the original	Dang Dinh Dao, Nguyen Spring Good, Angelisa Elisabeth Gillyard.
CPL2	The cost of raw material inventory is reasonable.	Keep the original	
CPL3	The cost of finished goods inventory is reasonable.	Keep the original	
CPL4	Order processing and information system costs are reasonable.	Keep the original	
CPL5	The paperwork for goods delivery and payment is reasonably priced.	Keep the original	
CPL6	It is reasonable to rent a warehouse and inspect the goods.	Additional	

*Source: Combine research from authors.*

Based on qualitative research, the author adjusts the factors for use in formal research.

The author systematized theoretical issues about Logistics activities. The criteria in 5 groups of Logistics activities: Internal Logistics, Input Logistics, Output Logistics, Support Logistics and Logistics costs have been synthesized, inherited and proposed by the author.

**5. Evaluating and examining the Scale of Logistics activities.**

**5.1. Descriptive statistics**

With a sample size of 230 directors of textile enterprises and managers of the logistics department of the enterprise, the selection of the proposed sampling method here

is a convenient sampling method divided by local and regional variables. The survey results show that the surveyed enterprises are concentrated in three types of enterprises, private enterprises, limited liability companies and joint stock companies. Out of a total of 212 respondents, mainly limited liability companies, accounting for 67.5% of the total sample. This is also consistent with the representativeness because in the overall SMEs of the provinces, limited liability companies account for a very large proportion. Regarding the survey area, the survey subjects are distributed in three provinces: Thua Thien Hue, Quang Tri, and Quang Binh. The survey results show that mainly enterprises belong to Thua Thien Hue, accounting for 60.8%. The remaining two provinces have approximately the same percentage of respondents ( $\approx 40\%$ ).

### **5.2. Examine the scale.**

The internal consistency approach evaluates the scale's reliability using the Cronbach's Alpha coefficient. Before examining EFA components, apply the Cronbach's Alpha reliability coefficient approach to exclude unsuitable variables because these garbage variables can create dummy variables (Nguyen Dinh Tho & Nguyen Thi Mai Trang, 2009). Cronbach's Alpha analysis evaluation requirement for this study is that variables with total correlation coefficients of less than 0.3 will be discarded, and scales with alpha reliability of 0.6 or higher can be employed in this study. if the idea under studied is novel to the respondent in the context of the research (Nunnally, 1978; Peterson, 1994; Slater, 1995).

The method of finding Cronbach's Alpha coefficient (CA) from 212 samples gathered is used to examine the relevance of observable variables as well as independent variables in the research model. Table... in appendix... shows the results of the CA (all  $>0.6$ ) coefficient study.

The results of the CA analysis also demonstrate that there are 39 observed variables that provide dependability for inclusion in the EFA analysis.

### **5.3 Exploratory factor analysis (EFA)**

Cronbach's Alpha analysis includes 39 observed variables belonging to 5 independent variables and 4 observed variables (which are subdivided into 13 small variables) belonging to 1 dependent variable. According to the results of the scale's reliability analysis, all the scales met and were included in the EFA analysis.

#### **5.3.1. Exploratory factor analysis.**

Factor analysis with Varimax rotation was performed to identify factors for further analysis. With the hypothesis posed in this analysis, there is no correlation between the 25 observed variables in the population. KMO and Barlett's test in factor analysis shows that this hypothesis is rejected (sig = 0.000), the KMO coefficient is 0.856( $>0.5$ ). This result indicates that the observed variables in the population are correlated with each other, and factor analysis (EFA) is appropriate.

The EFA study findings reveal that with the principal component extraction approach and Eigenvalue = 1,813 ( $>1$ ), the Varimax rotation allows to extract 5 factors

from 26 observed variables and the derived variance is cumulative Eigenvalues=71.03%, the extracted variance meets the requirements.

Table 6 clearly shows the factor rotation matrix, demonstrating that all observed variables had load coefficients greater than 0.5. As a result, the results have guaranteed the discriminant between factors. According to the EFA results, the logistics activity scale has 5 factors and 25 observable variables. The variables will be calculated using the factors to create new variables for regression analysis.

