

SITE SELECTION IN VIETNAM

CASE: Yritys A

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ABSTRACT

This thesis deals with site selection in Vietnam for a foreign invested metal processing plant. The purpose of this thesis is to provide an overview of the related concepts to site selection and identify the most cost effective locations in Vietnam for Yrity A. Additionally investment issues relevant to Yrity A in Vietnam are introduced.

As traditional supply chains are phasing out, Yrity A has decided to study Vietnam as a potential country for investing in a new processing plant. Yrity A has identified opportunities in the internationalizing supply chain of their products. For this purpose, Yrity A has solicited Finpro Vietnam to study the feasibility of establishing a processing plant in Vietnam. This thesis supplements the Finpro Vietnam study by extending the scope of research beyond market assessment.

This thesis is deductive with a single case study strategy. The chosen research method is a mixed-method combining qualitative and quantitative aspects in data collection techniques and analysis procedures. The empirical part of the thesis consists of unstructured expert interviews carried in Vietnam with the objective of gaining an understanding of key site selection issues in Vietnam. These conducted interviews allowed a more accurate site selection as numerous issues are identified influencing site selection in Vietnam.

A customized site selection model is produced for Yrity A's purposes. This model has been built on the basis of theoretical proposals and then adjusted to the case company's site selection specifications. Additionally, key findings from the expert interviews have been used in honing the model.

Site selection information is collected on 33 shortlisted industrial parks from secondary sources and expert interviews. This data is utilized through a three phased site selection process where industrial parks Nam Sach, Tan Duc, Tien Son and Lien Chieu are identified out of 33 industrial parks for Yrity A as the most cost effective locations. Along with this identification, an overview is given on key investment issues in Vietnam for Yrity A's consideration.

Key words: industrial park, investment issues, site selection, Vietnam, metal processing plant

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TIIVISTELMÄ

Tämä opinnäytetyö käsittelee sijainnin valintaa Vietnamissa ulkomaalaisomistaiselle kaapeliromun käsittelylaitokselle. Työn tarkoituksena on esitellä sijainnin valinnan olennaisia käsitteitä ja tunnistaa sopivimmat sijainnit Yritys A:lle. Lisäksi tämä opinnäytetyö selvittää Vietnamin yleisiä sijoitus kysymyksiä Yritys A:lle.

Perinteisten jakeluketjujen muuttuessa Yritys A on päättänyt tutkia Vietnamia potentiaalisena sijoitus kohteena jalostus tehdaslaitokselleen. Yritys A on tunnistanut mahdollisuuksia kansainvälistyvässä kaapeliromun kierrätysketjussa. Finpro Vietnam on laatinut tutkimuksen Yritys A:n kaapeliromun käsittelylaitoksen sijoittamisesta Vietnamiin. Tämä opinnäytetyö täydentää Finpro Vietnamin toteuttavuus tutkimusta laajentamalla markkinatutkimuksen ulkopuolelle.

Tämä opinnäytetyö on deduktiivinen tapaustutkimus. Valittu tutkimusmenetelmä on yhdistelmä laadullisia ja määrällisiä tiedonkeruu- ja analyysimenetelmiä. Työn empiirinen osuus koostuu asiantuntijahaastatteluista Vietnamissa, jonka tavoitteena on saada ymmärrys olennaisimmista sijaintivalinta asioista. Haastattelut mahdollistivat tärkeimpien sijainnivalinta tekijöiden tunnistamisen Vietnamista ja näin tarkensivat itse sijaintitutkimusta.

Räätälöity sijainnivalinta malli on tuotettu Yritys A:n tarpeisiin. Tämä malli on rakennettu teoreettiselle pohjalle ja sitten sovellettu case-yrityksen sijaintitarpeisiin. Lisäksi, asiantuntijahaastattelun tuloksia on hyödynnetty mallin täsmennyksessä.

Sijainnivalinta tietoa on kerätty 33 parhaasta yrityspuistosta toissijaisista lähteistä ja asiantuntijahaastatteluista. Tätä tietoa on hyödynnetty kolmivaiheisessa sijaintivalinta prosessissa, jossa Nam Sach, Tan Duc, Tien Son ja Lien Chieu on tunnistettu kilpailukykyisimmiksi Yritys A:lle. Parhaiden sijaintien tunnistamisen lisäksi Yritys A:lle on esitelty olennaisia sijoitus kysymyksiä.

Avainsanat: kierrätys, sijainnivalinta, sijoituskysymykset, yrityspuisto, Vietnam,

ABBREVIATIONS

CPI: Consumer Price Index

EZ: Economic Zone

EPZ: Export Processing Zone

FDI: Foreign Direct Investment

FIA: Foreign Investment Agency

FIE: Foreign Invested Enterprise

GIS: Geographic Information System

GVN: Government of Vietnam

IP: Industrial Park

IZ: Industrial Zone

MPI: Ministry of Planning and Investment

PCI: Provincial Competitiveness Index

USD: United States Dollar

VND: Vietnam Dong

TABLE OF CONTENTS

1	INTRODUCTION	1
1.1	Research questions	2
1.2	Scope and limitations	3
1.3	Structure	4
2	RESEARCH METHODOLOGY	5
2.1	Research approach and strategy	5
2.2	Data gathering	7
2.3	Weighted-score method	7
3	SITE SELECTION – THEORETICAL FRAMEWORK	9
3.1	Locating manufacturing facilities	9
3.2	Site selection process	10
3.3	Site selection factors	11
3.3.1	Staffing	13
3.3.2	Inherent local conditions	15
3.3.3	Infrastructure	16
3.3.4	Construction	17
3.3.5	Factors influencing cashflow and financial aid	18
3.3.6	Proximity of resources	19
4	CASE COMPANY – YRITYS A	21
4.1	Company overview	21
4.2	Processing plant site selection factors	21
5	SITE SELECTION CASE	25
5.1	Entry mode	25
5.2	Foreign trade zones	26
5.3	Vietnamese port system	29
5.4	Provincial Competitiveness Index (PCI)	31
5.5	Yritys A site selection process	31
5.5.1	Initial selection	33
5.5.2	Distance screening	33
5.5.3	Suitability	34
5.5.4	Cost matrix	35
5.5.5	PCI matrix	37

5.5.6	Shortlisted industrial parks	39
5.6	Regional site selection issues in Vietnam	41
5.6.1	Northern Vietnam	42
5.6.2	Tien Son	44
5.6.3	Nam Sach IP	44
5.6.4	Southern Vietnam	45
5.6.5	Tan Duc IP	47
5.6.6	Central Vietnam	48
5.6.7	Lien Chieu IP	51
6	RECOMMENDATIONS	52
6.1	Findings	53
6.2	Vietnam investment issues	54
6.2.1	Repatriation of profits	55
6.2.2	Legal environment	55
6.2.3	Staffing	57
6.2.4	Vietnam economy	58
7	SUMMARY	61
	APPENDICES	71

1 INTRODUCTION

All operations do not have logical justification for their location. Changes in demand and supply are often the two stimuli causing organizations to change locations. Shifting customer demand may prompt a location change the same way changes in the cost, or availability, of the supply of inputs to the operation. As traditional supply chains are phasing away, Yrityts A has decided to study Vietnam as a potential country for investing in a new processing plant.

Yrityts A has identified opportunities in the internationalizing supply chain of metal industry. As a big portion of Yrityts A's processing activities requires manual work, investing to low labour cost Vietnam is one of the best ways to gain a competitive edge. In this purpose, Yrityts A solicited Finpro, a consulting organization focused on accelerating internationalization process of Finnish companies, to study whether or not they should enter the Vietnamese market.

Yrityts A is currently considering their investment to Vietnam and has not reached a final decision whether or not to enter the market. This is due to a number of impediments like lack of in-depth market knowledge and investment license issues. Government of Vietnam (GVN) is trying to attract large scale investment into specific value-added industries like ICT and high-tech, so Yrityts A is considering carefully it's relatively small scale investment into its industry which is not on the list of industry sectors receiving big incentives.

Currently, Yrityts A is in the process of acquiring an investment license to Vietnam. After studying the market and general business conditions, Yrityts A will begin the next phase in their investment to Vietnam. This thesis functions as a pre-emptive site selection study for their purposes and will be utilized more in the future.

The purpose of this thesis is to supplement Yrityts A with knowledge and better understanding of the Vietnamese market. Site selection issues were not the main

scope of the Finpro study so this thesis concentrates particularly on issues relevant to Yrity's A's site selection. In this way Yrity's A will gain a better understanding of Vietnam's provinces and regions.

1.1 Research questions

This thesis has two research questions. The main aim is to answer these questions in a scope suitable to Yrity's A's information needs. Secondly, the needs of Finpro Vietnam were acknowledged and the general usability of the results in this thesis were considered last. Table 1 illustrates the relation of the research questions defined for this thesis and the information needs of Yrity's A.

TABLE 1. Research questions and research objectives

Research questions	Research objectives
1 What are the most cost effective locations in Vietnam for Yrity's A ?	<p>a) Identification of the most competitive industrial real estates in terms of costs and specific criteria set by Yrity's A</p> <p>b) Build a site selection model that can be reproduced in future studies by Finpro Vietnam</p>
2 Are there any special investment issues in Vietnam for Yrity's A to consider?	Supplementing Finpro Vietnam investment feasibility study by going beyond it's scope of research covering issues of interest.

Before the first research question can be answered properly, site selection criteria need to be established to define cost effectiveness. A set criterion need to be established particularly for the purpose of site selection in Vietnam. The most feasi-

ble locations can be identified for Yrity A once these site selection factors have been identified. The site selection model of Yrity A has been planned in such a manner that it can be used in future site selection studies in Vietnam. The results of the site selection can be easily reproduced by establishing a new set of criteria. This is illustrated in Chapter 1.2 Yrity A site selection process.

The second research question is necessary to answer a number of questions on Vietnam relevant to the site selection stipulated in this thesis. Provision of this advice has been deemed necessary to supplement an investment feasibility study made by Finpro Vietnam for Yrity A. In addition to supplementing information of interest, answering this research question provides an updated picture of Vietnam as an investment environment. The covered topics also provide generic advice on doing business in Vietnam.

1.2 Scope and limitations

As Yrity A is interested in investing to Vietnam, this thesis is limited to study specifically Vietnam as an investment environment. For the same reason, this thesis concentrates on studying the site selection of manufacturing and processing enterprises. This country limitation implies some obstacles in data collection. Transparent and reliable data is not widely available on Vietnam. Availability of quality information in particular is a major impediment for a more accurate site selection. For this reason, most limitations made in this thesis are made on the basis of data quality issues. The limitations in question are highlighted in their respective chapters.

Study of the factors of material availability, land preparation, zoning and environmental regulations are excluded from this thesis as Yrity A does not plan to construct its own facilities and premises in Vietnam. Of all the construction factors discussed in the theory part of this thesis, only the cost of land is studied in detail as it influences rent. Similarly preferential rent rates are not included in this site selection study due to their wide variability.

A work placement of the writer in Finpro Vietnam influenced the structure of the site selection greatly. Similarly, this has had an impact on the thesis itself as the guidance of Finpro personnel has been utilized throughout the writing process. Additionally the writer made use of his own work experience in Vietnam to find reliable up-to-date research publications.

1.3 Structure

This thesis is divided to seven chapters. In Chapter 1 Introduction the general nature and scope of the thesis are described. This is followed by two chapters handling theoretical issues like Chapter 2 discussing the research methods used. In Chapter 3 the theoretical framework of this thesis is described as a literary review and site selection in general is introduced. In Chapter 4 a brief overview is given on the case company, Yritys A and their needs from the planned processing plant.

In Chapter 5, the site selection for Yritys A is conducted. A wide spectrum of Vietnam specific site selection issues are covered in this chapter as 4 ideal locations are identified from the initial 200 locations. These locations are evaluated by the framework proposed in Chapter 4. Similarly, Chapter 5 contains region specific advice that will have major implications to site selection.

Chapter 6 is dedicated to giving recommendations to Yritys A's internationalization process to Vietnam and other general topics about the results of the site selection. This part contains generic advice about Vietnam's economy worthy of studying. Chapter 7 Summary finishes off the thesis with brief conclusions.

2 RESEARCH METHODOLOGY

This thesis is deductive with a flair of explorative study. The research strategy used in this study is multi-method by nature by combining qualitative and quantitative aspects. These chosen methods correspond best with the case company's needs and thus unstructured interviews are utilized.

It is to be noted that the chosen research methods in this thesis correspond somewhat well to those used in site selection studies conducted by Finpro Vietnam. Similar research methods have been identified from academic publications, in the initial phase of the thesis the methods generally used by Finpro Vietnam were utilized. These methods have been supplemented in the later phases with other methods from secondary sources. This chapter discusses the research methods used in this thesis.

2.1 Research approach and strategy

There are a number of justifications for the selected strategy and approach. Saunders, M. Lewis, P. & Thornhill, A. (2007, 379) state there is no standard approach to analyzing qualitative data. Tashakkori and Teddlie (2003) promote the usefulness of using a multiple methods if they provide better opportunities to answer the research questions. For these reasons, this thesis uses multiple research methods. A mixed-method approach is utilized by combining quantitative and qualitative data collection techniques and analysis procedures. All quantitative data is analysed quantitatively while qualitative data is analysed qualitatively. Qualitative techniques like expert interviews predominate over quantitative in this thesis. (Saunders Et al. 2009 152.)

This thesis is designed as a holistic single case study. This is a research strategy involving empirical investigation of a particular contemporary phenomenon within its real-life context, using multiple sources of evidence. (Saunders, Lewis &

Thornhill 2009, 588) The writer's motivation to gain understanding of site selection in Vietnam supports this approach well. (Saunders Et al. 2007, 139.)

The research approach utilized in this thesis is deductive. With this approach, a theoretical proposition is tested by employing a research strategy specifically designed for the purpose of its testing. (Saunders Et al. 2009 124) This approach is visible in the general structure of this thesis which is highly characteristic of a typical deductive approach. (Saunders Et al. 2009 124-25) as a theoretical hypothesis is established by listing site selection factors in Chapter 3 Site selection factors – theoretical framework and then expressing them in operation terms as stipulated in Chapter 4 Case company - Yritys A. This is followed by testing the theories in Chapter 5 Site selection. The outcomes of this inquiry are discussed in Chapter 6 Recommendations. Some modifications to the utilized theoretical part are suggested in the same chapter.

The site selection factors stipulated by Waller (2003) provide the theoretical framework for the site selection factors while Thai& Grewal (2005) and others provide the framework for the process itself. In addition to the frameworks adapted from academic publications described in Chapter 3 Site selection factors – theoretical framework, guidance from Finpro Vietnam personnel has been utilized in formulating the research approach as well.

Although this thesis is mostly deductive by nature, it has some explorative features. This explorative flair is useful in qualitative research where the primary motivation is to discover and explore new phenomena. (Myers 2009 258) This approach is used in order to gain a clearer understanding of the site selection process. As the writer was unsure of the nature of the site selection studies in Vietnam at the initial phases of the thesis process, the flexibility associated with explorative research is a major motivator for choosing to include this approach. (Saunders Et al. 2009 135.)

2.2 Data gathering

The flexibility of the research in this thesis is addressed in data gathering by using unstructured interviews. As each expert interview conducted has its own theme and questions to be covered, the interview approach is semi-structured. The main approach, unstructured interviews, is informal and suitable for explorative research. The writer's low level of understanding site selection was decisive for choosing the unstructured interview approach. (Saunders Et al. 2007, 312-14.)

The interviewees are investment consultants from Finpro Vietnam who have wide local knowledge and experience with studying developing markets. Additionally, the consultants are particularly experienced with consulting Finnish businesses on Vietnam business opportunities. Their valuable experience has been utilized in this thesis in the form of expert interviews.

