

Location Selection of Logistics Center

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Description

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Abstract				
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The objective of the research was to find the facts that affect the location selection of a logistics center and to provide a general conclusion of the factors that influence the site selection of the center. In addition, focusing on the human aspect in logistics, the purpose was to identify emotional factors and how they influence on the location selection process of a logistics company.				
In order to achieve these objectives, the qualitative research approach was selected for the study. The data was collected from previous research, articles and other printed or online materials from various sources. Moreover, a case study based on interviews with two mem bers of the management personnel of two logistics companies were conducted. The case study focused mainly on the human perspectives.				
higher operational efficiency. clude environment, infrastruct	e location decision brings not or The factors influencing the locat cures, customers, the company i es, the external influences come tors could be the personnel.	tion of a logistics center in- itself and much more. With		
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Contents

1	Introduction		
2	Thesi	is implementation	4
	2.1	Research background	4
	2.2	Thesis implementation stages	4
3	Logis	tics Integration and Logistics Industrial Cluster	6
	3.1	The trend of integration in and logistics Cluster	6
	3.2	The concept of Logistics Cluster	7
	3.3	Formation Factors of Logistics Cluster	8
	3.4	Benefits of logistics cluster	.10
	3.5	Sustainable Development Analysis of Logistics Cluster	.11
4	Princ	ciple of Location Selection	. 13
	4.1	Adaptability of Local Condition	.13
	4.2	Regional Coordination and Customer Distribution	.15
	4.3	Economic and Operational Expense	.16
	4.4	Strategic Development	.16
5	Analy	ysis of Factors Affecting Site Selection of Logistics Center	. 17
	5.1	Natural environmental factors	. 17
	5.2	Business environment factors	.18
	5.3	Infrastructure status	.19
	5.4	Other factors	. 20
6	Resea	arch Approach	. 22
	6.1	Research target	.22
	6.2	Research methods	.22

	6.3	The interview and analysis	.23
7	Resul	It of The Interview	. 25
	7.1	Fengshen Logistics	25
	7.2	Valtra	30
	7.3	Summary of the results	33
	7.4	Development ideas	34
8	Discu	ssion	.35
	8.1	Research result	35
	8.2	Research reflection	37
List	of Ref	erences	.38
App	endice	es	.40
	App	endix 1: Interview Questions	40

1 Introduction

With the rapid development of the global economy, people attach great importance to the logistics industry. At the same time, the logistics operators are facing a common problem: how to choose a reasonable location for the logistics distribution center. In the logistics network, the logistics distribution center connects the supplier and customer as a bridge between them. The location of logistics distribution center plays an important role in the whole logistics system. Therefore, the location of the distribution center has an important impact on the role of logistics system and the improvement of economic benefits.

Hesse (2008, 47) states the geographical conditions have not received sufficient attention by logistics industries until the recent years. This is probably because in the past, the flow of material was not as convenient as in the modern era. Long-distance transportation of materials is very difficult. Until the coming of industrial age, the invention and popularization of modern transportation, the logistics industry was able to develop rapidly.

The location of logistics facilities is an important part of logistics facilities planning and an important part of logistics network planning. The location of the logistics facility determines the composition of the enterprise logistics network. It not only affects the logistics capability of the enterprise but also affects the actual logistics operation efficiency and costs of the enterprise. It is a very important logistics strategic planning problem for enterprises. Especially after the beginning of the 21st century, production globalization, capital globalization and market globalization, the economic activities of transnational corporations across national borders have increased the importance of the location of logistics facilities beyond national boundaries, and therefore, the decision-making of logistics facilities on a global scale can be more important. The location of logistics facilities has a far-reaching significance for the construction of enterprise logistics systems.

2 Thesis implementation

2.1 Research background

It is universally acknowledged that the humanistic spirit is undoubtedly an excel-lent representative of human intelligence in the history of the development of human civilization. From Confucianism in the east to the great philosophers in ancient Greece, people have given great attention to the human-beings them-selves. Since ancient times, humans have attached great importance to the tremendous power of emotions.

When human civilization entered the industrial age, people needed more rational thinking. However, humans are different from the machines they have invented. People have emotions, and the emotions of people affect people's attitudes ultimately. Especially in the recent years, with the idea of humanity gaining popularity, more and more people are associating other issues with humanistic moral standards. From the industry's point of view, human values have become important, and the emotions of individuals must be respected. The negative practices of the pre-industrial era that violated the basic rights and interests of employees have been abandoned in the continuous development of society. People always hope that companies can pay more attention to social responsibility, protect personal rights and develop in a sustainable way. Thus, enterprises should not only consider the maximization of their own interests when making selections, but also take the emotional factors of peoples into account. Although in many cases this is not a decisive factor in a decision-making process, it will definitely encounter obstacles when implemented if enterprises do not consider the emotional perspective. Hence, for the logistics industry in particular, studying the emotional factors in logistics facilities' site selection is very necessary for the development of the logistics business.

2.2 Thesis implementation stages

This thesis was implemented in the way of theoretical introduction and case study.

The graph below illustrates the researching stages (see figure 1).

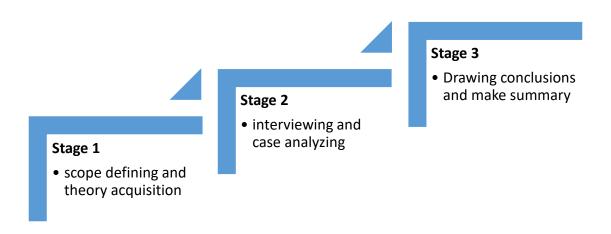


Figure 1. Thesis implementation stage

Scope defining and theory acquisition

In the very beginning of the research process, the scope of the thesis was defined.

This thesis was expected to generate results from a general, theoretical perspective.

Finally, two main theories were introduced, namely, the logistics cluster and location selection. The theory background helped to facilitate the investigation and research.

At the same time, the diversity of the topic was reflected on through materials from different political, cultural and educational backgrounds. This required some special attention when collecting information. The sources of the data had to be expanded as much as possible and not be limited to one aspect only.

Interviewing and case analyzing

After acquired the theoretical information necessary, a case study is implemented. It consists two interviews. Two interviewees were founded through different channels. The first interviewee is from Fengshen Logistics in China and the second one is from Valtra in Finland. Both interviewees had considerable work experience in the field of logistics and have deep insights on related topics. During the interview, humanity was emphasized. in other words, the interviewees' ideas about this issue were the

key point of the interviews. Moreover, the analysis was expanded to the emotional factors on the basis of general factors. After this, conclusions on the emotional factors affecting the location selection of a logistics center were drawn.

Drawing conclusions and make summary

In this part, the conclusion of the thesis is given in order to present its direct impact to the reader. The steps of the thesis and main idea of each chapter are concluded. The summery is made in the order of thesis chapter.

