

MINISTRY OF CONSTRUCTION

MINISTRY OF EDUCATION AND TRAINING

VIETNAM MARITIME UNIVERSITY



KO TAE YEON

**SOLUTIONS TO PROMOTE FOREIGN DIRECT
INVESTMENT FROM THE REPUBLIC OF KOREA
INTO HAIPHONG, VIETNAM**

SUMMARY OF DOCTORAL DISSERTATION IN ECONOMICS

HAI PHONG - 2025

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MAJOR: ECONOMICS MANAGEMENT; MAJOR CODE: 9310110

SPECIALIZATION: ECONOMICS MANAGEMENT

Supervisors:

1. Dr. Nguyen Minh Duc

2. Assoc Prof. Dr. Dan Duc Hiep

HAI PHONG - 2025

PUBLISHED PAPERS RELATING TO THE THESIS

1. Ko Tae Yeon – Nguyen Minh Duc – Dan Duc Hiep: “The determinants of foreign direct investment (FDI) from Korean enterprises to Haiphong city”, *Journal of Trade Science* (1) 2023, Vol 11, pp. 43-50.
2. MA. Ko Tae Yeon – PhD. Nguyen Minh Duc – Assoc.Prof.PhD. Dan Duc Hiep: “A study on the enablers of foreign direct investment inflows from the republic of korea into Haiphong, Vietnam”, *Journal of Finance & Accounting Research* 2024, Vol 05 (30) (In press).
3. NCS Ko Tae Yeon – TS. Nguyễn Minh Đức: “Comparative analysis on Haiphong’s competitive advantages for foreign direct investment”, *Kỷ yếu Hội thảo Khoa học Quốc gia ‘Chuyển đổi số trong quản lý kinh tế, kinh doanh và tài chính – kế toán’*, 2023.
4. TS. Nguyễn Minh Đức – Ko Tae Yeon: “Phân tích mối quan hệ giữa năng lực gia nhập chuỗi cung ứng toàn cầu của doanh nghiệp địa phương và khả năng thu hút đầu tư trực tiếp nước ngoài (FDI): Trường hợp của FDI từ Hàn Quốc vào Hải Phòng, *Kỷ yếu Hội thảo khoa học ‘Giáp pháp thúc đẩy các doanh nghiệp nhỏ và vừa tham gia vào chuỗi cung ứng toàn cầu’*, 2023.
5. MSc. Ko Tae Yeon – Dr. Nguyen Minh Duc: “Comparative analysis on competitive advantages of ASEAN countries for foreign direct investment: The case of LG group”, *Tạp chí Giao thông vận tải*, March 2024, pp. 131-134.

INTRODUCTION

1. Necessity of the research

The necessity of the research is grounded in Vietnam's status as a dynamic, open economy where foreign direct investment (FDI) plays a pivotal role in socio-economic development. Among Vietnam's FDI partners, the Republic of Korea leads with investments totaling \$85.87 billion by 2023, highlighting its critical role in Vietnam's economic landscape. Haiphong, a strategic seaport city, has become a top FDI destination, ranking second nationally in 2023 with Korean enterprises contributing \$11.8 billion, accounting for 45% of its total FDI.

Haiphong's strategic location, robust transportation network, and role in regional economic frameworks make it an attractive FDI hub. However, challenges such as global supply chain disruptions, geopolitical tensions, and evolving investment trends necessitate proactive measures to sustain and grow Korean investments. Korean FDI is vital to Haiphong's socio-economic strategy, driving innovation, job creation, and competitiveness.

This research is crucial for addressing emerging challenges, leveraging Haiphong's advantages, and ensuring its position as a premier investment destination. It aims to provide actionable solutions to enhance FDI inflows, strengthen Vietnam-Korea economic ties, and contribute to Vietnam's long-term economic objectives.

2. Research aims

The research aims to propose effective solutions for significantly enhancing the inflow of foreign direct investment from Korean enterprises into Hai Phong City. To achieve this overarching aim, the research addresses the following specific questions:

Question 1: What are determinants of provinces/cities to attract foreign direct investment and how the determinants are weighted?

Questions 2: How important are the factors attracting Korean FDI to Hai

Phong City?

Question 3: Which solutions will be suggested to promote foreign direct investment from Korean enterprises to Haiphong city and the impact/effectiveness of those solutions?.

3. Research subjects and research scope

- *Research subjects:*

The thesis analyzes Korean FDI in Haiphong, Vietnam, examining the city's capabilities, challenges, and investment climate. It evaluates factors like economic stability, infrastructure, and policies, proposing solutions to overcome challenges and enhance Haiphong's appeal as a top destination for Korean FDI.

- *Research scope:*

Scope of research side: The research examines FDI from Korean enterprises to Haiphong, analyzing trends, characteristics, and influencing factors. It compares FDI from other economies and Vietnamese provinces to highlight the unique dynamics of Korean investment in Haiphong, offering insights into region- and investor-specific patterns.

Scope of time: The analysis examines Korean FDI into Haiphong since 1995 to evaluate long-term trends, policy impacts, and shifts in investment patterns. Proposed solutions will focus on 2025–2030, with a strategic vision extending to 2045, addressing immediate challenges and long-term opportunities. This future-oriented approach aims to enhance Korean investment in Haiphong effectively.

Scope of research: The thesis explores key factors driving Korean FDI to Haiphong, including economic conditions, policies, infrastructure, labor, and Vietnam-Korea relations. Using qualitative and quantitative methods, it analyzes historical data, expert interviews, and comparative studies to propose sustainable strategies for boosting long-term FDI inflows.

