

베트남 대도시 물류개발의 기회와 가능성에 관한 분석

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Analysis on the Opportunities and Potential of Vietnam's Logistic Development in Metropolises

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1. Introduction

Ha Noi

- Capital city
- Population : 7,588,150
- Area : 3,324.92 km², including 12 districts, 1 town, and 18 suburban districts.
- Gross regional domestic product (GRDP) increased 9.0 - 9.5% (2016).
- GDP per capita: 75-77 million VND (~ 3,500 USD / person / year)

Hai Phong

- The major gateway to the sea for the provinces
- Hai Phong accounted for 98% of North Vietnam's throughput in 2014.
- The volume of cargo through the ports reached 80.01 million tons.
- The population : 2,190,788
- Area : 1,527 km².
- GDP per capita in 2016 is 3,472USD
- Gross regional development product (GRDP) : 105,584 billion VND (2016)

Quang Ninh

- The only province including 4 cities.
- The province is seen as a miniature Vietnam
- This is a major coal mining province of Vietnam.
- Area : 6,177.8 square kilometers
- Population : 1,245,000.
- The gross regional development product in 2016 increase 10.1%
- GDP per capita in 2016 is 3,776USD.

No	Terminal	2012	2013	2014	2015	2016
1	Chua Vu	446	401	378	315	270
2	Tan Vu	318	639	624	704	788
3	Dinh Vu	455	516	574	628	722
4	Nam Hai	232	252	182	244	255
5	Nam Hai Dinh Vu		280	350	464	
6	Hai An	110	183	309	323	293
7	PTSC	76	155	265	238	245
8	Doan Na	227	244	214	235	240
9	Green Port	373	396	360	350	280
10	VIP Green Port				350	
11	SNP		135	200	223	
12	Tamvua	104	80	79	113	120
13	CHIT	88	102	18	12	
14	Quang Ninh	240	28	3	N/A	N/A

Table 1. Throughput of container terminals in Northern Vietnam from 2012 to 2016 (thousand TEUs)

3. Result

Cities	S ¹	S ²	S ³	S ⁴	rank
Communication infrastructure of logistics					
Ha Noi	0	0.5813023		1	1
Hai Phong	0.5663051	0.0156772	0.026937676		3
Quang Ninh	0.5730927	0.0312743	0.051747166		2
Demand for Transportation					
Ha Noi	0.077233541	0.574466	0.881482066		1
Hai Phong	0.552963809	0.150989	0.214487901		2
Quang Ninh	0.578762823	0.01047	0.017769464		3
Economic situation					
Ha Noi	0.000675431	0.552955221	0.998779997		1
Hai Phong	0.534788823	0.043402379	0.075064491		2
Quang Ninh	0.552955264	0.000458328	0.000828184		3
Storage and Transportation					
Ha Noi	0.040434467	0.41281449	0.910789719		1
Hai Phong	0.24335949	0.203044653	0.454844811		2
Quang Ninh	0.422583328	0	0		3
Investment					
Ha Noi	0.585831	0	0		3
Hai Phong	0.200392	0.383231	0.66242552		2
Quang Ninh	0.072937	0.573773	0.8872195		1

Table 2. Overall indexes and ranking city

2. Methodology

TOPSIS method

- TOPSIS (The Technique for Order of Preference by Similarity to Ideal Solution) is a multi-criteria decision analysis method
- Including 7 steps :
 - Step 1: Construct the decision matrix
 - Step 2: Normalize the decision-matrix.
 - Step 3 : Calculate the weighted normalised decision matrix
 - Step 4: According to standardized value "vij" of weight to determine the best ideal solution "A*" and the worst ideal solution "A"
 - Step 5: Calculating distance scale
 - Step 6: Calculate the similarity to the best solution C*

Factors

- On the basis of previous studies, we assess the development of city logistics from five aspects
- Communication infrastructure of logistics
 - The demand for transportation.
 - Economic situation
 - Transportation and storage
 - Investment

4. Conclusion

- This study aims to investigate the main factors for evaluating of three metropolises of Northern Vietnam
- TOPSIS analysis results have shown that Ha Noi is the top rank among three biggest metropolises of Northern Vietnam in almost categories, Hai Phong and Quang Ninh are ranked next. Quang Ninh is laggard and only ranked top in the top investment categories. Hai Phong is ranked second in four categories and ranked third in communication infrastructure of logistics.
- In decision making, depending on each business characteristics, the results of this research can be used by related organizations.

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