3 Logistics Integration and Logistics Industrial Cluster

3.1 The trend of integration in and logistics Cluster

According to McKinnon (2001), the development of integrated logistics started 40 years ago. Nowadays, this concept has become one of the most popular themes in logistics industry. McKinnon (2001) also states that the integration of logistics has greatly changed the company's operation in every aspect.

Shen (2011, 30) states on the drawback of the traditional non-integrated logistics industry that the logistics industry does not have a standardized and unified management system. The sections of supply chains are severely isolated from each other. Moreover, the market, network and infrastructure cannot be fully developed. The optimization and integration of the existing logistics resources still have great potential. The drawbacks lead to low efficiency of transportation and storage. The result of such low efficiency is high cost in logistics operation. Moreover, the distribution of logistics enterprises is quite loose, and everyone going their own way, so there is lack of coordination. In addition, the logistics industry is also facing a problem of lacking qualified personnel. Last but not least, the IT construction of the traditional logistics industry is not sufficiently high and the competitiveness is not strong. Hence, a great deal of evidence shows that the traditional type of logistics industry is not able to provide services to other industries well but will become a burden to other industries.

Wang (2010, 338) and Zhi (2005) studied the economic characteristics formed by the accumulation of logistics clusters. They analyzed the exterior profits, network profits and the sharing of resources respectively. They found the logistics clusters economically inevitable.

Sheffi (2012, 55) presents four reasons why a logistics cluster brings benefits to the locals. First of all, logistics can provide jobs lost because of globalization, par-ticularly in the developed economies. Secondly, logistic operations are not likely to be offshored, which means that they can bring more jobs to the area and ease the job insecurity emotions of the local residents. Thirdly, in addition to the benefits to the locals, a logistics cluster also brings many advantages to the industry of the cluster area. Sheffi (2012, 55) believes the logistics plays a role as an infrastructure of other industries. With the coming of logistics enterprises into an industrial cluster, people will see significant developments in this region. Finally, the logistics industry does not only rely on some companies or industries, the adaptability and coordination of the logistics industry can serve the whole area.

3.2 The concept of Logistics Cluster

Han (2008) states that the concept of a cluster is continuously developed. Eric Brown (2014) states a logistics cluster is a sustainable choice for enterprises. According to Brown (2014), Sheffi (2012) states that a logistics center is no longer a place only for loading and unloading cargos, it can be a source of innovation with some help from the government. Logistics clusters promote the communication between enterprises and attract professional workers and business opportunities. They help the working environment to become more energetic, bring competitiveness, and attract emerging new businesses. According to Han (2008), Jia (2007) states that a logistics industry cluster is a spatial accumulation of different types of logistics enterprises and logistics infrastructure, thus forming a highly intensive and professionally operated logistics operation site with abundant logistics resources in a certain area.

Wang (2013, 53) states that a cluster promotes cooperation and geo-graphical coordination. It also decreases the high cost generated by frequent transactions at the same time. Wang (2013, 53) takes the vehicle production industry as an example: a

great majority of the automotive industry has developed through clustering. Examples of this are Detroit in the United States and Toyota in Japan.

3.3 Formation Factors of Logistics Cluster

The logistics industrial cluster require certain initial conditions and comparative advantages. According to Fu (2007), the factors which influence the formation of cluster include four aspect: natural environment, logistics professional, regional industrial condition and market requirement.

First of all, Fu (2007) believes the environmental issue is one of the fundamental issues that determine the industrial development way of one certain area. The logistics cluster has its own geographical space. The logistics center is mostly located around the transportation hub and relying on the transportation hub facilities in the business, it loses the meaning of existence when leaving the transportation hub facilities. Geographical advantage itself is the most important resource for the formation of logistics industry clusters. Transportation hub facilities are the intersection of various transportations, an important place for cargo distribution, and the main platform for logistics activities.

Logistics professionals, Secondly, are the core of forming a logistics cluster. It mainly refers to entrepreneurs and professional labor groups related to the cluster industry. (Fu, 2007). The cluster is a platform for the people working as logistics specialists. With these professionals accumulating, the cluster could have a great potential to become the reginal specialist center, which attract more people and more companies to be settled here.

Thirdly, usually the logistics industry takes the advantages of the public infrastructures such as transportation, telecommunication, logistics forwarding and so on. Fu (2007) states that in order to form a logistics cluster, the infrastructure must be developed and reach the requirements of logistics industry.

Market requirement is also an important factor. When talking about logistics cluster, the immense marketing requirements for the logistics services cannot be ignored. Fu (2007) believes the business of enterprises become more and more centralized with the economy globalization. The companies focusing on their core business which

makes the logistics operation separated. Nowadays it's not rare that companies outsourcing their logistics operation to the third-party logistics. It makes the formation of logistics cluster possible. For example, international cooperation and industrial development creates the Yangtze River Economic Belt, where many Chinese manufacturing companies and logistics companies have gathered (see Figure 2).

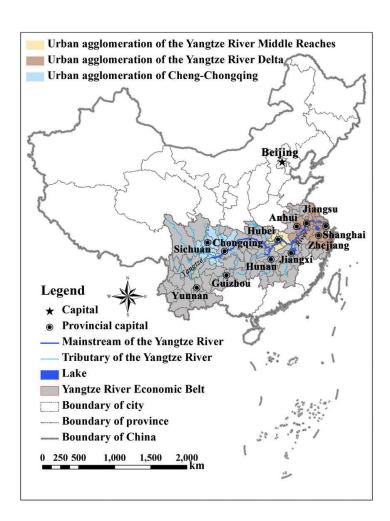


Figure 2. The Yangtze River economic belt in China

3.4 Benefits of logistics cluster

According to Hallock (2017), Porter (1998, 2000) states the cluster brings value added services to attract more service providers as well as suppliers. Moreover, cluster makes the job diversified.

Han (2008) states the resources benefits of logistics industry cluster in three aspects: to begin with, the cluster has ability to accumulate the resources, which attract everything related to the industry in the cluster so they can take advantage of it. Then companies in the cluster can share information resources because the supporting platform provided by cluster. Third, the companies in the cluster makes the social resources in full use. Which makes the on-time delivery, lean management and total quality management easier to achieve.

Meanwhile, Han (2008) notes the cluster helps enterprises to cut down the operational cost and gain trust by their customers. The scale of cluster makes the small logistics companies which cannot become competitiveness because of the size have opportunities to cooperate with and gain advantages.

Moreover, Han (2008) noticed that economic benefits can be found in the logistics cluster area, a single logistics enterprise provides professional services, and many other logistics enterprises work together to reach the cost savings from a variety of aspects. In the logistics industry cluster, due to the social and cultural similarity, enterprises can establish a positive relationship of trust and commitment and reduce the opportunistic and cheating behavior of enterprises.