Literature review is used to formulate the theoretical framework of site selection. To gain a valid and accurate understanding of site selection, only recent and the most relevant literature is used. The site selection research approaches are diverse, the qualitative approach utilized in this thesis is discussed in more detail in Chapter 2.3 Weighted-score method.

In addition to the secondary sources found through literature review, a number of primary sources have been utilized as well. The writer attended conferences, seminars and other events in Vietnam and the findings of these events have been applied in this thesis. This research method is called participant observation of a secondary nature. (Saunders et al. 2009, 296) The writer has built an understanding of investment issues in Vietnam through his involvement in a number of investment studies carried out by Finpro Vietnam. This understanding has been incorporated into this thesis by studying the most relevant issues to the case company.

2.3 Weighted-score method

Slack *Et al.* (2007, 161) presents a systematic and quantitative technique to help site selection process called weighted-score method. It involves the identification of criteria used for evaluating various locations. This method is also called preference matrix or the factor-rating method. The method described below is utilized in multiple parts of this thesis so it is described here to understand how it is to be interpreted.

TABLE 2. Sample site selection matrix (adapted from Thai& Grewal 2005a 11).

The matrix of possible sites for a processing plant							
Possible sites	Criterion 1		Criterion 2		Criterion 3		Composite point (PPT)
	PPT	%	PPT	%	PPT	%	Σ
Site 1							Σ
Site 2							Σ
...							Σ
Site n							Σ

An example of weighted-score method can be seen from Table 2. Firstly, a relative importance is established for each criterion and giving weighting factors to them. Lastly, each site is rated according to each criterion. Scores can be on any scale, but the sum of weights for all factors should equal 1.0 or 100. The total score for each alternative is the sum of weighted scores. This weighted-score method is particularly useful as the costs associated with the site alternatives are hard to evaluate. (Brandon-Jones& Slack 2008, 68.)

Another method presented by Slack *Et al.* (2007, 162) involves finding a center-of-gravity to minimize transportation costs. This method is based on the assumption that all potential locations have a value which is the sum of all the transportation costs to and from that location. Best location according to this model, is the one where transport costs are minimal. As this location technique is solely limited to analyzing costs of transportation, it is unsuitable. Addressing a wider variety of site selection factors is imperative for a more comprehensive site selection model.

Other more qualitative methods are introduced to supplement the weighted-score method. As the model accounts for costs and quantitative variable aspects it is worthwhile to include some qualitative models to the site selection process. Quantitative site selection models have shortcomings that can be compensated with qualitative models. (McKnight, 1998) The most comprehensive site selection plans are produced by accounting for both qualitative and quantitative variables.

3 SITE SELECTION – THEORETICAL FRAMEWORK

This chapter contains a literary review of most used models of site selection with emphasis on the process itself. Most attention is paid to the models adapted to the site selection used in this thesis. Firstly, a literary review on locating manufacturing facilities is covered. This is followed by brief explanations on the site selection process. Lastly, site selection factors as defined by Waller (2003) are described in detail.

3.1 Locating manufacturing facilities

Various research projects have been done to solve manufacturing facility location issues. Particularly cost-based models of location selection are reviewed in literature frequently. The major objective of cost-based location problems is the minimization of costs associated with the plant location or expansion.

Thai& Grewal (2005a) review in their paper multiple models working on cost-based location problems. Most location decision models feature levels, phases or stages while others use various mathematical models. The authors highlight excessive focus cost and quantitative variable aspects as the major shortcoming in the popular quantitative and cost-based site selection models. Authors in increasing amounts are investigating qualitative variables in location research of manufacturing facilities. Some researchers suggest a checklist of qualitative factors involving site selection to supplement the traditional cost and quantitative variable models. (Thai& Grewal 2005a, 5.)

If a site selection is based on financial assessment alone, it often results in poor solution involving recommended relocation. Miller, T. (1993) argues for qualitative factors by stating they play a critical role in most facility location decisions and can even outweigh quantitative modeling results. Thai & Grewal (2005a, 6) proceed to argue that manufacturing site location has received limited exposure in strategic planning literature. This is due to common site selection approaches utilizing quantitative data and cost based variables while underestimating the importance of qualitative factors that are more likely to provide long-term advantages.

Export-oriented enterprises like Yritys A tend to locate near to seaports. Wages can be expected to decrease with distance away from a seaport. The eventual optimal location depends on different marginal costs specific to the location. The optimal location from a port may be determined for a manufacturing enterprise by its need for skilled human capital and its need to source imports. (Gries, Naude & Matthee 2009, 515.)

The global trend of locating production facilities in cost effective Asia, particularly Vietnam and China, could be said to stand as evidence of the popularity of cost-based site selection. This is not necessarily the whole truth as production plant vicinity to emerging consumer markets could be more decisive than cost effective labour. This thesis attempts to balance the costs and quantitative variables with qualitative factors in the site selection.

3.2 Site selection process

Thai & Grewal (2005a) present in their paper the outcomes of the choice of location for distribution centers in logistics operations. A three-stage conceptual framework of location selection is presented.

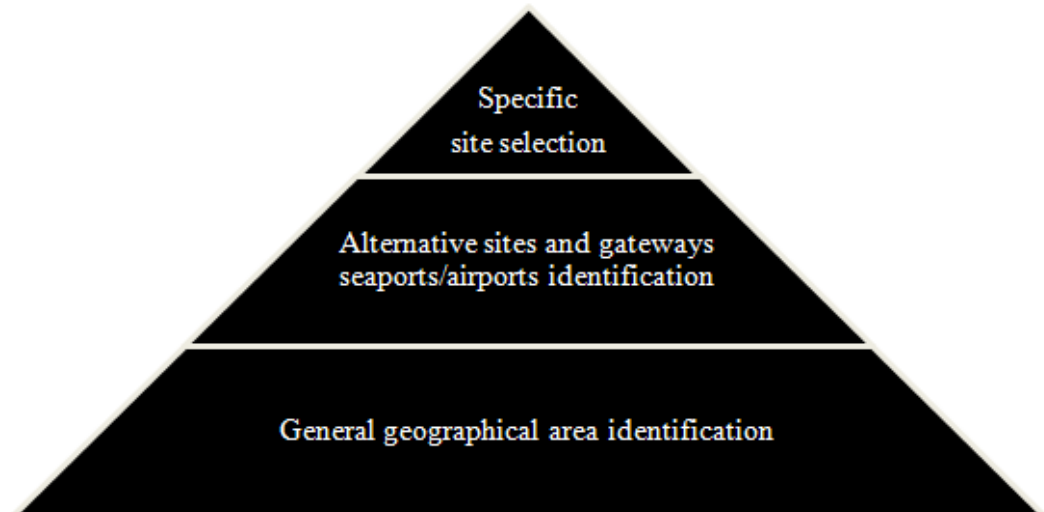


FIGURE 2. The three-stage hierarchy of site selection (Thai& Grewal 2005a)

The site selection model illustrated in Figure 2 was initially used as the site selection model of this thesis. However, due to data quality and availability issues a better approach was needed. A new model was produced to have a more flexible framework.

This flexible model is constructed specifically to suit the case company's entry strategy and needs. The collected data could be related to this model easier. The model in question is explained in greater detail with phase specific descriptions in Chapter 5 Site selection case where it is put to practice.

3.3 Site selection factors

The weighted-score method is chosen as the major model for analyzing data for its compatibility with the site selection factors defined by Waller (2003, 47). These factors are discussed in detail in the following chapters.

Deciding on the location for constructing, expanding, or acquiring, a physical entity of a company in order to reach new markets, increase production capacity, and/or better serve clients is what site selection in business is essentially about. The vital decision on site selection is based on the level of revenues expected to

be generated and the cost of operating the new facility. Deciding on a site for manufacturing is more complex than it might be for office facilities and retail outlets. Considering the large capital investments and labour requirements involved there is a greater downside risk. Deciding on a facility is a timely process due to the diverse variables and factors. (Waller 2003, 47-48.)

Site selection decision is a part of operations management environment even though it is a strategic, long-term decision made at the top management level. As choosing of a site can be decisive for effective supply chain performance, operation managers have numerous considerations to respond to varying from evaluating macroeconomic performance of a country to the business environment. (Waller 2003, 48.)

Proximity and reliability of the final market are a key concern to businesses as their core purpose is to sell a product or service. For service companies, customer vicinity is of utmost importance. For example, retail outlets are often located in residential areas. For manufacturing companies, this vicinity may not be as crucial considering that goods can be shipped to different markets. Certain manufacturing companies locate in low labour cost areas, and then export their products elsewhere. (Waller 2003, 48-49.)

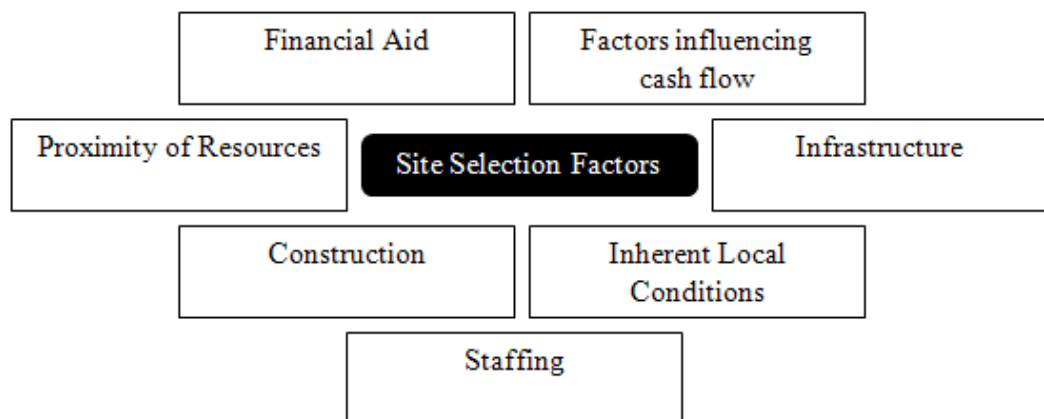


FIGURE 3. Site selection factors (Waller 2003)

Waller (2003, 50) lists 7 factors for site selection as can be seen from Figure 3. Within these factors there are sub-considerations, which complicate the site selection process. These factors and sub-considerations are explored in the following chapters.

3.3.1 Staffing

The process firms go through in hiring all types of personnel required to run a facility, is called staffing. This includes hiring of direct and indirect operating personnel and management. The factors of staffing, as illustrated in Figure 4, are discussed in detail in this chapter. (Waller 2003, 50.)



FIGURE 4. Staffing sub factors (Waller, 2003)

Labour costs are one of the most significant criteria in site selection. This is explained by how labour costs enter directly into the cost of manufactured products or the cost of providing a service. In addition to basic salary, or wages, labour costs includes social and other charges paid to the employee or paid in the form of taxes for the employee in question. These social charges include insurance, social security payments, paid vacations, retirement benefits, unemployment benefits and such. Laws of a country mandates these charges, which explains why many European countries have high labour costs. (Waller 2003, 50-51.)

Social laws directly impact social charges, concern labour flexibility like the basic workweek, overtime permitted, hiring and termination laws. Social protection is pricing out Europe of the world market. Companies can control the basic salary, or wages they pay but not obligatory social charges. Partly for this reason many

companies decide to set up facilities overseas where the labour costs are lower. (Waller 2003, 51-52.)

Availability of competent labour refers to a good pool of labour which can be appropriately trained for the type of work. Areas with high levels of unemployment are indicators of labour availability. The competence of this labour can be questionable but regardless, it is a major driving factor of site selection. (Waller 2003, 52) It is important to relate productivity to the availability of competent labour. By dividing output by the input of resources many companies formulate their labour cost based site selection decision. (Waller 2003, 52.)

Strong trade unions are a strong deterrent for a firm to locate in a region. Particularly in industrialized countries, many trade unions are rigid and reluctant to modernization in fear of unemployment. Union membership is declining in industrialized countries, with the exception of Sweden and Finland. In addition to union membership, a country's history of industrial action, or strikes, is very relevant for site selection decisions. (Waller 2003, 53-54.)

Education level of a country is growing in relevance with sophistication of technology. Respectively, education level of the available workforce is a significant site selection criterion Companies often evaluate how much training would be required, and what training facilities are available for potential personnel. (Waller 2003, 54.)

Local labour and plant technology are decisive for site selection when companies evaluate the operational ability of labour. Operating a facility according to specification design, including safety considerations, can be challenging if the labour pool is unable to be adequately trained. With these considerations, companies may simplify their processes to adapt to the level of the local labour. (Waller 2003, 54.)

Labour mix is related to regulations governing the percentage of local labour to be used in either the construction of a new facility, or its subsequent operation. Some countries stipulate the minimum levels of local labour to gain the economic advantages in the establishment of a new facility. This implies limitations for the

amount of expatriate labour utilized. Regulations in the labour mix can cause challenges if the country concerned does not have required educational capacity to operate. (Waller 2003, 54-55.)

3.3.2 Inherent local conditions

There are important considerations for personnel employed by a company in the inherent local conditions. These considerations are important to the associated families of the personnel employed. The factors of inherent local conditions, as illustrated in Figure 5, are discussed in detail in this chapter. (Waller 2003, 55.)



FIGURE 5. Inherent local conditions sub factors (Waller 2003)

Climate refers to the state of an atmosphere with respect to wind, temperature, cloudiness, moisture and such. Companies located in the sun belt, find it easier to recruit personnel. A warm climate translates into lower operating energy costs. Companies establishing facilities in countries with stable climates, often benefit from cheaper construction material and building conditions. (Waller 2003, 55.)

The culture of a country has major implications on planning human resources of a new facility. The usage of expatriate personnel has declined due to high costs, finding the right individuals and the requirements of foreign governments to use local personnel. (Waller 2003, 56.)

Ethics of a country impact the site selection decisions of a company in multiple ways. Ethical principles that do not match can cause conflicts and thus companies often strive to locate to countries with similar ethical cultures. Similarly, languages used has major implications. Companies locating into countries where English

is not widely spoken have certain handicaps, as English is the language of business. (Waller 2003, 56-57.)

3.3.3 Infrastructure

In the broadest sense, infrastructure includes physical facilities put in place by the region, laws enacted by the government, or the business environment that has evolved, or perhaps, declined. The factors of infrastructure, as illustrated in Figure 6, are discussed in detail in this chapter. (Waller 2003, 57.)



FIGURE 6. Infrastructure sub factors (Waller 2003).

Family services cover housing, education, healthcare and such that are an element in attracting personnel. (Waller 2003, 57) Communication refers to telephone and fax lines, computer network facilities, and video conferencing. All these require cable and satellite connections. Companies locating to developing regions often experience problems with communication links. (Waller 2003, 57.)

Environmental regulations cover local, regional and national rules for air, water, land, and noise pollution. Many companies in Germany have stated this as a reason for installing facilities somewhere else, due to strict environmental regulations. Legal environments of countries are very variable. Litigation laws, for example vary from country to country. (Waller 2003, 57-58.)

Transportation covers the facilities and networks for raw materials, finished goods, and also personnel. As transportation costs add significantly to the cost of finished products, companies often evaluate transportation very carefully. Com-

panies take poor transportation into consideration by planning their facilities to buffer for the raw materials and finished goods. Rental costs refer to the amount paid in rent for facilities and utilities. For companies in the service industry, office rental costs play a decisive role in site selection decisions. (Waller 2003, 58.)

Living costs cover all the expenses for the employees to live in the area. Recruiting appropriate personnel can be challenged by the living costs associated with the area in which the company's facilities are located in. Country stability refers to fragility of the government, the threat of civil strife, or locals plainly distrustful of foreign companies. Companies often evaluate countries on credit risk ratings, that are based on economic and political factors. (Waller 2003, 56-60.)

