Influential Factors for Location Decisions of International Business Ventures for Logistics Hub Operations: The Case Study of Sri Lanka.

Damayantha De Alwis Student ID 199162C

Research submitted in partial fulfilment of the requirements for the degree of Master of Business Administration in Supply Chain Management



Department of Transport and Logistics Management

University of Moratuwa Sri Lanka

September 2021

DECLARATION OF ORIGINALITY

I declare that this is my own work, and this thesis/dissertation does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma in any other University or institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text.

Signature: De Mas

Date: 5th September 2021

Damayantha De Alwis

COPY RIGHT STATEMENT

I hereby grant to University of Moratuwa the non-exclusive right to reproduce and distribute my thesis/dissertation, in whole or in part in print, electronic or other medium. I retain the right to use this content in whole or part in future works (such as articles or books).

Signature: De Mass

Date: 5th September 2021

Damayantha De Alwis

STATEMENT OF THE SUPERVISOR

The candidate has carried out research for the MBA in Supply Chain Management in the Department of Transport and Logistics Management of University of Moratuwa under my supervision.

Signature of the supervisor: ...

Date:06/09/2021......

Dr. Y M Bandara

ABSTRACT

Sri Lanka is strategically located in the middle of the East-West main shipping lane has the right location to operate as a Regional Logistics Hub. Due to the location advantage, ever since in the history, country was an attractive destination for the sailors and international traders as a transit point. After the independence in 1948, various governments appointed took many initiatives to develop Sri Lanka as regional commercial, manufacturing, and logistics hub. The thirty years of civil war hindered the progress of developing the country and discourage the foreign investment. Government attention was diverted towards protecting the nation from terrorist activities. During this period, internationally, manufacturing bases started moving from West to East looking for low cost of factors of production. International shipping was boomed with sourcing raw materials and supplying the finished goods all over the world. Countries like Hong Kong, Singapore, Dubai capitalized on the geographical location advantage to support the growing international trade by developing as regional logistics hubs. Thereby achieved the commercial and financial objectives. After the independence in Sri Lanka, many initiatives were taken to develop the country as a regional logistics and commercial Hub. Expansion of Colombo Port, establishment of Free Trades Zones, construction of Hambantota port and Matthala International Airport, introduction of Commercial Hub Regulations to facilitate the regulatory reforms are the initiatives taken by the government. In reviewing the statistics of Sri Lanka comparing to the other well performing logistics hubs for the post war ten years period, Sri Lanka is still the lowest performing county as a regional logistics hub even though Colombo port was leading in the region in the past. Regardless of the location advantage and the improvements done in varies sectors to attract international trade, Sri Lanka is still not given the first preference by the international business ventures to operate their regional logistics activities. Therefore, the focus of this research is to identify the factors prioritized by the international business ventures to locate their regional logistics hubs and benchmark Sri Lanka against the well performing Logistics Hubs to identify the areas for the improvements.

Based on the literature review conducted; the influencing factors identified as decision-making criteria for deciding the location for the regional logistics hub is categorized under five main areas as follows.

a) Location related factors,

Port facilities, Air / Sea connectivity related factors, b)

Business friendly legislation related factors, c)

d) Operating cost related factors,

Quality of the infrastructure related factors. e)

According to these factors, survey is conducted to capture the primary data from a sample

of the selected population to identify the influential factors for location decision and

benchmark Sri Lanka against the successful regional logistics hubs in Asia. The target

population for capturing the primary data for the research is identified as the senior

management experienced in the international supply chain management and regional hub

operation. To assess the psychological aspects, they consider while making the decision

of the regional hub location in terms of numbers, Analytical Hierarchy Process (AHP)

technique is used. AHP is basically used for identifying and prioritizing the most

influencing factors for certain complex decision making. Therefore, AHP technique is

identified as the most suitable technique to identify the priorities given by the industry

experts in deciding the regional hub location.

Based on the response to the questionnaire and the feedback received in the personal

interviews, the most important factor for deciding the regional logistics hub was

identified as the geographical location. At the same time, feedback reveals that industry

experts have given similar high importance to the other main factors identified in the

literature review. In reviewing the responses received for benchmarking Sri Lanka with

the other successful regional logistics hubs, reveals the areas to be improved to bring up

Sri Lanka as a preferred regional logistics hub.