Logistics industry cluster has the benefit of innovation, because in the cluster, enterprises have close connections in business and communication is quite convenient because of the distance. This makes the innovation of technology, marketing and organizational much easier. Han (2008) states the driving force of innovation is learning, learning not only decrease the cost of operation, but also promote innovation. Just like mentioned previously, cluster will accumulate many enterprises, within the logistics cluster, these enterprises can learn from each other. Any positive idea with future can soon be acquired and absorbed by the enterprises in the cluster. Enterprises can innovate and upgrade themselves by learning from others through this

learning and imitation process. Continuous innovation and learning have enabled the logistics industry cluster to maintain its innovative advantages and enhance the competitiveness of the cluster.

The competitiveness of the cluster of the logistics industry is reflected in the benefits of business cooperation. In the cluster, competition can promote resource sharing and additional benefits between companies. According to Han (2008), logistics companies can fully utilize their competitive advantages in a certain part of the supply chain in partnership with the supply chain. Increase profits to maximize total revenue. Consequently, it can survive in fierce competition. Companies in the cluster of the logistics industry will learn to collaborate and receive training on competition issues, which will improve their management abilities while enhancing the overall competitiveness of the region where the logistics cluster is located.

3.5 Sustainable Development Analysis of Logistics Cluster

In order to make the logistics cluster run in a sustainable way, first of all, the cluster should be a land of innovation. The enterprises should let the innovation ideas drive the development of companies. Second, enterprises must establish a correct sense of competition. Seeking cooperation opportunities in competition while competition with each other in cooperation. Then the local authorities need to realize their status in the expand process of logistics industry cluster, assisting, serving, regulating and planning the development of this area.

As it has been mentioned above, logistics cluster can bring innovational benefit to the companies and industries. Besides, the ability of innovation also ensures the logistics cluster develop rapidly. Improving the innovation ability is also a key problem needs to be solved in order to promote the further development of cluster. Optimizing the learning atmosphere is a practical way to improve the ability of innovation. Competition should be encouraged in the cluster so the companies can be more productive.

According to Fu (2007), the communication channel between logistics industrial cluster and local researching institution, colleges as well as the enterprises outside the cluster should be established. Furthermore, companies in the cluster should organize

an association in order to promote the spread of innovative ideas. Companies should be united and break the barrier in the cluster.

The sustainable development of the logistics industry cluster depends on the influence of the cluster created on the basis of competition and cooperation between organizations within the group (Fu, 2007). The influence of the cluster means that many organizations in the cluster are independent of each other and cooperate with each other, with a special division of work and cooperation, as well as competition in the spatial clustering that leads to significant external economic impacts and overall efficiency. In the industrial cluster, the individualism is not welcomed anymore, the idea of coordination and cooperation must be implemented. It is the time which collectivism lead the way.

Obviously, simply gathering the companies together cannot form an effective industry cluster. The function of cluster and enterprises in the cluster have no chance to be developed if the competence and coordination relation not established. The logistics cluster is not only a geographical concept, but also an economy concept. The companies need scientific planning and reasonable guidance.

Like mentioned above, companies in the cluster need appropriate planning and guiding. In many cases, planning and guidance of logistics industry cluster mainly from the governments. Sheffi (2012, 175) believes the government plays a strong role to the forming of industry cluster. Logistics industry require high investment on infrastructure, any attempt to completely handle it to private investments is dangerous and unwise. The planning of logistics cluster has a tremendous impact on government's regional or urban planning and vice versa. Which means it requires a universal coordination and consideration by government. According to Sheffi (2012, 176), government provides logistics infrastructure, such as roads, railways, airports to support the construction of logistics cluster. Next, government control the land they have the power to issue the regulation, regional development plan, construction permission. These matters directly influence the accumulation of clusters.

4 Principle of Location Selection

According to XU et al (2001, 10), The location of the logistics center should follow the principles of adaptability, coordination, economics and strategic principles. (There may even be extensive reference to the same source.)

4.1 Adaptability of Local Condition

The location of the logistics center must be compatible with the economic development guidelines and policies of the state, the provinces and municipalities, and be compatible with the distribution and demand distribution of existing logistics resources and be compatible with national economic and social development. Chan (2001, 4) states the policies of the People's Republic of China to promote the development of economy in the last thirty years of the 20th century. Some Special Economic Zone are established, with special legislation, low tax and many other benefits for foreign enterprises. The prosperity brought about by economic reform is remarkable. Initiatives of Chinese government have attracted many investments, and for logistics point of view, establishing logistics center in such zones is a chance to grab the market and promote not only the development of local society but also the companies themselves (see Figure 3).

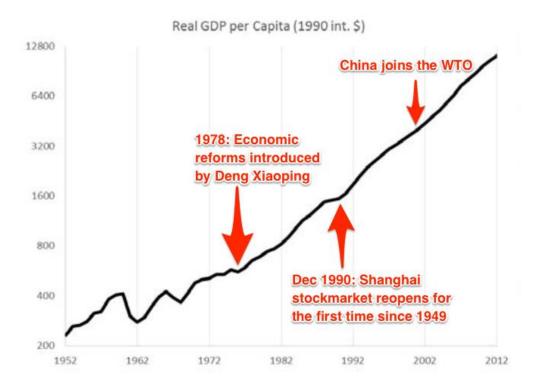


Figure 3. Real GDP per Capita (1990 int.\$)

It is clear to be seen from the graph that there is a significance growth after the 1980s, with the establishing of Special Economic Zone (SEZ). In the last two decades of the twentieth century, China experienced unprecedented changes. This was due to the Chinese government's policy on economic and political openness in 1978. Subsequently, with the introduction and implementation of China's further open policy. the logistics industry, like other industries, has ushered in a new era of development and prosperity.

The politics status of a region, in some cases, is the decisive condition for location of logistics centers. Political stability is the foundation of the development of enterprises. Political stability can guarantee the conditions for enterprises development. The benefits of political stability are usually reflected in stable and secure financial services, les political corruption, free flow of goods and people, promising security condition, adequate labor resources, equal and win-win market opportunities and a prosperous and orderly market environment. No one wants to invest money to those

politically unstable areas. Although there is a saying in business that is "high risks, high profit", it is better to avoid risks in logistics field, considering of uncertainty.

In previous statement, it has been illustrated that government plays a strong role to the forming of industry cluster because of the control of land resources. This also applies to the logistics center site selection. Although the location of logistics facilities is affected by multiple complex factors, the government has the power to give permission of using the land as a place for business to the companies.