4. Methodologies

This research employs a mixed-methods approach, combining quantitative

analysis of historical FDI trends from Korean enterprises to Haiphong with qualitative insights from expert interviews. Quantitative methods include statistical evaluations of FDI volumes, sectoral distribution, and growth rates since 1995, complemented by comparative data from other regions. Qualitative methods use the Fuzzy Analytical Hierarchy Process and expert interviews to explore investment determinants like policies, labor, infrastructure, and market access. Together, these approaches provide a comprehensive understanding of FDI dynamics and inform practical solutions to enhance Korean investment in Haiphong.

5. Contribution of the research

Theoretical contribution:

The study on promoting FDI from South Korea to Haiphong, Vietnam, employs a multidisciplinary approach, integrating economic theory, regional development, and data analytics. It examines factors like political stability, regulations, and infrastructure, identifying trends and refining investment flow theories. The research provides a model for similar studies and supports future work on bilateral economic relationships.

Practical contribution:

This research provides actionable strategies for policymakers and business leaders in Korea and Vietnam, emphasizing infrastructure upgrades, streamlined regulations, and business-friendly policies to boost Haiphong's investment appeal. It underscores the value of strong Korean-Vietnamese business networks for partnerships and knowledge transfer, promoting local economic growth, bilateral ties, and sustainable development.

6. Research's new contributions

The research identifies key factors and sub-factors that influence FDI flow from Korean enterprises into Haiphong, using the Fuzzy Analytic Hierarchy Process to assess their relative importance. This provides a valuable tool for government officials and researchers to compare Haiphong's attractiveness to other regions. The study also offers a thorough analysis of the current state of

Korean FDI in Haiphong within the context of national economic development and government policies. Based on this, it proposes practical solutions to enhance FDI and support local economic growth.

CHAPTER 1. LITERATURE REVIEW ON THE PROMOTION OF INWARD FOREIGN DIRECT INVESTMENT

1.1. International research on foreign direct investment

Most FDI research focuses on general trends, market size, infrastructure, and regulations, but little examines Korean FDI in emerging markets like Haiphong, Vietnam. This study addresses unique factors, such as bilateral relations, cultural dynamics, and regional policies, offering practical insights for policymakers and stakeholders in both countries.

1.2. Vietnamese research on foreign direct investment

Vietnamese FDI research often focuses on general factors like infrastructure, labor, and policy reforms, with limited attention to the unique dynamics of Korean FDI in Haiphong. This study addresses gaps by exploring bilateral relations, sector-specific trends, and tailored strategies to attract Korean investors, offering insights to enhance investment flows.

1.3. Research gap

Despite extensive FDI scholarship, little research links theory to actionable strategies for the specific, fast-growing flow of Korean investment into Haiphong. Existing studies neither isolate Korea-to-Haiphong capital, nor compare Haiphong's appeal with other provinces from a Korean viewpoint, nor weight the determinants that matter most to Korean firms, nor test tailored solutions. To close these gaps, this study uses a Fuzzy AHP model to rank Korean investors' key location factors and, on that basis, puts forward data-driven policies to attract and sustain Korean FDI, thereby advancing both practice and location-specific FDI theory.

CHAPTER 2. THEORETICAL BACKGROUND ON THE PROMOTION

OF INWARD FOREIGN DIRECT INVESTMENT

2.1. Introduction of FDI

FDI is vital for developing economies, driving growth, job creation, competition, and technology transfer. It involves an investor acquiring at least 10% of a foreign company's capital and managing assets, unlike passive Foreign Portfolio Investment (FPI). FDI includes equity, reinvested earnings, and direct investment capital, and can take the form of subsidiaries, affiliates, or branches. FDI benefits emerging markets by providing financial support, infrastructure, and expertise, while also promoting job creation, technological progress, and increased exports. However, it may also hinder domestic investment, expose countries to political risks, and lead to economic exploitation or inflation. Risks like expropriation can also deter investment.

2.2. Classification of FDI

FDI can be classified into four types: resource-seeking, where firms invest to acquire valuable resources like minerals, agricultural products, or affordable labor; market-seeking, which involves establishing a presence in foreign markets to cater to local demand and expand profitability; efficiency-seeking, aiming to optimize structure by leveraging economies of scale, risk diversification, and production advantages across different regions; and strategic asset-seeking, where companies acquire intangible assets like patents or expertise to gain competitive advantages, often through acquisitions or strategic alliances.

2.1. Introduction of Fuzzy AHP methodology

This research uses Multiple Criteria Decision Making (MCDM) methods to analyze factors influencing FDI in Haiphong. Techniques like AHP, TOPSIS, ELECTRE, ANP, and fuzzy versions are applied to rank criteria. AHP is simple but less effective with ambiguity, while TOPSIS is intuitive but sensitive to normalization. ELECTRE handles complexity but depends on parameter settings, and ANP models interdependencies but requires extensive input. Fuzzy AHP excels in addressing uncertainty, making it ideal for evaluating FDI factors from Korean enterprises in Haiphong.

2.2. Steps of Fuzzy AHP

The subsequent diagram depicts the sequential procedures that must be executed in Fuzzy AHP.

