An analysis of factors affecting the development of logistics services in import-export activities in Vietnam

GRA496_G4_SUPER JUNIOR TEAM

☰ SUPER JUNIOR TEAM

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OUTLINE

Introduction

Literature review

Methodology

Finding & analysis

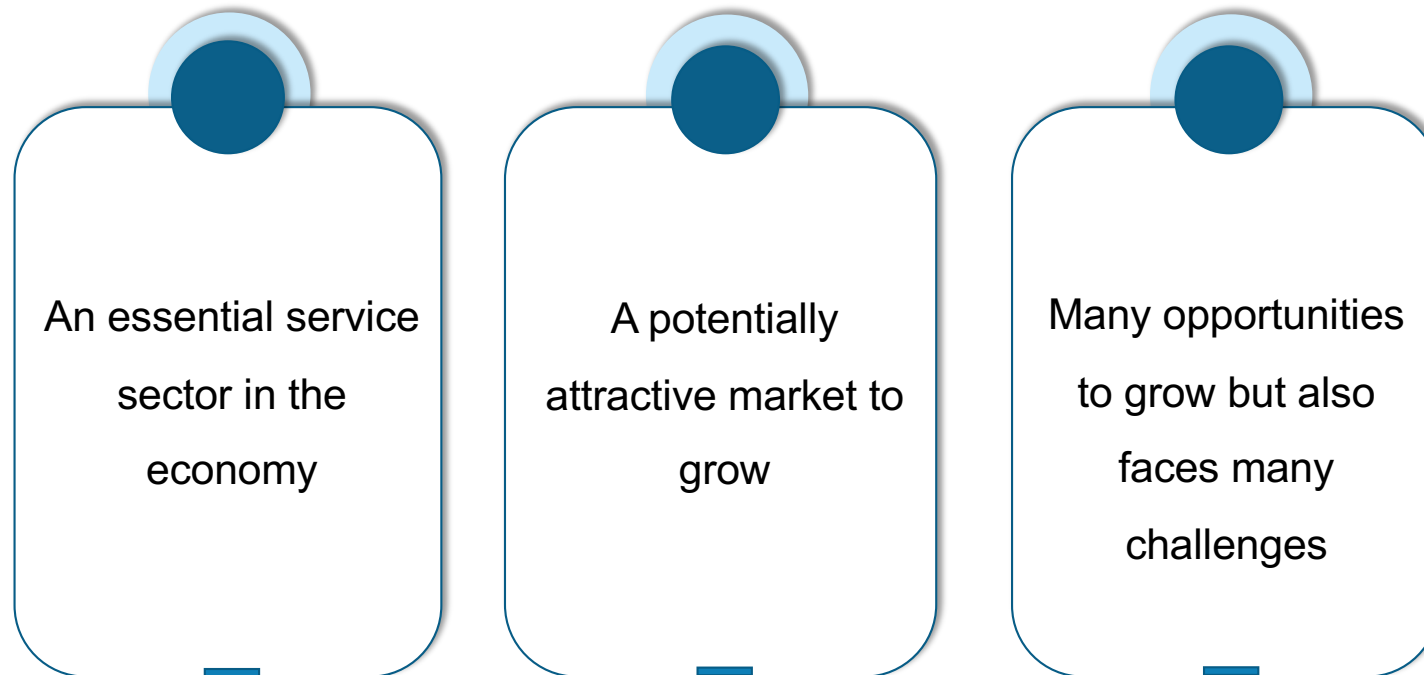Recommendations & conclusion

CHAPTER 1

INTRODUCTION

BACKGROUND

An essential service sector in the economy

A potentially attractive market to grow

Many opportunities to grow but also faces many challenges

The topic: "An analysis of factors affecting the development of logistics services in import-export activities in Vietnam"

RESEARCH OBJECTIVES

Objective 1: Determine the theories of logistics in general and logistics in import-export activities in particular

Objective 2: Overview the situation of the logistics services in import-export activities in Vietnam (from 2014 to now)

Objective 3: Identify the critical factors and evaluate the impact of them on the development of Vietnam's logistics services in import-export activities

Objective 4: Propose recommendations to improve the development of logistics services in import-export activities

RESEARCH QUESTIONS

01

Question 1: What is logistics in general, and logistics services for import-export activities in particular?

02

Question 2: What is the situation of the logistics services for import-export activities in Vietnam from 2014 to 2020?

03

Question 3: Which factors affect the development of the logistics services for import-export activities in Vietnam during the past years? How do these factors impact on the development of this industry?

04

Question 4: What are the most suitable recommendations for Vietnam to improve the development of logistics services for import-export activities?
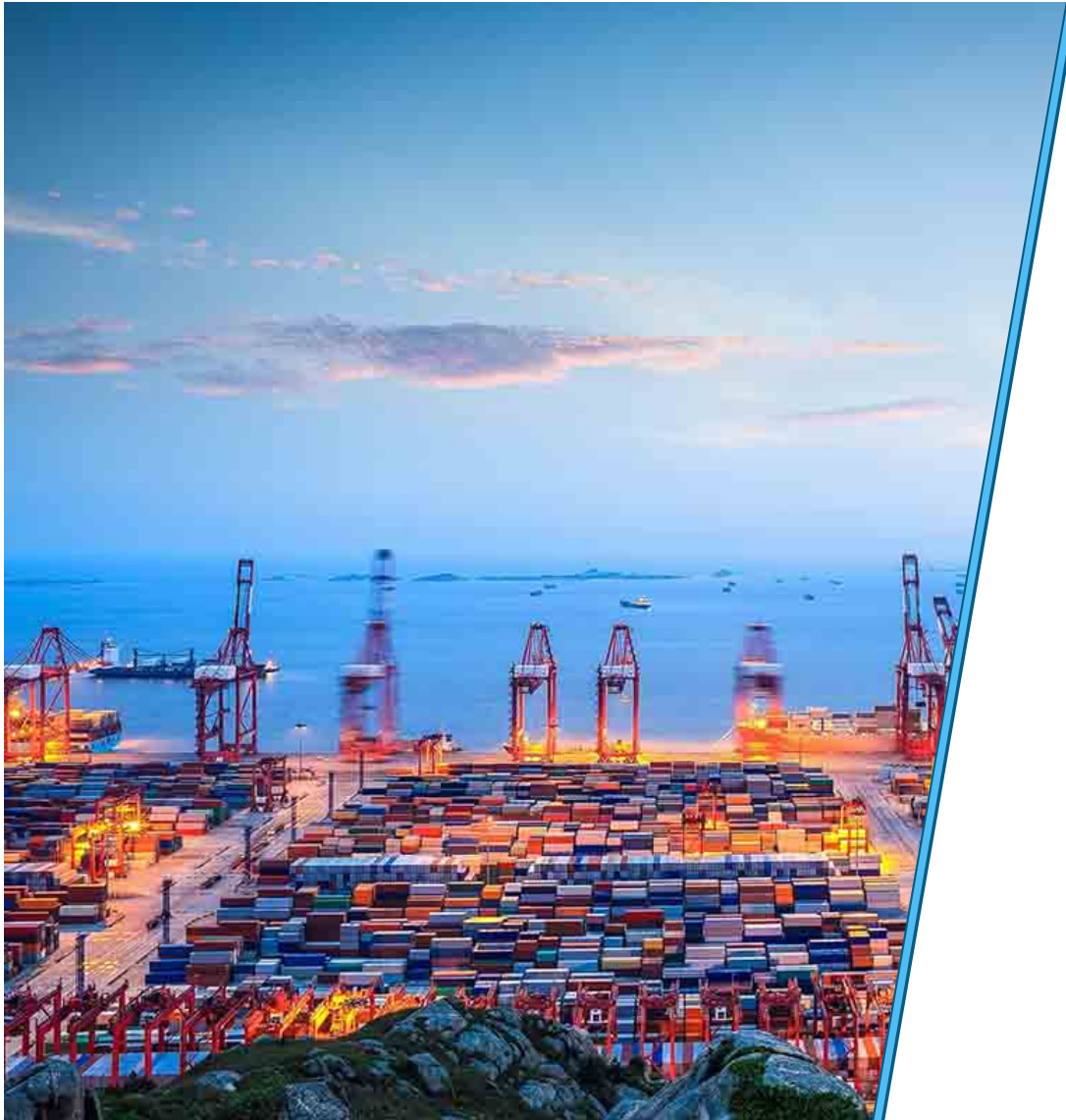
RESEARCH SCOPE & METHODS
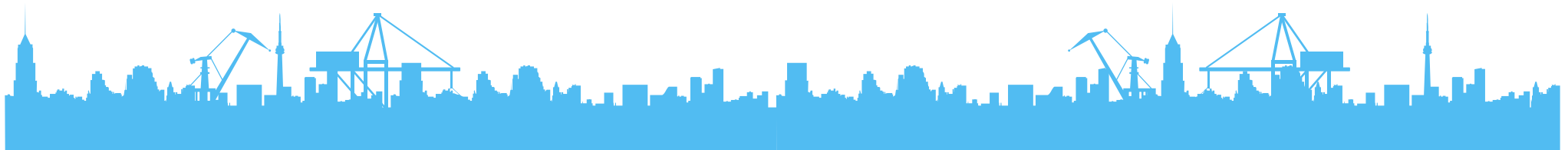
Scope

Logistics services in Vietnam which serve import-export activities (2014 – 2020)