4.2 Regional Coordination and Customer Distribution

The location of the logistics center should consider the logistics network and the supply chain as a large system, so that the facilities and equipment of the logistics center are coordinated in terms of geographical distribution, logistics operation productivity and technical level. On a historical basis, cities usually located on trade route, due to the accessibility to main market (Chan 2001, 4). Business activities usually accumulate in these locations. For this reason, those cities became the key points of material flows. The merchants were willing to select such locations as material storage places, these are the warehousing what we are talking about in modern times. Moreover, the customers are easy to access the locations which brings the popularity and prosperous to the cities.

An Example: City of Yangzhou in China

For example, the city of Yangzhou in ancient China, due to the construction of Grand Canal in 7th century. The Yangzhou has soon developed to an important business city as well as a large logistics hub. This canal connects the political center of northern China and the economy center, as well as the main grain production area of ancient China. The canal flowed through the city of Yangzhou and went into the Yangtze River in the suburb. However, Yangzhou declined in the early of 20th century. As the Ping-Han railway, which did not go through Yangzhou, replaced the canal became the main channel for communication between the north and south.

4.3 Economic and Operational Expense

During the development of the logistics center, the cost of site selection mainly includes two parts: construction cost and logistics cost (operating expenses). When the logistics center is in the urban, suburban or remote suburbs. The scale of construction and construction costs of future logistics activities auxiliary facilities, and the logistics costs such as freight are different. When selecting the site, the lowest cost should be used as the economic principle for the location of the logistics center.

Visible economic factors are not the only aspect to be considered, the selection of site also requires thinking about how to make the business low cost and high return. Since logistics is a capital-intensive industry, it's critical to keep the operational expense in a low level.

John Langford (2006, 330) also emphasized the determination the location of logistics facilities needs to consider the distance between the source of materials and main markets in order to minimize the transportation and operation cost.

4.4 Strategic Development

James Cooper (1993, 112) states the logistics strategy from purchasing and manufacturing aspects. Meanwhile, the strategy of distribution must be taken into account. Such as the size of warehousing facilities, type of goods, as well as the distribution for different customers and products.

Hence, the location of the logistics center should have a strategic vision. First, decision maker should consider from a universal and developing perspective. Second, we must consider the long-term partial compliance with the overall situation. The current interests must be subject to long-term interests, and we must consider the current actual needs. Consider the possibility of future development. The logistics center is not easy to be moved or make the functional changes. Therefore, company must pay special attention to future development when establishing a logistics center.

From the strategical distribution's perspective, Distribution is a pipeline from the producer to the customer. At the beginning and possibly at other points in that pipeline are warehouses and depots; moving goods through the pipeline are people and various mode of transport; servicing and monitoring that pipeline is a network of information system, most of which probably use some form of IT. (Marchant 1996, 43.)

5 Analysis of Factors Affecting Site Selection of Logistics Center

XU et al (2001, 10) states that the planning process of modern logistics system, the following factors should be considered in the location of logistics center:

- 1. Natural environmental factors
- 2. Business environment factors
- 3. Infrastructure status
- 4. Other factors

5.1 Natural environmental factors

XU et al (2001, 10) conclude the natural environmental factors into four main points, the meteorological, geological, hydrological and terrain conditions. Simchi-Livi (2009, 90) state the location must satisfied the geographical requirements. If the environment of logistics center site is not in a very satisfactory, the company will be facing a significant negative aftermath. The logistics company are predicted to spend considerable investment in land reformation.

The first factor mentioned in the research of XU et al. (2001, 10) is meteorological conditions, which is one of the important part of natural conditions. During the site selection process of a logistics center, the main meteorological conditions are temperature, wind, precipitation, frost-free period, frozen soil depth, annual average evaporation and other indicators. According to XU et al (2001)'s statement, for warehousing facilities, areas that often blow strong winds should be avoid, because the aging of open-air stacking goods will accelerate in those areas.

According to Xu et al. (2001, 10), geological condition also plays an unreplacable role in site-selection project of logistics center because the center is a gathering place for

a large number of commodities. Some building materials with a large weight will pile up a great deal of pressure on the ground. If the geological conditions are not satisfactory, such as silt layer, flowing sand layer and loose soil layer below the ground of the logistics center, it will cause serious consequences, such as subsidence and tumbling in the pressured area. For this reason, the soil bearing capacity is required to be sufficient.

Xu et al. (2001, 10) also state that water influence the location of logistics center very much because the location of the center should be kept away from easily flooded river basins and from areas where the groundwater overflows. It is necessary to carefully examine the hydrological data of the recent year when deciding the location of a logistics center. The groundwater level should not be too high, and the locations on flood plains, river channels, dry river beaches and other areas are absolutely prohibited.

The terrain condition must be taken into consideration because it contains many aspects. According to XU et al. (2001, 10), the area for a logistics center should be flat, and it should have appropriate area and shape. It is ideal if a completely flat terrain can be selected. Mountained areas should be completely avoided. The shape of land could be rectangular. It is not advisable to choose narrow or irregular shapes. The terrain condition of a selected construction site for a logistics center should also have a tremendous impact on the layout of the facilities and the daily operations of the company, such as routes of transportation and the placement of cargos.

5.2 Business environment factors

XU et al. (2001, 10) states the business factors which affect the location selection of a logistics center include operationals factors, cost saving, business service level.

First of all, The preferential logistics industry policy in the area where the logistics center is located will have an important impact on the economic benefits of logistics enterprises; the abundant and high-quality labor conditions are also one of the factors considered in the location of the logistics center. Product characteristics, logistics centers that operate different types of goods are best placed in different regions. For example, the location of the production logistics center should be

considered in close combination with the industrial structure, product structure and industrial layout.

Logistics costs are one of the important considerations for the location of logistics centers. Most logistics center chooses to approach the logistics service demand, for example, close to large industrial and commercial areas, in order to shorten the transportation distance and reduce the freight costs.

The service level is a consideration for the location of the logistics center. Since the realization of on-time delivery in the modern logistics process is an important indicator of the level of service, when the logistics center is selected, it should ensure that customers can submit logistics requirements to the logistics center at any time, and they can recieve fast and satisfactory services. Location of logistics center will influence the customer's experience. In order to offer a better serviceto the customer, logistics company prefers to choose their reginal distribution center near the customers. This approach can decrease the speed of response and improve the service quality of company.

Onnela (2015) also claims that the imporatance of location of logistics facilities from the deliverer's and customer's perspectives. Since the logistics activities are becoming more and more customer oriented. Thus, the location decision affect the service that it provides to the customers.

5.3 Infrastructure status

The infrastructure status mainly contain two aspects, traffics and public facilities.