3.3.4 Construction

In constructing a new facility on a virgin site, the factors of construction are important. Profitability of facilities built is often evaluated as the construction costs depreciate over a certain period. The factors of construction, as illustrated in Figure 7, are discussed in detail in this chapter.



FIGURE 7. Construction sub factors (Waller 2003)

The cost of land, including taxation, is often high where land is scarce. (Waller 2003, 60) Construction labour covers the pool of labour available for constructing a facility, as opposed to operating labour for a facility once it is running. With implications from local regulations, companies may be required to use a certain amount of local labour in the construction activity. In some cases, if the labour is

not available it is imported. Similarly, the availability of construction material can add up costs if it has to be imported. (Waller 2003, 61.)

Land preparation covers the work needed to prepare the facility construction. Companies establishing facilities in foreign countries are often attracted to industrial parks or zones where little land preparation and construction are required. Expansion possibilities are important to site selection considerations, if a company needs expansion possibilities to exist. Zoning and environmental regulations impact this strongly as countries often impose laws regarding constructing a particular area. (Waller 2003, 61.)

3.3.5 Factors influencing cashflow and financial aid

Much of the factors previously discussed enter to the financial equation of site selection. Other financial considerations, which impact a company's cash flow, as illustrated in Figure 8, are discussed in detail in this chapter.



FIGURE 8. Factors influencing cash flow sub factors (Waller, 2003).

Fluctuating exchange rates refer to the stability of the country's currency. The currency used by the parent company and the country, has been widely variable varying impacts on revenues realized, cost of raw materials, operating costs, and investment amounts needed. Prices of the basic raw materials, like crude oil, are one denominator of currencies. A strong currency is an indicator of the stability of the country. It also serves as a deterrent for investment in new facilities. (Waller 2003, 61.)

Repatriation of funds refers to the ability of the company to repatriate funds to its headquarter country. Particularly emerging economies, like that of Vietnam, have strict exchange controls so that transfer is not easy. (Waller 2003, 63.)

Taxes on operations refer to countries levying taxes on companies doing business in their territory. Taxes paid will diminish the net return to the corporation. Differences in tax rates on corporate profit between countries can distort the investment decision of multinational firms. (Waller 2003, 63.)

Financial aid refers to direct cash grants, or tax incentives on the land, operation, or products produced are included in financial aid given by regional, local, or national government. This is a vital factor in the selection of a site. (Waller 2003, 63.)

3.3.6 Proximity of resources

To facilities, particularly process flow plants, proximity of raw resources like raw material and energy are critical success factors for site selection. The factors of proximity of resources, as illustrated in Figure 9, are discussed in detail in this chapter. (Waller 2003, 65.)



Figure 9. Proximity of resources sub factors

In addition to proximity of raw materials, processing facilities are pressured by environmental regulations to plan their optimum location. Rather than shipping the raw material, in some cases it is cheaper for companies to transport the refined products. For example, oil refineries are often located in the vicinity of oilfields, from where the finished products like gasoline, kerosene and diesel are shipped to customers. (Waller 2003, 65.)

Process and utility water is used in great quantities by oil refineries, metal-processing plants, and paper companies. This water is used for cooling and/or the process itself, so the company plants are often located close to a reliable water supply, such as inland lakes and rivers. There is a similar dependence on reliability of power supplies. In emerging companies, these considerations are vital especially if backup power facilities need to be constructed for the facility. (Waller 2003, 65.)

Suppliers and subcontractors are a vital part of to certain business operations, so there is an obvious impact on the site selection. For an interrupted supply chain, reliable and readily available suppliers and subcontractors are of great importance. Companies with just-in-time production criteria are particularly concerned over this. Companies that require certified quality have to consider this in planning their site selection, for example, the availability European ISO-9000 certified subcontractors. (Waller 2003, 65.)

4 CASE COMPANY – YRITYS A

This chapter includes two parts. Firstly, an overview of the case company is given. Secondly, site selection factors specific to Yrityys A's needs are discussed. The site selection factors discussed in the chapter are related to the ones described in the previous Chapter 3 Site selection – theoretical framework.

4.1 Company overview

Yrityys A is a financially solid family owned company. Yrityys A has received an AAA credit rating by Dun& Bradstreet, after several years of strong and profitable growth. Yrityys A specializes in the metal industry. Their facilities are situated in western Finland. Yrityys A is active in the retail and processing of their products all over the world. Their main markets are Europe, Middle and Far East. (Yrityys A 2009.)

Yrityys A's growing sectors of operations are mostly international by nature based on client needs. Yrityys A utilizes their global contacts to cater for their customers with timely deliveries. (Yrityys A 2009) Yrityys A's chief executive officer states approximately 80% of the company's revenue is from exporting to China. Due to economic reasons, Yrityys A has been looking outside the Finnish borders more and more. Yrityys A is currently seeking to internationalize its operations further by investing to Vietnam.

4.2 Processing plant site selection factors

This chapter discusses factors that are relevant for Yrityys A's site selection. As the site selection factors by Waller (2003) are used as the core framework. A brief description is given on each relevant factor and comments how they are addressed. It is important to concentrate on a limited number of factors to have a more reliable study. Some limitations are necessary also for other reasons like data quality and transparency issues. As Yrityys A is mostly interested in locating

to a designed production zone, multiple factors become irrelevant due to inherent qualities of these zones in Vietnam.

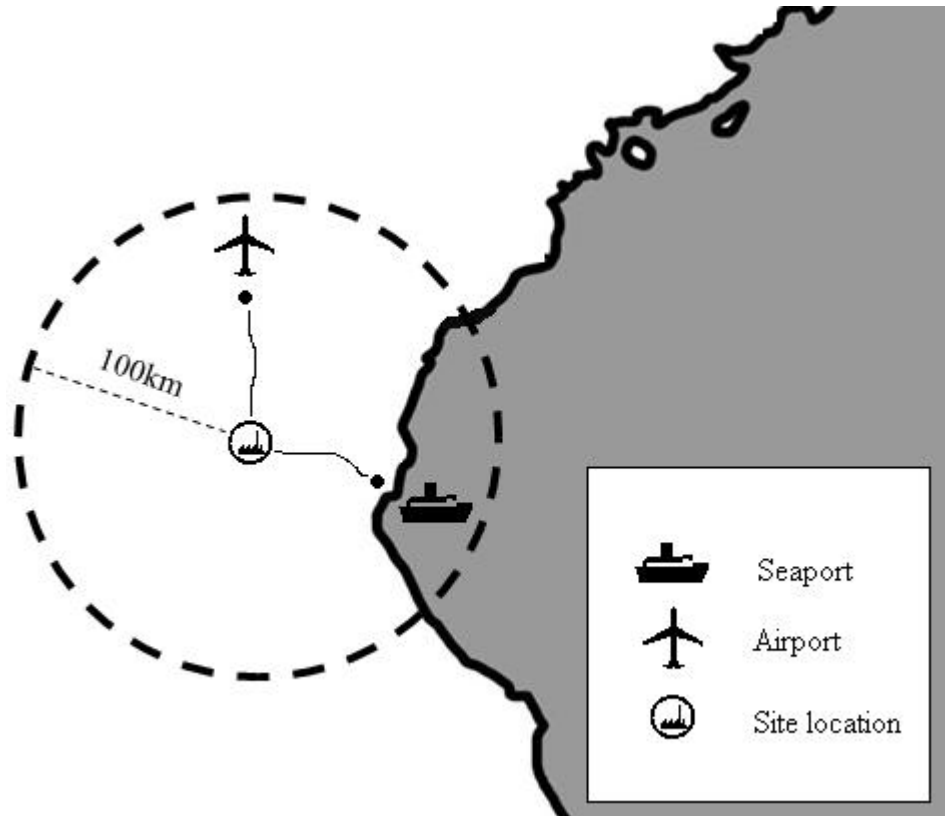


FIGURE 10. Ideal geographic site location by distance to ports.

Firstly, Yritys A wants the processing plant to be within a reasonable driving distance from an international airport. Sea port vicinity is also of equal importance. For this reason, the ideal site location is within a 100km distance by road from a seaport and airport as illustrated in Figure 10.

Proximity of resources in Vietnam is not a relevant factor to Yritys A's site selection because the most of the material used by Yritys A is sourced from Finland and Europe. The processing plant does not require substantial suppliers or subcontractors from Vietnam. A source of process and utility water is not needed as processing is mostly of manual nature.

As labour union activity is low in Vietnam it is not a relevant consideration for Yrity's A's site selection. The labour mix of the processing plant is planned to be 100% Vietnamese. Approximately, 35-50 workers are employed for the manual work inputs of the processing plant. Competent labour for the field of simple metal processing is widely available in Vietnam. Respectively this processing plant has no significant requirements for local labour or plant technology. As the skills and technology required for operating this plant are quite low, labour cost is the only relevant factor for further study. (Karjalainen 2009.)

The only significant concerns of inherent local conditions are flooding and other natural disasters. In areas provided by industrial park authorities the threats of damage through flooding are mostly eliminated by advanced irrigation and sewage systems. (Kieu 2009a) It is to be noted that flooding can be a realistic concern even in highly developed industrial real estates in Vietnam.

Due to the variable development area policy in Vietnam, financial aid factor is studied with limitations. As the tax and investment incentives of Vietnam are constantly changing, only simple guidelines are proposed in this thesis in Chapter 6 Recommendations. Financial aid, as stipulated by Waller (2003, 63), is not taken into consideration in the site selection model. Instead this factor is taken into consideration indirectly in the analysis of factors influencing cash flow. (Waller, 2003, 61) As the site selection is limited to designed production zones it is more worthwhile to investigate investment zone incentives given by provinces and industrial parks of Vietnam. (Kieu 2009a.)

Study of the factors of material availability, land preparation, zoning and environmental regulations are excluded from this thesis as Yrity's A does not plan to construct its own facilities and premises in Vietnam. Of all the construction factors, only the cost of land is studied in detail as it influences rent.

The factor of utmost importance for Yrity's A's site selection is infrastructure. Issues like family services, communications and country stability are excluded from this part of the site selection due to low relevance. Preference is given to factors

like transportation, legal environment and rental costs. These factors are often the denominating factors in site selection in Vietnam. (Kieu 2009a.)

Environmental regulations influence foreign owned enterprises greatly. It is common for the relevant environment supervisory officials to be more diligent with enterprises with foreign investment. In the case of Yritys A, environmental regulations present no major implications for site selection as most designed production zones impose similar environmental regulations.

While the core processes of the processing plant are not environmentally harmful the importation of metal to Vietnam is subject to licensing. (Kieu, 2009a) As the site selection is limited to IPs with somewhat universal regulations on environmental regulations pay no significance in the site selection. The relevant site selection factors previously listed are used in the next Chapter 5 Site selection case to find the ideal location for Yritys A's processing plant.

5 SITE SELECTION CASE

This chapter discusses how Yritys A's proposed site selection should be done in Vietnam. Firstly, issues of entry mode are discussed to understand manufacturing site selection issues specific to Vietnam. For the same reason, a brief overview of Vietnamese foreign trade zones is done. This is followed by an introduction to the Vietnamese port system. Secondly, the Provincial Competitiveness Index (PCI) is introduced as it plays a pivotal role in Yritys A's site selection. Yritys A's site selection factors discussed in Chapter 4, are taken into consideration.

Thirdly, the 4 phased site selection of Yritys A is presented. The potential locations for a processing plant are narrowed down step by step from 200 to 4. The 4 short listed locations are then discussed in more detail with their region specific implications. The findings of this chapter are analyzed in greater detail in Chapter 6 Recommendations.

5.1 Entry mode

Foreign investors in Vietnam have three choices to get land for their production facilities. These alternatives are 1) 100% foreign-owned project, 2) joint-venture (JV) with a local company, 3) go to a designed production zone. (Kieu 2009a) The chosen mode is going to a designed production zone. This chapter discusses the chosen alternative and its implication to the site selection process.

The first choice of 100% foreign-owned project is the costliest in both time and resources. This is where investors themselves carry out the necessary procedures for land allocation with local authorities. There are reported cases where solving land issues have taken more than two years. (Kieu 2009a) Carlen (2009) among many other Vietnam business environment experts, strongly advises against investing outside industrial parks due to the inherent unforeseeable delays and costs. (Carlen 2009, 6.)

The second choice of getting into a joint-venture with a Vietnamese company has been a feasible alternative to Finnish companies. However, less and less foreign investors opt for this approach due to many interest and management conflict issues between the two parties. (Kieu 2009a) Even if the partner offers land and their expertise of the market it is currently very challenging to find a local partner who can run a business by European terms. (Carlen 2009.)

The last choice is going to a designed production zone. This is currently preferred the most by foreign investors, particularly by those in light manufacturing industry. As Yritys A is involved in such a sensitive industry it is wise to designed production zones as the first choice of entry mode. (Luong 2009) Information on industrial real estate outside designed production zones is scarce and thus not feasible for a research project of this magnitude.

5.2 Foreign trade zones

Foreign trade zones in Vietnam are established to offer tax advantages for setting up factories within the zones. Industrial parks are also known as Industrial Zones (IZ). In these foreign-trade zones enterprises are allowed to produce for the domestic market or for export. By the end of 2008, Vietnam had 219 IZs. Out of these IZs, only 54% are operational. The remaining IZs are still in the process of developing their infrastructure and have yet to see any investors move in. (Huyen 2009.)

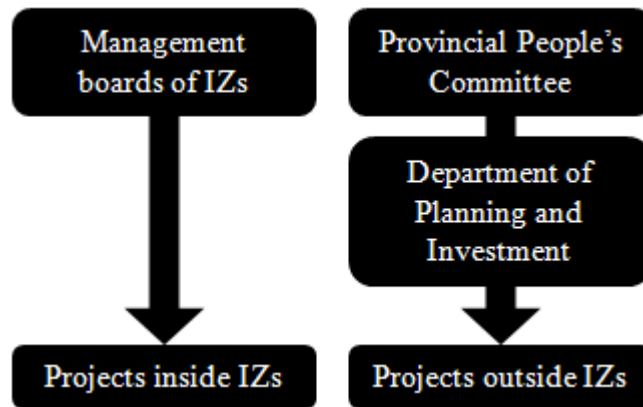


FIGURE 11. Investment licensing bodies in Vietnam (Thao 2009)

Mr. Vu Thi Phuong Thao (2009) highlighted the easiness of investment to IZs in a Vietnam investment procedure course. Figure 11 illustrates when investing outside IZs, there are more licensing bodies involved and thus more complicated procedures to go through. The one-stop investment service is usually provided in IZs of Vietnam, so it is often the most feasible alternative. (Thao 2009) Dealing with authorities like Provincial People's Committees can be a more time and resource consuming process.

There are three types of foreign-trade zones in Vietnam. These are called Economic Zones (EZ), Export Processing Zones (EPZ) and Industrial Parks (IP) and they are somewhat vague in their definitions and responsibilities. All three entities have been established in accordance with the master plan by Prime Minister. These areas are usually owned, managed and/or supervised by the government. (MPI 2007, 11.)

