MINISTRY OF EDUCATION AND TRAINING
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THE IMPACT OF GREEN TRAINING, GREEN INTELLECTUAL CAPITAL AND GREEN LOGISTICS PRACTICES ON OPERATIONAL EFFICIENCY OF ENTERPRISES: THE CASE OF LOGISTICS ENTERPRISES IN HO CHI MINH CITY

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ABBREVIATE
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LIST OF ANNOUNCED WORKS

International Conferences

1. *"Impacts of Green Training on Green Competencies of Employees: Empirical Case of Industrial Manufacturers in Dong Nai Parks*".

2022 6th International Conference on Green Technology and Sustainable Development (GTSD)July 29-30, 2022 - Nha Trang City, Vietnam.

2. *"impacts of green training on the performance of logistics companies"*, Published in Social Sciences and Humanities Research Association (SSHRA) Proceedings, pp. 479-489 (ISSN 2454-5899).

3. *"impact model of green training on business performance"*, Published in Social Sciences and Humanities Research Association (SSHRA) Proceedings, pp. 490-498 (ISSN 2454-5899).

CHAPTER 1: INTRODUCTION TO THE RESEARCH TOPIC

1.1 Reasons for choosing a topic

1.1.1 Theoretical context

Everything we need to survive and thrive depends, directly or indirectly, on the natural environment. In recent years, sustainability in the activities of organizations, especially the production and business activities of logistics enterprises, has received more and more attention due to the development of the Industrial Revolution 4.0, which has posed many environmental problems. Green logistics practices are becoming increasingly important for the sustainable development of enterprises. To better understand the community's interest, the author has focused on the environmental issues of freight transportation, such as carbon emissions, energy consumption, and life cycle assessment, emphasis on modeling, planning and optimization of supply chain performance, development strategy and competitiveness. Research to uncover the opposites, mixed relationships, and mutual positive relationships of green logistics practices. Currently, many businesses in Vietnam still do not fully understand the impact of focusing on the environment, especially in the export market. Rao (2002) points out that, compared to developed countries, businesses in developing countries are in the process of learning how to integrate green practices into their daily operations. Therefore, there is a great need for a study in a developing country like Vietnam that looks at the green logistics practices being applied and their relationship to the performance of businesses.

1.1.2 Practical context

The development of logistics services has contributed an important part to GDP, and with the current development rate of the logistics industry of 12-14% per year, it is estimated that by 2025 the logistics sector will contribute 8-10% of GDP. Logistics activities are mainly concentrated in big cities such as Hanoi and Ho Chi Minh City; specifically, about 28% of logistics enterprises are operating in Hanoi and nearly 50% are operating in Ho Chi Minh City (Ministry of Industry and Trade, 2019). Research on THLX has made many developments in the world, but in Vietnam it is still limited. The Vietnamese Government has issued many policies to promote sustainable development and THLX, creating favorable conditions as a legal basis for ministries, localities, enterprises and individuals to implement and coordinate actions.

For the above reasons, it is urgent to study the topic ***"The impact of green training, green intellectual capital and green logistics practices on the operational efficiency of enterprises: The case of logistics enterprises in Ho Chi Minh City"*** . The research results can help clarify the role as well as the mechanism of influence of green factors on business performance, thereby contributing to the scientific basis for building a sustainable development strategy in the logistics industry in Ho Chi Minh City in particular and the whole country in general.

1.2 Research objectives

1.2.1 General objectives

Identify and measure the impact of green training, green intellectual capital and green logistics practices on the operational efficiency of logistics enterprises in order to propose some governance implications to help logistics enterprises in Ho Chi Minh City in particular and in Vietnam in general have appropriate strategies to improve operational efficiency in the coming time.

1.2.2 Specific objectives

(1) Identify the relationship between green training factors, green intellectual capital, and to the sustainability of enterprises and the performance of enterprises;

(2) Measure the impact of green training, green intellectual capital and green logistics practices on the operational efficiency of logistics enterprises.

(3) Propose some governance implications to help logistics businesses in Ho Chi Minh City in particular and in Vietnam in general have appropriate strategies to improve operational efficiency in the coming time.

1.2.3 Research Questions

(1) How do the factors of green training, green intellectual capital, and green logistics practices relate to the sustainability of enterprises and the performance of enterprises?

(2) What is the impact of green training, green intellectual capital and green logistics practices on the operational efficiency of logistics enterprises?