The logistics center must have convenient transportation conditions. Usually, a logistics center should deal with a large quantity of material flow every day. In some cases, even there are many goods outbound and inbound in one minute. The logistics facilities will have a profound impact on surrounding traffic condition. Thus, in planning process, the company must carefully evaluate and esitmate the flow of materials and capacity of the roads. For layout, it is best to be close to the transportation hub, such as the port, road hub, railway station or airport. XU et al

(2001) recommanded the locations to be selected to have more than two modes of transportation connected. Moreover, the approporite location to set up the logistics center could be close to the entrance and exit of main expressway. However, logistics operators should carefully planning the places of warehousing way-in and out, do not let the logistics vehicles block the traffics on the expressway.

In addition, logistics facilities place high demands on local public service facilities. As the natural property of logistics industry, The location of the logistics center requires that the city's roads, communications and other public facilities are available. As well as sufficient power, water, heat, and gas supply. As we know the logistics facilities consume a great quantities of energy and produce plenty of waste. In addition, there must be easily connected to the sewage and solid waste treatment infrastructures around the site.

5.4 Other factors

According to XU et al. (2001), The planning of the logistics center should save land and make full use of land resources. Generally speaking, the logistics facilities takes a considerable area to fullfill the operation of logistics activities and reserve sufficient space for future development around it. For this reason, the price of land has an important impact on the layout planning. In addition, the layout of the logistics center must also take into account other elements of regional and urban planning.

With the increasing popularity of environmental protection concepts, the operation of logistics companies must also meet environmental requirements. The location of the logistics center needs to consider factors such as protecting the natural environment and the human environment, and minimize interferences with urban life. For large transportation hubs, it should be properly located away from the downtown area, so that the the negative impact of logistics activities on urban traffic will be minimized and the ecological systems of the city can be maintained and improved (XU et al, 2001).

Meanwhile, companies are reqired to take the nearby cultural relics into consideration. As the reason of protection. The daily operation of logistics center may bring damages to the surrounding. The relics are ususally very fragile and easily

damaged even the logistics company is not deliberate to do that. But objectively speaking, the operation of logistics center will still affects the cultural relics to varying degrees. The influencing factors include, but not limited to, type of goods, logistics vehicle runing, personnel activities, wast disposal, environment pollution and security problems. Generally speaking, each country attaches great importance to this and has detailed regulations.

From the nature's perspective, It is not wise to establish the logistics facilities in the ecologically fragile area, even it is the mathmatically optimal choice. For example, the rain forest, national nature reserve, known or possible wildlife habitat and the water sources of lake and river.

Fire prevention, in particularly, is one of the special requirement of a logistics and warehousing facilities. Of course customers do not wish to see their precious goods damaged by fire. In addition, the administrations put high demands on the fire prevention worl of logistics enterprises, and this set of standards must be implemented without compromise.

Let's takes China and Finland as an example. According to People's Republic of China Ministry of Public Security Decree 61, Chapter 3, Article 13, logistics facilities are classified as key fire safety units and should be strictly managed. Meanwhile, the Finnish law also regulated the fire class of a building. (Decree of the Ministry of the Environment on fire safety of production and warehouse buildings Adopted in Helsinki, 22 March 2005)

In a word, on the basis of the ideas in official documents, It is not suitable to be located near some certain type of industrial facilities (such as wood processing and metallurgical enterprises) that are easy to disperse fire, and it is not suitable to choose nearby the residential area.

6 Research Approach

6.1 Research target

The present study examined the factors influencing the decision of logistics center site selection. In the theoretical part, the thesis focused on the general factors of location selection, such as policies, infrastructures and strategies. The research chapters report mainly on the investigation of the internal factors from the perspective of humanity. In order to reach the target of the research, the following two research questions were determined:

- 1. What could be the emotional factors that influence the site selection of logistics center?
- 2. how do people's emotions affect the location selection process of logistics center?

6.2 Research methods

The main research methods for this thesis was qualitative, and the data was collected by using interviews. In this research, the information is collected by interviewing two persons in charge of two case companies. Since the author wants to find the general law of the location of logistics enterprises from the examples and deeply explore the emotional influencing factors of the location of logistics center. The qualitative method of this research mainly includes two interviews, which are conducted to present the real-life examples in nowadays business environment. Then the case study is analysis according to the information gathered from the interviews.

The interview in this thesis is mainly in the form of semi-structured interview. Semi-structured interviews are a research tool used to provide more discussion about issues and interviewee's perceptions of a particular topic. This approach can be conducted in a flexible way. which allows researchers to freely ask slightly similar questions to cover a list of topics that have been prepared. After the path discussed with the interviewee. Therefore, the collected data can summarize qualitative information and have an impact on exploratory research. (Understanding of the research methodology, 2017) In this thesis, the research is implemented not only from the inter-

views, but also the information acquired in previous chapters. After that, a broad understanding of the target of research can be acquired and support to answering the questions.

All the interview questions designed based on the target of the research. Moreover, it is worth knowing the general ideas of the interviewees about the topic as well as the operational statuses of two companies in order to have a more comprehensive understanding and prove the theories mentioned in chapter 3 and 4.

6.3 The interview and analysis

In order to reach the target of the research, two case companies are selected as examples. The Fengshen Logistics in China and Valtra in Finland, both are representatives of their own field.

The first interviewee was from FengShen Logistics co,.Ltd (Xiangyang). Fengshen Logistics Co., Ltd. (Xiangyang) is focusing on automobile logistics business. Company's business mainly covers the logistics operation related to automobile industry. Such as procurement logistics, production logistics, product processing, sales logistics and other logistics business related to automotive industry. The annual turnover of company is about 200 million Chinese RMB Yuan (around 26 million Euro). At present, the company mainly provide logistics services to the Dongfeng Nissan Xiangyang Plant which producing the Nissan vehicles located in central China. In addition, the company's marketing strategies are focusing on the auto part manufacturers too. The network of company is mainly engaged in the production logistics, warehousing and distribution business of the automobile industry. The operation site is mainly in the operation site of automobile and parts enterprises. The road transportation business is generally entrusted to a third-party logistics company, and there is no logistics transportation network of the company's own.

The second interviewee is from Valtra. Valtra is a part of AGCO Group. The main business of Valtra is tractor manufacturing. He gave his point of view based on his working experiences. Valtra was originally founded in 1951 by the name Valmet in

Jyväskylä. In the year 1969, the company moved to its current location Suolahti. Valtra has been part of AGCO's global business operations since the beginning of 2004. At present, Valtra has around 975 employees in Suolahti and around 700 employees in its other plant in Brazil.

The operation and business in Finland were the focus point of this thesis. In the Finnish Parts business, Valtra has two logistics centers. In Suolahti the company store fast moving parts and build kits. In the other site, which are located in Säynätsalo as well as in Jyväskylä, the facilities store slow moving and large parts, hazardous materials, merchandise and buffer stock for fast movers and do pre-packaging of the parts. The Suolahti Parts warehouse was founded in 1975 and Säynätsalo Parts warehouse was taken in use in 2013. The Säynätsalo warehouse is operated by a third party.