**Table 6. EFA analysis results**

<i>Factor rotation matrix</i>					
<i>Observe variables</i>	<i>Components</i>				
	1	2	3	4	5
LNB1	0.551				
LNB2	0.828				
LNB3	0.873				
LDV1		0.677			
LDV2		0.638			
LDV3		0.603			
LDV4		0.683			
LDV5		0.763			
LDV6		0.769			
LDR1			0.877		
LDR2			0.809		
LDR3			0.740		
LDR4			0.854		
LDR5			0.919		
LHT1				0.826	
LHT2				0.652	
LHT3				0.634	
LHT4				0.828	
LHT5				0.655	
LHT6				0.589	
CPL1					0.761

CPL2					0.816
CPL3					0.693
CPL4					0.775
CPL5					0.928
CPL6					0.790

Source: Data Analysis

#### 5.4. Confirmatory factor analysis (CFA)

CFA method in analyzing linear structure model is used because it has many advantages compared to traditional methods such as correlation coefficient method, exploratory factor analysis (EFA), multiple methods-multiple concepts. Specifically, the CFA method allows testing the theoretical structure of measurement scales, such as the relationship between a research concept and other concepts without being biased by measurement errors (Steenkamp & Van Trijp, 1991). Moreover, CFA allows testing the convergent and discriminant value of the scale without using as many studies as the traditional method.

Following CFA confirmatory factor analysis, the data yielded a Chi-Square adjusted for degrees of freedom (CMIN/df) of 1,329 (2), which is considered good (Hair et al., 2010; Hu & Bentler).

**Table 7: The index to assess the relevance of the confirmatory factor analysis**

Index	CMIN/df	GFI	TLI	CFI	RMSEA	PCLOSE
Value	1.329	0.985	0.975	0.972	0.029	0.956
Reference value	<2	≥0.9	>0.95	>0.95	<0.03	>0.05
Conclusion	Good	Good	Very good	Very good	Very good	Good

Source: Data analysis

Hair et al (A Primer on Partial Least Squares Structural Equation Modeling, 2021) suggest that an AVE value of 0.5 or higher indicates that the latent variable will explain more than half the variance of its observed variables, at this scale achieves good convergence. In table 8 shows that all scale achieves good convergence (all>0.5)

**Table 8: The index Composite Reliability & Average Variance Extracted**

	Composite Reliability (CR)	Average Variance Extracted (AVE)
Internal Logistics	0,873	0,579
Inbound Logistics	0,916	0,784

Outbound Logistics	0,948	0,785
Support Logistics	0,859	0,670
Logistics cost	0,927	0,762
<b>Reference value</b>	<b>≥0,7</b>	<b>≥0,5</b>
<b>Conclusion</b>	<b>Significant</b>	<b>Significant</b>

Source: Data analysis

The obtained absolute goodness of fit index (GFI) is 0.985 ( $\geq 0.9$ ), expressed at a good level. The Comparative Relevancy Index (CFI) and the Tucker & Lewis Index (TLI) of 0.972 and 0.975 are both greater than 0.95, respectively, and the indicator is at a very good level. The model's goodness of fit (RMSEA) index of 0.03 is very good (Hair et al., 2010; Hu & Bentler, 1999). With a value of 0.029, it shows that the fit of the model compared to the overall is very good; A PCLOSE index of 0.956 greater than 0.05 is very good (Hu & Bentler, 1999). The criteria for assessing the relevance of the confirmatory factor analysis are significant to reinforce the confirmatory factor analysis to be appropriate.