(3) What strategies do logistics businesses in Ho Chi Minh City in particular and in Vietnam in general need to have to improve their operational efficiency in the coming time

1.3 Object and scope of study

Green training, green intellectual capital, green logistics practices, business sustainability and operational efficiency of logistics enterprises in Ho Chi Minh City. HCM.

The data was collected from February 2023 to July 2023.

1.4 Research Methodology

- Qualitative research: Seek literature and discuss expert groups to build research models and scales.
- Quantitative research: Using affirmative factor analysis (CFA) and linear structural analysis (SEM) to test the hypothesis.

1.5 Structure of the subject

In addition to references and appendices, the thesis is structured into 5 chapters:

Chapter 1: Introduction to the research topic.

Chapter 2: Theoretical basis and research model.

Chapter 3: Research methods.

Chapter 4: Research results and discussions.

Chapter 5: Conclusions and implications of governance.

CHAPTER 2: THEORETICAL BASIS AND RESEARCH MODEL

2.1 Related concepts

2.1.1 Green training

2.1.1.1 Concept

- Training related to environmental topics, helping employees to effectively integrate green principles and practices into their work.
- Investment content**:** Includes environmental awareness, resource management skills, green technology, waste treatment, and advanced methods in production and operation.

2.1.1.2 Research works

- **Ahmed & c.s. (2020), Carter & c.s. (1998):** Emphasizing the role of e-commerce in green human resource management and achieving the environmental goals of enterprises.
- **Pham & c.s. (2018), Shahzad & c.s. (2020), Gyurak & c.s. (2020):** Affirming that e-commerce is an important human resource management

practice to improve business efficiency, educate employees on the value of environmental management, energy saving, and spread environmental awareness.

2.1.2 Green Wisdom Concept

- **Concept:** Summarizing an organization's knowledge and skills in environmental management, creating a competitive advantage.
- **Competitive advantage:** VTTX helps businesses comply with international environmental laws and raise environmental awareness, creating valuable intangible assets that are difficult to copy.
- **Organizational culture:** VTTX needs an organizational culture that promotes the creation, dissemination and retention of green knowledge, especially implicit knowledge, to improve innovation efficiency and competitive advantage.
- **Research works:**

- **Chen (2008):** Defining VTCX as "the sum of the organizational competencies... on environmental protection or green innovation in businesses".
- **Huang & Kung (2011):** Describes VTCX as "characteristics and infrastructure support related to environmental protection or the development of green products".
- **Sidik (2019):** VTTX is a powerful tool of businesses, converging non-material resources and capabilities, helping to improve efficiency.
- **Ali & c.s. (2021a):** VNLX helps businesses become aware of intangible assets such as environmental knowledge and information.
- **Farooq & c.s. (2022):** VTTX is created from a combination of employee competencies in terms of the operating environment.

2.1.3 Green Logistics Practices

-Notion

Apply environmentally friendly solutions and technologies in logistics activities, in order to minimize negative impacts on the environment.

- Research works

Bag & Gupta (2019) points out that the availability of green human capital (VNLX) has a direct positive effect on reverse logistics.

Karaman & c.s. (2020) points out that green logistics is an essential part of enterprises' efforts to achieve environmental responsibility, detecting a

positive but negligible relationship between sustainability and sustainability reporting.

Agyabeng-Mensah & Tang (2021) points out that VNLX promotes the adoption of THLX, leading to the creation of competitive advantages and improved social and financial efficiency.

Huge-Brodin & c.s., 2020 THLX has been developed in recent years to help logistics play an increasingly important role as logistics businesses focus on environmental sustainability.

- **THLX activities:**

- **Green transportation:** Use fuel-efficient transportation, optimize routes, and apply emission reduction technology.
- **Warehousing and inventory:** Energy-efficient warehousing design, optimizing inventory management, and adopting intelligent technology for monitoring and control.
- **Green Packaging:** Using eco-friendly packaging materials, recycling and reusing packaging, optimizing size and weight.
- **Reverse Logistics:** Effectively manage the recovery, recycling, and disposal of post-consumer products.

2.1.4 Corporate Sustainability

- **Concept:** A business model that aims to create long-term value for businesses and stakeholders by balancing economic, social, and environmental goals.
- **Main content of the BV**

- **Economical:** Reduce environmental costs, save energy, cooperate with stakeholders, improve processes.
- **Society:** Reducing inequality, improving the quality of life, building positive relationships with stakeholders.
- **Environment:** Manage products that do not harm the environment, reduce resource consumption, comply with environmental regulations.