The research process included analyses and comparisons of each case. The data was acquired by interviewing the respondents via email. By interviewing the managing personnel of the two companies, it was possible to understand the development history of two companies and identify similarities and differences be-tween them. from the interviews focused on the emotional perspective and how it affected the decision on the site selection of their logistics centers. All the data for the research were mainly collected by interviewing, and there were opportunities to have further discussions according to specific situations.

The purpose of the interview was to understand the interviewees and companies' views on the location of logistics facilities, and how these factors affected the company, and the focus of the interviews was on the human emotional factors. The interview questions are provided in the Appendix part. Furthermore, one interview is in two languages, Chinese and English. However, in this thesis, only the English version is provided.

7 Result of The Interview

7.1 Fengshen Logistics

First of all, from the interview with the head of Fengshen Logistics, it is obvious to be seen when it comes to emotional factors, the interviewee always gave very positive and affirmative answers. This shows that as a company leader, he attaches great importance to this issue. This also confirms from one aspect that the spirit of humanity has been deeply rooted in the hearts of the people and gradually being widely accepted and implemented in every aspect of the logistics industry.

Analysis of current location

According to the statements from Fengshen Logistics, the company's business is highly attached with Dongfeng Nissan in China. Currently, the FengShen Logistics only has one logistics center, which was established in September 2006. As the company is mainly engaged in the production logistics, warehousing and distribution business for the automobile industry. The operation location is mainly at the production site of automobile and parts enterprises. Therefore, the company generally does not need to build a self-built logistics center. When customers have additional storage needs, FengShen Logistics will rent warehouses within 5 km of the location to meet customer needs. The "5 kilometer from the customer" is It is the commitment of this company to customers and also an important principle of business management. Meanwhile, it is also an important reference factor for the company's location in the logistics center.

The existing logistics center is also used to provide customers with warehousing and distribution services according to the needs of customers. The location is also based on the premise of less than 5 kilometers from the customer.

To begin with, in order to have a more intuitive impression, let's take a look at a diagram that describes the geographical relationship between the FengShen Logistics and the most important customer of Fengshen Logistics: Dongfeng Nissan Xiangyang Plant (see Figure 4):



Figure 4. Positional relationship between Dongfeng Nissan Xiangyang Plant and Fengshen Logistics Center

From the map we can see that the location of Fengshen Logistics is close to the Xiangyang Plant. This also confirms the interviewee's statements. The company select here is also to provide better logistics services for the Dongfeng Nissan Plant.

As it has been mentioned above, the company has only one location, established in September 2006. It was mainly considering the location which is the closest site to the customer's factory logistics gate to meet the requirements of the customers and their development for the foreseeable future. In addition, considering about the land resources that the government could provide for the construction of logistics center of our company.

The author of this thesis had an internship here in the summer of 2018. Through personal experience, this arrangement has indeed greatly facilitated the production and operation of the plant. As it has been mentioned above, logistics companies should

take the customer factors into account in the site selection process, as much as possible to facilitate the main customer's delivery and pick-up time, and to ensure the timelessness of transport of goods. Therefore, it is the choice of many logistics companies to be as close as possible to the main customers in the location of the logistics center.

Strategies of Fengshen Logistics

The logistics company itself does not produce products, but the goal of the logistics company is to meet the customer's needs and create value for customers. For the Fengshen Logistics, according to the interview, a premise of "five kilometers from the customer" was put forward and be implemented in business operations. This is an important factor in the selection of Fengshen Logistics in the logistics center. Meanwhile, my interviewee mentioned a factor that there are some logistics operation sites of Fengshen Logistics are located at the production site of automobiles and parts. This is a very noteworthy phenomenon. This company combines some of the functions of the logistics center with the production of the product. According to my observation during the internship, this company set the logistics operations directly next to the vehicle production line in the plant. This strong dependency relationship not only guarantees the production of plant but also save many logistics costs.

Interviewee's ideas

According to the interviewee's point of view, it's necessary to compare the distance, quantity of goods and delivery frequency comprehensively. Moreover, we need to think about the traffic conditions in this area, (minimum the traffic jams, promising road conditions, etc.) Surrounding supporting facilities, and safety conditions (no flammable and explosive dangerous goods in the surrounding area). Such as chemical plants, gas stations, paint companies, companies have too much dust emission, etc. as well as topography (cannot be in flood region, and wind, slopes of the area, etc.) and so on. Regarding the general factors of the location selection of the logistics center, the interviewee proposed roughly the same ideas as Xu et al (2001, 80). Both of them mentioned the location and distance of customers, condition of infrastructures and traffic and natural environment issues.

The location of the logistics center must focus on long-term development, but it must also take into account short-term interests. It can be seen from the interviewee's answer. Fengshen Logistics plans the development of the company with a very cautious and pragmatic attitude. Any blind behavior on location selection process will cause serious losses to the company.

Consideration of management

Moving to the emotional factor, what is the role of people in the decision of location of logistics enterprises? The interviewee gave a thought from the management perspective.

Considering from the management staff, the first interviewee responds to this question in two ways: decision and process. These two aspects related to management staff will have an impact which cannot be ignored on the location of the logistics center.

First of all, the decision-making. There may be some opposite opinions of the management personnel on the site selection plan, and it is impossible to reach an agreement. We have to admit that people's ideas are complex and changeable sometimes. Personal interests sometimes do not agree with the collective interests. This point is mainly reflected in the disagreement of managers in the process of site selection of logistics facilities. Actually, this situation is very common in the operation of company. Failure to reach an agreement will create a conflict. Moreover, it will form unstable factors in the enterprise. For example, some people may deny a location selection proposal because the investment in the project is too high and the risk is uncontrollable, but others insist that the location plan of the logistics center must start as soon as possible from the perspective of seizing the market opportunity. Frankly speaking, we can't think that one side's point of view is absolutely correct or absolutely wrong. They are only considering this from the perspective of their own cognition. Everyone has its own limitation. In other hand, obviously we don't need a dictator who has an absolute power to determine what to do or what not to do in modern business society. However, enterprises must achieve consistency in decision-making, which requires managers to seek a balance of interests based on a comprehensive

consideration of the interests of all parties. In general, the solution of this problem is to fully analyze the advantages and disadvantages and seek unity of ideas.

The other aspect is the process. Due to various reasons, such as government land acquisition, construction and other special problems of various links, may lead to the choice of not available or the process time is too long to meet customer needs. In some developing countries, due to the underdeveloped market environment and the low efficiency of government administration, it may take a long process for companies to recieve a permit. This leads to human factors from government departments affecting the location selection process of logistics companies.