In conclusion, as per the facts gathered in the literature review, questionnaire feedback

and the personal interview responses, recommendations are provided for the

improvements to be done to make Sri Lanka the most preferred regional logistics hub in

the Asia.

Key words: Benchmarking, International Logistics Hub, AHP Method.

vi

ACKNOWLEDGEMENTS

First of all, I would like to express my sincere appreciate to Dr. Mahinda Bandara for enlightening us on the subject of Business Research Methodologies. Further, I was so fortunate to have Dr. Mahinda Bandara as the supervisor for my research project. Without his support and guidance, the outcome of this thesis would not have achieved.

At the same time, I would like to express my thankfulness for my family, many individuals and friends who helped me in various ways to complete the research.

I take this opportunity to thank the staff of the Department of Transport and Logistics Management and all the lecturers who enlighten us on various subjects which contributed from all angles to make this research project a success.

LIST OF ACRONYMS

BOI- Board of investment

3PL – Third Party Logistics.

MCC- Multi Country Consolidation.

LSI- Liner Shipping Connectivity Index.

LPI- Logistics Performance Index.

UNCTAD- United Nations Conference on Trade and Development.

TABLE OF CONTENTS.

	Page
DECLARATION OF ORIGINALITY	ii
COPY RIGHT STATEMENT	iii
STATEMENT OF THE SUPERVISOR	iv
ABSTRACT	V
ACKNOWLEDGEMENT	vii
LIST OF ACRONYMS	vii
CHAPTER 01 – INTRODUCTION	01
1.1 Background	01
1.2 Statement of the Problem	04
1.3 Research Questions.	07
1.4 Research Objectives	07
1.5 Justification of the Research Topic	07
1.6 Outline of the thesis.	08
CHAPTER 02 – LITERATURE REVIEW	09
2.1 Dry Port, Free Port concepts and Logistics Hub.	09
2.2 Sri Lankan Government initiatives to Develop the Country as	09
Regional Logistics Hub	
2.3 Commercial Hub Regulations in Sri Lanka.	10
2.4 Internationally used matrix to measure the logistics	12
performance and competitiveness.	12
2.4.1 LPI (Logistics Performance Index):	12
2.4.2 LSCI (Liner Shipping Connectivity Index) 2.4.3 Doing Business Index.	13
	13
2.5 Important Factors to become a Regional Logistics Hub	
2.5.1 Importance of the Geographic Location for a Regional Logistics Hub.	13
2.5.2 Importance of Air, Sea, Land, Connectivity for a	14
Regional Logistics Hub.	
2.5.3 Importance of Government Industrial, Trade Policies and	14
Free Trade Agreements (FTA's) for Regional Logistics hub.	
2.5.4 Sea /Air Combined Transportation and Turnaround	15
Timing.	
2.6 Well Performing Regional Logistics Hubs in Asia.	16
2.6.1 The Strengths of the Singapore as Regional Logistics	16
Hub.	
2.6.2 Hong Kong as a Hub of Global Supply Chain.	17
2.6.3 Indonesia, Lessons to Learn.	17
2.6.4 Dubai as a Regional Logistics Hub.	18
2.6.5 Malaysia became a Regional Logistics Hub by	18
Developing Freeports.	