-Environmental Performance (HSMT): Assesses activities aimed at minimizing environmental impacts, including emissions, energy use, water and air quality.

-Economic efficiency: Evaluate the economic value and profits that the business creates.

- Related Studies:

- **Carroll (1999), Bowen (2013):** Definition of corporate social responsibility (CSR) is the commitment of enterprises to society.
- **Zink & et al. (2008):** BV needs a long-term orientation to meet the needs of current and future stakeholders.
- **De Giovanni (2012):** Emphasizing that businesses are focusing on green initiatives to improve operational efficiency.

Savitz & Weber (2006): Ecologically sustainable will bring long-term economic benefits.

2.1.5 Operational efficiency (HQHD)

Notion:

The ability of the business to achieve the set goals effectively and make optimal use of resources.

- Related research works

- **Arokodare & Asikhia (2020):** Using financial metrics such as profit after tax, return on assets, return on equity.
- **Brown & Laverick (1994):** Consider the interests of stakeholders, especially those with close ties to the business.
- **Neely (1999):** Emphasis on the selection of measurement measures that are appropriate to the characteristics of the information/data.
- **Factors affecting HQ:**
- **Lee&c.s. (2021):** Organizational culture and environment, technological advancement, active employee engagement.

2.2 Some background theories

This section presents ***four theories*** that underlie the research model:

2.2.1 Theory of Green Human Resource Management

Emphasizing the management of human resources in a sustainable direction, including recruitment, training, remuneration, and development of employees in a green direction, contributing to environmental protection and improving operational efficiency.

2.2.2 Stakeholder Theory

Businesses need to consider and respond to the needs of stakeholders (employees, customers, suppliers, communities,..) to achieve sustainable success. Sustainable activities help businesses attract support from stakeholders, improve reputation and operational efficiency.

2.2.3 Resource Dependence Theory

Businesses depend on external resources (capital, raw materials, human resources, information,...) and need to manage relationships with resource providers to ensure survival and development. Businesses carry out sustainable activities to attract resources, reduce risks and improve operational efficiency.

2.2.8 Sustainable Development Theory (PTBV)

Emphasizing the balance between economic and social development and environmental protection to ensure sustainable development for the current and future generations. Enterprises apply THLX and implement corporate protection to contribute to sustainable development and improve operational efficiency.

2.3 Research hypotheses

2.3.1 Green training and business performance

2.3.2 Green Training and Corporate Sustainability

2.3.2.1 Environmental impact of green training

2.3.2.2 Social Impact of Green Training

2.3.2.3 Economic impact of green training

2.3.3 Green Training and Green Intellectual Capital

2.3.4 Green Training and Green Logistics Practices

2.3.5 Green logistics practices and business performance

2.3.6 Green Logistics Practices and Corporate Sustainability

2.3.7 Business Sustainability and Business Performance

2.3.8 Green Intellectual Capital and Corporate Sustainability

2.3.9 Green Intellectual Capital and Green Logistics Practices

2.4 Research model and hypothesis

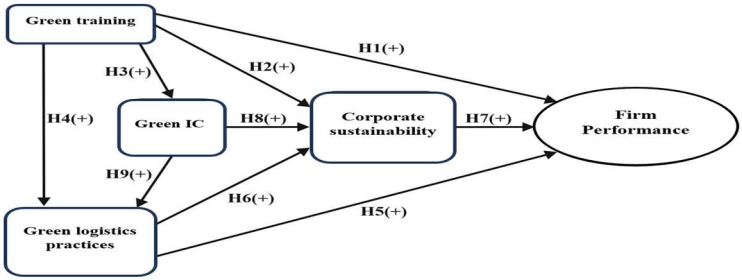

Figure 2.1. Proposed research model

CHAPTER 3- RESEARCH METHODOLOGY

3.1 Methodology and Research Process

A mixed method is used in the dissertation, which combines qualitative and quantitative research to enhance the value and reliability of the research results.

Qualitative research:

Literature search and expert group discussions are used to solicit opinions and identify new elements, adapt and supplement concepts, research models, and design scales that are appropriate to the research context in Vietnam.

Quantitative Research:

- The questionnaire survey is used to collect data from logistics businesses in Ho Chi Minh City. Ho Chi Minh City, then analyzed using SPSS software.

Research process: Includes 3 main stages:

- **(1) Qualitative research:** Building a preliminary model and scale.
- **(2) Preliminary quantitative research:** Adjust the scale, build a survey questionnaire.
- **(3) Formal quantitative research:** Validation of models and hypotheses.