Methods

Both primary and secondary methods

CHAPTER 2

LITERATURE REVIEW

2.1. Definition of logistics services

2.2. Logistics services provider classification

2.3. Logistics services in import/export

2.4. Literature gap

2.5. Conceptual research model

☰ DEFINITION OF LOGISTICS SERVICES

"Logistic services are commercial activities whereby traders organize the performance of one or many jobs including reception, transportation, warehousing, yard storage of cargoes, completion of customs procedures and other formalities and paperwork, provision of consultancy to customers, services of packaging, marking, delivery of goods, or other services related to goods according to agreements with customers in order to enjoy service charges."
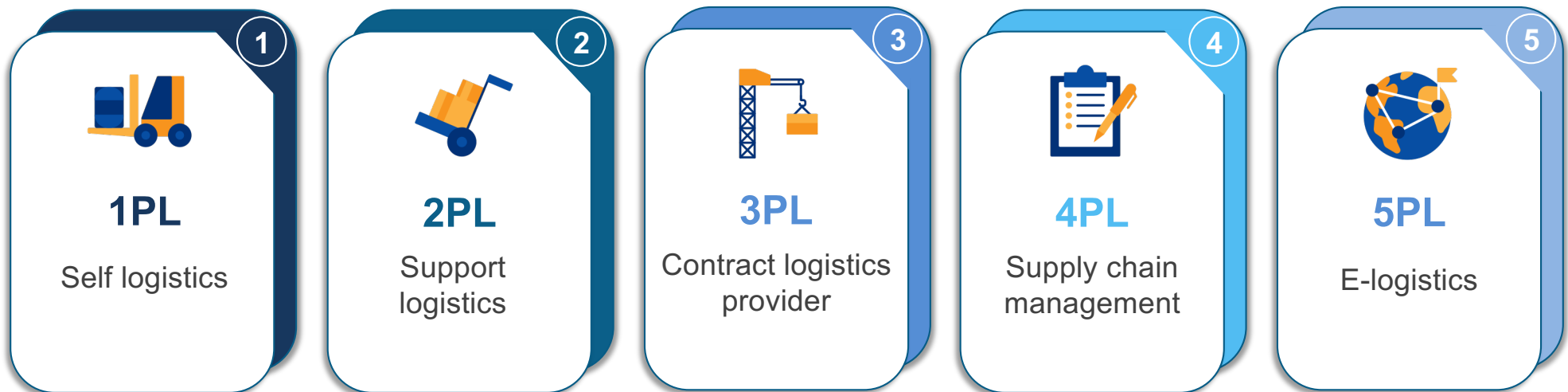
– Vietnam Commercial Law (2005)

≡ LOGISTICS SERVICES CLASSIFICATION

Classification by process

- **Inbound logistics:** Refer to the influx of raw materials from suppliers to manufacturing facilities.

- **Outbound logistics:** Involve the flow of finished products from a company to its customers or end users

- **Reverse logistics:** Relate to the reuse of products and materials

LOGISTICS SERVICES CLASSIFICATION

Classification by the form of logistics

1 1PL

Self logistics

2 2PL

Support logistics

3 3PL

Contract logistics provider

4 4PL

Supply chain management

5 5PL

E-logistics

LOGISTICS SERVICES IN IMPORT - EXPORT

Main logistics services

Transportation services

Labeling/Packing services

Freight forwarding services

Warehousing services

Other services

LOGISTICS SERVICES PROCESS

Logistics services process

Step 1
Customer's initial purchase request

Step 2
Forwarder get details of the shipment

Step 3
Warehousing

Step 4
Export customs clearance

Step 5
Transport by carrier

Step 6
Import customs clearance

Step 7
Warehousing

Step 8
Delivery to consignee

PREVIOUS RESEARCH

Research	Foreign	Domestics
Authors	Zheng Yanchao (2010) Ming Xiong (2010) Ming Juan Ding (2011) Akhavan et al (2020)	Ngoc Hoai Nam (2009) Ly Truong (2016) Le Trong Nghia(2016) Doan Van Tao (2019)
Methods	Mostly qualitative method	
Influence level of factors	Technology, infrastructure, legal and policy system have different levels of influence	Technology, infrastructure and legal and policy systems are the most influential factors

LITERATURE GAP

Out-of-date

All the research about

logistics services in

import-export was

made before 2020

Lack credibility

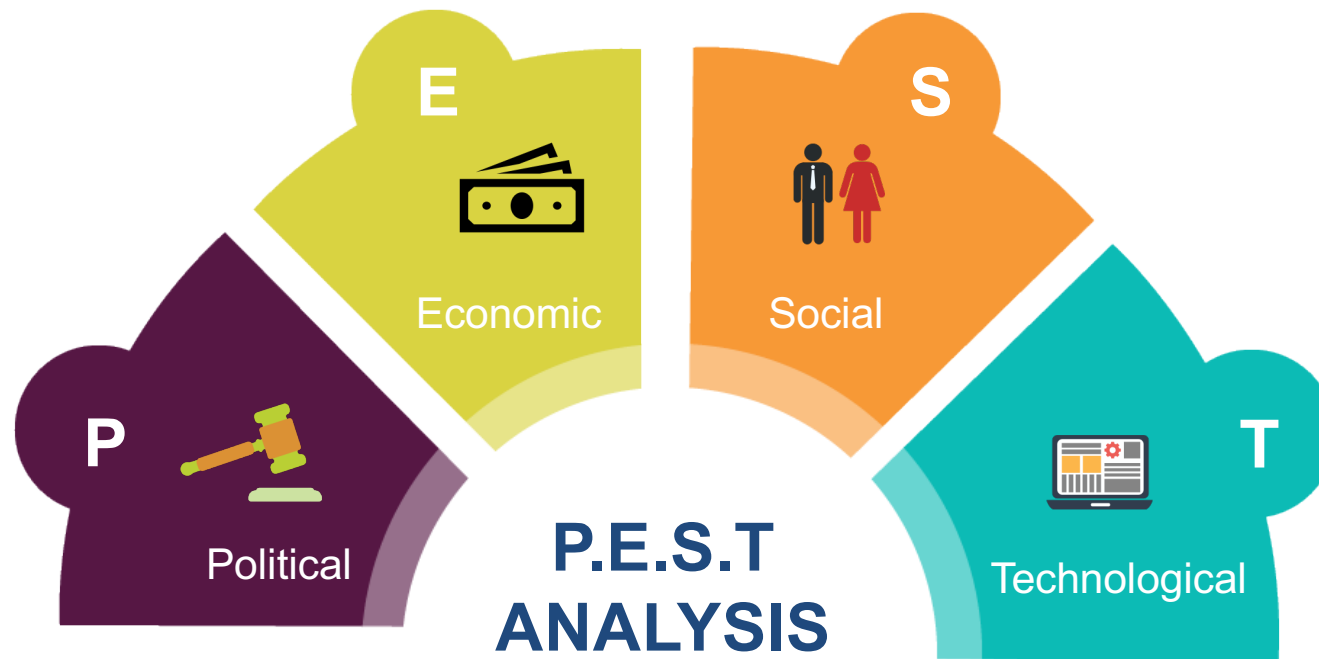Most of research

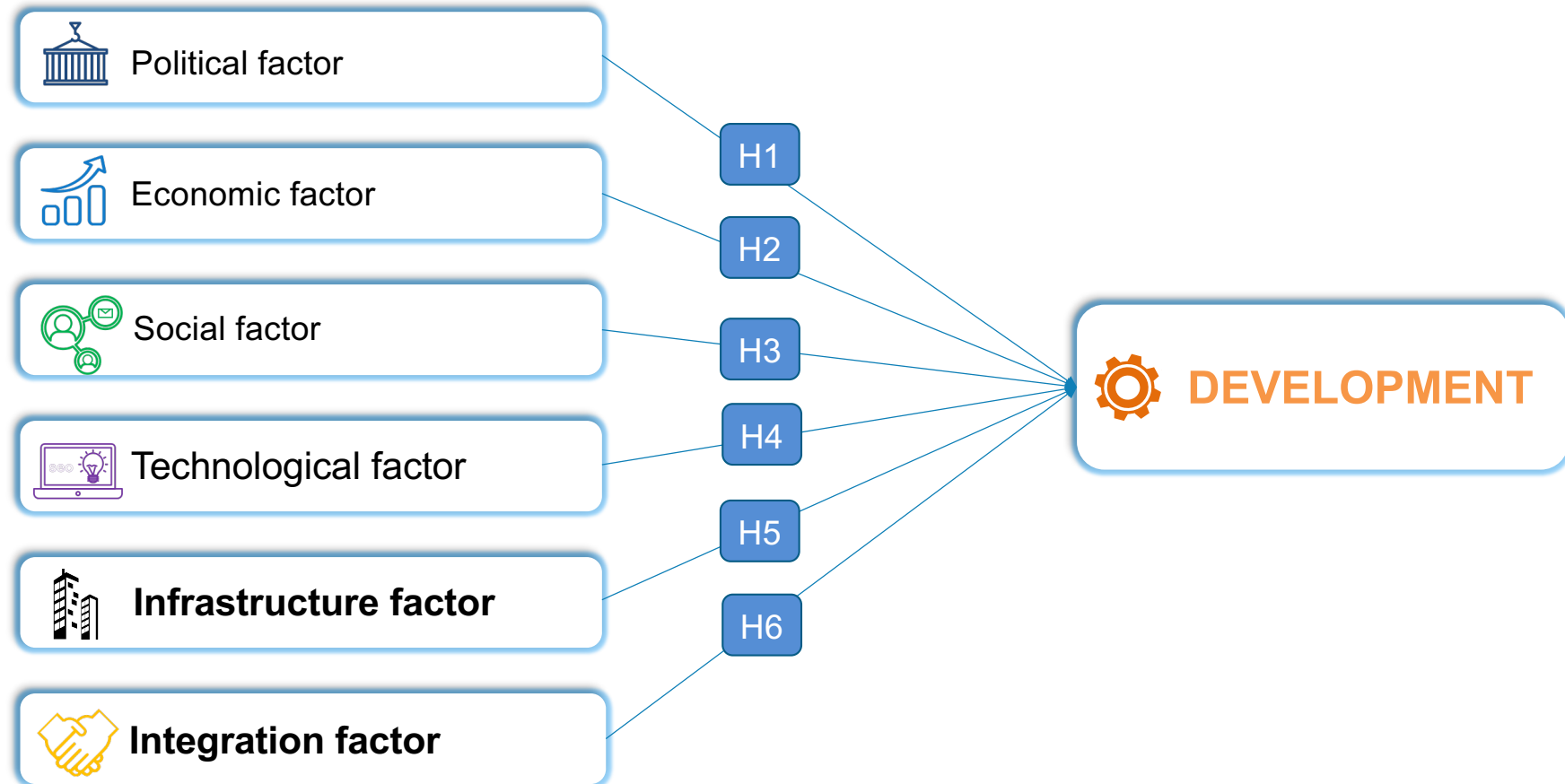are use qualitative

research methods

Narrow research scope

Some research scope

concentrated on a city

or a specific place

PROPOSED RESEARCH MODEL

Political factor

Economic factor

Social factor

Technological factor

Infrastructure factor

Integration factor

H1

H2

H3

H4

H5

H6

DEVELOPMENT

CHAPTER 3

METHODOLOGY

RESEARCH PHILOSOPHY & METHODS

PHILOSOPHY:

METHODS:

PRAGMATISM

REALISTIC

POSITIVISM

INTERPRETIVISM

QUANTITATIVE

QUALITATIVE

RESEARCH PROCESS

PHASE IV

Communicate the research results

PHASE II

Execute the research design

PHASE III

Select the appropriate design

Determine the research problem

PHASE I

PRIMARY DATA

SECONDARY DATA
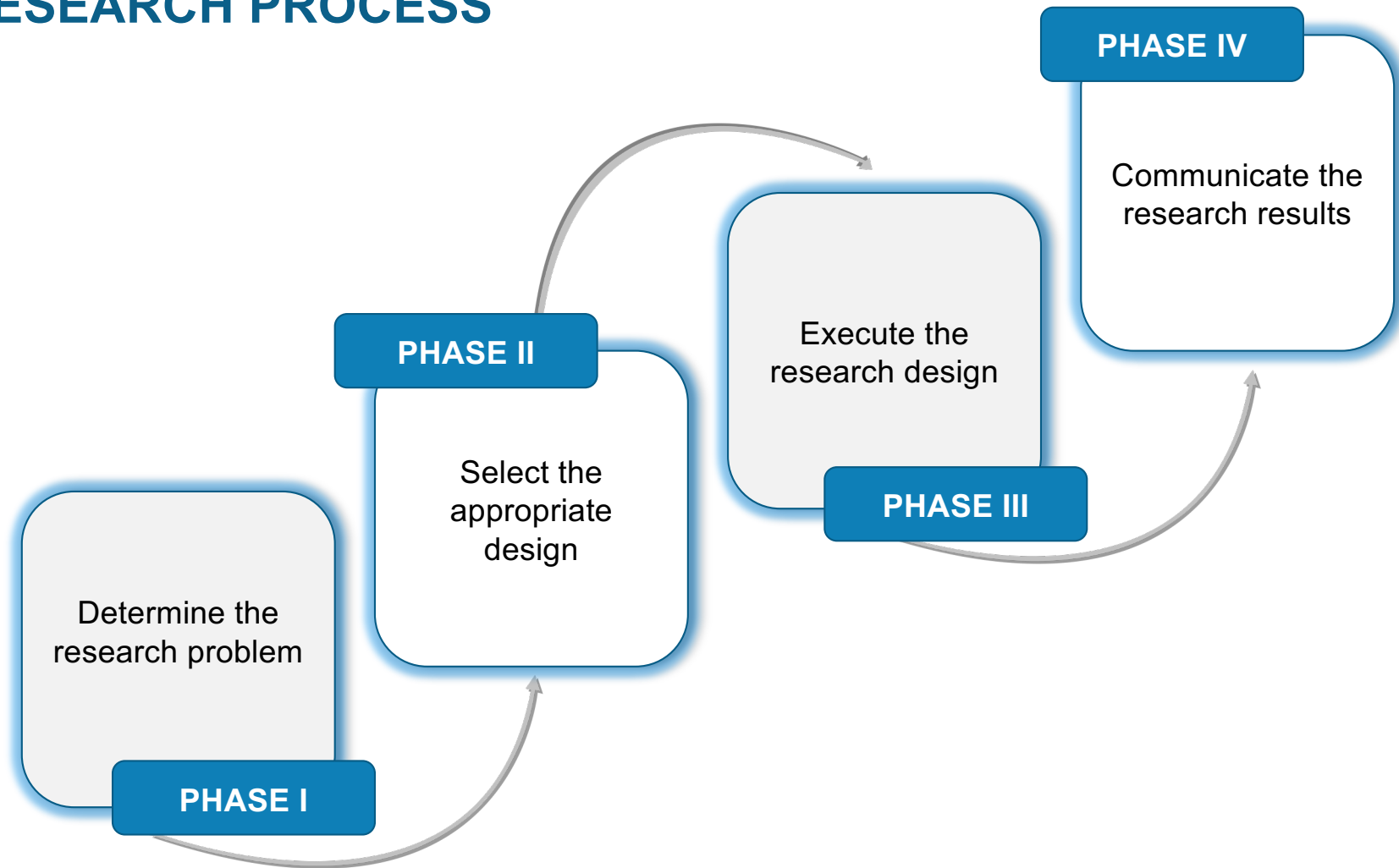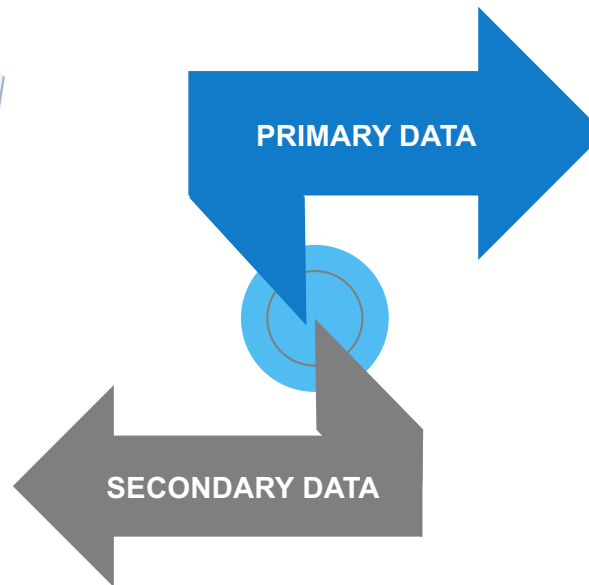
PRELIMINARY RESEARCH

EXPERT INTERVIEWED

Respondents: 9 senior representatives in logistics industry

Objectives: to discuss different factors and related issues in each factors, then to make the proposed research model more suitable and practical

Collecting process: online and offline interview

RESULT: - "Social" factor ➡ **"Industry awareness" factor**

- "Political" factor ➡ **"Political-legal framework" factor**

- Other factors are confirmed

DESIGNING QUESTIONAIRE

PART I
Business general information

PART II
The logistics services that businesses provide in import and export activities

PART III
Collect assessments on the factors influencing the development of logistics services
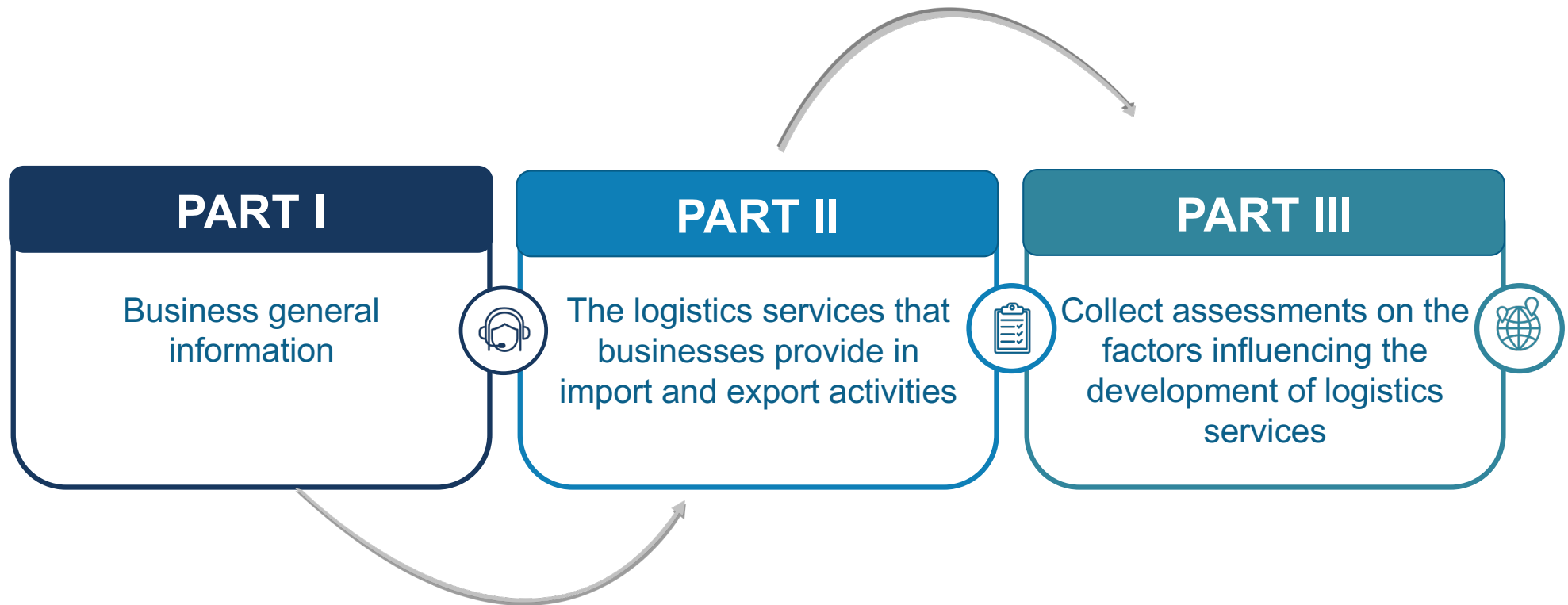
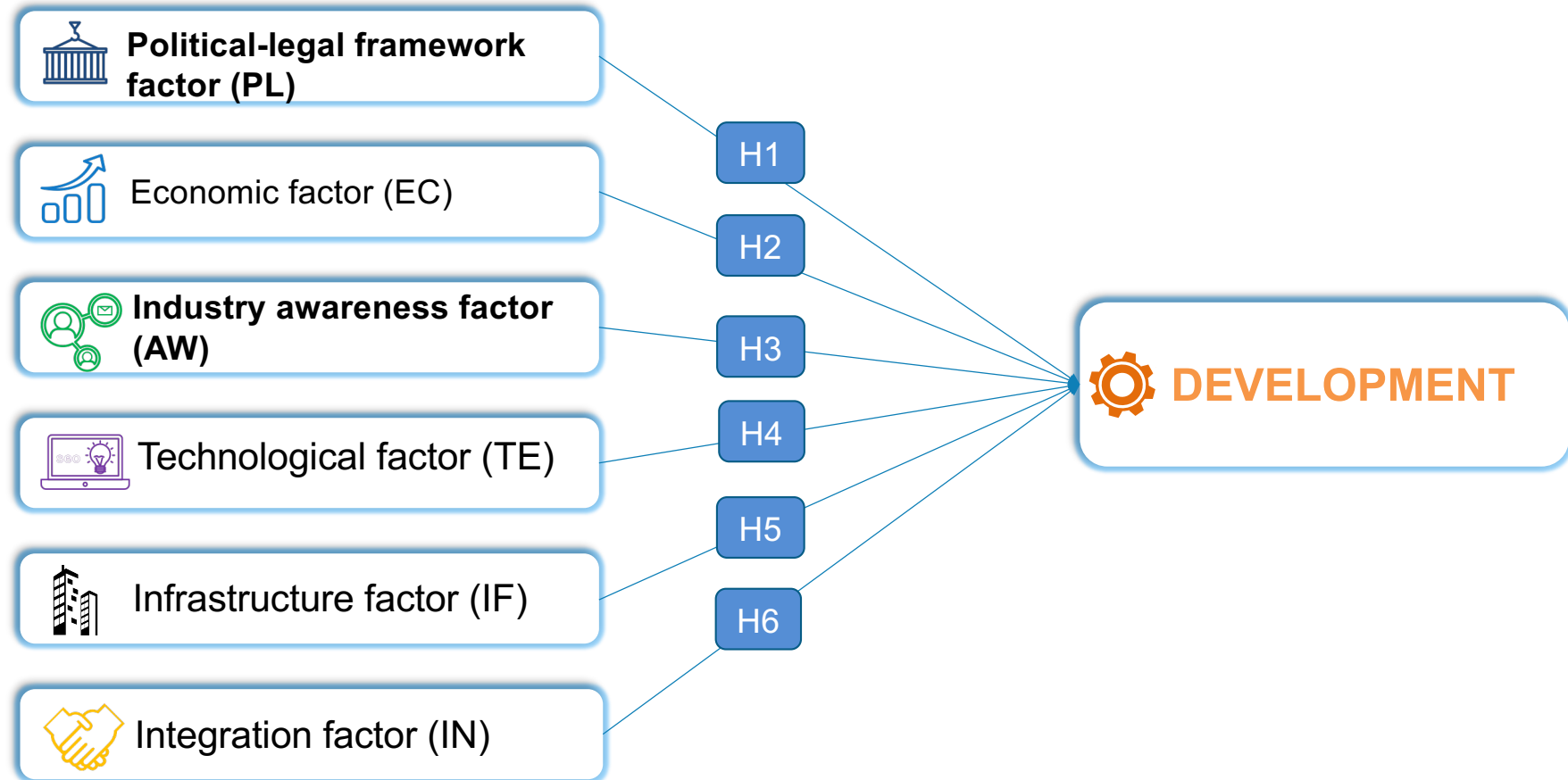# OFFICIAL RESEARCH MODEL.