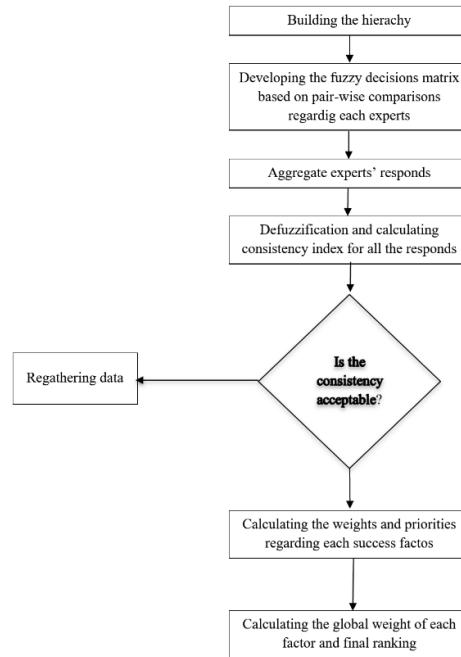


Figure 2.1 Steps of Fuzzy AHP

2.3. Data collection

2.3.1. Selection of experts

To evaluate decision-making topics, participants with relevant expertise and interest were selected to ensure accurate and logical input. Experts included FDI investors, researchers, consultants, and policymakers, with a focus on diverse perspectives. Fuzzy AHP was used to assess investment factors, with data collected via surveys, interviews, and meetings. The study had a 100% survey response rate and a 60% interview rate, involving 18 investors, 5 researchers, 4 advisors, and 3 policymakers. Most participants (44%) had over 10 years of FDI experience, and 56% had 5–10 years. Of 30 responses, 3 inconsistent entries were excluded, leaving 27 valid responses for analysis, ensuring data reliability in understanding Haiphong's FDI trends.

2.3.2. Collection of data from experts

Clear explanations and guidelines are crucial when collecting data from

specialists to ensure understanding of criteria, alternatives, and the fuzzy scale. Terms like "very high," "medium," and "low" are clarified, and a 1–9 numerical scale is used in FAHP to assess criteria importance. This study employs interviews to identify FDI drivers and recommendations and uses questionnaires to gather data on key FDI determinants in Haiphong. Responses are presented in tables with selectable options to simplify the process for participants..

CHAPTER 3. CURRENT SITUATION OF FOREIGN DIRECT INVESTMENT FROM REPUBLIC OF KOREA INTO HAIPHONG CITY

3.1. General introduction of Haiphong city

3.1.1. The geographical location and natural conditions of Haiphong

Haiphong, located in northern Vietnam, is strategically positioned between Quang Ninh, Hai Duong, Thai Binh, and the Gulf of Tonkin, making it a key maritime hub. The city, 102 km from Hanoi, hosts an international seaport and plays a vital role in the "Two Corridors, One Economic Belt" program between Vietnam and China, boosting regional trade and connectivity. Haiphong's economy thrives in manufacturing, logistics, seafood exports, textiles, and electronics. Covering 1,523.38 km², it has a population of nearly 2 million, with a workforce of over 1.14 million. As the third-largest city in Vietnam, Haiphong has evolved into a significant industrial center since its colonial roots in 1888.

3.1.2. Growth and economic structure

Haiphong's GRDP growth has progressed in two phases: 7.1% annually from 2011 to 2015, and 14.7% per year from 2016 to 2019, maintaining strong performance even during the 2020 pandemic. By 2023, GRDP per capita reached 191 million VND, 1.83 times higher than in 2018 and above the national average. The economy has shifted from services to industry, with industry and construction contributing 62.7% to growth (2016–2020), compared to 20% from services. From 2022 to 2023, sectors like logistics, construction, and infrastructure saw increased FDI, with electronics dominating, while agriculture declined. Industry drives over half of Haiphong's output, establishing it as a manufacturing and

logistics hub. However, the service sector remains underdeveloped (37.76% of output), and tax contributions are low. To sustain growth, Haiphong should expand services, enhance fiscal efficiency, and promote high-value industries.

3.1.3. Population, employment and labor productivity

Between 2009 and 2019, Haiphong's population saw more dependents and fewer young workers (15-24), posing workforce challenges. By 2023, the labor force reached 1.1 million, but the shift to industry hasn't fully absorbed surplus labor. The city faces a skilled worker shortage and struggles to attract talent due to lower wages and higher living costs. While average incomes have grown steadily, they lag behind the city's economic expansion, limiting improvements in living standards.

3.1.4. Industrial infrastructure

By 2023, Haiphong had a total of 12 industrial zones, covering a planned area of over 4,400 hectares. This has significantly influenced the organizational structure of Haiphong's industrial sector, driving positive developments. Haiphong is home to several key industrial and economic zones, including the Dinh Vu-Cat Hai Economic Zone, VSIP Haiphong, and Trang Due Industrial Zone, which attract both domestic and foreign investors. These zones are supported by strong infrastructure, such as highways and deep-sea ports, and specialize in sectors like logistics, heavy industry, electronics, and high-tech manufacturing. The Trang Due Industrial Zone, in particular, has become a hub for Korean investment, notably from LG Corporation, which has invested over USD 7.24 billion. This investment has created thousands of jobs, advanced technologies, and increased Haiphong's export turnover, making it a vital part of Vietnam's industrial growth.

3.1.5. Seaports and regional connectivity

Haiphong is a key coastal city and international gateway in the northern region of Vietnam, part of the growth hub formed by the Haiphong-Hanoi-Quang Ninh triangle in the Red River Delta. This region hosts major industrial zones like Thang Long, Hoa Lac, and Trang Due, offering significant potential for logistics

development. Haiphong is increasingly focusing on developing its inland waterway port system to alleviate road transport congestion and promote sustainable logistics, with a proposed 120 km inland route for container shipping to Bac Ninh. Rail transport, including the Hanoi-Haiphong and Kep-Ha Long routes, is also improving, with international intermodal operations launched in 2023. The Red River Delta region, with three international airports, plays a crucial role in Vietnam's growing air transport sector. Haiphong, part of the Group 01 seaport development plan, aims to become a modern international logistics hub, with its Lach Huyen port seeing significant growth in container throughput, reaching 6.3 million TEUs in 2023.