3.2 Qualitative research

3.2.1 Initial Scale Design:

The scales are built on the original scales from the outlined, translated into Vietnamese and adapted to the context of the study.

Expert group discussions are conducted to explore, evaluate and redefine theoretical models and scales, ensuring their relevance to practice.

3.2.2 Analyze the results of the expert group discussion

Experts evaluate and give opinions on the observed variables in the scale, contributing to the adjustment and completion of the scale.

Specifically, experts have evaluated and adjusted the following scales:

3.2.2.1 Scale of business performance: Adjust from 9 observation variables to 7 observation variables.

3.2.2.2 Green Training Scale: Adjust from 10 observation variables to 8 observation variables.

3.2.2.3 Green Logistics Practice Scale: Adjust from 30 observation variables to 19 observation variables.

3.2.2.4 Green Intellectual Capital Scale: Adjust from 16 observation variables to 10 observation variables.

3.2.2.5 Corporate Sustainability Scale: Adjusted from 22 observation variables to 18 observation variables.

3.3 Preliminary quantitative research

3.3.1 Implementation Steps

- A preliminary quantitative study was conducted with 87 observations from employees of logistics enterprises to:

- Assess the use of language in the questionnaire.
- Evaluate the reliability and value of the scale.

- Cronbach's Alpha analysis and exploratory factor analysis (EFA) are used to test and refine the scale.

3.3.2 Research results:

3.3.2.1 Scale reliability analysis: The results of Cronbach's Alpha analysis show that all scales are reliable, with the alpha coefficient and the total variable correlation coefficient within the allowable range.

3.3.2.2 Exploratory Factor Analysis (EFA): The EFA results show that the explored scales all meet the criteria of intrinsic value, factor load factor and cumulative deduction variance.

3.4 Formal quantitative research

3.4.1 Sample size

3.4.2 Data Collection Methods

In-person surveys using printed questionnaires and online surveys via Google Forms are used to collect data.

3.4.3 Data Analysis Methods

3.4.3.1 Affirmative Factor Analysis (CFA): Checking the suitability of the measurement model with the actual data.

3.4.3.2 Linear Structure Modeling (SEM) Analysis:

- Explore measurement errors and merge abstract concepts, linking theory to actual data.
- Use AMOS 20.0 software to validate the model.

3.4.3.3 Testing the reliability of SEM estimates: Evaluating the relationship between theory and actual data, ensuring the reliability of the results.

3.4.3.4 Multi-group structure analysis: Compare the impact of research factors between different groups (e.g., business size).

CHAPTER 4. RESEARCH RESULTS AND DISCUSSION

4.1. Overview of the situation of logistics enterprises in Ho Chi Minh City

4.1.1. General characteristics of logistics enterprises in Ho Chi Minh City

Ho Chi Minh City. Ho Chi Minh City is a major economic center with a developed logistics infrastructure system, currently there are about 3,000 logistics enterprises operating. The majority are small and medium-sized enterprises (70–80%), mainly serving the domestic market. Large enterprises are usually FDI or belong to multinational corporations, providing integrated logistics services. The types of services are diverse, from forwarding, transportation, warehousing to comprehensive supply chain solutions.

4.1.2. Green training situation at logistics enterprises

Most logistics enterprises in Ho Chi Minh City. Ho Chi Minh City does not have an official green training program. Only about 30% of enterprises organize activities to raise environmental awareness and only 10-15% have a methodical training program. Small enterprises often lack resources and have not realized clear economic benefits. A number of large enterprises and FDI pioneers implement training through cooperation with universities, sending employees abroad and using e-learning.

4.1.3. The current situation of green intellectual capital of logistics enterprises

The concept of VTTX is still unfamiliar to small and medium-sized enterprises; The management of green knowledge is mainly based on personal experience. Large enterprises and FDI began to develop VTTX through personnel training, building manuals and establishing green relationships with partners. However, the number of enterprises reaching the level of comprehensive VTTX is still small, due to lack of investment and insufficient awareness.

4.1.4. Application of green logistics practices

Logistics enterprises in Ho Chi Minh City. Ho Chi Minh City is diverse in scale and level of green logistics application. Green training is still fragmented, VTTX has not been properly invested, and green practices have not been linked

to long-term strategies. Enterprises need to promote training, build a green knowledge management system and expand green cooperation to improve operational efficiency and sustainable development.