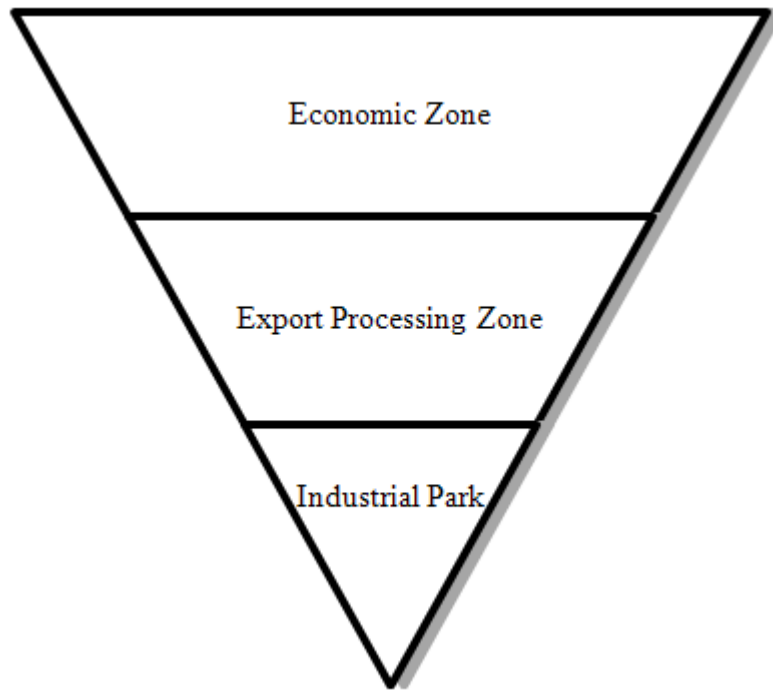


FIGURE 12. Foreign-Trade Zone hierarchy in Vietnam (MPI 2007 11)

It is important to understand the hierarchy behind these three entities as they overlap in many areas. Figure 12 illustrates the hierarchy. The main difference between EZ and IP is the size. EZs are established in socially and economically under-developed areas. Investors are encouraged by local authorities to invest in EZs. This is the reason why most EZs are located in the poorer central Vietnam. One needs to understand that different rules and regulations apply for EZs than IPs and EPZs with more priorities and incentives. (Kieu 2009a.)

EZs often are hubs for certain industrial manufacturing, service supply, commerce, life amenities and entertainment. They consist of free-tax zone and other functional areas like IPs and EPZs. (MPI 2007 11-12) Dung Quat EZ is an example of a petrochemicals industry hub which not only contains a large number of IPs but also an EPZ. (Vietnam Industrial Parks 2009.)

EPZs are industrial parks specifically catering to export oriented enterprises. Respectively goods produced within the EPZs borders are solely for export. Addi-

tionally, enterprises providing industrial services for IPs are allowed in EPZs. (MPI, 2007 12) All of the productions in EPZs are to be exported. (Kieu 2009a.)

IPs specialize in the manufacture of industrial products and the provision of services for industrial manufacture within Vietnam Government (GVN) defined geographical boundaries. IPs are often industry specific when calling for investment. There is a high tendency for Vietnamese IPs to appeal to light and environmentally friendly manufacturing industries. (MPI 2007) Preferential rent rates are available for investors who lease land or factories for longer term periods. These preferential rates are not addressed in this thesis due to the wide variety in IP policies on the matter.

5.3 Vietnamese port system

Sea ports are an integral link within international logistics chain and as such play an important role in its efficiency. The Vietnamese port system is burdened with outdated work practices, low efficiency and poor competitiveness in regional terms. Vietnamese do not have an equal geographic location advantage like their regional counterparts in Singapore. However, the ports of Vietnam are located to a close proximity to major maritime routes of Asia, namely Trans-Pacific and North-South Asia trade lanes. (Thai & Grewal 2005b 1.)

Vietnam has been at the preliminary phase of containerization compared with other ASEAN ports in the region. (Thai & Grewal, 2005b 2) Currently most seaports in Vietnam have the capacity to break bulk and receive general cargo but container transport is undeveloped outside new and upgraded ports. Consequently, at the moment a large proportion of Vietnam's exported and imported goods transit through Hong Kong and Singapore. (BMI 2010).

TABLE 3. Hinterland connectivity of key Vietnamese ports (adapted from Thai& Grewal 2005b 23).

Area	Port	Connections		
		Road	Rail	IW
North	Haiphong	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
South	Saigon New	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
South	Saigon Port	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Central	Da Nang	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Central	Quy Nhon	<input checked="" type="checkbox"/>		
South	Dong Nai	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>

Thai& Grewal (2005) highlight some key ports of Vietnam in their analysis paper on the Vietnamese port system. Table 3 shows hinterland connectivity of 6 Vietnamese key ports. As most of Vietnamese ports are located in the vicinity of major urban areas, the vast majority of cargo flow of Vietnam goes through these selected ports as they are often preferred by foreign enterprises for their efficiency. (Kieu 2000a).

All selected ports are connected to major roads of Vietnam. Some ports have the advantage of rail and inland waterway connectivity. These modes of transport are economic but largely ignored by foreign investors due to a number of impediments like lack of container handling capacity in inland waterway ports. (Nghia 2009.)

Port capacity is a major bottleneck for economic development of Vietnam. Port vicinity and capacity are also important factors of site selection for foreign export oriented enterprises. In this thesis, the Vietnamese port competitiveness is not addressed due to data quality issues. It is recommendable to consider the ports carefully in the final site selection. Some comparable data has been collected on the ports of Vietnam in APPENDIX 7 for this consideration.

5.4 Provincial Competitiveness Index (PCI)

Little research has been done on economic governance of provinces in Vietnam. It is challenging to compare provincial competitiveness as no appropriate tools have been available. Since 2005 Provincial Competitiveness Index (PCI) has been carried out annually. PCI is a method for comparing economic governance of provinces. PCI aggregates the voice of private firms in each 64 province of Vietnam along a range of indicators to economic governance. These include transparency, corruption issues and nuanced issues like labour policy and confidence in legal institutions. The data collected in PCI is ranked for provincial leaders and business owners to see which provinces excel in which areas of economic governance.

PCI research indicates that the major obstacles of conducting business in Vietnam are not central level but provincial. This is interesting considering Vietnam public sector is widely considered a centralized system. The research methods utilized in PCI addresses perception bias issues by combining firm perceptions with hard data. Studying legal decrees in combination with firm perceptions gives a far more transparent picture of provincial competence. (Malesky & Schoen 2009.)

The indexes provided in the publication are useful to investors as reference for their investment decisions. (Malesky 2009, 1) The PCI and its positive effects are widely acknowledged by professionals. Foreign investment promotion organizations have found PCI a reliable and useful resource for assisting site selection decisions in Vietnam. (Ngoc Quynh 2009.)

5.5 Yritys A site selection process

The next chapters are dedicated to discussing Yritys A site selection process. This custom site selection model has been built specifically for Yritys A's site selection in Vietnam. This step-by-step process is the result of careful consideration to find the most feasible method of site selection for the case company.

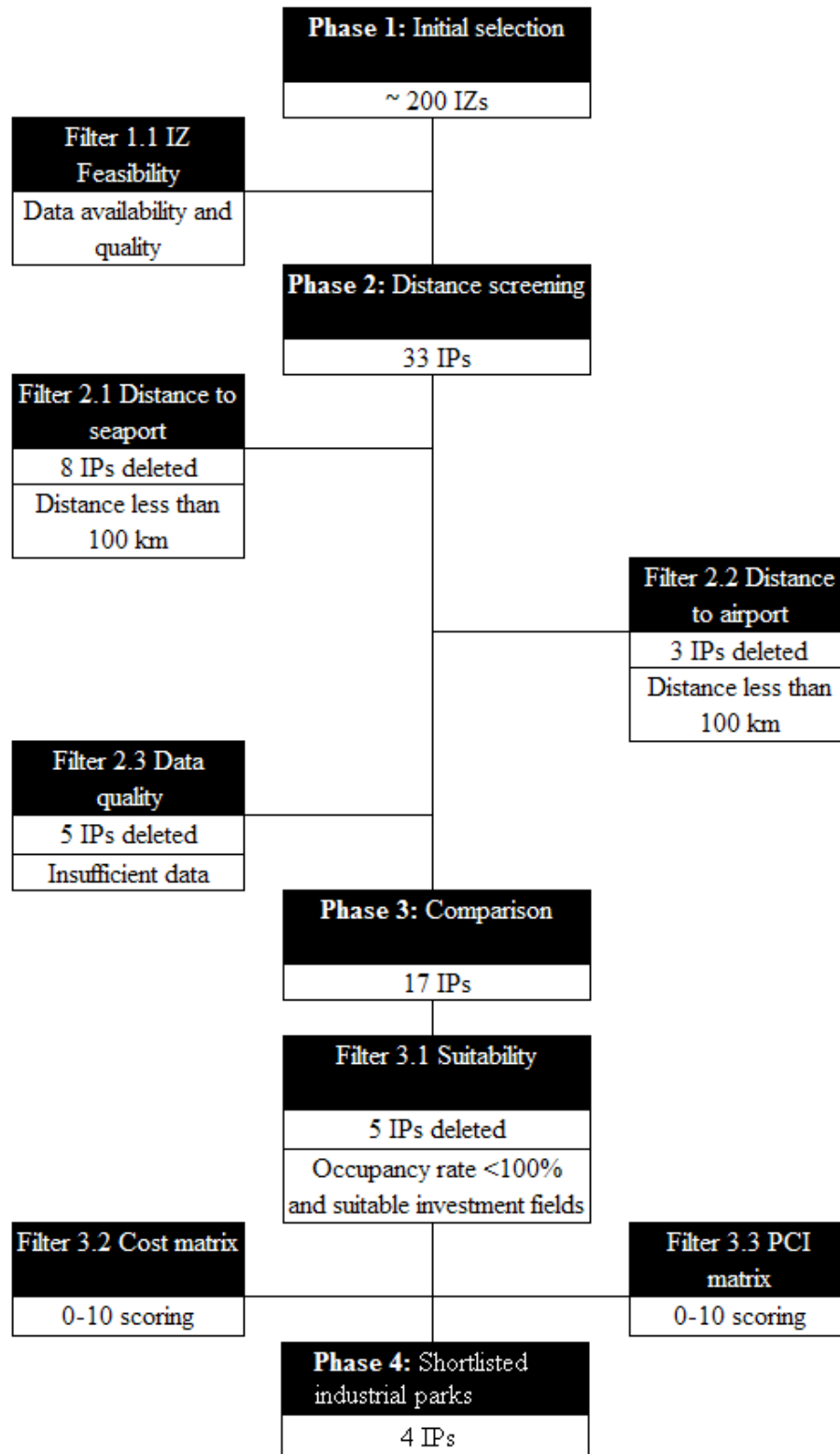


FIGURE 13. Yritys A site selection process.

The step by step site selection process of Yritys A is illustrated in Figure 13. The process has four distinct phases. In each phase, the IPs are screened against a set criteria established in Chapter 4.2 processing plant site selection factors. An IP

failing to meet the criteria is deleted from the site selection process. This gradual deletion process leaves us with 4 shortlisted IPs.

5.5.1 Initial selection

There are approximately 200 IZs in Vietnam. (Kieu, 2009a) EPZs and EZs have been excluded from this study as they require large scale investments. Most IPs are eliminated due to insufficient data. IPs that publicize little information about themselves online, are often less feasible for foreign investors. (Luong 2009a).

The deleted IPs in this phase include newly established and poorly marketed ones. Many IPs report to have adequate supporting infrastructure but due diligence is required as many report falsely on their website. For example, some IPs report to be located in an internationally competitive port when, in reality it is located in the vicinity of a small inland fishing port.

Due to data quality issues as previously described, more than 150 IZs have been deleted. The IPs passing this phase have reliable information available on them, which can be utilized in the following phases. An IP's poor marketing is not a healthy signal even in Vietnam.

5.5.2 Distance screening

In this site selection case, the suitable distances between IPs and ports are less than 100 km. APPENDIX 1 table lists the passed and deleted IPs. The table also contains the distances to the ports to be utilized in other site selection cases. The 100 km radius is justified for the reasons described below.

Malesky (2009, 60) accounts for 30% of transport costs in Vietnam by the distance to one of the three major ports. As this cost is easy to control it should be minimized at an early phase. Also, as a physical presence of Yritys A personnel is

essential in the start-up phase, for this reason the IP should be within a reasonable driving distance from an international airport. (Carlen 2009, 9.)

A short distance from an IP to a port does not automatically imply cost effectiveness. Provincial road quality and IP transport infrastructure are also significant factors. Addressing these is not possible due to data quality issues. Industrial real estate connected to sea ports through major highways in the vicinity are often preferred by foreign enterprises for their convenience. These types of locations are often the costliest and thus it is important to study an ideal balance between port vicinity and costs. (Kieu 2009a.)

5.5.3 Suitability

APPENDIX 2 lists the IPs with their occupancy ratios and investment fields. Fully occupied IPs are deleted as authorities rarely invite more investors to enter the IP. There have been cases where entry opportunities present themselves when other investors leave an IP. These cases occur rarely and thus are not accounted in the site selection.

IPs with unsuitable investment fields are deleted from the process. Most IPs specialize in specific industries to attract investors of a certain industry or field. IPs calling for industry specific investment often offer competitive advantage in terms of infrastructure, supporting industries and location. Da Nang SAA is an exemplary IP in attracting aquatic product processing industry with its strategic location next to a major fishing port in the vicinity of fishing villages. While suitable for fish oil producers, Da Nang SAA is not the first choice of locale companies in Yritys As industry.

As it can be seen from APPENDIX 2, Xuyen A and Da Nang SAA are deleted as they do not attract suitable industries. Duc Hoa, Bien Hoa 2 and Tam Phuoc are all 100% occupied already so they are deleted from the site selection.

5.5.4 Cost matrix

As Yritys A is planning to locate their processing plant to Vietnam in order gain competitive advantage in price effectiveness, the staffing costs of the processing plant are to be minimal. Minimum wage and rental costs accounted in the matrix are in USD except electricity costs, which are in VND.

The labour costs are often listed as the most attractive feature of Vietnam. U.S Foreign Commercial Service (2009, 11) categorizes Vietnam into 4 zones based on minimum salary. Each category contains a number of provinces have a apply a certain level of minimum salary. This level reflects quite realistically the general wage levels in the region. F.ex urban centers like Hanoi and HCMC have the highest minimum wage levels while the distant rural Dak Lak province has the lowest. The minimum wage levels stipulated by U.S Commercial Service (2009, 11) are used in calculating staffing costs in the cost matrix.

Land rental costs vary by IPs in Vietnam. Most IPs quote rental costs in USD / square meter. (MPI 2007, 41-58; VIIPIP 2009) Preferential rent rates are available for investors who lease land or factories for longer term periods. These preferential rates are not addressed in the cost matrix due to the wide variety in IP policies on the matter.

Electricity prices are set by Electricity of Vietnam (EVN) and are often non-negotiable. Dr. Malesky (2009) has studied the average electricity price in each province for industrial use. The results from Dr. Malesky's (2009) research are used in calculating the electricity grade for each IP.

Each of the cost factors is ranked from 0-10, with 0 being the worst score and 10 the best score. APPENDIX 3 is the list of cost factors and APPENDIX 4 shows the scoring system utilized. TABLE 3 below is the ranked results of IP costs, contained in APPENDIX 3, being graded according to a system illustrated in APPENDIX 4. The cost scores of IPs are utilized in the final phase of site selection.