The governmental impacts

This can also be reflected in two aspects. On the one hand, the delay of the project due to delays in the approval of the project. On the other hand, the preferences of some local officials lead to the request rejected. First, deliberately harassed and delayed by staff during administrative examination and approval. The poor business environment is reflected in the arrogant attitude of government officials. Consequently, the specific impact on the location selection process of logistics enterprises is the extension of the approval process. Documents that can be processed in a few weeks may have to be delayed for months or even years. Second, some officials in charge are not hold the altitude that responsible for the company and responsible for the people. This has caused great troubles and obstacles to the operation of the company. As for the site selection process, some officials are very unprofessional in the allocation of land resources. Do not consider objective economic rules and people's demands. Simply think that a company should or should not choose a location. Without scientific discussion and professional argumentation. Making irrational decision. Even with the excuse of approving the project application, blatantly requiring benefits from the companies. This will seriously damage the fairness of business environment.

The result of this leads to a serious lag in the progress of the project, and the company's losses and even dragged down and bankrupted because of the project. Even in some case, companies will probably be willing to undertake the risk the illegality and start the construction in advance without obtaining a land use permit or paying

bribes to the authorities that in charge of this matter. All of these are the potential negative results of deliberate inaction by the approving officers.

In the previous chapters, it has been introduced that the government plays an important role in the location selection of logistics enterprises. A fair, honest and efficient government will play a supporting role in the development of the company. Conversely, a corrupt, inefficient, incompetent government will make the enterprise face difficulties. Let the company lose confidence in this area, as well as lose the desire to make investment. Regardless of the political system of a country or region, the ultimate decision maker is always human, a person or a group of people. It is inevitable that people will be affected by various emotional factors. No matter who and where people are.

In particular, it is important to point out that government's misconduct behavior is a worldwide problem, which means this issue can be occur in every governments, no matter the system of the nation or ideology or the race. No matter how honest and efficient they claim to be. Thus, this requires more extensive international cooperation, democratic supervision and combating with corruption.

7.2 Valtra

Interviewee's ideas

From the interviewee's perspective, the factor which affect the location selection of logistics center include the convenience of transportation and distance from transportation hubs, as well as diversification of transportation options. Locations from a main road, preferably highway and also location from an airport with freight operations needs to be noted. When not talking about individual logistics center which takes care of all necessary operations for a certain company, but a center which is connected some way to a main site of the company, the distance between the main site and the logistics center needs to be estimated really carefully. Simply speaking, the logistics center is greatly affected by the surrounding traffic conditions. Similarly, the establishment of the logistics center will greatly change the surrounding traffic conditions. In addition, the interviewee mentioned the distance between the main site of Valtra plant and logistics center, it has to be planned carefully.

According to the person in charge in Valtra, Valtra is considering the location of the currently 3rd party operated functions regularly, because there's 60 km between the two warehouses and there's a great deal of daily traffic to operate.

Furthermore, the site selection of logistics center is a comprehensive work, it is influenced by many potential factors, and sometimes the factors are unpredictable. Company have to make change of the original plan. when facing a situation that a selected location cannot be implemented, the interviewee said "We would always have plans B and C also for other locations than A." Of course, having the alternate options any time is very important. As there are too much uncertainties in the site selection process. Making adjustment according to the real situation can ensure the project is implemented smoothly, and also help to avoid risks and reduce losses.

Consideration of Management

From the management point of view, Valtra introduced their ideas about the obstacles may encountered during the location selection. The factors are various. It's related to the pay-off period, flexibility of resources, insurance prices effected by the character of the site. These will prompt staff in charge of related matters to consider more factors. Since the location selection of a logistics facility is a comprehensive, systematic project.

As for the management team, they must consider multiple factors, which puts high demands on the manager's ability. Generally speaking, in logistics company, the core management staff of the company is held by experienced people. In the age group, it is better to have both the old and the young generation. It helps to be balance and let young people have the opportunity to show their talents. A qualified manager usually knows better how to deal with complex and difficult company's matters. Guarantee the company is operated normally, ensure and promote the development of company and keep the business profitable. A positive management team will motivate employees to be enterprising. When making site selection decisions, capable managers are able to find the optimum choice and avoid potential risks.

The site selection of logistics center is a comprehensive work, it is influenced by many potential factors, and sometimes the factors are unpredictable. Company have to make change of the original plan. When talking about this topic, the interviewee

illustrates the company's action in his point of view when they are facing a problem that he selected location of logistics center cannot be implemented for some reason. According to his statements, when the original plan of establishing a logistics center cannot be implemented, the company need to review the location regarding to the factors which has been mentioned above. In addition, he particularly emphasized the employee availability. This is very worthy of further study.

The importance of employee

Talking about the general process of location selection, person from Valtra states that each optional location should be under careful reviewing and evaluating any possible factors which could make influences on the project. The interviewee particularly mentioned the influence of employees. In the production and operation of logistics enterprises, not only to ensure profits, but also to fully consider the humanitarian factors, give employees humane care and help them. Let employees have confidence in the company so that they can work with peace of mind. When employee satisfaction is high, they will work more efficiently, and the benefits of the company will rise. As for the interviewee, Valtra's altitude toward their employees is introduced. According to interviewee's statements, the emotional factors to be considered are mostly related to the employees. The employee's wellbeing is always an important factor for the company. If this kind of location changes would have impact on company's current employees' personal life and wellbeing (needing to consider moving etc.), it would be carefully estimated and talked together with the employees.

In the location of logistics enterprises, the word "convenience" has many considerations. In addition to the convenience customers which has been mentioned above, the location should also be a convenient place for employees to go to work. Try to avoid employees spending too much time on daily commutes. This is a positive way to keep the enthusiasm of employees. So that it helps to retain those excellent employees for the company. As it has been mentioned above, when the logistics center is settled, it's not easy to make changes. Therefore, companies are required to focus on long-term planning, consider as much as possible and be well prepared.

7.3 Summary of the results

Persons which in charge of two companies respectively responded to the question about the factors which influencing the site selection of the logistics center and talked about their views. One of them is from Fengshen Logistics in China and one is from the Valtra in Finland. The social and cultural backgrounds of these two cases have many differences. But they do agree on some points of view.

In general, the two interviewees gave the same answer when it came to the question of whether there were any factors affecting the location of the logistics center. This answer is yes. But specifically, the two interviewees started from their own work experience and discussed this topic from different perspectives.

The result of case study can be concluded in the chart below (see Table 1).

	Fengshen Logistics	Valtra
	general factors such as environment, infrastructures and customer	
Similarities	company attach great importance on emotions of people	
	employee is the focusing point of emotional factor	
	influences mainly from exterior,	
differences	such as impacts from govern-	internal influences are important
	ments	

Table 1. comparison of two case companies

The similarities

To begin with, general factors related to the location selection which introduced in chapter 3 and 4 are been mentioned during the interviews, such as natural environment, traffic condition and customers. This result shows that no matter which country or region the company comes from, no matter what the differences on some specific situation between the two places. They do have a lot in common in the topic of site selection, from a universal perspective.