4.2 Statistics describing the survey object

-The data was collected from 437 respondents, representing logistics businesses in Ho Chi Minh City.

Enterprise characteristics		**Amount**	**Density (%)**
Scale of the enterprise	<=10 people	51	11,7
	11-50 people	79	18,1
	51-100 people	178	40,7
	>=101 people	129	29,5
Type of enterprise	1 TV Co., Ltd.	188	43,0
	2 or more TV Co., Ltd.	244	55,8
	Joint Stock Company	5	1,1
	Partnerships	0	0,0
	Private enterprises	0	0,0
	State-owned enterprises	0	0,0
Operating time in the industry	<5 years	65	14,9
	5-10 years	231	52,9
	>=10 years	141	32,3
Sum		**437**	**100**

4.3 Discovery factor analysis (EFA) results

Hệ số KMO (Kaiser-Meyer-Olkin Measure of Sampling Adequacy)		**0,741**
Bartlett's Inspection (Bartlett's Test of Sphericity)	Chi-Square Value	23463,922
	Free Tier (df)	1485
	Significance Level (Sig.)	0,000

Table 4.2 KMO Results and Bartlett's Accreditation

- **Results of EFA analysis**: Based on the tables, the use of EFA in the analysis is appropriate.

4.4. Analysis of CFA affirmative factors

4.4.1 Evaluating the reliability of the scale using CFA analysis

The results of the reliability test through CFA in Table 4.8 show that the factors all have a Cronbach's Alpha coefficient and the aggregate reliability is above 0.6, while the coefficients of variance are greater than 0.5. This confirms that the scale is highly reliable.

- **The results of the CFA analysis** are presented in the tables, which show that all the appropriate indicators meet the permissible threshold, proving that the scale used in the study has good reliability and convergence values.

4.4.2 Model conformity testing

4.4.2.1 Convergence value analysis of the model

The scale achieves a convergence value when the composite reliability (CR) must be greater than 0.7 and the extracted mean variance must be greater than 0.5. The results of the convergence value analysis in Table 4.9 show that all CRs are greater than 0.7 and all AVEs are greater than 0.5; especially the AVE is smaller than CR. Therefore, the model achieves convergence value.

4.4.2.2 Differential value analysis of the model

The results of the convergence value analysis in Table 4.10 show that the model achieves a differentiated value, which means that the model is consistent with the study data.

4.4.2.3 Unidirectional Analysis of the Model

The results of testing by CFA affirmative factor analysis in Figure 4.1 show that the values of CMIN/df = 1.149; TLI = 0.989; CFI = 0.989; and RMSEA = 0.019; Thus, all indicators meet the criteria for evaluating the suitability of the model. This confirms the unidirectionality, convergence value, and relevance of scales in the model.

4.5 Linear Structural Modeling (SEM) Analysis

4.5.1. Linear Structure Model Testing

The Linear Structural Modeling (SEM) analysis method is used to validate the research model. The SEM analysis results in Figure 4.2 and Table 4.11 show that the model has a relative Chi-square statistical value of Cmin/df = 1.149 under [1, 5] and other suitability measures such as TLI = 0.989; CFI = 0.989;

RMSEA = 0.018 all satisfied the criteria for evaluating the model. Therefore, we can conclude that the research is appropriate for the market data set.

4.5.2. Bootstrap Testing

The results of the Bootstrap estimation reliability test with the number of repeating samples N = 1,000 in Table 4.12 show that all Critical Ratios (C/R) values are less than 1.96, so it can be concluded that the deviation is very small, not statistically significant at 95% confidence. And so, we can conclude that the estimates in Table 4.11 are reliable.

4.5.3. Verification of research hypotheses

The model test results in Table 4.11 and Table 4.12 show that the hypothesis of the model is accepted with a significance level of 0.05. Specifically, the authors rearrange the results according to the hypotheses stated in Chapter 2 as shown in Table 4.13.