TABLE 4. Cost matrix of industrial parks

Cost matrix of industrial parks							
INDUSTRIAL PARK	Electricity		Minimum wage		Rent		Composite point (PPT) 100%
	PPT	15%	PPT	35%	PPT	50%	
Tien Son	10	15%	10	35%	10	50%	10
Nam Sach	10	15%	10	35%	7	50%	8.5
Duc Hoa	6	15%	10	35%	7	50%	7.9
Tan Duc	6	15%	10	35%	7	50%	7.9
Dai An	10	15%	10	35%	5	50%	7.5
Long Hau	6	15%	10	35%	5	50%	6.9
Nhon Trach 2	6	15%	10	35%	5	50%	6.9
Nhon Trach 3	6	15%	10	35%	5	50%	6.9
Thanh Phu	6	15%	10	35%	5	50%	6.9
Hoa Cam	2	15%	6	35%	9	50%	6.9
Hoa Khanh	2	15%	6	35%	9	50%	6.9
Lien Chieu	2	15%	6	35%	9	50%	6.9
Nhon Trach 1	6	15%	10	35%	1	50%	4.9

Based on the grading system and the costs illustrated in Table 4, a cost based ranking of IPs is possible. Tien Son and Nam Sach in northern Vietnam are superior in terms of cost while Nhon Trach 1 in southern Vietnam is least competitive. Phase 2 Distance Screening in the site selection process explains why 7 IPs score same in this cost matrix. Hoa Cam, Hoa Khanh and Lien Chieu are all in Danang province which is highly competitive in terms of distance to ports. As minimum wage and electricity are province specific, these IPs can't be ranked in terms of costs. Regardless of this province specific limitation in calculating IP costs, this cost matrix is valid in the site selection. A suitable sample of IPs is discernibly competitive in terms of costs. IP selection based on cost related issues alone is not enough. Additional issues are to be taken into consideration.

5.5.5 PCI matrix

The PCI (2009) is utilized in the site selection to see the provincial competitiveness of selected IPs. As the provincial authorities play a pivotal role in the competitiveness of a province, it is a vital consideration for this site selection process. The PCI indexes are not used directly in the site selection but with some adjustments to suit the needs of this site selection case.

Two issues are constantly highlighted in the media as impediments to effective investment in Vietnam. These issues are legal environment and infrastructure, the two bottlenecks for Vietnam's economic development. Respectively, they are also often the two main concerns of foreign investors. As PCI evaluates such a wide spectrum of issues, a weighting method has been utilized to refine the site selection for greater accuracy.

Table 4 shows PCI of the provinces where the IPs are located in. Composite points are calculated for each IP to rank them in terms of provincial competitiveness. Weights have been placed on the PCI indexes to rank them in importance. Staffing is the least relevant concern as the legal environment and infrastructure are of equal relevance to Yrity's A. PCI Staffing index for Hai Duong province is not available for unknown reasons. This is why staffing is not taken into consideration when evaluating Dai An and Nam Sach.

TABLE 5. PCI matrix of IPs (Adapted from Malesky 2009).

PCI matrix of industrial parks								
INDUSTRIAL PARK	PROVINCE	Legal environment		Staffing		Infrastructure		Composite point (PPT)
		PPT	40%	PPT	20.0%	PPT	40%	
Hoa Cam	Da Nang	7.28	40%	7.69	20.0%	6.63	40%	7.10
Hoa Khanh	Da Nang	7.28	40%	7.69	20.0%	6.63	40%	7.10
Lien Chieu	Da Nang	7.28	40%	7.69	20.0%	6.63	40%	7.10
Nhon Trach 1	Dong Nai	6.30	40%	5.33	20.0%	7.18	40%	6.46
Nhon Trach 2	Dong Nai	6.30	40%	5.33	20.0%	7.18	40%	6.46
Nhon Trach 3	Dong Nai	6.30	40%	5.33	20.0%	7.18	40%	6.46
Thanh Phu	Dong Nai	6.30	40%	5.33	20.0%	7.18	40%	6.46
Tien Son	Bac Ninh	6.44	40%	5.91	20.0%	5.93	40%	6.13
Duc Hoa	Long An	6.56	40%	4.75	20.0%	5.76	40%	5.88
Long Hau	Long An	6.56	40%	4.75	20.0%	5.76	40%	5.88
Tan Duc	Long An	6.56	40%	4.75	20.0%	5.76	40%	5.88
Dai An	Hai Duong	5.88	40%		20.0%	6.46	40%	4.94
Nam Sach	Hai Duong	5.88	40%		20.0%	6.46	40%	4.94

APPENDIX 6 contains the calculated PCI averages that are used in Table 5. Staffing PPT is Labour and Training Index while Infrastructure PPT is Infrastructure Index. Legal Environment PPT is the average of several PCI indexes explained in APPENDIX 5.

The composite point is the combination of the three factors legal environment, staffing and infrastructure with their respective weights. The formula below illustrates how the composite point for each IP is calculated.

$$(\text{Legal environment} * 40\%) + (\text{Staffing} * 20\%) + (\text{Infrastructure} * 40\%) = \text{PPT}$$

The site selection factors by Waller (2003) are the core theoretical framework for Yritys A site selection. APPENDIX 8 shows how the PCI previously is related to the site selection factors stipulated by Waller (2003). The PCI composite points of IPs are utilized in the final phase of site selection in the next chapter.

5.5.6 Shortlisted industrial parks

Cost scores and PCI scores are taken into consideration in finding the most price effective IPs that fulfill specific criteria set by Yritys A. Only the composite points are taken into consideration to get a complete picture of each IP. The results of this comparison are discussed in this chapter.

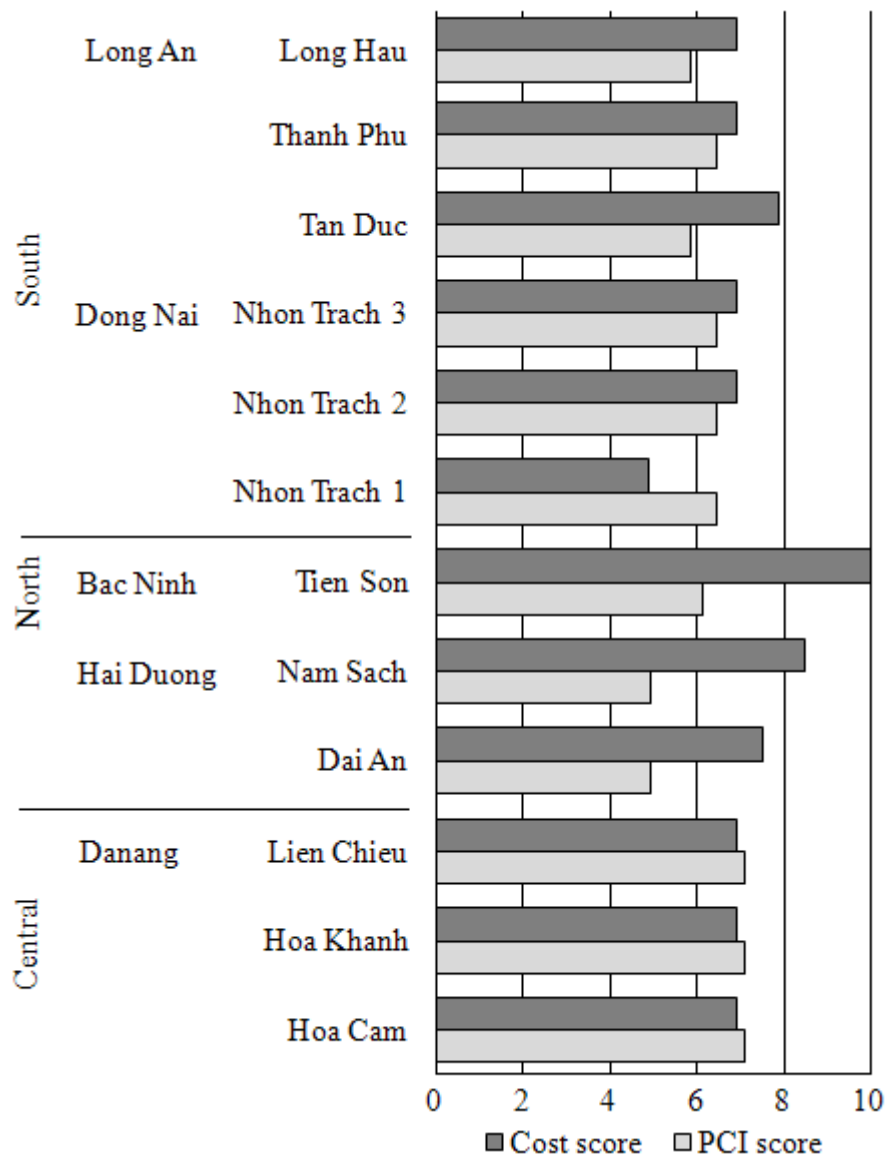


FIGURE 14. Industrial park cost and PCI comparison

Tien Son in the north and Tan Duc in the south stand out from their regional counterparts with good scores in costs and PCI. Central Vietnamese IPs do not particu-

larly stand out from each other as they are all located in Danang province. From this table 4 most competitive IPs are be picked out for further study. These short-listed IPs are Tien Son, Tan Duc, Nam Sach and Lien Chieu.

Although no particular IP stands out from central Vietnam based on Figure 14, Lien Chieu was chosen because little or no data was available on Hoa Cam and Hoa Khanh. This reflects poor IP management and thus these two IPs are reasonably ignored. Additonally, Hoa Khanh IP's 98% occupancy ratio encourages this decision.

These shortlisted IPs perform discernibly well in the site selection both in terms of costs and PCI. A further study of these shortlisted IPs is necessary to find the best of the best IPs because the cost and PCI score are insufficient to formulate a final decision. Next, a regional study is necessary to understand regional benefits specific to each IP.

5.6 Regional site selection issues in Vietnam

Vietnam has distinct economic benefits in each region. The shortlisted IPs of northern Vietnam, Nam Sach and Tien Son, are in the competitive provinces of Bac Ninh and Hai Duong. These provinces are located in one of the most competitive and dynamic areas of Vietnam. In central Vietnam, Lien Chieu is in the coastal city of Da Nang. Being the economic hub of central Vietnam, Da Nang has been continuously ranked as the best place to do business in Vietnam. (Malesky 2009) Tan Duc of Long An province is located in the vicinity of HCMC, the commercial hub of Vietnam. This region has the highest concentrations of IZs in Vietnam (Huyen 2009).

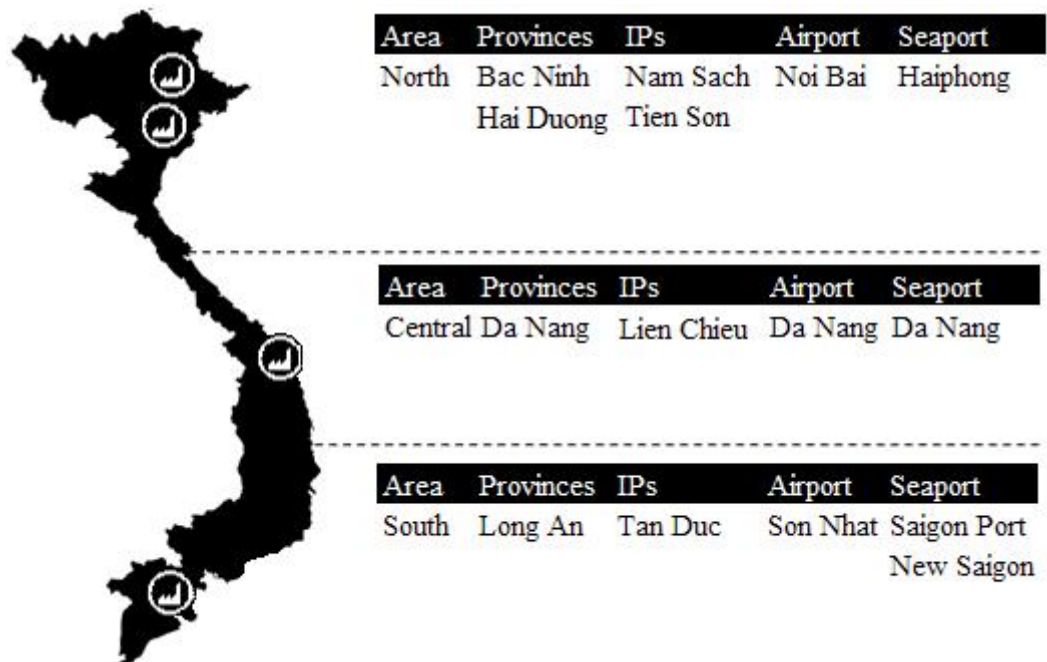


FIGURE 15. Vietnam regional division for Yritys A

Area specific site selection factors are clearly identifiable in Vietnam so for reading purposes a three-way division of Vietnam to central, southern and northern regions is necessary. This division does not imply political division but rather to highlight issues distinctive to each region. Figure 15 illustrates the regional divi-

sion with the shortlisted IPs and their provinces. Infrastructure is included in this region specific site selection analysis.

The following chapters discuss the region specific issues rather than provincial. An overview of each region is given and most relevant issues are highlighted. The information in this chapter can be of valuable consideration if studying other IPs than the ones shortlisted in the previous chapter.

5.6.1 Northern Vietnam

The political and governmental hub of Vietnam is in the northern capital of Hanoi. The shortlisted IPs of northern Vietnam are right in the middle of the Hanoi-Haiphong-Quang Ninh economic development triangle. This area in particular has been receiving extra attention from GVN as the area has been developed to attract FDI (Kieu 2009a; Luong 2009). Both Nam Sach and Tien Son are located in the middle of this triangle.

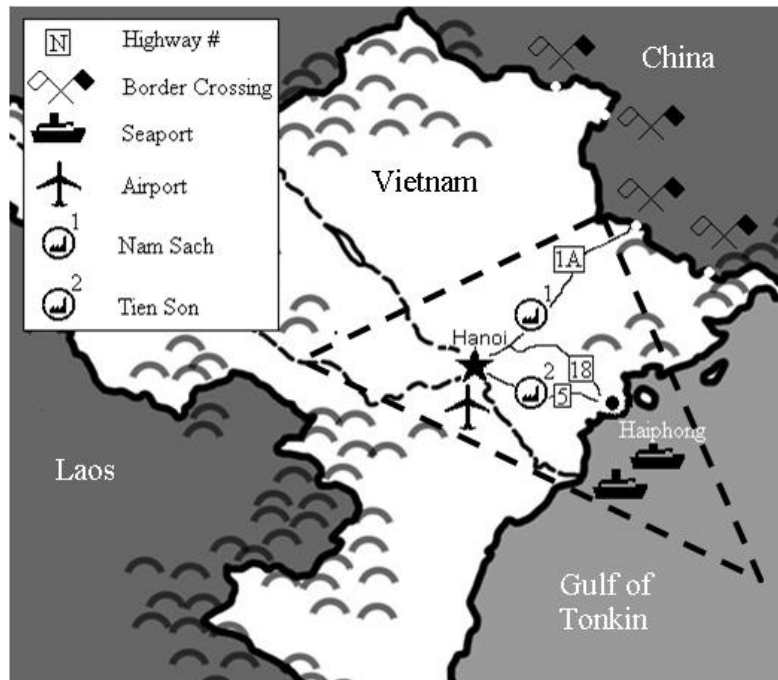


FIGURE 17. Northern Vietnam map (adapted from Invest In Vietnam 2010).

The economic triangle as illustrated in Figure 17 is the most densely populated and economically competitive area in northern Vietnam. The strategic location of the triangle makes it one of the most dynamic areas of Vietnam in terms of road transportation. Excellent road connectivity with the bustling seaport of Haiphong and Noi Bai airport of Hanoi are the main competitive advantages of this area.

Northern Vietnam has an extensive network of navigable inland waterways. These link various provinces, important towns and river ports with Haiphong Port. This mode of transport contributes 40% towards the overall transportation system in the region (Huyen 2010). This mode of transport is often largely ignored by foreign investors due to container transportation capacity issues. (Nghia 2009.)

The vicinity to the southern provinces of China is an advantage of northern IPs. A modern highway and a railway network are being built to facilitate bigger trade between Vietnam and China. For the same reasons, the port capacity in Haiphong is being upgraded to cater to the increasing needs of booming trade.