3.2. Analysis on the current situation of FDI attraction from Republic of Korea to Haiphong city

3.2.1. FDI attraction to Haiphong

3.2.1.1. Status of receiving applications and approving registration for FDI registration

From 2018 to 2023, Haiphong saw fluctuating trends in new FDI project registrations. In 2018, 104 new projects were registered with a capital of USD 644 million, but by 2020 and 2022, the registered capital surged to USD 1.125 billion and USD 1.121 billion, despite fewer new projects. The year 2021 witnessed a decline in the number of projects to 53, with a capital of USD 372 million, but capital adjustments reached a peak of USD 2.722 billion with 65 projects. Overall, the total number of new projects over the five years was 413, totaling USD 3.373 billion in registered capital. In 2023, 100 new projects were registered with USD 1.413 billion, while capital adjustments totaled USD 1.944 billion, exceeding expectations and reflecting sustained investment interest in Haiphong.

3.2.1.2. Activities of foreign-invested enterprises

From 2018 to 2023, FDI enterprises in Haiphong experienced significant growth in both investment capital and revenue. Realized investment capital surged from USD 1,573 million in 2018 to USD 3,379 million in 2023, despite a

dip in 2020. Revenue from FDI enterprises grew from USD 12,425 million in 2018 to USD 26,761 million in 2022, with exports and imports also rising consistently, despite a temporary decline in 2021. The contribution to the local budget increased, and the workforce in FDI enterprises grew from 190,000 to 239,000. Overall, the period from 2018 to 2022 saw steady and robust growth, with a quick recovery from minor setbacks.

3.2.1.3. Structure of registered FDI in Haiphong

From 2010 to 2023, Haiphong saw a dramatic increase in registered FDI, rising from \$4.29 billion to \$28.83 billion, a growth of over 572%. The processing and manufacturing sector was the dominant contributor, with substantial growth beginning in 2016, highlighting Haiphong's growing appeal as an investment destination. Other sectors, including real estate, transportation, and wholesale/retail, also saw steady growth, but the overall variation in annual growth rates underscores the accelerating trend in manufacturing investments.

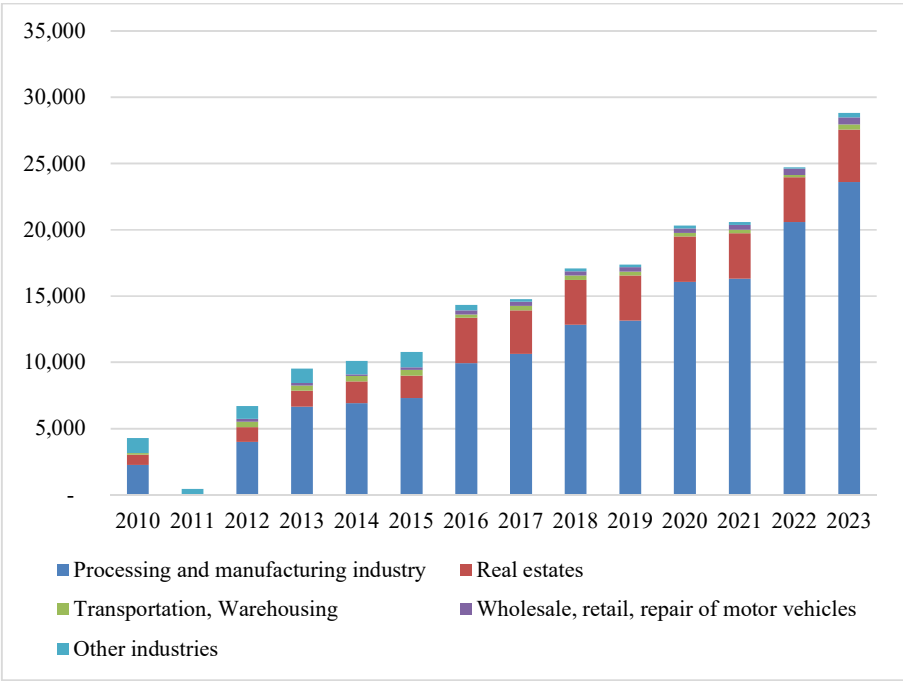


Figure 3.1 Structure of registered FDI

Source: Hai Phong Statistical Office, 2024

From 2010 to 2023, FDI in Haiphong saw significant growth, particularly in the processing and manufacturing sector, which surged by 935%, reaching \$23.61 billion. Real estate also experienced steady growth, rising by 420%,

although its expansion slowed after 2020. The transportation and warehousing sector grew modestly by 252%, while wholesale, retail, and motor vehicle repair saw a 662% increase. Conversely, FDI in "other industries" declined sharply by 69%, signaling a shift in investment focus toward manufacturing and real estate. Overall, Haiphong's FDI structure highlights its growing role as a manufacturing hub, with steady growth in real estate and retail, but a reduction in investments in smaller sectors.