Table 4.13. Results of Verification of Research Hypotheses

Research hypothesis		**Relationship**	**Normalized regression coefficients**	**p**	**Conclude**
H1	Investment has the same impact on the operational efficiency of enterprises.	HQHD ← Mobile	0,037	0,016	Accept
H2a	Investment has the same impact on the socio-economic sustainability of enterprises.	Mobile Hospitals ←	0,031	0,011	Accept
H2B	Investment has the same impact on the environmental sustainability of enterprises.	Mobile Protection ←	0,001	**	Accept

Research hypothesis		Relationship	Normalized regression coefficients	p	Conclude
H3	Mobile phones have the same impact on the trading facilities of enterprises.	VTT ← DTX	0,044	0,014	Accept
H4a	Mobile phones have the same impact on the optimal operation practices of enterprises.	TUVT ← MOBILE	0,052	0,024	Accept
H4B	Investment has the same impact on the emission reduction practices of enterprises.	GTPT ← DTX	0,042	0,018	Accept
H4C	Mobile phones have the same impact on the reuse/recycling practices of enterprises.	High School ←	0,036	***	Accept
H5a	Optimal operation practices have the same impact on the operational efficiency of enterprises.	HQHD ← TUVH	0,022	0,010	Accept
H5B	Emission reduction practices have the same impact on the operational efficiency of enterprises.	HQHD ← GTPT	0,044	0,013	Accept

Research hypothesis		Relationship	Normalized regression coefficients	p	Conclude
H5c	The practice of reuse/recycling has the same impact on the operational efficiency of enterprises.	HQHD ← THTC	0,018	0,016	Accept
H6a	Operational optimization practices have the same impact on the socio-economic sustainability of enterprises.	BVKX ← TUVH	0,016	0,015	Accept
H6b	Emission reduction practices have the same impact on the socio-economic sustainability of enterprises.	BVKX ← GTPT	0,131	0,012	Accept
H6c	The practice of reuse/recycling has the same impact on the socio-economic sustainability of enterprises.	BVKX ← THTC	0,023	0,018	Accept
H6d	Operational optimization practices have the same impact on the environmental sustainability of enterprises.	BVMT ← TUVH	0,048	0,021	Accept

Research hypothesis		Relationship	Normalized regression coefficients	p	Conclude
H6e	Emission reduction practices have the same impact on the environmental sustainability of enterprises.	BVMT ← GTPT	0,080	**	Accept
H6f	The practice of reuse/recycling has the same impact on the environmental sustainability of enterprises.	BVMT ← THTC	0,001	0,024	Accept
H7a	Socio-economic sustainability has the same impact on the operational efficiency of enterprises.	HQHD ← BVKX	0,075	0,024	Accept
H7b	Environmental sustainability has the same impact on the operational efficiency of enterprises.	HQHD ← BVMT	0,024	0,023	Accept
H8a	VTTX has the same impact on the socio-economic sustainability of enterprises.	BVKX ← MTB	0,063	0,025	Accept
H8B	VTTX has the same impact on the environmental	BVMT ← VTT	0,016	***	Accept

Research hypothesis		Relationship	Normalized regression coefficients	p	Conclude
	sustainability of enterprises.				
H9a	VTTX has the same impact on the optimal operation practices of enterprises.	TUVH ← VTT	0,063	**	Accept
H9B	VTTX has the same impact on the emission reduction practices of enterprises.	ATV BPWG ←	0,118	0,017	Accept
H9C	VTTX has the same impact on the reuse/recycling practices of enterprises.	VTT ←High School	0,072	**	Accept

*Note: ** p < 0.010*** p < 0.001 (Source: Author's Data Processing, 2023)*

4.6 Multi-group structure analysis

4.5.1 Variable Analysis of Enterprise Scale

- The results of the analysis showed that there was no significant difference in the impact of the research factors between groups of enterprises of different sizes.

4.6.2 Variable Analysis of Enterprise Type

- The results of the analysis show that there is a significant difference in the impact of some research factors between two groups of businesses: 1TV Co., Ltd. and 2TV Co., Ltd. or more.

- Table 4.15. Results of analysis of variable and invariant models by type of enterprise

Model	Chi-square	df	p-value
Variability	4301,708	3612	
Immutable	4308,202	3618	
Different	6,494	6	0,103

- *(Source: Author's Data Processing, 2023)*

4.6.3 Analysis of the variable Time of participation in the logistics industry

The results show that the impact of research factors on the performance of enterprises between groups of enterprises with different periods of time in the logistics industry is considered the same, there is no significant difference.

Table 4.16. Results of Variable and Invariant Model Analysis Over Time

Model	Chi-square	Df	p-value
Variability	8411,958	5418	
Immutable	8422,221	5430	
Different	10,263	12	0,088

(Source: Author's Data Processing, 2023)

4.7 Discussion of research results

The results of this study show that mobile phones have a positive impact on the operational efficiency of enterprises, and mobile phones help improve the awareness and skills of employees about environmental issues, thereby improving work efficiency and minimizing negative impacts on the environment. This shows that enterprises in general and logistics enterprises in particular need to invest in investment to achieve environmental and economic goals as well as sustainable development.