Political-legal framework factor (PL)

Economic factor (EC)

Industry awareness factor (AW)

Technological factor (TE)

Infrastructure factor (IF)

Integration factor (IN)

H1

H2

H3

H4

H5

H6

DEVELOPMENT

SAMPLING

SAMPLING METHOD

- Nonprobability sampling

SAMPLING DESIGN

- Nominal scale
- Interval scale

SAMPLING SIZE

- At least 5 responses per 1 observed variable

- The minimum size of 135 responses

- 472 questionnaires were given

DATA COLLECTION

- Type of survey: Online survey

- Number of respondents expected: 135 units

- Respondents: Enterprises providing logistics services in Vietnam

- Logistics enterprises' information from vla.com.vn.

- Online survey are created by Google Forms.

- Customer's answers can be anonymous.

☰ DATA ANALYSIS METHOD

Descriptive analysis

Descriptive analysis is the analysis of data collected between valid or non valid answers through the mean, percentage, mode and variance of variables

Reliability analysis

Cronbach's Alpha	Internal consistency
$\alpha \geq 0.98$	excellent
$0.9 > \alpha \geq 0.8$	good
$0.8 > \alpha \geq 0.7$	acceptable
$0.7 > \alpha \geq 0.6$	questionable
$0.6 > \alpha \geq 0.5$	poor
$0.5 > \alpha$	unacceptable

DATA ANALYSIS METHODS cont.

Exploratory factor analysis

The sampling adequacy of factor analysis is based on Kaiser-Meyer-Olkin (KMO) Measure.

- $0.5 < KMO$ value < 1.0
- Sig. < 0.5

more appropriate

- $0.5 > KMO$ value
- Sig. > 0.5

may not be appropriate

Correlation analysis

The Pearson correlation coefficient (r) measures the dree of correlation between the two variables.

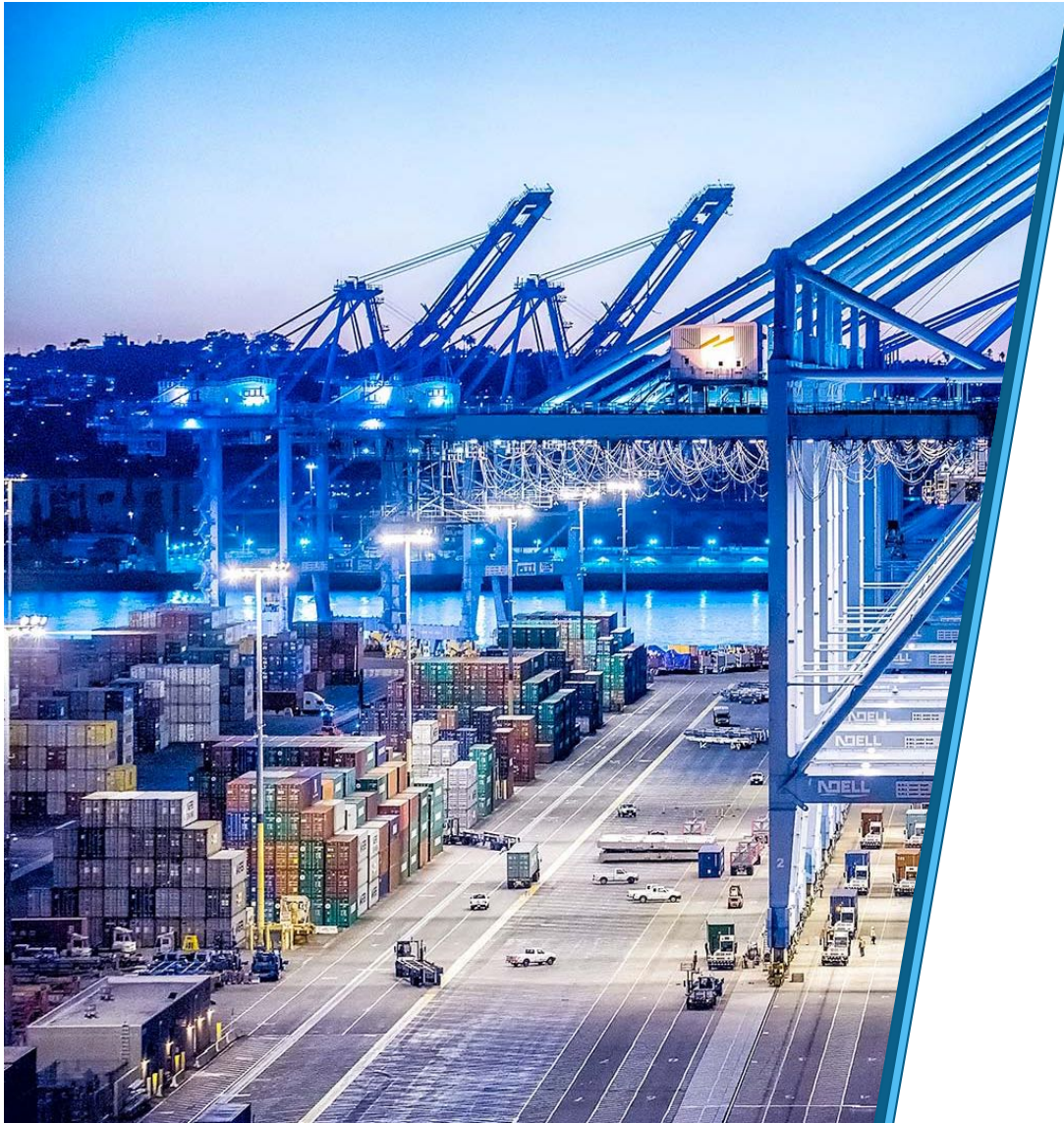$r < 0$ → Negative correlation between the two variables

$r > 0$ → Positive correlation between the two variables

$r = 0$ → No correlation

DATA ANALYSIS METHOD cont.