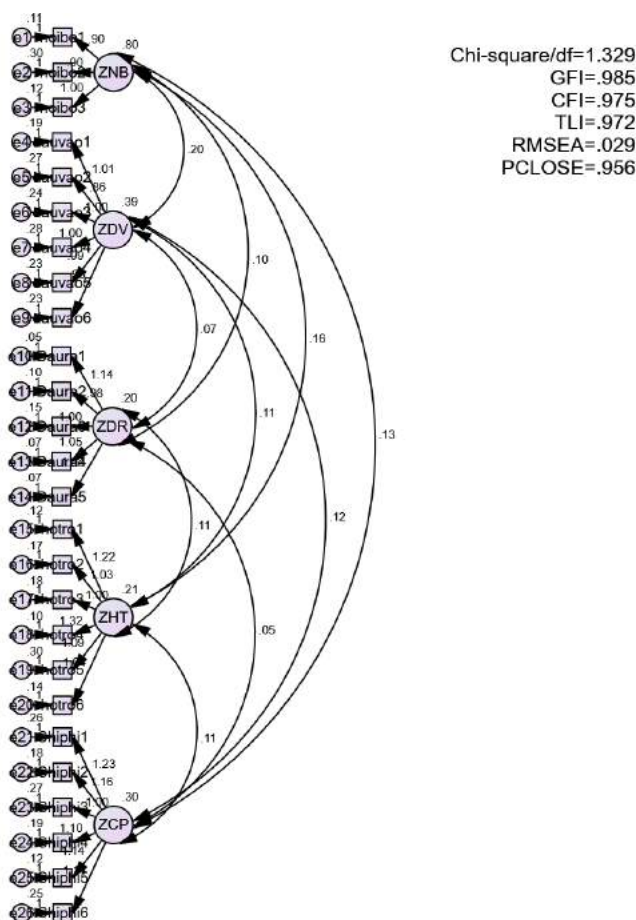


Figure 2. Confirmatory factor analysis result of Logistics activities scale.

Source: Data analysis

## 6. Conclusion

The main objective of this research paper is to develop and validate the scale using survey data from textile enterprises in the Binh Tri Thien area. The official scale of logistics activities includes 26 observed variables grouped into 5 dimensions as follows: internal logistics (3 observed variables), inbound logistics (6 observed variables), external logistics (5 observed variables), support logistics (6 observed variables) and logistics costs (6 observed variables). From Cronbach's alpha, Exploratory factor analysis (EFA) and Confirmatory factor analysis (CFA) demonstrate that the scales achieve reliability, the observed variables in each scale achieve convergent and discriminant values.

As future research line we would like to point out the following: (i) The present study can be further tested empirically and validated. It is further recommended that manufacturing industries where the logistic activity and supply chain network is quite apparent can be used as a basis for study. (ii) To identify and test other predictor variables of business efficiency beyond the logistics practices. Researchers believe that an alternative theoretical model could be proposed considering the resources and capabilities of firms with a special highlight on information and communication resources and capabilities. Such a proposed framework provides an important base for further study.

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Appendix

<b>Appendix 1. The result of Cronbach's Alpha</b>			
<b>Research variables</b>	<b>Observed variables</b>	<b>Corrected Item-Total Correlation</b>	<b>Cronbach's Alpha</b>
<b>Internal logistics (LBN)</b>	LNB1	0.351	0.812
	LNB2	0.653	0.463
	LNB3	0.657	0.458
<b>Inbound Logistics (LDV)</b>	LDV1	0.555	0.765
	LDV2	0.472	0.782
	LDV3	0.434	0.792
	LDV4	0.556	0.769
	LDV5	0.667	0.737
	LDV6	0.670	0.740
<b>Outbound Logistics (LDR)</b>	LDR1	0.844	0.903
	LDR2	0.764	0.918
	LDR3	0.699	0.935
	LDR4	0.837	0.905
	LDR5	0.921	0.888
<b>Support Logistics (LHT)</b>	LH	0.736	0.864
	LHT2	0.591	0.887
	LHT3	0.744	0.863
	LHT4	0.745	0.862
	LHT5	0.749	0.863
	LHT6	0.669	0.875
<b>Logistics Cost (CPL)</b>	CPL1	0.700	0.892
	CPL2	0.747	0.884
	CPL3	0.651	0.899
	CPL4	0.703	0.889
	CPL5	0.942	0.855
	CPL6	0.701	0.890
<b>Business efficiency (HQ)</b>	PDTC	0.683	0.791
	PDKH	0.644	0.808
	QTNB	0.684	0.791
	DTPT	0.676	0.794

**Appendix 2. KMO coefficient and Bartlett's Test of the scale belonging to the independent variable**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.856
Bartlett's Test of Sphericity	Approx. Chi-Square	3717.891
	df	325
	Sig.	0.000

RESULTS AND ECONOMIC EFFICIENCY OF PAPER FLOWER PRODUCTION  
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OF HUE TEXTILE AND GARMENT JOINT STOCK COMPANY

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