3.2.1.4. Structure of enterprises in Haiphong

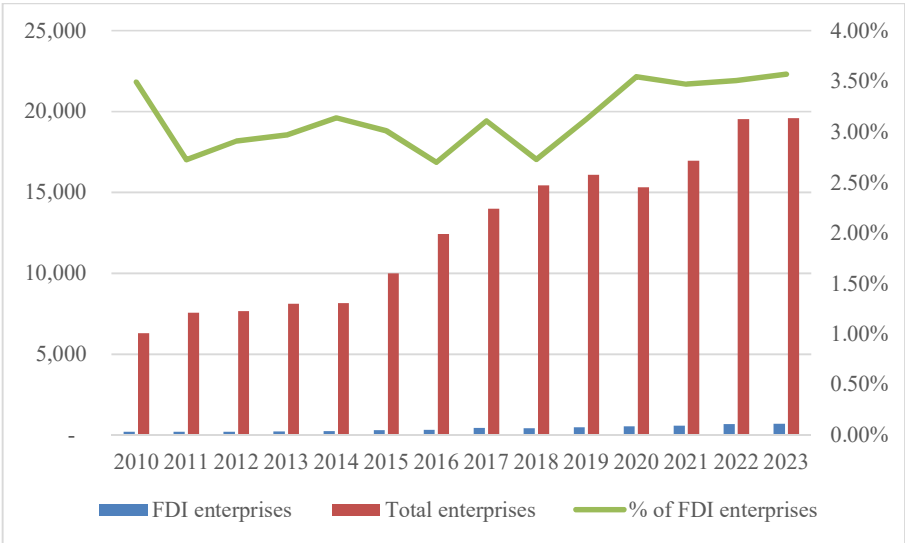


Figure 3.2 Structure of enterprises in Haiphong

Source: Hai Phong Statistical Office, 2024

From 2010 to 2023, Hai Phong saw a significant increase in the number of enterprises, growing by 210% from 6,302 to 19,587. This growth was driven by both FDI and non-state enterprises, with FDI enterprises increasing by 218% during this period, from 220 in 2010 to 699 in 2023. The number of state-owned enterprises (SOEs) declined, reflecting the shift towards private and foreign investment. FDI enterprises, while growing steadily, accounted for a small but stable proportion of total businesses. Major FDI projects, particularly in high-tech and environmentally friendly industries, have been central to the city's industrial development. However, challenges remain in creating strong connections between FDI enterprises and domestic suppliers, with a need for greater localization and technology transfer. In 2023, Hai Phong focused on developing supporting

industries to strengthen these links and enhance the city's role in global value chains.

3.2.1.5. Structure of labor in Haiphong

From 2010 to 2023, Hai Phong saw significant growth in its workforce, with an average increase of 20,373 employees per year, totaling 422,602 employees by 2023. The rise in the number of businesses, particularly in the FDI sector, was a key driver of this growth, with FDI employment increasing fourfold during this period. The FDI sector's workforce grew at an average rate of 11.98%, significantly outpacing the non-state sector's growth of 3.25%. Meanwhile, the number of employees in state-owned enterprises (SOEs) decreased by 8.25%. By 2023, FDI workers made up around 50% of the city's workforce, while SOE workers accounted for less than 10%. FDI enterprises have played a crucial role in job creation and improving human resources, both directly and indirectly, by stimulating domestic investment and supporting the development of satellite industries.

3.2.1.6. Comparison of Haiphong's registered FDI capital growth rate and GRDP with neighbour cities

As of November 2023, Hai Phong ranks third in Vietnam for attracting registered FDI with USD 2.8 billion, following Quang Ninh and Ho Chi Minh City, and boasts the third-highest FDI growth rate at 68%. The city also ranks fourth nationally in economic growth at 10.08%. Hai Phong benefits from a favorable geographical location, strong infrastructure, and efficient transportation links, making it a key player in the development triangle connecting Hanoi, Hai Phong, and Quang Ninh. While other regions like Hanoi and Ho Chi Minh City have strengths in human resources and specific industries, Hai Phong's position is enhanced by its industrial zones and connectivity to domestic and international markets.

3.2.2. Current situation of FDI attraction from Republic of Korea to Haiphong city

Haiphong has become a major destination for Republic of Korea FDI,

attracting around USD 12 billion, which represents about 14% of Korea's total FDI in Vietnam. South Korea leads all countries investing in Haiphong, with a focus on high-tech sectors like electronics, automotive components, and machinery. Key contributors include LG Corporation, with investments totaling USD 7.24 billion, and other firms such as Heesung and Haengsung Electronics. South Korean investments are spread across Haiphong's industrial zones, particularly the Trang Due Industrial Zone, which has received over USD 9 billion. In addition to industrial zones, South Korean investors have diversified into non-industrial sectors, contributing significantly to Haiphong's economic growth. The trade relationship between Haiphong and South Korea is robust, with exports to South Korea reaching USD 12.3 billion in 2022. This FDI has generated employment, driven technological advancements, and boosted local fiscal revenues. However, challenges such as infrastructure capacity and the need for sustainable practices must be addressed to sustain this growth. Despite these challenges, South Korean FDI remains a cornerstone of Haiphong's economic development and global integration.

3.3. Effects of FDI inflows from Republic of Korea to Haiphong's economy

FDI has significantly transformed Haiphong into a major industrial and logistics hub in Vietnam, driven by substantial investments, particularly from South Korea. Industrial zones like Dinh Vu-Cat Hai and Trang Due have attracted multinational corporations in high-tech sectors such as electronics and automotive manufacturing, spurring rapid industrialization and driving Haiphong's high economic growth, with the city's GRDP rising by 10.34% in 2023. FDI has also contributed to job creation, workforce upskilling, and technological advancements, with companies like LG Corporation investing heavily in manufacturing facilities and employee training. Additionally, FDI has driven infrastructure development, including the Lach Huyen Deep-Sea Port and improved transport networks, enhancing Haiphong's role in regional and global supply chains. The influx of foreign investment has bolstered local government revenues, further fueling reinvestment into the city. However, the rapid industrialization has led to

environmental challenges, including pollution, and social issues such as wage disparities, highlighting the need for sustainable practices and fair labor policies to ensure balanced growth. Despite these challenges, FDI remains central to Haiphong's economic success and future development.