Regression analysis

Regression analysis is a modelling technique for analyzing the relationship between dependent variables and independent variables.
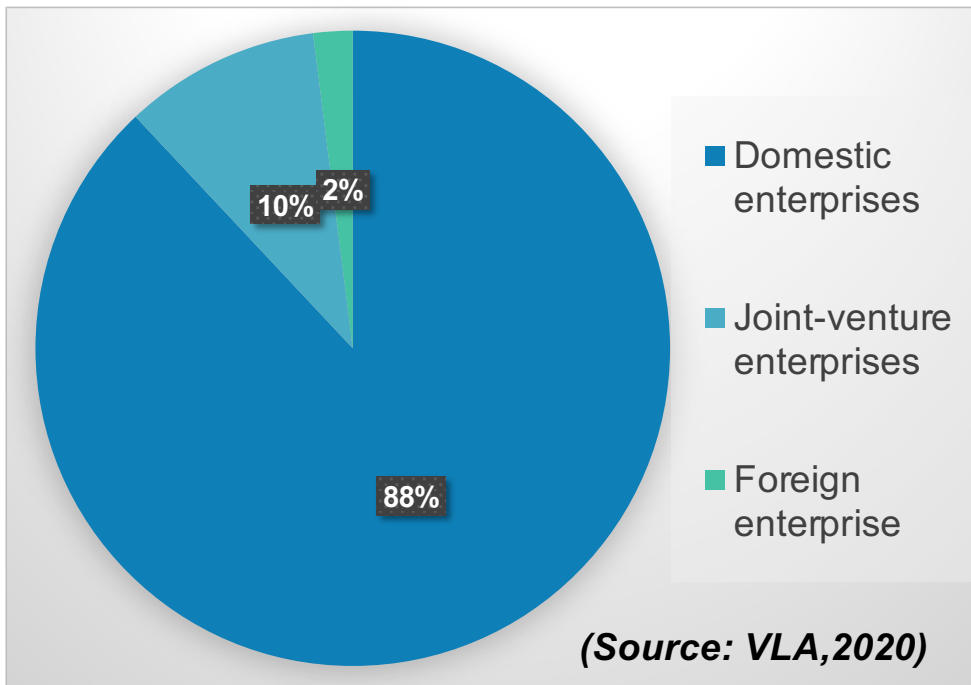
CHAPTER 4

FINDING & ANALYSIS

4.1. Overview of logistics services in import-export activities (2014-2020)

4.2. Factors influence logistics services in import-export activities in Vietnam

4.3. Achievements & limitations

OVERVIEW OF LOGISTICS SERVICES IN VIETNAM

Domestic enterprises: 88%
Joint-venture enterprises: 10%
Foreign enterprise: 2%

(Source: VLA,2020)

Micro-scale enterprise: 41%
Small-scale enterprises: 54%
Medium-sized enterprises: 4%
Large-scale enterprises: 1%

(Source: VLA,2020)

Type of logistics enterprises
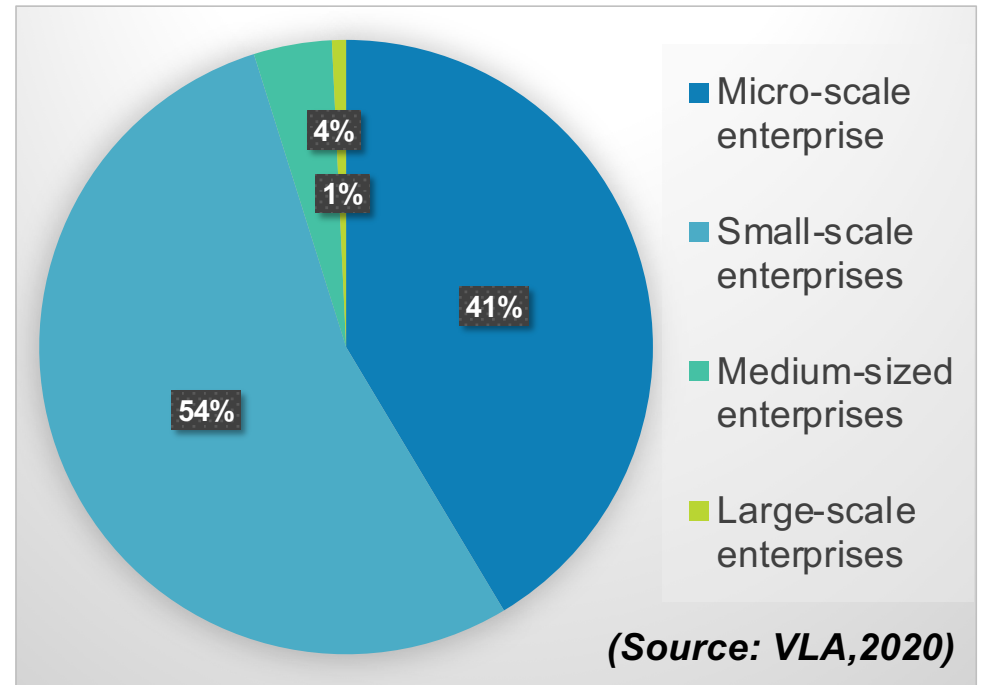
Number & size of domestic logistics enterprises

OVERVIEW OF LOGISTICS SERVICES cont.
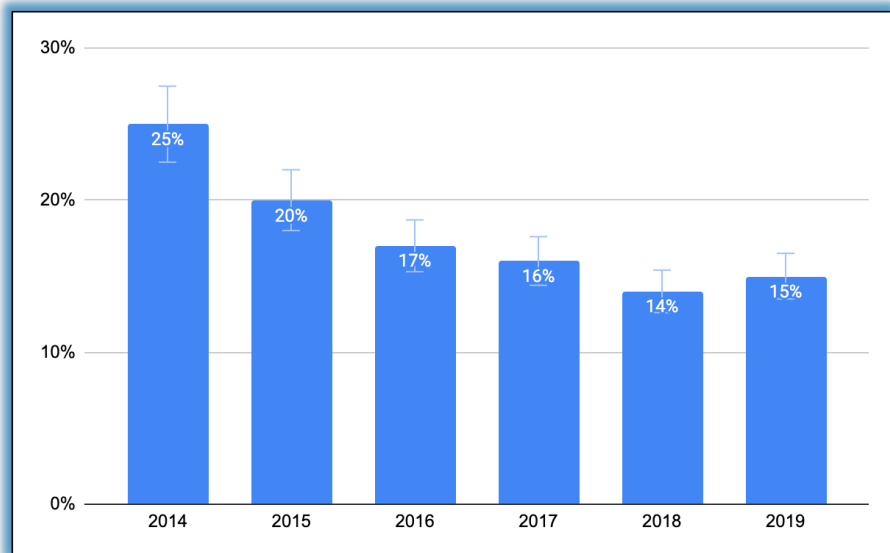
Vietnamese Logistics Provider Index

Year	Rank LPI	Clearance process	Infrastructure	International shipments	Logistics Competence & Quality	Tracking& Tracing	Timeliness
2014	48	3.15	2.81	3.22	3.09	3.19	3.49
2016	64	2.98	2.75	3.12	2.88	2.84	3.5
2018	39	3.27	2.95	3.16	3.4	3.45	3.67

(Source: World Bank, 2018)

The growth rate of the logistics services industry (VLA,2019)

Vietnam's import and export value in 2014-2019 (General Statistics Office, 2019)

LOGISTICS MAIN SERVICES PROVIDED

FORWARDING

- Main service being provided by logistics services providers

- Efficiency increase 15-20% thanks to advanced technologies

TRANSPORTATION

Model	Volumes (million tons) in 2019	Average growth rate (%) in 2019
	1293	(+) 110
	385.4	(+) 109.2
	5.2	(-) 27
	0.45	(+) 6.7

LOGISTICS MAIN SERVICES PROVIDED cont.

LABELING/PACKAGING

- Vietnamese enterprises cannot fully exploit this whole market

WAREHOUSING

- 3,000,000 m² (Vietnam)
- 675,000 m² (Saigon)
- CAGR of 13.4%

CUSTOMS CLEARANCE

- 87.8% of logistics companies provide customs declaration services
- 914 customs brokers and 1,450 certificated customs employees

CONSULTING SERVICES

- Help businesses avoid unnecessary risks
- Prepare documents for logistics enterprises

SURVEY ANALYSIS

% TYPE OF ENTERPRISES

Respondent's profile

Questionnaires sent: 472

Response received: 220

Valid response: 168

- Partnerships 4%
- Foreign invested company 11%
- Private enterprises 39%
- State-owned enterprises 12%
- Joint stock company 18%
- Limited liability company 16%
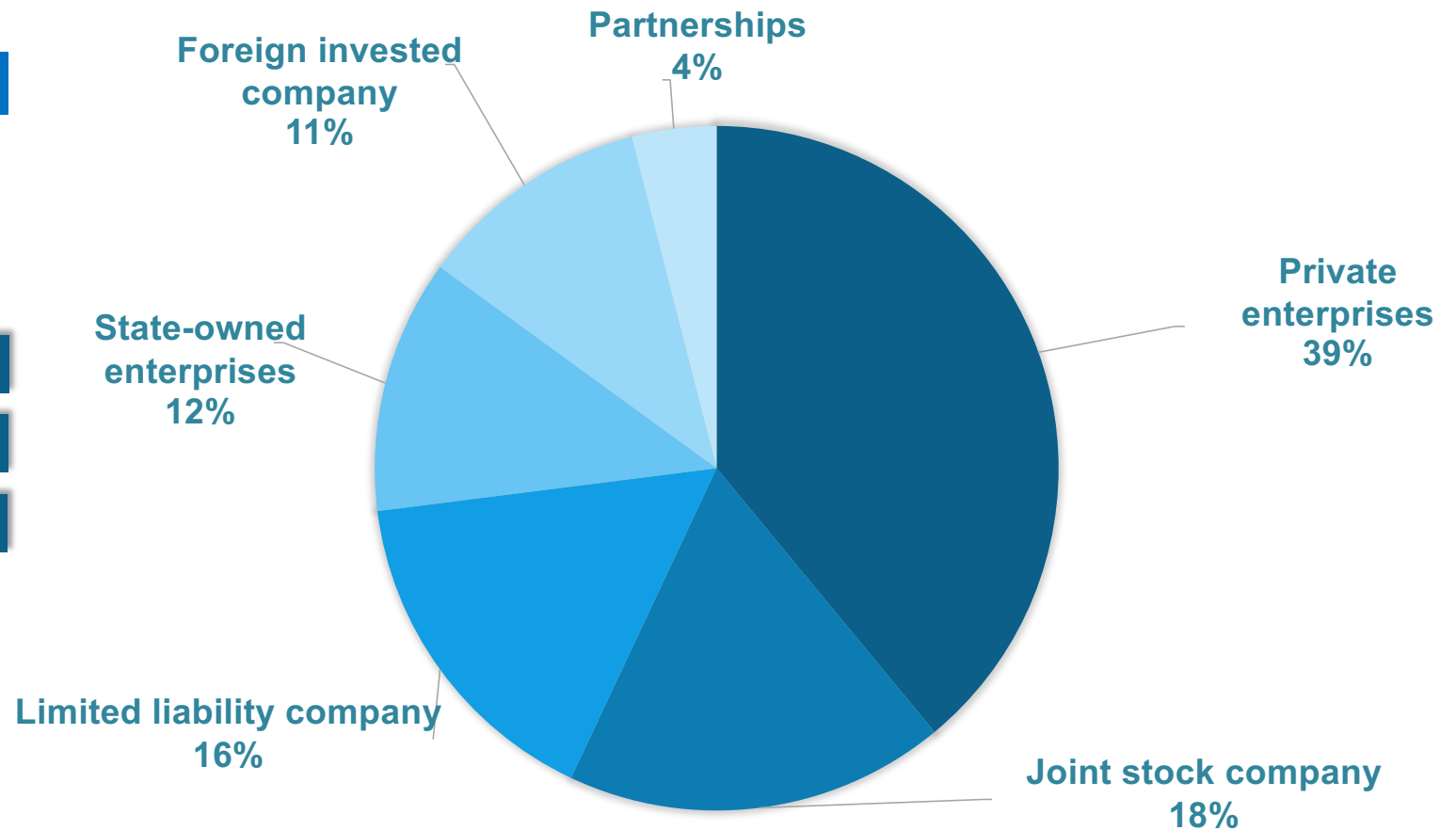
Source: Survey result

SURVEY ANALYSIS cont.