At the same time, this study also shows that VTTX, including VNLX, VTCX and VQHX, plays an important role in improving the operational efficiency of enterprises, VTTX will bring great economic and social benefits to enterprises. In particular, VNLX helps to improve the capacity and commitment of enterprises in implementing green initiatives.

In addition, this study shows that the application of green logistics practices not only helps reduce costs but also brings significant economic and social benefits, helping to improve the overall operational efficiency of enterprises. This shows the importance of investing in the implementation of green practices to help businesses in general and businesses logistics in particular can be PTBV.

In conclusion, this study not only confirms the positive impact of mobile phones on the performance of enterprises, but also finds that this impact is particularly strong in the logistics industry in Ho Chi Minh City. HCM. This may be related to an increase in environmental awareness and commitment from the NV as they see the direct impact of their daily activities on the surrounding environment. In addition, the application of specific investment programs, such as training courses on waste management and energy efficiency, has helped logistics enterprises achieve higher operational efficiency.

Another new finding of the study is the role of VTTX in promoting innovation in logistics enterprises. This study has determined that enterprises with high performance efficiency tend to have a higher ability to innovate, which helps them maintain a competitive advantage and respond quickly to changes in market requirements and environmental regulations. In particular, VNLX has proven to be a key factor in promoting creativity and implementing innovative green logistics solutions.

This study has also shown that the application of green logistics practices not only minimizes negative impacts on the environment but also brings significant economic benefits to businesses.

The study also found that government support and incentive policies play an important role in promoting logistics enterprises to adopt green practices.

Investing in green training, green intellectual capital development and green logistics practices helps logistics enterprises in Ho Chi Minh City. Ho Chi Minh City reduces costs, enhances brands, attracts partners and adapts to sustainable trends. This is an important basis for associations, management agencies and enterprises to develop policies to support and improve the competitiveness of Vietnam's logistics industry.

CHAPTER 5- CONCLUSIONS AND IMPLICATIONS OF GOVERNANCE

5.1 Conclusion

- The study confirms that DTX, VTTX and Green Logistics Practices all have a positive impact on the operational efficiency of logistics enterprises.

- Mobile phones help improve employee awareness and skills, improve work efficiency, and reduce negative impacts on the environment.

- VTTX helps businesses make effective use of green resources, create added value and sustainable competitive advantages.

- Green Logistics practices help optimize processes, reduce costs, save resources, and minimize environmental impact.

5.2 Administrative implications

This section focuses on specific recommendations for logistics businesses to apply research results into practice, improve operational efficiency through.

5.2.1 Focus on green training

Green training should be considered as a key strategy to improve operational efficiency and promote sustainable development of logistics enterprises. Investing in comprehensive training programs, regularly updating content, applying modern technology, and encouraging active employee participation will help raise environmental awareness and skills, thereby improving work performance and minimizing negative impacts on the environment. In addition, creating conditions for employees to apply knowledge in practice and link with professional units also contributes to improving the quality of training and the effectiveness of implementing green practices in enterprises.

5.2.1.1 Develop a detailed and comprehensive green training program

Assessment of training needs, design of training content, effective energy management, waste management, application of green technology, optimization of freight transportation, emission reduction, reuse and recycling, training on reuse and recycling of materials, establishment of waste collection and recycling programs, environmental protection.

5.2.1.2 Conduct regular and ongoing training

Update training programs, organize training sessions and in-depth training workshops to share knowledge.

5.2.1.3 Encourage active participation of employees

This can be done by integrating sustainable values into daily activities and policies of enterprises.

5.2.1.4 Using modern technology and tools to support green training

E-learning and online platforms, assessment and tracking tools.

5.2.1.5 Creating conditions for employees to apply knowledge in practice

Practical and simulated projects, support and monitoring

5.2.1.6 Linking with external businesses to improve the quality of training

Cooperate with professional enterprises, participate in international programs and initiatives.

5.2.2 Focus on the implementation of green logistics practices

5.2.2.1. Optimize operations

5.2.2.2. Focus on emission reduction practices

5.2.2.3. Focus on reuse and recycling practices

5.2.3 Improving Green Intelligence Capital in Enterprises

Improving VTTX helps logistics enterprises effectively implement THLX and improve operational efficiency. Through training, building a sustainable culture, encouraging creativity and sharing knowledge, enterprises not only increase their competitive advantage but also meet the requirements of sustainable development and build an environmentally friendly image.5.2.4 Sustainable improvement of enterprises

5.2.4.1. Sustainable integration into business strategy

Define clear sustainability goals and adopt strategies to achieve them.