CHAPTER 4. ANALYZING FACTORS AFFECTING FOREIGN DIRECT INVESTMENT INTO HAIPHONG CITY

4.1. Research on factors affecting foreign direct investment

Recently, many research have put focus on the empirical examination of factors influencing foreign direct investment. The factors that influence foreign direct investment differ from one region to another. Moreover, they undergo transformations gradually due to advancements in technology and shifts in policies. Nevertheless, the majority of existing research indicates that the nine following determinants play a significant role in determining the inflow of foreign direct investment.

Table 4.1. Factors affecting FDI inflows

No	Factors	Description
1	Gross regional domestic product	Indicating economic health, market size, and growth potential.
2	Local supporting industries	Providing necessary inputs, services, and infrastructure, with the integration of local industries into foreign supply chains boosting investment, particularly in sectors like electronics and textiles.
3	Consumer price index	Indicator of price stability. High inflation, shown by a rising CPI, creates uncertainty and reduces investor confidence, while a stable CPI fosters a favorable investment climate.
4	Human capital	Knowledge and skills of a workforce.
5	Wage rate	Low labor costs make countries more appealing for labor-intensive production.
6	Industrial infrastructure	Regions with better transport, communication, and utilities tend to attract more FDI.

7	Transportation and logistics infrastructure	High-quality infrastructure lowers operational costs and boosts efficiency, making regions more attractive for FDI.
8	Political stability	Policy changes, expropriation, and civil unrest, make regions more appealing for investment.
9	Institutional quality	formal regulations and informal norms shape economic outcomes by reducing transaction costs. Strong institutions attract FDI by mitigating risks, lowering costs, and providing legal protection

4.2. Application of Fuzzy AHP to examine the factors affecting FDI inflows from Republic of Korea to Haiphong city

By consulting with experts, an average pair-wise comparison matrix has been created based on the weight of each response to determine the weight assigned to each factor. The following table illustrates the matrix acquired.

Table 4.1 Pair-wise comparison matrix

Factors	Social	Economic	Political
Social	(1, 1, 1)	(5,6,7)	(2,3,4)
Economic	(0.14,0.17,0.2)	(1, 1, 1)	(0.33,0.5,1)
Political	(0.25,0.33,0.5)	(1,2,3)	(1, 1, 1)

The calculation of the fuzzy geometric mean values of the factors involves the multiplication of matrix vectors that represent fuzzy integers. Upon performing the computation of the fuzzy geometric mean values, the subsequent step involves the determination of the fuzzy weight for each factor. After obtaining the fuzzy weight of all criterion, the de-fuzzification procedure known as Centre of Area is utilized to determine the measured weight of each element.

The weights assigned to factors influencing FDI inflows from Korean enterprises in Haiphong reveal that social factors are deemed the most significant, emphasizing the importance of infrastructure, human resources, and social

conditions. Economic factors hold the lowest weight, indicating their lesser influence in FDI decisions, while political factors fall in between, suggesting that political stability, government policies, and regulatory frameworks play an intermediate role in attracting FDI to Haiphong. The last stage of the FAHP approach involves calculating the normalized weight for each factor, resulting in a total weight of one for all factors combined.

After determining the weights of the components, a consistency test was conducted using triangular fuzzy numbers in FAHP. To calculate the consistency ratio, these fuzzy numbers are defuzzified into crisp values. Once defuzzification is completed, the consistency ratio is computed following the AHP method, ensuring the validity of the assigned weights for each enabler of FDI inflows.

Consistency index and consistency ratio are calculated as blow:

$$CI = \frac{\lambda_{max} - n}{n - 1} = \frac{\sum \frac{\lambda}{3} - 3}{2} = 0.05$$

$$CR = \frac{CI}{RI} = \frac{0.05}{0.58} = 0.09$$

The consistency ratio, calculated to be less than 0.1, confirms that the expert judgments are in good agreement and the pairwise comparisons align with AHP principles, enhancing the reliability of the fuzzy AHP analysis. The sub-criteria weights are calculated using the same methodology, and the global significance of each factor is determined by multiplying the local weight of each sub-factor with the corresponding factor weight. This process ensures a robust decision-making framework.

Table 4.2 Local and global weights of the criteria

Criteria	Sub-criteria	Local weight	Global weight	Rank
Social 0.66	Industrial infra	0.31	0.20	1
	Trans&Log infra	0.28	0.18	2
	Human capital	0.24	0.16	3
	Wage rate	0.17	0.11	5
Economic 0.12	GRDP	0.26	0.03	9
	Local supporting industries	0.31	0.04	8
	CPI	0.43	0.05	7
Political 0.23	Institutional quality	0.64	0.15	4
	Political stability	0.36	0.08	6

The Fuzzy AHP results highlight the key factors influencing FDI inflows to Haiphong, with infrastructure (including industrial, transport, and logistics) and human resources receiving the highest weights, indicating their crucial roles in attracting FDI. Institutional quality also plays a significant role but is less influential than infrastructure and human resources. Other factors like wage rate, CPI, political stability, and local supporting industries have moderate influence, while GRDP holds the lowest weight, suggesting it is less critical in FDI decisions. This hierarchy can guide policymakers to focus on enhancing infrastructure and human resources to attract more FDI.