Descriptive analysis

Variablesz	Mean
PL1	4.01
PL2	3.95
PL3	4.14
PL4	4.10
EC1	3.97
EC2	3.93
EC3	3.99
EC4	4.02
AW1	4.09
AW2	4.11
AW3	4.24
AW4	4.12

TE1	4.04
TE2	3.97
TE3	4.12
TE4	3.54
IN1	4.14
IN2	4.07
IN3	4.10
IN4	4.20
IF1	3.77
IF2	4.11
IF3	4.02
IF4	3.83
DE1	3.72
DE2	3.94
DE3	4.13

☰ SURVEY ANALYSIS cont.

Reliability analysis

Development	
Cronbach's alpha	N of items
.679	3

Political – legal framework	
Cronbach's alpha	N of items
.890	4

Technological	
Cronbach's alpha	N of items
.798	4

Economic	
Cronbach's alpha	N of items
.862	3

Industry awareness	
Cronbach's alpha	N of items
.850	4

Infrastructure	
Cronbach's alpha	N of items
.890	4

Integration	
Cronbach's alpha	N of items
.818	4

SURVEY ANALYSIS cont.

Reliability analysis

First attempted

Variables	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Economic factor		
Cronbach's alpha = .775		
EC1	0.681	0.633
EC2	0.759	0.613
EC3	0.709	0.647
EC4	0.195	0.862

→ **Removed EC4**

Second attempted

Variables	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Economic factor		
Cronbach's alpha = .862		
EC1	0.709	0.833
EC2	0.787	0.759
EC3	0.720	0.822

→ **Accepted**

SURVEY ANALYSIS cont.

Exploratory factor analysis

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.849
Bartlett's Test of Sphericity	Sig.	000

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.528	32.731	32.731	7.528	32.731	32.731
2	2.746	11.941	44.672	2.746	11.941	44.672
3	2.003	8.708	53.38	2.003	8.708	53.38
4	1.691	7.351	60.73	1.691	7.351	60.73
5	1.227	5.334	66.064	1.227	5.334	66.064
6	0.916	3.984	70.048			
7	0.786	3.417	73.464			

	Component				
	1	2	3	4	5
PL1		.828			
PL2		.793			
PL3		.845			
PL4		.806			
TE1					.717
TE2					.737
TE3					.786
TE4					.694
IN1	.767				
IN2	.787				
IN3	.651				
IN4	.778				
EC1	.690				
EC2	.756				
EC3	.647				
AW1				.736	
AW2				.807	
AW3				.673	
AW4				.829	
IF1			.723		
IF2			.674		
IF3			.764		
IF4			.667		

SURVEY ANALYSIS cont.

Exploratory factor analysis

	Component
	1
DE1	.735
DE2	.841
DE3	.774

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.638
Bartlett's Test of Sphericity	Sig.	000

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.847	61.559	61.559	1.847	61.559	61.559
2	.682	22.749	84.308			
3	.471	15.692	100.000			

After EFA analysis, the two factors of Integration and economic have combined to form a new factor. The authors decided to accept this factor and named it Economic-integration (IE)

Political-legal framework Factor (PL)

Industry awareness factor (AW)

Technological factor (TE)

Infrastructure factor (IF)

Economic-integration factor (IE)

H1

H2

H3

H4

H5

DEVELOPMENT
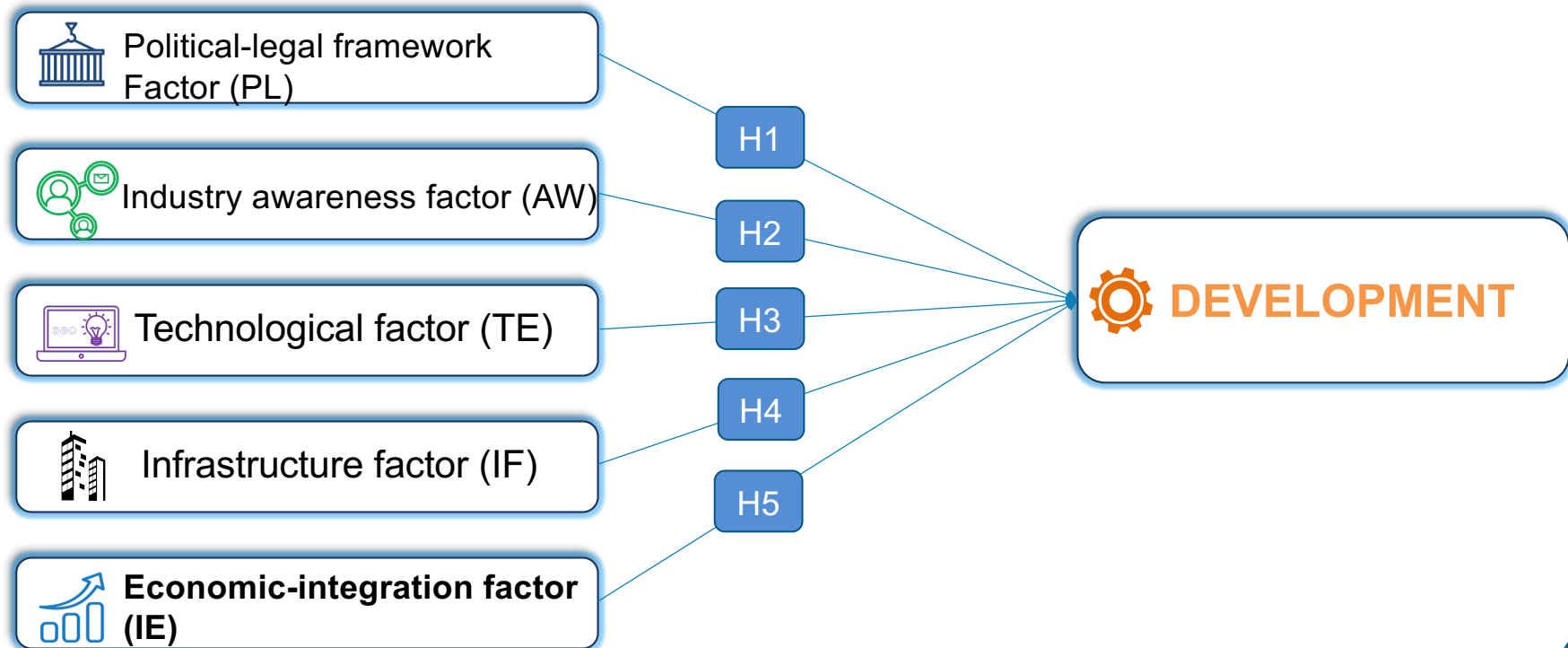
SURVEY ANALYSIS cont.

Correlation analysis

		PL	TE	AW	IF	IE	DE
PL	Pearson Correlation	1	.412**	.496**	.336**	.258**	.552**
	Sig. (2-tailed)		.000	.000	.000	.001	.000
	N	168	168	168	168	168	168
TE	Pearson Correlation	.412**	1	.337**	.456**	.366**	.642**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	168	168	168	168	168	168
AW	Pearson Correlation	.496**	.337**	1	.422**	.402**	.500**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	168	168	168	168	168	168
IF	Pearson Correlation	.336**	.456**	.422**	1	.359**	.564**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	168	168	168	168	168	168
IE	Pearson Correlation	.258**	.366**	.402**	.359**	1	.470**
	Sig. (2-tailed)	.001	.000	.000	.000		.000
	N	168	168	168	168	168	168
DE	**Pearson Correlation**	**.552****	**.642****	**.500****	**.564****	**.470****	**1**
	Sig. (2-tailed)	**.000**	**.000**	**.000**	**.000**	**.000**	
	N	**168**	**168**	**168**	**168**	**168**	**168**

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

SURVEY ANALYSIS cont.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.780[a]	.609	.597	.40912	1.241

a. Predictors: (Constant), IE, PL, IF, TE, AW

b. Dependent Variable: DE

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	42.249	5	8.450	50.482	.000[b]
	Residual	27.116	162	.167		
	Total	69.365	167			

a. Dependent Variable: DE

b. Predictors: (Constant), IE, PL, IF, TE, AW

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	Collinearity Statistics	
		B	Std. Error				Tolerance	VIF
1	(Constant)	.100	.254		.396	.693		
	PL	.179	.044	.240	4.035	.000	.684	1.463
	TE	.319	.054	.348	5.864	.000	.685	1.460
	AW	.094	.055	.106	1.717	.088	.635	1.574
	IF	.208	.055	.223	3.788	.000	.693	1.442
	IE	.153	.054	.158	2.807	.004	.762	1.312

SURVEY ANALYSIS cont.