5.2.4.2 Adoption of technology and sustainable innovation

Logistics enterprises need to apply advanced technologies and promote innovation to improve operational efficiency and minimize environmental impact.

5.2.4.3. Sustainable Supply Chain Management

Evaluate suppliers based on sustainability criteria and conduct periodic audits. At the same time, it is necessary to build cooperative relationships with partners in the supply chain to develop sustainable solutions.

5.2.4.4 Increase transparency and reporting

Transparency and reporting are important factors to ensure the

sustainability of enterprises. Businesses need to provide clear and transparent information about sustainability strategies, goals and results; as well as strengthening interaction and dialogue with stakeholders on sustainability issues.

5.2.4.5 Promoting a sustainable corporate culture

This culture needs to be clearly reflected in all activities and decisions of enterprises. Enterprises also need to organize training and education programs on sustainability for enterprises.

5.2.5 Promoting cooperation and support from the Government and Logistics Associations

In addition to the internal efforts of enterprises, the companionship of the Government and the Logistics Association plays a particularly important role in building a policy, financial and infrastructure foundation to support the green transition:

5.2.5.1 Role of the Government

It is necessary to promulgate tax incentives and green credit policies to encourage logistics enterprises to invest in electric vehicles, renewable energy and environmentally friendly infrastructure. Invest in charging stations, improve transportation and modern warehouses to support green logistics operations. Develop clear green standards and regulations to serve as a basis for the orientation and commitment of enterprises.

5.2.5.2 Role of the Logistics Association

As a bridge between enterprises, promoting cooperation in using common warehouses, connecting trips, reducing costs and emissions. Organize green logistics courses and seminars to update trends and share experiences. Connect with financial institutions and technology companies to support the transfer of green applications and preferential loans.

5.2.5.3 Create a synchronous environment between stakeholders

Businesses – Government – Associations need to coordinate to share data and evaluate emission efficiency to come up with appropriate incentive policies. Strengthen propaganda so that people are interested in green services, creating motivation for businesses to invest sustainably.

5.3.1 Scientific contributions

The study affirms that green training and green intellectual capital play a key role in improving the operational efficiency and innovation capacity of logistics enterprises. The adoption of green logistics practices brings economic and environmental benefits, and support from government policies is an important enabler in the sustainable transition.

5.3.2 Practical contribution

The thesis points out that the context and research methods affect the role of green logistics practices (THLX) on the efficiency of business operations. Businesses are increasingly aware of the benefits of THLX and know how to optimize to bring socio-economic efficiency. Green training helps to raise awareness and commitment of employees and the quality of human capital. In particular, in Ho Chi Minh City. Ho Chi Minh City – a major economic center with fierce competition – enterprises need a sustainable strategy based on three pillars: green training, green intellectual capital and synchronous implementation of THL to improve the HQ.

5.4 Limitations of the topic and further research directions

5.4.1 Limitations of the topic

The research mainly focuses on logistics enterprises in Ho Chi Minh City. Ho Chi Minh City – the most developed area in Vietnam – can limit the representation of the whole industry. The business environment here is different from other localities, affecting the ability to generalize results. In addition, the topic has not analyzed the differences between types of logistics services, leading to a lack of insight into the impact of factors such as investment, logistics, and logistics according to each group of enterprises. affecting the comprehensiveness of the study.

5.4.2 Further research directions

In order to overcome the above limitations and continue to develop research in this field, further research directions should be considered in the direction of expanding to areas other than Ho Chi Minh City. HCM; such as Hanoi, Hai Phong, Da Nang, Dong Nai, etc. to increase the representativeness and generality of the results. In particular, it is necessary to conduct long-term studies to monitor and evaluate changes and trends in the implementation of green logistics practices and corporate sustainability over time.

In addition, it is also worth considering the role and impact of new and advanced technologies such as artificial intelligence (AI) and the Internet of Things (IoT) in supply chain management and green logistics, including the optimization of shipping routes, warehouse management, and demand forecasting; or blockchain applications to enhance transparency and traceability in the supply chain, thereby improving sustainability and reducing fraud to help improve the efficiency of green logistics and the sustainability of enterprises.