A severe shortage of manual labourers has been reported in the IPs of northern Vietnam. Enterprises of the IPs are struggling to find seasonal employees to their manufacturing facilities. Low salary has been reported as the main reason for the reluctance of people to work in some IPs (VietnamNet 2009). Many workers opt to migrate away from IZs back to their home provinces as employers cut back on overtime during world economy slow down. (Vietnam Holding 2009.)

Much of Vietnam's heavy industry is concentrated to northern Vietnam. Shipbuilding and metal processing plants are often located in the north due to better availability of technical workers like welders. Additionally, there are relevant handicraft villages in the provinces of Bac Ninh and Bac Giang. These provinces are neighbouring the shortlisted IPs. The villages offer a sourcing opportunities for materials and competent labour. (Kieu 2009a).

5.6.2 Tien Son

Tien Son is a large IP within a 20 minute car drive from Noi Bai Airport. The IP caters to enterprises from a wide range of industries. Electronic, mechanic, production of steel products, consumer goods and garment processing are just a few industries present in the IP. Currently, 80% of the IP is occupied, either rented or leased. (MPI 2009) Tien Son is the cheapest of the shortlisted IPs in this site selection study. Tien Son is within a close distance from the relevant handicraft villages of Bac Giang and Bac Ninh province.

Tien Son is well connected to highway 1B which can be conveniently travelled to Haiphong port and Hanoi. Tien Son is 9km from Haiphong port. Tien Son has modern infrastructure capable of handling container transport. Approximate container transport charges from Tien Son to Haiphong port are within USD 170 to USD 250. Additionally, Tien Son boasts an international standard telecommunications infrastructure. Furthermore, recruiting educated labour is easy in Tien Son due to close vicinity to urban Hanoi. (Viglacera 2009)

Negative issues about Tien Son vary from lack of investment incentives to other issues. One of these issues is the official minimum land sublease which is 10000 m². As Tien Son has been mainly serving to large enterprises that require larger spaces for their facilities, SMEs are not frequently given investment licenses. Also, no special preferential CIT rates are available in Tien Son IP as Yrity's A's activities do not fall into an investment incentive sector. (MPI 2009; VIIPIP 2010).

5.6.3 Nam Sach IP

Nam Sach is adjacent to highway 5, a busy road leading to Hanoi. Nam Sach compensates what it loses in low distance competitive with superior investment incentives. Nam Sach has finished building its infrastructure and is currently hosting 19 foreign invested projects in addition to a number of domestic projects. The projects are from industries like garment and textile manufacturing, packaging,

paper and pulp, agriculture and forestry processing. Nam Sach is 97% occupied already so as no expansion plans are underway, investors are being invited at the moment. (MPI 2009.)

High container transport infrastructure capacity and direct connection to highway 5 and 183 are the major advantages of Nam Sach. Although not as competitive as Tien Son in terms of distance, Nam Sach is within a reasonable driving distance from both Noi Bai airport and Hanoi. Much like Tien Son, this IP is within a close distance from the relevant handicraft villages of Bac Giang and Bac Ninh province.

Competitive incentives are available in Nam Sach through GVN, Hai Duong's Peoples' Committee and the IP managing authority, Nam Quang. In addition to the national incentives by GVN, Hai Duong's Peoples Committee gives out subsidies and tax holidays for investors of Nam Sach. These incentives are supplemented by value-added services like aid and assistance with investment license applications, import-export documentation and building permits from IP managing authority Nam Quang. (VIIP 2010.)

5.6.4 Southern Vietnam

The commercial, industrial and financial hub of Vietnam is located in the southern parts of Vietnam. Most export oriented enterprises are located in the south due to better infrastructure for container transport and generally more investment receptive municipal authorities. There are also more industrial clusters for plastics, electronics and garment manufacturing enterprises in the south. Historically it has been the trend of foreign enterprises to locate their facilities in the south. Although southern Vietnam remains an attractive locale for manufacturers, other areas are emerging as competitors to this area. In fact, most IPs in HCMC are close to fully occupied. (VIIP 2010.)

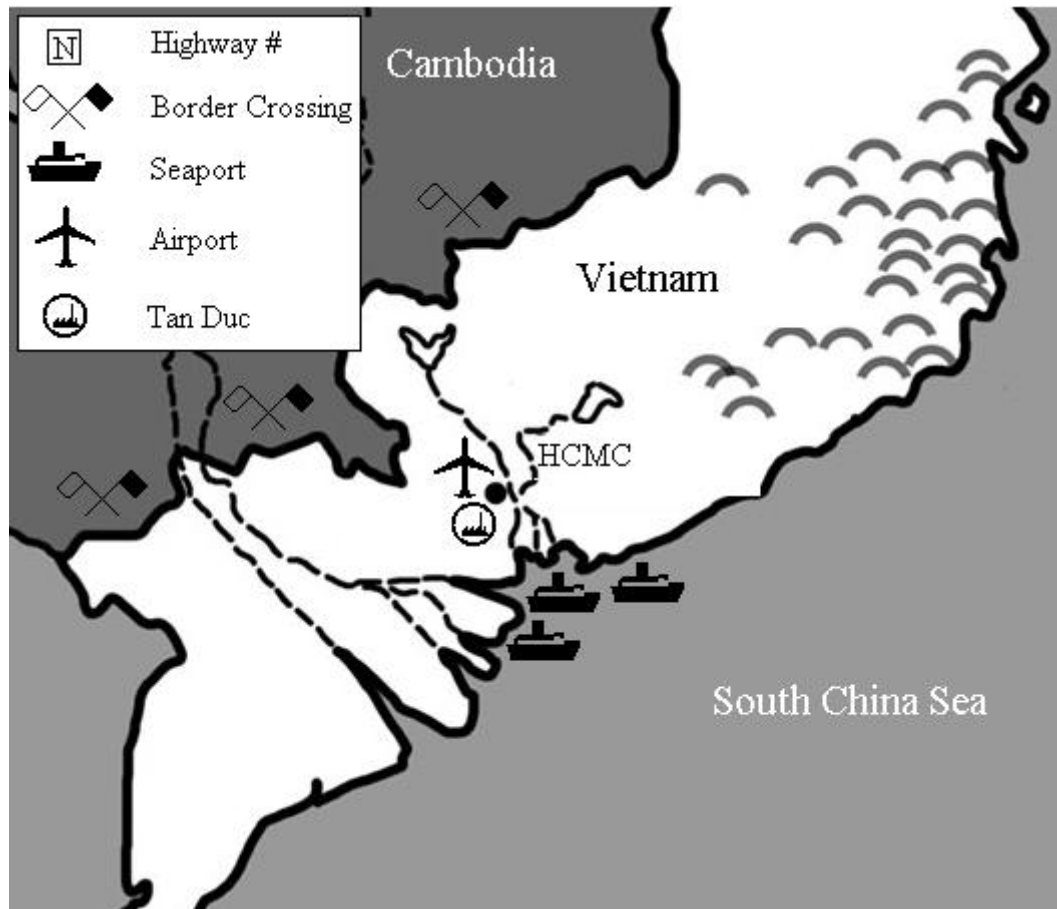


FIGURE 18. Southern Vietnam map (adapted from Invest in Vietnam 2010)

The large sea ports of Saigon have the largest capacities for container transport in Vietnam. Container shipping prices to US, EU and China are most competitive in southern Vietnam's ports. (VPA, 2010) Many exporting enterprises choose to transfer their containers from central Vietnam through Saigon and New Saigon ports because of this price effectiveness. (Kieu, 2009b) Vietnam's first modern container terminal was opened in 2009 in HCMC. This new port is the most competitive and modern port in the country. (Businessline, 2009) Figure 18 illustrates how the large number of competitive container seaports makes southern Vietnam superior in terms of international sea transport.

Southern Vietnam's Son Nhat airport has superior flight connectivity in the country. With most flights international departures and arrivals coming to the commercial hub of Vietnam, GVN has announced plans to build the country's largest air-

port at Long Thanh in the province of Dong Nai (BMI 2010). After completion, this airport will replace Son Nhat, which will only cater to domestic flights in the future (Huyen 2009). This makes southern Vietnam even more competitive in terms of flight connectivity.

5.6.5 Tan Duc IP

Fully operational by 2012, Tan Duc is currently calling for investment. There are 89 registered enterprises in the Tan Duc already. Adjacency to highway 1A makes Tan Duc easily accessible to HCMC and Son Nhat airport by car. This IP is trying to attract light manufacturing industries with minimal pollution.

Traffic congestion is a major issue for container transport in the provinces surrounding HCMC. Tan Duc is located along highway 1A, that leads to HCMC and Vung Tau. Trucks transporting containers to the ports of HCMC are not allowed in the city by day due to traffic problems. Even during allowed hours the roads leading to ports are highly congested by container transport. (BMI 2010).

There is a greater number of ports available in southern Vietnam than in the other regions. As most ports of HCMC are located within a mouth of a river almost in the middle of the city, the ports of Vung Tau are emerging as alternative sea ports to exporting enterprises. Good road network to Vung Tau makes this southern Vietnam most dynamic in terms of international container transport. (BMI 2010).

There is a larger pool of qualified labour available in the south than in the northern and central parts of Vietnam. Particularly engineers for quality control are more available as there are larger numbers of technical schools, universities and other institutions in southern Vietnam. (Kieu 2009a).

5.6.6 Central Vietnam

Located between Hanoi and HCMC, the two most important economic and political centers of Vietnam, central Vietnam takes up a favorable geographic position for commerce. Danang is the commercial hub of this central region. While Danang is foremost recognized for its tourism potential, it is also the third leading commercial center in Vietnam after Hanoi and HCMC. With an enlarging private sector fuelled by non-state and foreign enterprises launching operations in the central coast of Vietnam, the private sector in the region has grown exponentially over recent years. (Indochina Land 2009, 8-9).

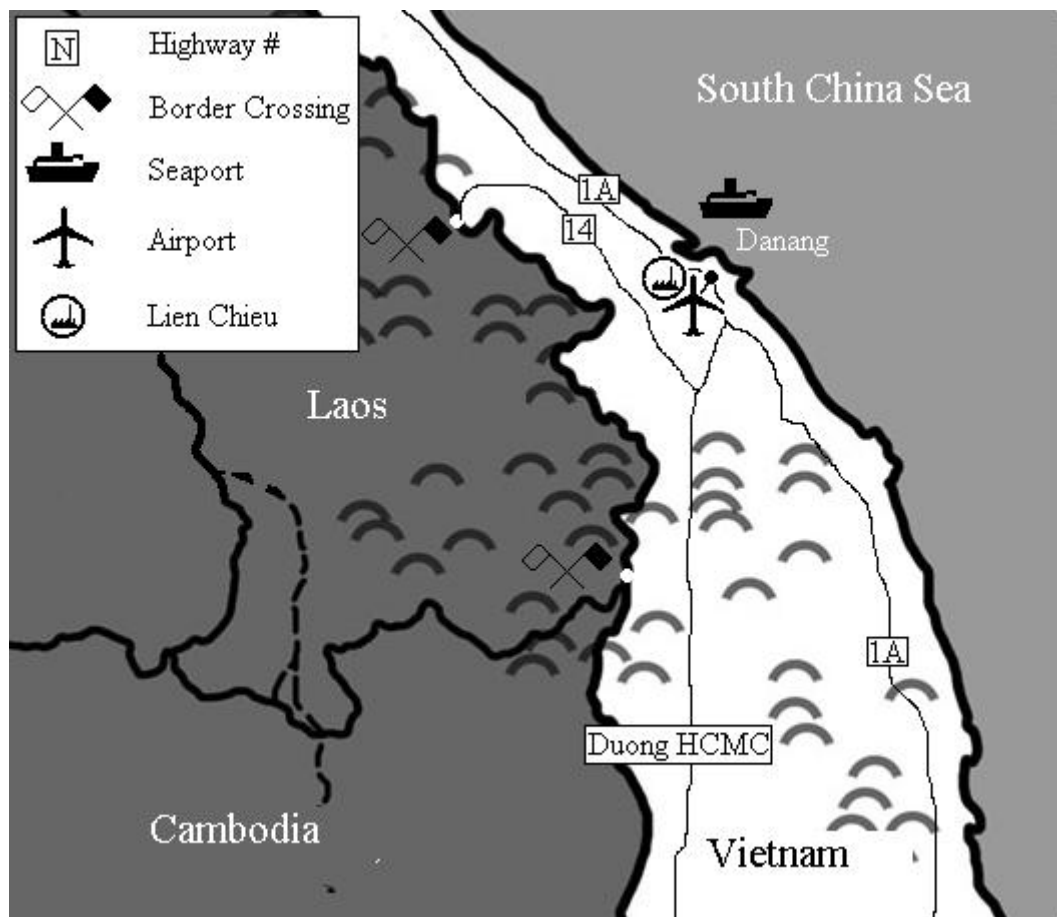


FIGURE 19. Central Vietnam map (adapted from Invest in Vietnam 2010).

International seaport and airport of Danang are all located within a 100km distance from each other. A distance advantage of this magnitude is only specific to

the central Vietnam. Figure 19 illustrates the good road connectivity of central Vietnam to the northern and southern parts of the country.

Regardless of recent global economic uncertainty, Danang has remained an attractive investment destination benefitting from dynamic economic growth, compelling demographics and pro-business governmental authorities. (Indochina Land 2009, 8-9). Danang's continuous ranking as the best place to do business in Vietnam according to PCI stands as evidence of this. In the past few years, Danang is often being cited as a benchmark province in excellent economic governance.

Currently, international flight connectivity is comparatively low in Danang International Airport. At the moment, Danang International Airport has a limited number of international routes. The common routes include Bangkok, Singapore, Seoul and Osaka. Most international flights go through either Son Nhat or Noi Bai airports. Domestic flights from these airports to Danang however are frequent. (Indochina Land 2009, 18-19.) A new terminal is being added to Danang International Airport to improve its passenger capacity (BMI 2010.)

Container shipping prices to US, EU and China are least competitive in central Vietnam's ports. Container shipping prices in Danang port are more than double of those in Haiphong and Saigon Port. (VPA 2010) In fact, many enterprises opt for transporting their containers through the ports of southern Vietnam rather than Danang (Kieu 2009b).



FIGURE 20. East West Economic Corridor (Da Nang 2010).

Central Vietnam has one distinct geographic advantage over southern and northern parts of Vietnam. This is the East West Economic Corridor (EWEC) illustrated in Figure 20. This trade channel utilizes the geographical proximities of Vietnam, Laos, Cambodia, Thailand and Burma. This channel increases market access to these countries dramatically because this is the only land route crossing mainland Southeast Asia from east to west. (Global Policy Forum 2005).

EWEC increases in cargo and commerce flow through the central Vietnam's ports and IPs. Additionally, this type of an economic corridor encourages labour movement to high productivity areas, in this case Danang. This ensures that there will be a more abundant work force available in Danang area for manufacturing enterprises.

5.6.7 Lien Chieu IP

As Hoa Cam IP and Khanh Hoa IP were receiving bad reputation for polluting industries, an alternative location was sought to relocate the polluting production establishments. Many enterprises relocated to Lien Chieu district in Danang, which is home to Lien Chieu IP and Lien Chieu Seaport. (MPI 2009; VIIP 2010) Although this seaport was recently upgraded it still does not have the capacity to receive large container ships. Also, the neighboring port of Danang does not provide a price effective alternative for seaport transportation due to low price effectiveness in comparison to the ports of southern and northern Vietnam. (Kieu 2009b).

Lien Chieu IP is located next to highway 1A which can be taken all the way to HCMC or Hanoi. This land route is preferred for container transport by many foreign exporting enterprises located in Danang. (Kieu 2009b) It is noteworthy that Danang Airport has good domestic flight connectivity from Noi Bai and Son Nhat but it is also possible to travel by road to Danang from the two other international airports of Vietnam.