2.7 Influential factors identified in the literature review to become a	19
successful regional logistics hub.	
	21
CHAPTER 3 – RESEARCH METHODOLOGY	21
3.1 Introduction	21
3.2 Research Design.	21
3.3 Data Collection.	21
3.3.1 Primary Data Source	21
3.3.2 Secondary Data Source	21
3.4 Selection of Population and Samples.	22
3.3.1 Population.	22
3.3.2 Sample.	22
3.4.3 Sample Selection Criteria and Respondent Profile for	22
Questionnaire feedback.	
3.4.4 Sample Selection Criteria and Profile for Personal Interviews.	24
3.5 Application of Analytical Hierarchy Process (AHP)	25
3.5.1 Develop the AHP Hierarchy.	25
3.6 Questionnaire	28
210 Questionnume	
3.6.1 Overview	28
3.6.2 Structure of the Questionnaire for Primary Data Collection.	28
3.6.2.1 Construct the pair wise comparison format.	29
3.6.3 Structure of the Questionnaire for personal interviews.	30
3.6.4 Implementation of the Questionnaire Survey and the Interviews.	31
3.6.5 Strategies for Error Control.	32
3.7 Data Analysis Method: Analytical Hierarchy Process.	32
3.7.1 Interview Feedback Analysis.	36
3.8 Data Collection	37
3.8.1 Primary Data Collection through online questionnaire.	37
8.8.2 Feedback Response rate	37
0.0.2 I coubuck Response face	
CHAPTER 4 – DATA ANALYSIS AND RESULTS.	38
4.1 Introduction	38
4.2 Data Analysis.	38
4.2.1 AHP analysis is done to identify the prioritizing factors for	38
location decision of regional logistics hub.	
4.2.2 Findings of the survey data analysis using AHP.	39
4.2.3 Respondent's rating on benchmarking Sri Lanka with the	41
well performing regional logistics hubs based on the sub factors.	
4.2.4 Findings of the benchmarking analysis based on the sub factors.	42
4.2.5 Personal Interview Feedback.	45
4.2.5.1 Findings base on the personal interviews	45

CHAPTER 5. CONCLUTION AND FUTURE RESEARCH DIRECTIONS.	50
5.1 Summarizing the Research Findings in line with the Research Questions and Objectives.	50
5.2 Recommendations for Improving Sri Lanka as a preferred Regional Logistics Hub in Asia.	52
5.3 Research Limitations.	55
5.4 Future Research Directions.	55
References.	56
Annexure.	58

LIST OF TABLES	
	Page
Table 1-1 Comparison of the performance of the Regional Logistics hubs in Asia from year 2009 to 2019	05
Table 2-1 Free ports and Bonded Areas nominated by the Gazette No 1818/30. 2013 to operate Commercial Hub Operations.	11
Table 2-2 Influential Factors Identified in the Literature review to Become a Successful Regional Logistics Hub.	20
Table 3-1 Sample selection criteria, weightage, and respondent profile for Questionnaire.	22
Table 3-2 Sample selection criteria, and respondent profile for personal interview.	24
Table 3-3 AHP Decision criteria- Main Factors and Sub Factors.	25
Table 3-4 Scale used for pair wise comparison.	29
Table 3-5 Format for the Semi Structured Personal Interview.	31
Table 3-6 Comparison Matrix.	33
Table 3-7 Normalized Matrix.	34
Table 3-8 Consistency Check.	34
Table 3-9 Identifying the Prioritizing Factors based on the respondent's feedback.	35
Table 4.1 AHP Calculation of geometric mean figures of all	39
respondents' feedback	
Table 4-2 Priorities given by the industry experts for location decision of regional logistics hub based on the data analysis using AHP technique.	40

Table 4-3 Geometric mean figures of all respondents' feedback on	41
benchmarking Sri Lanka with other Regional Logistics Hubs	
Table 4-4 Ratings given by the respondents benchmarking Sri Lanka	42
with the well performing regional logistics hubs in Asia.	
Table 5-1 Comparison of prioritizing factors for deciding the Regional	
Hub Location and ratings given for the same factors benchmarking Sri	
Lanka against the best performing Regional Logistics Hubs.	

LIST OF FIGURES		
		Page
Figure 1-1	International Maritime Trade by Region 2018.	01
(Percentage sh	are in world tonnage)	
Figure 3-1	AHP Hierarchy	27
Figure 3-2 Format for capturing the data of benchmarking Sri Lanka with well performing Regional Logistics Hubs base on sub factors.		29
Figure 3-3 for the Main Fa Factors	Format used for capturing the pair wise comparison data actors to identify the priorities giving among the Main	30
Figure 3-4 feedback.	Main Factor pair wise comparison for the respondent	33
Figure 3-5	Values of Random Consistency Index.	35
Figure 3-6 benchmarking	Analyzing the respondent rating on Sri Lanka with the other regional logistics hubs	36

LIST OF EQU	JATIONS	
		Page
Equation 3-1	Equation for Consistency Index	35
Equation 3-2	Equation for Consistency Ratio.	35