The two interviewees also raised the significance of the factor of enterprise employees. When talking about employees, Fengshen Logistics said that "the enthusiasm of employees is the driving force for enterprise development". In the discussion with Valtra, the interviewee highlighted the importance of employees. From Valtra's demonstration, the factor which mostly related to the topic—location selection of logistics center — from emotional perspective is the employees. He says, "Our employee's wellbeing is always an important factor for us."

The differences

Talking to the differences, in the Case 1, the interviwee describes the emotional of people from the outside, like the governmental impact. He systematically explained the relationship between politics and business from the perspective of management and interpersonal relationship. The theory of laissez-faire in classical economics no longer applies to contemporary society. Government should provide support for business development.

However, interviewee in Case 2 focus on the company's internal affairs. He mainly discusses the necessity of considering emotional factors from the perspective of employees.

Undoubtably, all the emotional factors mentioned above are required to be considered when selecting a suitable place for logistics center. Although the focus of the two interviewees is somewhat different. But in fact, all factors must be considered and decided according to the actual situation.

7.4 Development ideas

Based on the research findings, the location of the logistics center needs to take many factors into account. This includes not only the operation and development of the logistics company, but also the sustainable development of the surrounding environment. Undoubtedly, people are one of the key factors that cannot be ignored. This includes the relevant personnel involved in the site selection, including a wide variety of direct or indirect people who get influenced.

Considering of all the factors which influence the location selection of logistics center, enterprises must be extra cautious when making relevant decisions. Scientific and careful planning are indispensable. The demands from all parties must seek to an agreement, especially the ideas of ordinary employees. By wide range researching to listen to the real demand of employees in order to minimize negative emotions. At the same time, a proper political - business relationship is also an important guarantee for the smooth implementation of the project. This positive relationship must be based on fairness and justice and contribute to sustainability, not illegally convey of benefits.

8 Discussion

8.1 Research result

The objects of this thesis are bringing a general concept of location selection of logistics company and the factors influence the selection process. In addition, the research is conducted mainly from emotional perspective, reach the target of what and how people influence the logistics center site selection.

In conclude, the geographical location has a tremendous impact on the operation of logistics center. However, in the beginning, the concept of logistics cluster is being introduced in chapter 3. Through this chapter it can be discovered that the logistics cluster is a megatrend in the nowadays development of logistics industry. This trend reshaped the business and bring a considerable amount of benefits to the enterprises. The reason why a cluster is formed is diverse, and the accumulation of business in a certain area is one of the majority factors. Admittedly, the challenges are always existing. There are profound influences on the whole logistics industry which every companies need to face. Understand the industrial agglomeration is help the following research on logistics site selection.

Moving to the location selection, a wise location decision brings not only profit improvement, but also higher operational efficiency, higher service quality, higher employee satisfaction, and a more friendly business environment, a low negative impact. Conversely, if a company's logistics center is chosen in the wrong place, it will

cause a series of troubles. The troubles are not only reflected in the business, but also in the human aspect. Therefore, the location selection of the logistics center is a systematic project. It requires a careful planning and arrangement to ensure that all possible influencing factors are fully considered. These factors are summarized to include four major aspects: adaptability of local condition, regional coordination and customer distribution, economic and operational expense and strategic development of enterprise.

Furthermore, there are too many factors could have potential influences on the location of logistics center. Except environment, infrastructure, customer etc., the humanity is equally worthy of attention. This thesis has answered the questions which come up in chapter 6.1. the first question is answered in the chapter 7.1 and 7.2 and summarized in 7.3. The answer is influences could from the external and internal side of company. External influences related to the government and the personnel in the company could be the internal influencing reason. There is also a comparison of two case companies in chapter 7.3. By comparing the two companies, there is an agreement that humanity ideas are accepted when selecting a place for company's logistics center. Moreover, two interviewees hold the same opinion that the company's employees play an important role in it. In terms of specific issues, the focus of the two companies is different. Fengshen Logistics puts forward the influence of the government, and Valtra summarizes the influencing factors into the internal attitude of the company. Question 2 is answered in the results of interview chapter 7.1 and 7.2. The result of question 2 can be concluded from the following three points. First, the impact on the planning process. Second, influences through intervention in the location selection process implementation. Third, the impact on the final decision-making. This also includes adjustments to the final location decision.

The object is answered in a proper and logical way and cover all aspects of the logistics industry as much as possible. The results of the research get a promising summary. From this thesis, a clear, comprehensive concept of the topic can be formed.

8.2 Research reflection

There are countless articles on the topic of logistics center site selection. Every author describes and studies this topic from various aspects. However, in this thesis, the humanity factor is the focus of research. I choose this research target because of the awareness of people. If enterprises in modern society wants to survive, they need to care about people. Profits is not the only target of company. We must make the management into a more humanity one in order to make our business develop sustainably.

Through this thesis a clear concept can be reached, theoretical illustrations and research finding of this thesis could be a reference for future company's decision making. Meanwhile, the case in this paper can also be used as a representative of logistics facility location planning for reference and imitation. Bringing supports to the future learners and logistics operators too. Moreover, this article can also remind companies to give people attention and implementing the humanity spirits in the operations.

However, the research is lack of statistics support. This could be the main limitation of this thesis. Since I use qualitative research method mainly. Moreover, the support of my research is real-life example. I believe my interview can lead to Logical and credible results. Compared to studying theoretical data and building mathematical models in absolute ideal conditions, I prefer to implement from reality. As the location of the logistics center is a very realistic issue that is affected by multiple factors.

In addition, even data source is been tried to expand as much as possible, this article is still relying on some single sources too much. This may be limited by the author's writing methods and access of data.

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Appendices

Appendix 1: Interview Questions

- 1. Please give an introduction of your company, this may include the company's history, company's size, business scope, and logistics network of your company.
- 2. How many logistics centers are there in your company? Address and function? Why did your company choose your current address? And when was it founded?
- 3. When was the last time your company needed to consider the location problem? What was the situation at that time?
- 4. Does your company have a development plan for a new logistics center in the near future? If so, please give a brief introduction.
- 5. In your opinion, what are the factors that need attention in the logistics center location?
- 6. From the perspective of management, what are the obstacles that may be encountered during the site selection process and how can they be solved?
- 7. What will your company do if the selected location of logistics center cannot be implemented for some reason?
- 8. What is the general process for your company to choose a regional logistics center address?
- 9. Do you think there are some personal emotional factors when considering the location of the logistics center? For example, from the perspective of local government, investors, suppliers, management, company employees, local residents and social organizations, company's strategy, etc.