Established under the decision of Vietnam's Prime Minister in 1998, Lien Chieu IP has been attracting enterprises from variable industries ranging from large SOEs to foreign SMEs in manufacturing industry. The proactive provincial authorities of Danang are by far the best advantage Lien Chieu offers as a location candidate. The province is managed well and local governance extends even to Lien Chieu IP (Le 2010). The IP gives out no particular investment incentives other than those stipulated by the government and the province. Although Lien Chieu is calling for investment for all enterprises in manufacturing industry, it only gives preference to investors in competitive sectors like textile and garments manufacturing (MPI 2009).

6 RECOMMENDATIONS

This chapter analyses the findings made so far and introduces investment topics relevant to site selection in Vietnam. Topics for future research are recommended for Yritys A to refine their site selection further. Further refinement of the site selection plan is advised to address the shortcomings and limitations of the site selection highlighted in this chapter.

The simple guidelines given in this chapter are based on current data and forecasts on Vietnam. Firstly, utilization of the collected site selection data is discussed. This is followed by chapters discussing issues influencing site selection in Vietnam. Yritys A industry specific considerations are not included in this public version of the thesis due to confidentiality issues.

6.1 Findings

Table 6 contains the research questions and research objectives set out in the start of this thesis. The table also summarizes the relevant findings made in this thesis.

TABLE 6. Research questions, objectives and findings

Research questions	Research objectives	Findings
1 What are the most cost effective locations in Vietnam for Yritys A?	a) Identification of the most competitive industrial real estates in terms of costs and specific criteria set by Yritys A	1. Tien Son IP 2. Nam Sach IP 3. Lien Chieu IP 4. Tan Duc IP
	b) Build a site selection model that can be reproduced in future studies by Finpro Vietnam	Figure 13 on page 33
2 Are there any special investment issues in Vietnam for Yritys A to consider?	Supplementing Finpro Vietnam investment feasibility study by going beyond it's scope of research covering issues of interest.	Yes. The relevant findings can be found in Chapter 6.2 Vietnam investment issues.

The first research question has been answered successfully as the most cost effective locations have been identified for Yritys A. The findings of this research, however could be different had there not been such drastic limitations to research due to data availability. The site selection factors described in Chapter 4.2 have been devised within the limitations and obstacles highlighted in Chapter 1.2 Scope and limitations.

In light of this understanding, the writer highly recommends Yritys A to study the short listed IPs further with a more qualitative approach and a new set of refined site selection criteria. These new criteria ideally address issues left out from this thesis like vicinity of supporting industries, IP investment incentives and other factors. As these factors are somewhat unique to each IP, studying them should be

carried out with the competent help of a person with a better understanding of the local market and language.

In future utilizations of this site selection model, it is also important to study the selected seaports. No dramatic changes are expected with the capacities of international airports, but seaport capacity changes are frequent in the rapidly developing transport network of Vietnam. It is therefore, reasonable to consider new ports for international transport. For example, the ports of HCMC are often titled as the most competitive in cost but the deep sea ports of Vung Tau are surpassing them in competitiveness due to less congestion and other connectivity. Through this new study, if some of the shortlisted IPs turn out unfeasible for unknown reasons Yrity's A can refer to Figure 14 Industrial park cost and PCI comparison to find the next most competitive locations to study in more detail.

It can be said that both of the research objectives of the first research question have been met. The site selection model produced for Yrity's A is easily reproduced in future site selection studies in years to come by simply updating the numerical data. This is easy by utilizing existing reports, figures and periodicals. The writer intentionally utilized regularly published secondary sources in building the core of the site selection to allow this type of reproduction. These regular publications provide a holistic view of their respective topics.

6.2 Vietnam investment issues

A number of issues have been highlighted for Yrity's A to consider while investing to Vietnam. The following chapters answer to the second research question.

2. Are there any special investment issues in Vietnam for Yrity's A to consider?

These issues are repatriation of profits, Yrity's A's industry implications and general issues of Vietnamese legal environment, staffing and economy. Most of these issues are subject to frequent change so it is highly recommended for Yrity's A to

maintain an up-to-date understanding of them while conducting business in Vietnam. As previously mentioned, the industry implications are not discussed in this public version of the thesis.

6.2.1 Repatriation of profits

There are no particular requirements for a capital structure for Foreign Invested Enterprises (FIE) in Vietnam. However, enterprises do need to have enough capital resources to successfully realise their business goals set in the Investment Certificate (IC) (Mayer& Brown 2009 2-6). Yritys A is advised to utilize the knowledge of local legal experts in producing documents necessary for licenses and other formalities.

If a foreign investor has met its financial obligations to the GVN, he/she may remit their investments from Vietnam with the following specifications. Profits derived from business activities can be remitted on a quarterly, semi-annual or annual basis. Payments received from the provision of technology and services and from intellectual property are remittable. Principal of and any interest on offshore loans are remittable as is invested capital and proceeds from the liquidation of investments. Other sums of money and assets legally owned by the investor can be remitted as well. (Mayer& Brown 2009 9-10).

Mayer& Brown (2009) do not specify in their guide how a foreign investor usually meets its financial obligations to GVN. It is therefore highly recommended for Yritys A to study if there are the some industry specific premises for profit repatriation in Vietnam.

6.2.2 Legal environment

Upon Vietnam's accession to WTO in 2007, foreigners and foreign entities in direct investment and enterprise regulation started to receive equal and uniform treatment. As this statement is mostly true only on paper, recent law cases in

Vietnam illustrate how dispute processing is not fully adopted without discrimination in Vietnam. Also, it is very difficult to enforce foreign arbitral awards in Vietnam in light of these dispute cases. (Sato 2009, 224).

Contractual disputes usually arise from fraudulent activities due to the lack of jurisprudence of “security of trade”. This premise of a legal system for a market economy is not fully developed in Vietnam (Sato, 2009 225). Legal transparency like this is characteristic of a developing country like Vietnam.

Unlike in most common law countries, a FIE in Vietnam is only permitted to conduct business activities within its “business line” which is narrowly defined and codified by GVN. Usually, for FIEs the permitted business lines must be closely tied to what is considered necessary for their particular project. Furthermore, to obtain an Investment Certificate (IC), the investor needs a tangible business plan that includes feasibility studies that detail precisely the investors planned activities.

The year 2009 was eventful for enterprises in Vietnam due to numerous developments in enterprises income tax (EIT), foreign contractor tax (FCT), special sales tax, personal income tax (PIT), customs duties, natural resources tax and tax administration. The year 2010 is expected to be exciting from a legislative perspective as there are many important laws on the Vietnam government’s agenda. Respectively, enterprises in Vietnam are encouraged to watch for pending changes that will have an impact on their interests. (Vietnam Economic Times, 2009b, 15)

Tax guides and reports by PricewaterhouseCoopers (2009) and Deloitte (2009a, 2009b) are useful references for taxation in Vietnam. Both personal and corporate taxation in Vietnam are subject to frequent changes. Respectively prudence is recommended in checking latest rates, positions and laws. (Deloitte, 2009b)

Yritys A should market aggressively in the early steps of the enterprise to reap benefits of specific tax incentives. Newly established SMEs in Vietnam are eligible for 15% cap on the deductibility of market and advertising expenses. The

normal cap is 10% so Yritys A could utilize this small concession easily. (Vietnam Economic Times, 2009b, 15).

Direct tax incentives are granted to the sectors of the economy and/or geographical locations that suffer from market failures. (Nguyen& Navarro, 2009) The potential benefits of investment encouragement rarely outweigh transportation costs incurred by locating to a distant province. This is particularly true as preferential Corporate Income Tax (CIT) has been abolished. This has resulted in lower IP land leasing ratios. Many enterprises are opting to rent or buy land outside IZs to build workshops or to gather into an industrial complex (Dau Tu 2010.)

There are effectively no difference between IPs and EPZs in Vietnam with respect to incentives, rights and privileges. Only EZs provide greater incentives than IZs (The Canadian Trade Commissioner Service 2009, 25). For these reasons, IZ investment incentives should have no weight in the final location decision provided it is limited to IPs.

6.2.3 Staffing

The Swedish Honorary Consul-General Mr. Krister Kling, who has many years of experience in the manufacturing industry in Vietnam, states there should be a window of 10-15 years before wage levels in Vietnam are up to the regional level (Carlen 2009, 4). A single nationwide minimum wage will be set by the government of Vietnam by 2012 (U.S. commercial service 2009, 111).

Increases in the salary levels are expected due to volatile inflation and public policy. Similar forecasts and considerations are emphasized by Russin& Vecchi (2009, 65) in their comments on labour legislation in Vietnam. These events and factors should be acknowledged by Yritys A in their long-term plans for Vietnam.

Retaining skilled labour is challenging in Vietnam. Most enterprises need to re-train most newly recruited personnel. Particularly vocational level educated people have outdated skills that are difficult to transfer to real working life. Paying

competitive salaries for qualified labour in Vietnam is mostly a problem for SOEs that are subject to government regulations. Many SOEs report that can only make a profit by violating these regulations. These violations come in the form of seasonal bonuses or paying a higher salary than regulated by GVN. (Cheshier& Penrose 2007, 25)

Gender issues in staffing are not entirely self explanatory in Vietnam. In fact, a survey by UN discovered some directions for future research on the topic in Vietnam. Men tend to be hired for management and technical positions while women are seen in positions of marketing, public relations and administration. The male/female ratio increases at higher levels of management and technological complexity. Although companies tend to not have a preference for gender in hiring, it is reported that having a suitable ratio of both genders is ideal. While women are reported to be more diligent and attentive to detail, men are considered more suitable for operating machinery and managing operations. (Cheshier& Penrose 2007, 30-33) This UN study SOE managers were interviewed in this UN study, so it is to be noted that the views of these managers do not represent a common view on staffing but their personal long experiences in Vietnam

Mr. Thomas Bo Pedersen states having a physical presence in the country is essential for managing one's business on European terms. He emphasizes the importance of presence, particularly in the start-up phase (Carlen 2009, 4-5). It is pivotal for Yrity's A's success to be on the site of their processing plant in the initial phase because hiring qualified managers in Vietnam is challenging. More so, finding a partner one can easily trust is rarely a simple task in Vietnam. Also relocating a qualified employee to a rural factory site can be challenging and costly if the location is distant from an urban area (Luong 2009).

6.2.4 Vietnam economy

Vietnam suffers from substantial trade, current account and fiscal deficits (Vietnam Economic Times 2009a, 40; Vietnam Holding 2009, 6-7). This leaves the economy highly vulnerable to global economy fluctuations as seen in 2008-2009.

It is noteworthy that the fiscal picture of Vietnam is distorted by 'off-the-books' spending. Respectively, due diligence is always highly advised when analyzing country risks of Vietnam.

In contrast to Vietnam's vulnerability to the world economy, the country has fared relatively well in the global economic downturn in 2008-2009. Vietnam's current stage in its industrial development is to be indirectly thanked for this. Vietnam produces essential and discount items that usually hold up fairly well during an economic downturn. A country producing luxury items is often impacted more heavily by the global economy. Vietnam did not go through the economic turmoil of 2008-2009 unscathed because foreign investment inflows dropped significantly with firms reconsidering their expansion plans (Vietnam Holding 2009, 6-7). Interestingly, according to a recent survey by Vietnam Economic Times (2009a, 40) a vast majority of Vietnamese business owners is highly optimistic in their medium term business prospect and share a positive outlook for the future of Vietnam's economy in 2010.

Vietnam's economic fundamentals and corporate sector health remain good, and recent challenges posed by the global economic downturn have not derailed the long-term development trajectory of the country. (Vietnam Holding 2009) Although Vietnam has been in a transition away from a centrally planned economy, the government stimulus package is still a highly relevant concern for foreign investors.

Dr. Le Dang Doanh does make a positive forecast for Vietnam's economy in 2010-2011. He forecasts GDP growth to reach 5-5.2% by year-end 2010. Although this is the lowest growth rate in 10 years, it is remarkable compared to ASEAN growth rate (Le Dang Doanh 2009, 6). It is worthwhile to note that growth in 2009 was roughly half of what Vietnam has become accustomed to in last few years (Vietnam Holding 2009, 6). The year 2010 is a critical time for the economy of Vietnam because it is the first year of the next 5-year-plan devised by GVN. In this plan, new strategies, policies and guidelines are set to face the challenges of the new decade (Sacombank 2009). For foreign investors this implies major changes in legislation.

The numerous economic forecast reports on Vietnam herald a bright future. Although there are risks involved, Vietnam is expected to be competitive due to its stability. Particularly the high political stability of Vietnam makes the country highly attractive in comparison to neighbouring countries like Thailand and Indonesia. It is important though to consider the opinions of the experts on Vietnam economic development and understand the implications of the numerous extraordinary factors in the global market on Vietnam as an investment environment. For example, global crude oil prices should be monitored as it strongly impacts inflation in Vietnam.

7 SUMMARY

Although the scope of this thesis was initially to study site selection implications specific to Yritys As industry, this thesis is applicable to other fields as well. The tables and figures in this thesis are usable in other site selection studies in Vietnam as described in Chapter 6 Recommendations. This utilization possibility brings this thesis added value. Also in future with small adjustments a new site selection can be produced with the established framework as illustrated in Figure 13– Yritys A Site selection process.

The most cost effective locations in Vietnam can be said to be solely in IPs. This is particularly true for FIEs. The costs avoided by utilizing the one-stop investment service provided by the IP are not easy to measure, but they are substantial and therefore, a major competitive advantage of a designated production zone.

4 IPs have been identified as the most cost effective in Chapter 5. How to utilize the site selection stipulated in that chapter, is discussed in Chapter 6.1. Yritys A should study supporting industries and incorporate them in their final site selection decision. In the writer's perspective more and more transparent information is made available on Vietnam's investment conditions. This gradual process will enable more comprehensive site selection studies that do not suffer from the same data quality limitations as the one in this thesis. The writers attempt to produce a site selection model based on data that is reproduced regularly was somewhat successful. The site selection data used can be easily updated in future site selection studies as the format of the utilized reports and figures is somewhat consistent.

This thesis delivered Yritys A the needed information on potential locations in Vietnam to find the most competitive location for their processing plant. This objective was reached by finding 4 most potential locations out of 200. Site and region specific recommendations given in Chapter 6 for future considerations and research bring added value to this.

In addition to the site selection issues, this thesis provides general information for investors interested in Vietnam. Chapter 6 summarizes some key considerations when investing to Vietnam. The region specific issues discussed in some parts of Chapter 5 are equally useful in a similar way for anyone studying regional competitive advantages of Vietnam. For these reasons, this thesis brings value for management consultancy organizations like Finpro. There has not been a publication similar to this thesis in the public domain. Possibly due to lack of data availability, very few comprehensive studies have been made into regional competitive issues of Vietnam.