CHAPTER 5. SOLUTIONS TO PROMOTE FOREIGN DIRECT INVESTMENT FROM KOREAN ENTERPRISES INTO HAIPHONG CITY

5.1 Analysis on the orientation of the central and Haiphong's government in attracting foreign direct investment

5.1.1. Orientation of Vietnamese government

The Vietnamese government's strategy for attracting FDI is outlined through key policies, legal frameworks, and strategic documents that focus on sustainable socio-economic development. The 10-year Socio-Economic Development Strategy (2021-2030) and Decision No. 667/QĐ-TTg emphasize FDI as a key driver of economic growth. Legal frameworks, including the Investment Law No. 61/2020/QH14 and its amendments, create a stable and clear environment for foreign investors. The government's strategy prioritizes targeted investment in regions, markets, and industries that align with global economic trends, such as green investments, high technology, and advanced management practices. Vietnam also seeks to strengthen partnerships with multinational corporations and integrate more deeply into global supply chains, boosting the localization rate and value-added content of domestic businesses. The government aims to diversify FDI sources, focusing on regions such as Asia, Europe, and the Americas, to enhance competitiveness, foster sustainable development, and maximize socio-economic benefits from foreign investments.

5.1.2. Orientation on attracting FDI in Haiphong

Hai Phong, Vietnam, has a clear strategy for attracting FDI, outlined through several key resolutions and action programs. Resolution 45-NQ/TW of the Politburo sets a roadmap for the city's development until 2030, focusing on leveraging FDI for economic growth, while Resolution No. 30-NQ/TW emphasizes the city's role in the broader socio-economic landscape of the Red River Delta. The city's long-term planning framework (2021-2050) integrates FDI strategies, promoting sustainable urban development, industrial expansion, and infrastructure modernization. Action Program No. 76-CTr/TU implements these strategies with a focus on improving investment promotion, enhancing trade relations, and tapping into new markets. Hai Phong prioritizes attracting FDI in high-tech, environmentally friendly industries, and projects that boost budget revenues. Partnerships with key global markets such as Japan, the U.S., the EU, and Korea are emphasized, alongside fostering a favorable investment climate

through transparent regulations, efficient procedures, and strong infrastructure. The city's FDI strategy is designed to drive sustainable development, economic growth, and regional integration.

5.2. Strategic analysis on the current situation of FDI from Korean enterprises in Haiphong city

5.2.1. Strengths

Haiphong, located in northern Vietnam, offers several key strengths that make it an attractive destination for FDI. Its strategic geographic location near major markets, particularly China, provides logistical advantages, including reduced transportation costs and efficient supply chain management. The city is equipped with a modern deep-sea port, Lach Huyen, enhancing its role as a regional trade hub. Haiphong's comprehensive transportation infrastructure, including well-maintained road networks and improved connectivity to international airports, further boosts its appeal. The city's solid urban foundation, with thriving commercial districts and strategic industrial zones, supports business growth and offers a favorable environment for investors. Haiphong also benefits from a proactive local government that simplifies administrative processes, offers incentives, and collaborates with the central government to improve infrastructure and create a business-friendly climate. These strengths position Haiphong as a competitive and promising destination for FDI, contributing to its economic growth and long-term prosperity.

5.2.2. Weaknesses

Haiphong faces several challenges that hinder its ability to attract FDI and sustain economic growth. Key issues include a shortage of skilled labor, particularly in sectors like manufacturing, technology, and logistics, which limits the city's ability to meet the needs of foreign investors. The city also struggles with a lack of clean industrial land, with high recovery costs for contaminated sites deterring investment. Additionally, Haiphong's transportation infrastructure is underdeveloped, particularly in railway, aviation, and inland waterways, which impacts supply chain efficiency and market connectivity. The city also lacks

developed urban and social infrastructure, including universities, healthcare facilities, and modern amenities, reducing its appeal to investors and skilled professionals. Moreover, Haiphong's underdeveloped service sector, particularly in finance, legal, and business services, limits the availability of essential support for multinational corporations. Finally, the slow development of domestic businesses further weakens Haiphong's economic resilience, making it more reliant on foreign investment. Addressing these weaknesses through targeted investments and policy reforms is crucial to enhancing Haiphong's competitiveness and attracting sustainable FDI.

5.2.3. Opportunities

Haiphong is well-positioned to attract FDI by capitalizing on its strategic advantages and key opportunities. As part of Vietnam's integration into international trade agreements such as the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) and the EU-Vietnam Free Trade Agreement (EVFTA), Haiphong benefits from improved market access, reduced trade barriers, and increased investment flows, especially from Europe and Asia. The city's strategic location, skilled labor force, competitive operating costs, and infrastructure improvements, particularly with the Lach Huyen Deep Sea Port, enhance its appeal for multinational corporations looking to diversify their manufacturing and supply chains under the "China + 1" strategy. Additionally, Haiphong's political stability, supportive government policies, and well-developed infrastructure, including efficient transportation networks, position it as a safe and reliable investment destination, especially in the context of US-China strategic competition. By leveraging these factors, Haiphong can strengthen its economic competitiveness and continue to attract sustainable FDI, fostering long-term growth in Vietnam's evolving business landscape.

5.2.4. Threats

Haiphong City faces several challenges that may hinder its ability to attract and retain FDI. The city's distance from key economic centers, such as Hanoi, creates logistical issues, higher transportation costs, and reduced competitiveness

for investors seeking proximity to major hubs. Additionally, Haiphong faces intense competition from the Hanoi region, which boasts a more diversified economy, a skilled labor force, and established business clusters. This makes it difficult for Haiphong to compete for high-quality human resources and private investments. Furthermore, Haiphong is vulnerable to the impacts of climate change, such as rising sea levels, coastal erosion, and extreme weather events, which pose risks to critical infrastructure like ports and industrial zones. To overcome these challenges, Haiphong must implement targeted strategies to improve infrastructure, offer investment incentives, enhance climate resilience, and leverage its unique strengths to attract sustainable and responsible FDI, while collaborating with regional stakeholders to mitigate risks and enhance competitiveness..