IMPACT LEVEL

AW = 0	➤	denied
IE = 0.158	➤	accepted
IF = 0.223	➤	accepted
PL = 0.240	➤	accepted
TE = 0.348	➤	accepted

REGRESSGION ANALYSIS EQUATION:

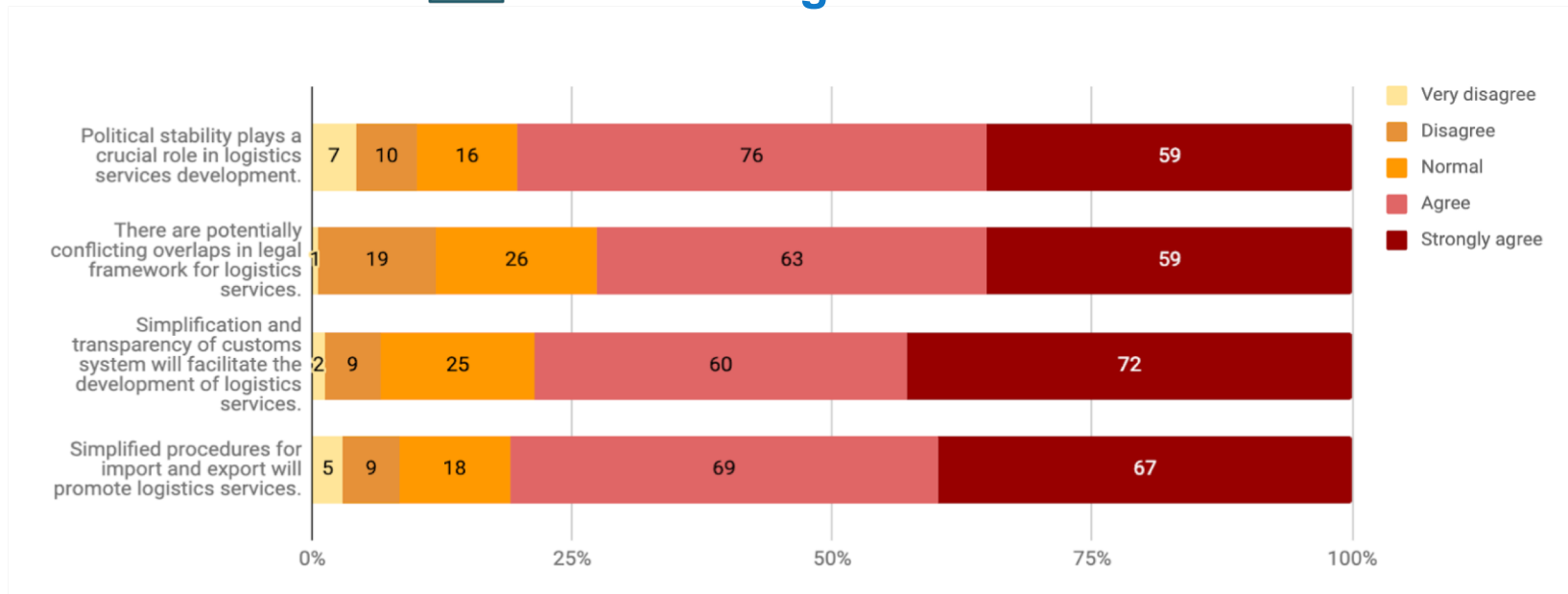$$DE = 0.348*TE + 0.240*PL + 0.223*IF + 0.158*IE$$

Four hypothesis are confirmed

ACHIEVEMENTS AND LIMITATIONS

🏛 Political – legal framework

ACHIEVEMENTS AND LIMITATIONS

Achievements

- **Ranked 83/128** on the safest countries

- **Better policies and law** to promote logistics services day by day

- **Convenient policies** in import-export and transparent customs system

Limitation

- The legal corridor for logistics services is **overlapping** and **inappropriate**

- The legal system regulating logistics activities is **not synchronized**

Economic-integration

Economic-Integration factor's observed variables
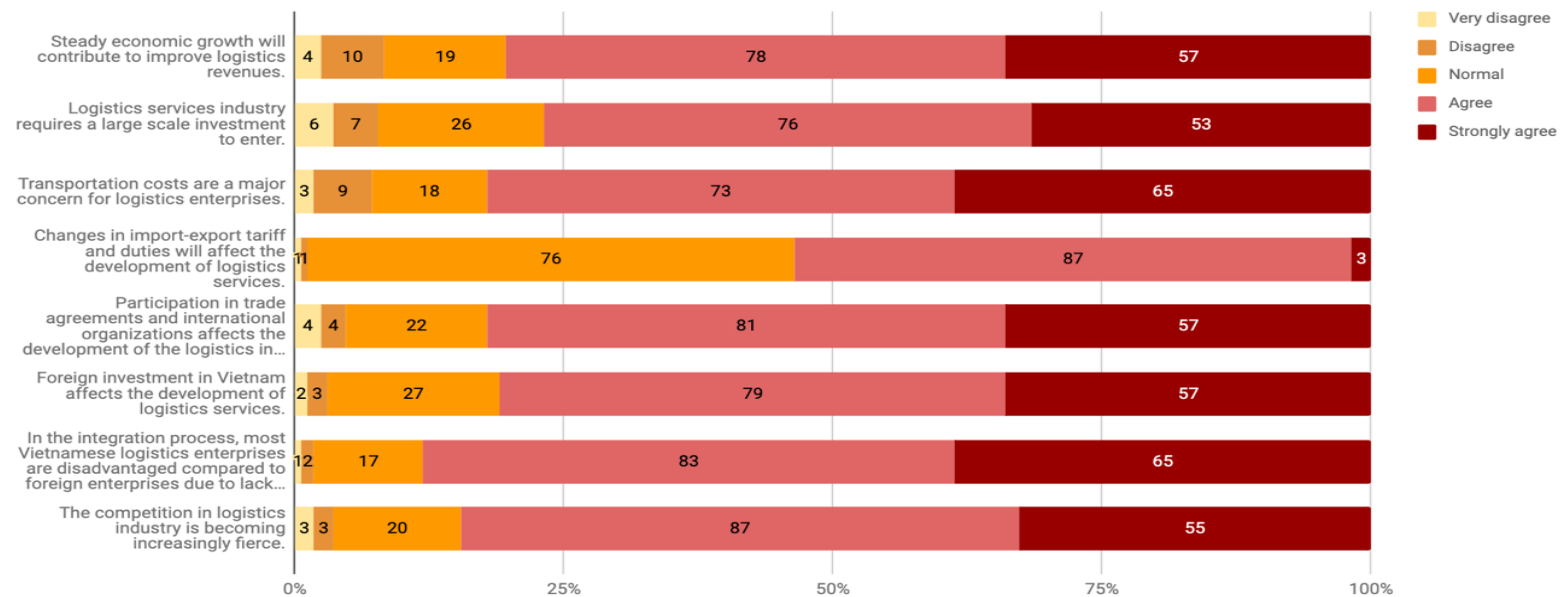
ACHIEVEMENTS AND LIMITATIONS cont.

Achievements

⚙️ **Highest growth rates** in the region in 2019

👤 **Signed FTAs** with many major economies in the world such as EU, Japan, Korea, etc

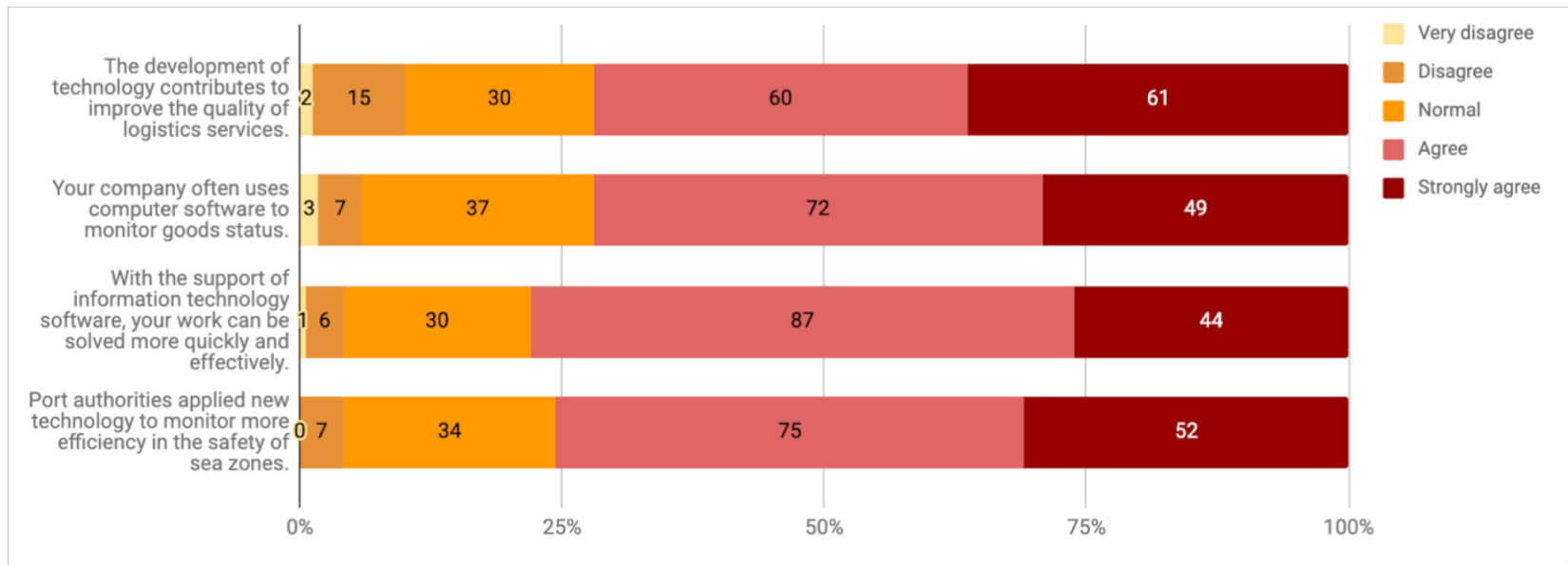🧠 **Reduction** in import-export tariff in integration progress with other countries

Limitations

↷ **Low scale of capital** of logistics services business

↷ **High competition** from foreign competitor

↷ **High transportation cost**

Technological

ACHIEVEMENTS AND LIMITATIONS cont.