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APPENDICES

APPENDIX 1

Phase 2

Filters 2.1, 2.2 and 2.3

#	Deletion reason	Industrial park	Nearest seaport	Distance (km)	Nearest airport	Distance (km)
1	Filter 2.1	Bac Chu Cat	Haiphong	130	Noi Bai	47
2	Filter 2.1	Dinh Tram	Haiphong	110	Noi Bai	40
3	Filter 2.1	Hoa Hiep	Quy Nhon	120		
4	Filter 2.1	Loc Son	Dong Nai	150	Da Nang	110
5	Filter 2.1	Phan Thiet	Saigon Port	200		
6	Filter 2.1	Quan Chau	Haiphong	110	Noi Bai	35
7	Filter 2.1	Sao Mai	Quy Nhon	240	Gia Lai	50
8	Filter 2.1	Song Khe -	Haiphong	115	Noi Bai	45
9	Filter 2.2	Cai Lan	Quang Ninh	1.5	Noi Bai	200
10	Filter 2.2	Dinh Vu	Dinh Vu	0	Noi Bai	150
11	Filter 2.2	Do Son -	Haiphong	20	Noi Bai	150
12	Filter 2.3	Dong Mai	Haiphong	25		
13	Filter 2.3	Long My	Quy Nhon	12		
14	Filter 2.3	My Tho	My Tho	60	Noi Bai	80
15	Filter 2.3	Phu Tai	Quy Nhon	12		
16	Filter 2.3	Viet Hung	Quang Ninh	12	Noi Bai	
17	Pass	Bien Hoa 2	Dong Nai	45	Son Nhat	10
18	Pass	Da Nang SAA	Da Nang	6	Da Nang	3
19	Pass	Dai An	Haiphong	55	Noi Bai	89
20	Pass	Duc Hoa	Tan Cang	28	Son Nhat	25
21	Pass	Hoa Cam	Da Nang	7	Da Nang	2
22	Pass	Hoa Khanh	Da Nang	20	Da Nang	10
23	Pass	Lien Chieu	Da Nang	25	Da Nang	15
24	Pass	Long Hau	Saigon Port	22	Son Nhat	26
25	Pass	Nam Sach	Haiphong	45	Son Nhat	70
26	Pass	Nhon Trach 1	Dong Nai	15	Son Nhat	40
27	Pass	Nhon Trach 2	Dong Nai	23	Son Nhat	65
28	Pass	Nhon Trach 3	Dong Nai	15	Son Nhat	65
29	Pass	Tam Phuoc	Dong Nai	15	Son Nhat	32
30	Pass	Tan Duc	Saigon Port	29	Son Nhat	28
31	Pass	Thanh Phu	Dong Nai	12	Son Nhat	35
32	Pass	Tien Son	Haiphong	9	Noi Bai	35
33	Pass	Xuyen A	Tan Cang	28	Son Nhat	18

Sources: MPI (2007), VIIPIP (2007), Google Maps (2010),

APPENDIX 2

Filter 3.1 Suitability

Sources: MPI (2007), Vietnam Industrial Parks (2009), VIIP (2010)& ROL (2010)

Industrial park	Occupancy ratio	Source	Suitability of investment fields
Hoa Khanh	98%	Investment Promotion Center for Central Vietnam, 2008 27	Mechanical engineering, electronic and garment industries; agro-forestry-aquatic product processing; construction material and chemical production
Duc Hoa	26%	Vietnam Real Estate Online, 2009b	Light industries of little pollution like food processing, agriculture supporting manufacturing, consumer and building materials.
Tan Duc	Calling for investment	Vietnam Industrial Zones, 2009	Industries for food processing, foodstuff, mechanics assembly, electronics, consumer goods manufacturing, building materials, textile and dyeing, paper
Xuyen A	-	Vietnam Industrial Zones, 2009	Food and cattle-feed processing industries, mechanical, electronic manufacturing and assembling, consumer goods, building materials industries, textile, dyeing and paper industries.

Industrial park	Occupancy ratio	Source	Suitability of investment fields
Bien Hoa 2	100%	Vietnam Real Estate Online, 2009a	Foodstuffs and agricultural products and food processing; garments and textiles; jewelries, fine arts goods and cosmetics; footwear, sportswear, high grade packages; industrial products from rubber, ceramics, glass; assembly of electronic goods, computer accessories, electronic components; manufacture of electric wires of all kinds, electric appliances; high grade building materials, wood processing, woodwork; car and motorcycle accessories, assembly of cars and motorcycles; pharmaceutical products, medical tools and agricultural medicine; PVC grains and plastic goods; mechanical parts and metallic components; industrial machinery and equipment.
Tam Phuoc	100%	Vietnam Real Estate Online, 2009c	Mechanic, pharmaceutical, cosmetic, chemical, electric, electronic, construction material, textile, to footwear industry
Tien Son	80.7%	Viglacera Land, 2009	Production, installing electric and high technology electronic, mechanic; production of steel and products made from steel; consumer goods and garment processing and foodstuff, handicraft and fine arts production; agricultural products
Dai An	Calling for investment	Vietnam Real Estate Online, 2009b	Textile, garments, leather footwear, consumer goods, foodstuffs, agricultural product processing, manufacture of accessories, machinery assembly, electronic equipment manufacture and assembly, making porcelain, terra-cotta, glassware, making handicrafts and fine art articles and some other crafts

Industrial park	Occupancy ratio	Source	Suitability of investment fields
Nam Sach	97%	Vietnam Industrial Zones, 2009	Garment, shoes, packaging, paper, agriculture and forestry processing
Long Hau	Calling for investment	Vietnam Industrial Zones, 2009	Food processing including vegetable, milk and products from milk, domestic fowls, Plastics, consumers, fine art, textile, garment, leather, imitation leather, paper, carton, packaging, toys, mechanics: manufacturing equipment, agriculture equipment, machine component, alternative spare-part, assembling special equipment, motorbike, electronics: manufacturing and assembling electronics product, building materials: materials for civil building, industry and transportation
Da Nang SAA	25%	Vietnam Industrial Zones, 2009	Aquatic product processing industry, logistic services for fishing ports
Hoa Cam	Calling for investment	Vietnam Industrial Zones, 2009	Mechanics, assembling, electronics, garment, food processing, post-petrochemical as package, plastics, high quality construction materials with small and medium-scaled companies
Lien Chieu	Calling for investment	Vietnam Industrial Zones, 2009	Mechanics, assembling, electronics, garment, food processing, post-petrochemical as package, plastics, high quality construction materials with small and medium-scaled companies

Industrial park	Occupancy ratio	Source	Suitability of investment fields
Nhon Trach 2	Calling for investment	Vietnam Industrial Zones, 2009	Textile and garment industries, silk, yarn, dyeing, bleaching; assembly of electric and electronic components; mechanical industries, manufacture of dynamic engines, manufacture and assembly of transportation means; agricultural machines; building materials: production of iron sheets, zinc sheets, tanks, pre-made concrete components and other metallic components; food industries, pharmaceutical products, flavoring, chemical cosmetics.
Nhon Trach 3	Calling for investment	Vietnam Industrial Zones, 2009	Textile and garment, silk, yarn, dyeing, bleaching; electrical and electronics assembly, manufacturing of dynamic Engines, manufacturing and assembly of transportation means, agricultural and building machines, food processing, pharmaceuticals, flavoring and chemical cosmetics
Thanh Phu	Calling for investment	Vietnam Industrial Zones, 2009	Processing industries, repairing and engineering industry, less polluted sectors
Nhon Trach 1	Calling for investment	Idico-Urbiz, 2009	Building materials; mechanics, precision mechanical tool; production and repair of machine-vehicles, equipment; textiles, garments, dyeing; electric and electronic products; industrial, agricultural and foodstuff chemicals; food and agricultural products processing; other industries which do not cause serious environment pollution.

APPENDIX 3

Cost matrix source data

Industrial Park	Electricity (VND/KW)	Grade	Minimum wage (USD/month)	Grade	Land rental (USD/m2/year)	Public utility fee (USD/m2/year)	Sum (USD)	Grade	Sewage treatment fee (USD /m3/year)
Bien Hoa 2	823.51	6	56	10	0.08	0.4	0.48	10	0.28
Da Nang SAA	937.68	2	64	6	0.8	0.2	1	9	0.32
Dai An	744.74	10	56	10	0.7	1	1.7	5	0.22
Duc Hoa	823.81	6	56	10	0.76	0.3	1.06	7	0.32
Hoa Cam	937.68	2	64	6	0.5	0.22	0.72	9	0.22
Hoa Khanh	937.68	2	64	6	0.5	0.22	0.72	9	0.22
Lien Chieu	937.68	2	64	6	0.5	0.2	0.7	9	0.22
Long Hau	823.81	6	56	10	0.76	1	1.76	5	0.32
Nam Sach	744.74	10	56	10	0.4	1	1.4	7	0.32
Nhon Trach 1	823.51	6	56	10	1.54	1.45	2.99	1	0.28
Nhon Trach 2	823.51	6	56	10	0.09	1.5	1.59	5	0.28
Nhon Trach 3	823.51	6	56	10	0.09	1.51	1.6	5	0.32
Tam Phuoc	823.51	6	56	10	0.045	1	1.045	7	0.316
Tan Duc	823.81	6	56	10	0.76	0.3	1.06	7	0.32
Thanh Phu	823.51	6	56	10	0.09	1.45	1.54	5	0.25
Tien Son	777.45	10	56	10	0.15	0.2	0.35	10	0.265
Xuyen A	823.81	6	56	10	0.76	0.3	1.06	7	0.32

Sources:

Electricity (Malesky, 2009; EVN, 2010)

Minimum wage (U.S Foreign Commercial Service, 2009 11)

Land Rental, Public Utility Fee and Sewage Treatment Fee (MPI 2007 41-58; VIIPIP 2009)

APPENDIX 4

Cost matrix value grading

Electricity (VND/KW)	Grade
730+-800	10
800+-850	6
850+-900	4
900+	2

Minimum wage (USD/month)	Value
56	10
64	6

Rental & Public Utility fee	Value
0 to 0.5	10
0.5+ to 1	9
1+ to 1.5	7
1.5+ to 2	5
2+ to 2.5	3
2.5+ to 3	1
2.5+ to 3	1

APPENDIX 5

Source: PCI (2009)

Industrial Park	Province	Entry Costs and Security of Tenure	Land Access and Transparency of Information	Time Costs of Regulatory Compliance	Informal Charges of Provincial Leadership	Proactivity of Business Support Services	Legal Institutions		
Bien Hoa 2	Dong Nai	7.88	5.05	6.80	7.57	6.26	4.91	6.58	5.37
Da Nang SAA	Da Nang	9.52	6.61	7.27	8.60	6.64	7.70	6.58	5.31
Dai An	Hai Duong	7.72	6.04	6.43	7.19	5.28	4.51	4.85	5.03
Duc Hoa	Long An	9.12	6.67	6.89	7.23	6.90	6.33	3.99	5.35
Hoa Cam	Da Nang	9.52	6.61	7.27	8.60	6.64	7.70	6.58	5.31
Hoa Khanh	Da Nang	9.52	6.61	7.27	8.60	6.64	7.70	6.58	5.31
Lien Chieu	Da Nang	9.52	6.61	7.27	8.60	6.64	7.70	6.58	5.31
Long Hau	Long An	9.12	6.67	6.89	7.23	6.90	6.33	3.99	5.35
Nam Sach	Hai Duong	7.72	6.04	6.43	7.19	5.28	4.51	4.85	5.03
Nhon Trach 1	Dong Nai	7.88	5.05	6.80	7.57	6.26	4.91	6.58	5.37
Nhon Trach 2	Dong Nai	7.88	5.05	6.80	7.57	6.26	4.91	6.58	5.37
Nhon Trach 3	Dong Nai	7.88	5.05	6.80	7.57	6.26	4.91	6.58	5.37
Tam Phuoc	Dong Nai	7.88	5.05	6.80	7.57	6.26	4.91	6.58	5.37
Tan Duc	Long An	9.12	6.67	6.89	7.23	6.90	6.33	3.99	5.35
Thanh Phu	Dong Nai	7.88	5.05	6.80	7.57	6.26	4.91	6.58	5.37
Tien Son	Bac Ninh	9.13	6.46	7.02	6.96	7.03	5.04	3.97	5.89
Xuyen A	Long An	9.12	6.67	6.89	7.23	6.90	6.33	3.99	5.35

APPENDIX 6

PCI (2009) average calculation table

Industrial Park	Province	Legal environment average	Staffing average	Infrastructure average
Bien Hoa 2	Dong Nai	6.30	5.33	7.18
Da Nang SAA	Da Nang	7.28	7.69	6.63
Dai An	Hai Duong	5.88		6.46
Duc Hoa	Long An	6.56	4.75	5.76
Hoa Cam	Da Nang	7.28	7.69	6.63
Hoa Khanh	Da Nang	7.28	7.69	6.63
Lien Chieu	Da Nang	7.28	7.69	6.63
Long Hau	Long An	6.56	4.75	5.76
Nam Sach	Hai Duong	5.88		6.46
Nhon Trach 1	Dong Nai	6.30	5.33	7.18
Nhon Trach 2	Dong Nai	6.30	5.33	7.18
Nhon Trach 3	Dong Nai	6.30	5.33	7.18
Tam Phuoc	Dong Nai	6.30	5.33	7.18
Tan Duc	Long An	6.56	4.75	5.76
Thanh Phu	Dong Nai	6.30	5.33	7.18
Tien Son	Bac Ninh	6.44	5.91	5.93
Xuyen A	Long An	6.56	4.75	5.76

APPENDIX 7

Vietnam port data

Area	Port	Vessels		Cargo throughput (x 1,000 MT)				
		calls	Tons	Import	Export	Domestic	TEUs	DWT
North	Haiphong	4779	13900	7635	3231	3034	808000	40000
South	Saigon New	2168	20180	9751	10429		2018104	30000
South	Saigon Port	1819	13166	5413	2845	4908	510496	30000
Central	Da Nang	1542	2742	526	1230	986	61881	45000
Central	Quy Nhon	1296	3311	835	1524	952	72276	10000
South	Dong Nai	775	2803	721	914	1168		

Sources:

MPI (2008, 23)

VPA (2010)

APPENDIX 8

PCI relation to Waller's (2003) site selection factors

PCI Sub-Index	Waller (2003) main factor	PCI Sub-Index explanation (PCI, 2009 15)
Land Access and Security of Tenure	Legal environment	Ease of access to land and the security of tenure once land is acquired
Entry Costs	Legal environment	Measurement of following elements: 1) the time it takes a firm to register and acquire land; 2) the time to receive all the necessary licenses needed to start a business; 3) the number of licenses required to operate a business; and 4) the perceived degree of difficulty of obtain all licenses/permits
Time costs of Regulatory Compliance	Legal environment	Measures how much time firms waste on bureaucratic compliance, as well as how often firms have to shut their operations down for inspections by local authorities. This index also measures progress on the ongoing public administration reform.
Transparency and Access to Information	Legal environment	A measure of whether firms have access to the proper planning and legal documents necessary to run their businesses, whether those documents are equitably available, whether new policies and laws are communicated to firms and predictably implemented, and the business utility of the provincial webpage.
Informal Charges	Infrastructure	A measure of how much firms pay in informal charges, how much of an obstacle those extra fees pose for their business operations, whether payment of those extra fees results in expected results or "services," and whether provincial officials use compliance with local regulations to extract rents.
Proactivity of Provincial Leadership	Legal environment	A measure of the creativity and cleverness of provinces in implementing central policy, designing their own initiatives for private sector development, in implementing central policy, designing their own initiatives for private sector development, and working within sometimes unclear national regulatory frameworks to assist and interpret in favor of local private firms.

PCI Sub-Index	Waller (2003) main factor	PCI Sub-Index explanation (PCI, 2009 15)
Business Support Services	Legal environment	A measure of the overall attitude of provincial officials as well as their creativity and cleverness in implementing central policies, designing initiatives for private sector development and also working within unclear national regulatory frameworks to assist and interpret in favor of local private firms.
Labour and Training	Staffing	A measure of the efforts by provincial authorities to promote vocational training and skills development for local industries and to assist in the placement of local labour.
Legal institutions	Legal environment	A measure of the private sector's confidence in provincial legal institutions; whether firms regard provincial legal institutions as an effective vehicle for dispute resolution, or as an avenue for lodging appeals against corrupt official behavior.
Infrastructure	Infrastructure	Aggregate average of indicators like Industrial Zone Quality and Coverage, Road Quality and Transport Costs, Utilities (energy and telecommunications)