5.3. Solutions to promote FDI from Korean enterprises into Haiphong

Haiphong City aims to attract FDI from Korean enterprises to drive regional economic development. With Korea's strong industrial base and global business influence, Haiphong seeks to capitalize on this opportunity through a comprehensive approach that includes improving industrial infrastructure, enhancing transportation and logistics, developing human resources, optimizing public administration, refining policy frameworks, and supporting local industries. These strategies are designed to create a favorable environment for Korean businesses, fostering economic growth and sustainable development in Haiphong.

5.3.1. Solutions for industrial infrastructure development

To attract FDI from Korean enterprises, Haiphong City must focus on developing robust industrial infrastructure. This includes ensuring the availability of well-prepared industrial park land, which reduces setup time and costs for investors. Establishing the Southern Coastal Economic Zone (SCEZ) can provide tailored incentives and infrastructure for Korean businesses, enhancing Haiphong's appeal as an investment destination. Additionally, developing circular industrial parks that prioritize sustainability and environmental protection aligns with the growing demand for green practices, attracting eco-conscious investors.

By implementing these strategies, Haiphong can position itself as a competitive and environmentally responsible hub, appealing to Korean enterprises seeking efficient, sustainable industrial environments for their operations.

5.3.2. Solutions for developing transportation and logistics infrastructure

Developing a robust transportation and logistics infrastructure in Haiphong is crucial for attracting FDI from Korean enterprises. Key strategies include establishing a multimodal transportation system linking Haiphong seaport with the rear region, improving seaport capacity and efficiency, and developing logistics centers near seaports. A multimodal system involving roads, railways, and inland waterways will reduce congestion, lower transportation costs, and provide sustainable options for logistics. Expanding the capacity of seaports, particularly in Lach Huyen and Nam Do Son, by upgrading infrastructure and automating operations, will improve efficiency and appeal to Korean businesses. Additionally, strategically located logistics centers offering value-added services such as packaging and inventory management will streamline supply chains, reduce costs, and enhance competitiveness. These infrastructure improvements will support industrial growth, create jobs, and make Haiphong a prime destination for Korean investment, boosting its economic development.

5.3.3. Solutions for human resource development

To enhance human resource development and attract Korean FDI to Haiphong, several strategies can be implemented: offering incentives for businesses to invest in employee training, developing state-of-the-art training facilities and skilled teaching staff, increasing public investment in high-tech research, and strengthening business-education partnerships. Additionally, promoting Korean language programs, ensuring the supply of social housing for workers, and encouraging collaboration between local and Korean educational institutions are key initiatives. These efforts will create a skilled, adaptable workforce aligned with the needs of Korean businesses, reducing recruitment costs and fostering innovation. By aligning education with industry demands,

Haiphong can enhance its appeal to Korean investors, drive long-term economic growth, and strengthen bilateral ties with South Korea..

5.3.4. Solutions to improve public administration efficiency

To improve public administration efficiency and attract Korean FDI to Haiphong, promoting digital transformation in administrative procedures is essential. Digitizing processes such as business registration, licensing, and tax filing can streamline operations, reduce costs, and eliminate bureaucratic barriers. This will create a more transparent, accessible, and investor-friendly environment. Digital transformation also enhances data management, provides real-time updates to investors, and improves inter-agency coordination, making Haiphong a more competitive and attractive destination for foreign investors, particularly Korean enterprises.

5.3.5. Solutions to improve political mechanism

To improve the political mechanism and attract Korean FDI to Haiphong, several solutions are recommended. First, ensuring consistency, transparency, and simplified procedures for foreign investors can make the investment process more predictable and efficient, lowering entry barriers and increasing Haiphong's competitiveness. Second, implementing policies that offer carbon credits to FDI enterprises can make the city more attractive to companies committed to sustainability, particularly those from Korea, by aligning economic growth with environmental goals. Lastly, preferential policies for foreign investors using high and environmentally friendly technologies can incentivize sustainable business practices, positioning Haiphong as a hub for green technology. These policies would help foster innovation, reduce environmental impact, and enhance Haiphong's appeal to environmentally conscious and technologically advanced Korean investors.

5.3.6. Solutions for the development of supporting industry

To attract Korean FDI to Haiphong, several strategies should be

implemented to support local businesses. These include providing financial support, market information, and legal simplifications to enhance the local supply chain. Supporting digital transformation through access to advanced technologies and training will increase the competitiveness of local businesses, making them more appealing to Korean firms. Promoting connections between Korean businesses and local companies through KOCHAM will foster partnerships and knowledge exchange. Additionally, guiding local businesses in green transformation will align them with international market demands for sustainability, attracting environmentally conscious Korean investors. These initiatives will strengthen Haiphong's appeal as a dynamic, competitive, and sustainable investment destination for Korean enterprises.

5.4. Recommendations and proposals

To attract Korean FDI to Haiphong, a multi-agency approach is recommended. The Ministry of Transport should expand industrial and logistics areas and enhance connectivity to key transport hubs. The Department of Planning and Investment should focus on developing supporting industries and fostering local supplier networks through incentives and training programs. The Ministry of Planning and Investment should create targeted investment attraction policies, streamline licensing, and improve legal protections. The People's Committee of Haiphong should support Korean expatriates by providing tailored housing, services, and education, as well as advancing digital transformation for administrative efficiency. Together, these measures would improve Haiphong's appeal to Korean investors, promote long-term partnerships, and foster sustainable economic growth.

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