Achievements

- **4.0** technology revolution

- **88% of business have** qualify IT staff

- Application of **Internet of Things**

Limitations
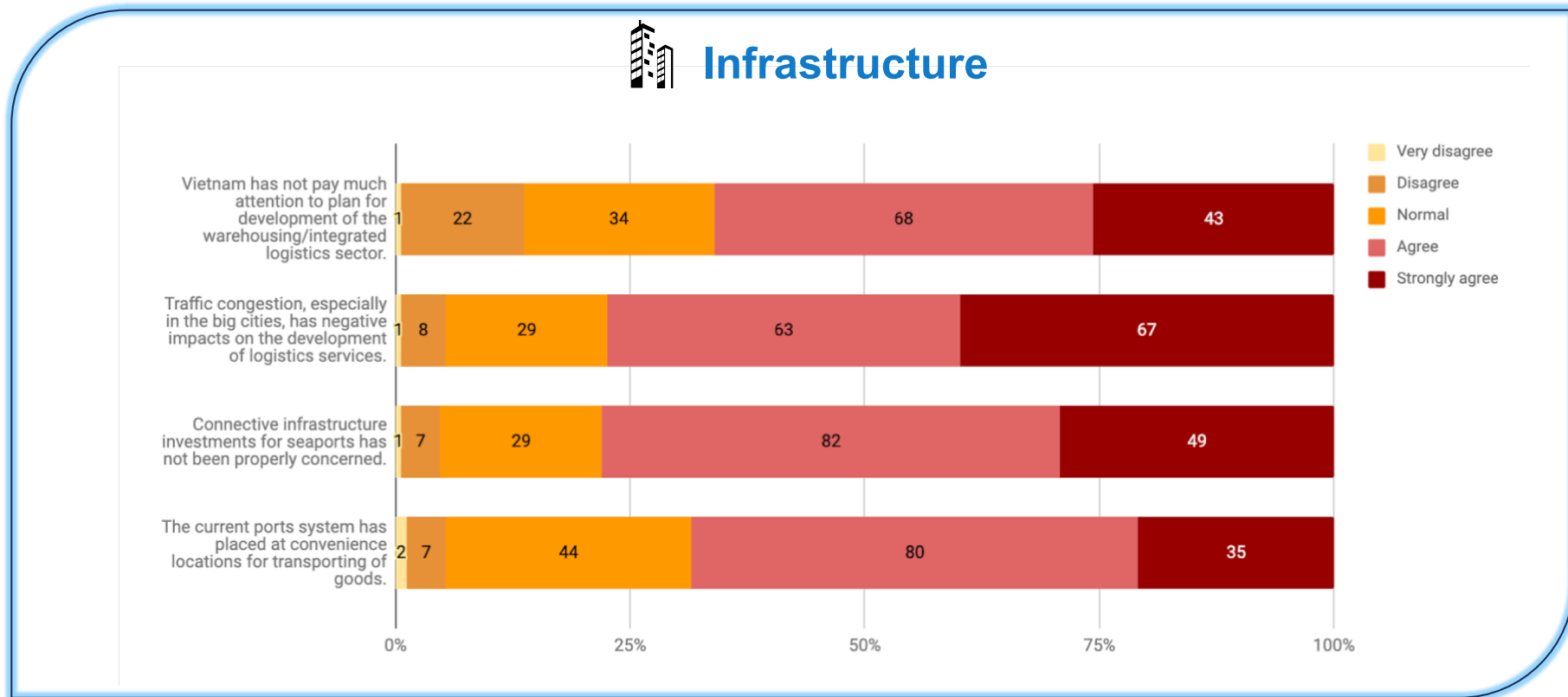
- **Gap** at applying new technologies

- **Cost** of new technologies still large

- **Low** on qualification IT staff

🏢 Infrastructure

	Very disagree	Disagree	Normal	Agree	Strongly agree
Vietnam has not pay much attention to plan for development of the warehousing/integrated logistics sector.	1	22	34	68	43
Traffic congestion, especially in the big cities, has negative impacts on the development of logistics services.	1	8	29	63	67
Connective infrastructure investments for seaports has not been properly concerned.	1	7	29	82	49
The current ports system has placed at convenience locations for transporting of goods.	2	7	44	80	35

ACHIEVEMENTS AND LIMITATIONS cont.

Achievements

- Has **281 ports** with a total capacity of over **550 million tons/year**

- Has **1,568 ships, rank fourth** in ASEAN, **30th** in the world

- Achieved an growth of **11%** in air transport

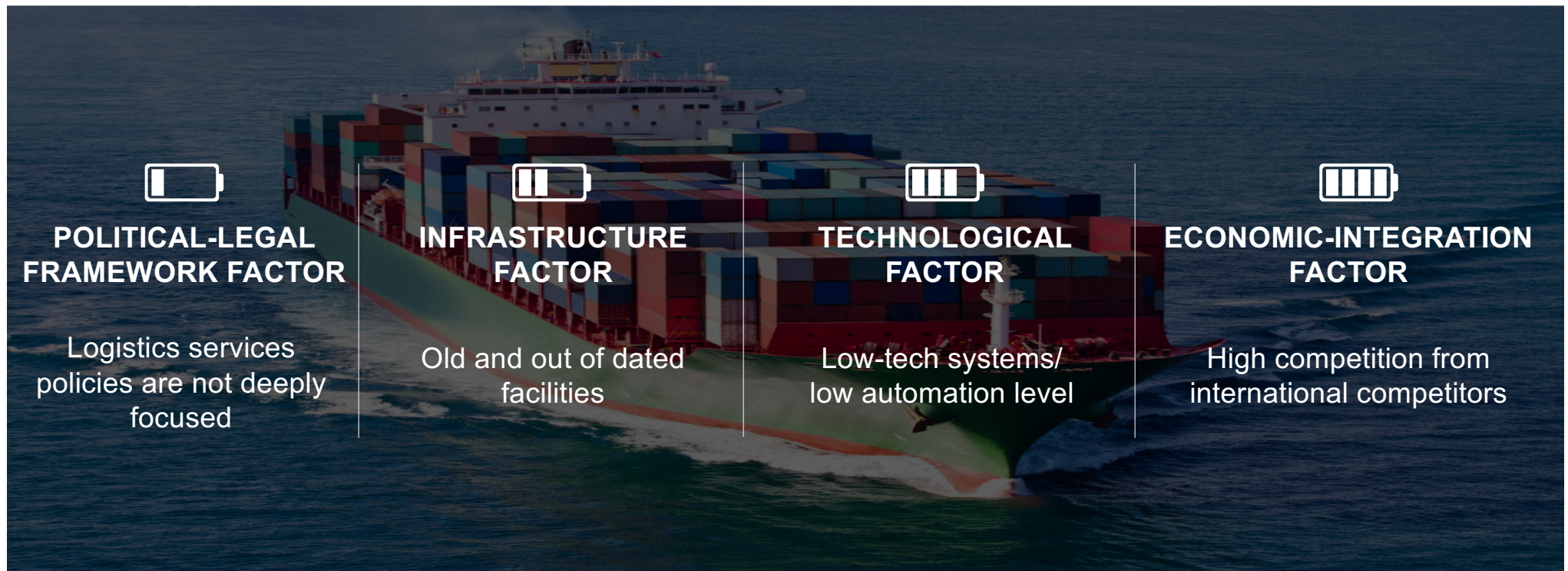- Has **297** stations with **3,143km** of railway

Limitations

- Still **weak** and **inconsistent**

- The logistics warehouse construction is **not complete** and **needs to be implemented**

SUMMARY OF MAIN LIMITATIONS

POLITICAL-LEGAL FRAMEWORK FACTOR

Logistics services policies are not deeply focused

INFRASTRUCTURE FACTOR

Old and out of dated facilities

TECHNOLOGICAL FACTOR

Low-tech systems/ low automation level

ECONOMIC-INTEGRATION FACTOR

High competition from international competitors

CHAPTER 5

RECOMMENDATIONS & CONCLUSION

5.1. The Government's orientation in developing logistics services in Vietnam in the period 2020-2025

5.2. Solution & Recommendations

5.3. Limitations & Suggestion

GOVERNMENT ORIENTATIONS 2020-2025

Objectives

GDP will reach 8% - 10%; **Growth rate** reach 15%-20%; **Proportion** of outsourcing reach 50%-60%; **Logistics costs** will reduce 16%-20% of GDP; **Ranked** at 50th or above by LPI

Luring investments and improving the **connection** between Vietnam and other countries

Forming leading logistics services enterprises

Building capable commercial business

Promoting the application of **technologies** and training professional personnel

Complementation of the **State management mechanism** must be **implemented**

SOLUTION & RECOMMENDATIONS

TECHNOLOGICAL FACTOR

Luring IT investment and setting up a specific strategy for IT development

Helping logistics enterprises in embracing digital transformation

Active in access advance technology and training skilled human resource

SOLUTION & RECOMMENDATIONS

POLITICAL-LEGAL FRAMEWORK FACTOR

Review the national law, policies and legal instruments to avoid conflicts

Facilitate tax, free, charges and procedures for logistics services

SOLUTION & RECOMMENDATIONS

INFRASTRUCTURE FACTOR

Build more expressways and transit hubs between production areas and ports

Improve and modernize railways facilities

Build modern cargo terminals with a large cargo handling capacity and a high degree of automation

Apply advaned technology to speed up the implementation of customs declaration procedures

SOLUTION & RECOMMENDATIONS

ECONOMIC – INTEGRATION FACTOR

Take advantages from international commitments

Be prepared to compete directly with FDI firms

Break out of 2PL to become a full 3PL logistics services provider or even 5PL enterprises

SOLUTION & RECOMMENDATIONS

OTHER RECOMMENDATIONS

01 Should be consistent with the strategy of diversifying the types of services provided to customers

02 Strengthen cooperation among logistics service enterprises

03 Participate in joint ventures and partnerships with foreign partners

LIMITATIONS & SUGGESTIONS FOR FURTHER RESEARCH

The research period was limited

Logistics in import-export activities data was hard to collect

Information collection by distrubuting questionaire was hard to conduct

THANK YOU

FOR YOUR ATTENTION!