CITY UNIVERSITY OF HONG KONG
香港城市大學

Country Selection for New Factory in Southeast Asia :
Multiple Criteria Analysis and Decision Support Model
在東南亞投資新廠的國家選擇問題研究：
多目標分析及決策支援模型

Submitted to
College of Business
商學院
In Partial Fulfillment of the Requirements
For the Degree of Doctor of Business Administration
工商管理學博士學位

By

Lee Ho Fai
李浩輝

August 2018
二零一八年八月

ABSTRACT

The shortage of migrant workers in the Chinese manufacturing sector began in 2004. This marked an end to the tale of unlimited labour supply in China and there has been a trend, in recent years, for Chinese entrepreneurs to relocate their production facilities from China to South East Asia (SEA). Establishing a new factory in a foreign country involves an enormous amount of investment and long-term commitment of the corporation's resources. This research aims to formulate a decision support model for country selection with empirically significant criteria for entrepreneurs to establish a new factory in SEA.

Country selection for a new factory typically involves a multiple criteria decision making (MCDM) problem that takes into consideration of the political, economic, socio-cultural, technological, legal, and environmental (PESTLE) factors. Two questionnaire surveys were designed in the course of this analytical study to collect the preference and opinion of entrepreneurs and factory managers. A 7-point Likert Scale was used in the first survey (Survey 1) to identify 20 factors which the respondents considered significant for country selection, based on the result of 67 relevant questionnaires collected from factory managers in China. The questionnaire also confirmed that this research problem is of great significance to the business community as 18% of the respondents were either planning to or has established factories in SEA. Moreover, the results demonstrate that the direction of this research was plausible, as nearly all respondents considered Southeast Asian countries as locations which they would like to establish new factories outside of China.

The second questionnaire survey was conducted to determine the relative importance of the 20 significant factors as the relative importance of these factors may vary across different business sectors. Different comparative weightings of the criteria were reflected in the new decision support model created. The Simple Additive Weighting (SAW) method was the MCDM tool used in this survey. 122 valid questionnaires were obtained from 1560 relevant members of The Federation of Hong Kong Industries and from several professional database. The relative weighting of the criteria was then normalized for computation. After getting the current values of the 20 significant factors of the eight ASEAN countries, the ranking of the best countries for establishing new factories was calculated. Moreover, different rankings were also obtained for different business sectors. As such, the decision support model was generated using a multiple criteria decision analysis. The open questions of the second survey (Survey 2) indicated that Vietnam and Cambodia were the most popular countries to establish new factories. The main reasons for their attractiveness are the relatively low cost of labour and stable political environment. The local merchants' associations and the government platforms are often the most popular channels to identify the most suitable countries for investment. The biggest

difficulties that factory managers encountered in SEA are unfamiliar local policies and culture. The suggested solution is to contact local authorities through the merchants' associations and be respectful of the local culture. Majority of the factory managers in SEA indicated that their investment of new factories are successful, contributed by the low cost of labour, low cost of land, and political stability.

The decision support model from this study can be used to solve location selection problems and a MCDM Model Application with flowchart is provided for reference. An Implemented Case Study is also given as an example of the application. This study fills a void in prior research by identifying the location selection criteria that are significant and can assist business managers in making better decisions through analytical means when establishing a new factory in Southeast Asia.