

# 2025 KAPT-KLRA-BGE(HUNGARY) International Conference



## Strategic Issues on Products and Logistics for Asia and Europe

- ◆ Date : 2025. 7. 10(July 10, 2025)
- ◆ Place : Budapest University of Economics and Business



Faculty of Finance and Accountancy

Buzogány u. 6-10, Budapest, H-1149  
Auditorium IV.

- ◆ Organizer:  
Korea Academy of Product & Technology  
The Korea Logistics Research Association, Inc.
- ◆ Co-Organizer  
Budapest University of Economics and Business



# Schedule

- ◆ Arrival & Registration : July 9, 2025. - July 10, 2025.
- ◆ Conference Day : July 10, 2025.
- ◆ Conference Place: Budapest University of Economics and Business, Faculty of Finance and Accountancy, Buzogány u. 6-10, Budapest, H-1149, Auditorium IV.
- ◆ Opening Ceremony
  - Date: July 10, 2025. AM 9:30 – AM 10:00
  - The Master of Ceremony: Bae, IL-Hyun(Hyupsung University, Korea)
  - Opening Address: Dr. Seo, Yong Gu  
(President of The Academy of Product & Technology.)
  - Welcoming Remark: Dr. Ahn, Young Hyo  
(President of The Korea Logistics Research Association, Inc.)
  - Welcoming Remark : Dr. Habil Andras Kovács (Vice-Dean of Department of Communication, Professor of Budapest University of Economics and Business)

◆ **Session I : July 10, 2025. AM 10:00 – AM: 11:50**

**Chairman: Seo, Yong-Gu (Sookmyung Womens University, Korea)**

■ **Key Note Speech : “Do Korean Employers Use the Hallyu Effect in the UK and USA?”**

**Gary Davies(Alliance Manchester Business School, UK)**

**Joon-Hye Han(Sookmyung Womens University, Korea)**

**1. The Secrets of K-Success : 1960~2024**

**Seo, Yong-Gu (Sookmyung Womens University, Korea)**

*Discussant(s): D. H. Kim(Empire Dtate College, USA)*

*Kwon, Moon-Kyu(Korea Maritime & Ocean University, Korea)*

**2. The history and importance of the Silk Road (A Selyem Út története és jelentősége)**

**Dr. Kornél Bányai, Ph.D. (Budapest University of Economics and Business, Hungary)**

*Discussant(s): Ahn, Young-Hyo (Incheon National University, Korea)*

*Ryu, Sung-Yong (Soonchunhyang University, Korea)*

**3. Museum Management in the Age of AI: Why Design Thinking Matters**

**Lee, Bo-Ram(Ph.D. in Design, Goldsmiths, University of London Director, Design Thinking Museum, UK)**



*Discussant(s): Kankesu Jayanthakumaran(University of Wollongong, Australia)*

*Bae, IL-Hyun(Hyupsung University, Korea)*

**4. European Supply Chains regarding the geopolitical changes (Az európai ellátási láncok a geopolitikai változások tükrében)**

**Dr. Zoltán Domboróczky, Ph.D. (Budapest University of Economics and Business, Hungary)**

*Discussant(s): Simon Park(Victoria University of Wellington, New Zealand)*

*Lee, Heejung(CHA University, Korea)*

◆ **Session II : July 10, 2025. PM 1:00 – PM: 5:30**

**Chairman: Ahn, Young-Hyo(Incheon National University, Korea)**

- 1. A Comparative Study of Domestic and Foreign Visitors' Perceptions for Revitalizing the New Night-Time Economy and Tourism in the Hanyangdoseong (Seoul City Wall) Inner Area**

**Han Hee Jung(Pai Chai University, Korea)**

**Jeong, Gang Hoan(Pai Chai University, Korea)**

**Nam Moon Hee(Daejeon Metropolitan Council Researcher, Korea)**

**Choi In Sub(Far East University, Korea)**

*Discussant(s): D. H. Kim(Empire Dtate College, USA)*

*Suh, Yong-Kun(Jeju National University, Korea)*

- 2. A Study on the Acquisition of Intellectual Property Rights for Emerging Korean Fashion Designer Brands in the Global Market**

**Kim, Yong-Ju(Hansung University, Korea)**

*Discussant(s): Kim, Janghyun(Kunsan National University, Korea)*

*Bhuyan Iqbal(Daffodil International University, Bangladesh)*

- 3. A Recent Study on Logistics Costs for Korean Companies**

**Jeong, Dong-Bin(Gangneung-Wonju National University, Korea)**

*Discussant(s): Yun Ji-Hyun(Baekseok University, Korea)*

*Simon Park(Victoria University of Wellington, New Zealand)*

**4. International Logistics Status and Issues-Focusing on the Current Status and Countermeasures of Japan-**

**Lee, Young-Chan(Baekseok University, Korea)**

**Mun, Sung-Hyun(Baekseok University, Korea)**

*Discussant(s): Kim, Won-Kyum(Pai-Chai University, Korea)*

*Kankesu Jayanthakumaran(University of Wollongong, Australia)*

**5. The impact of electronic voting systems on the transparency of the board, sustainable growth rates, and corporate value**

**Ryu, Sung-Yong (Soonchunhyang University, Korea)**

*Discussant(s): Muhamad Faisal Yul Zamrudi(Unisulla University, Indonesia)*

*Kim, Chang-Hyeon(Hyupsung University)*

**6. The Impact of Relational Experiences on Recommendation Intent: A Focus on the Vietnamese Market**

**Lee, Hee-Jung(CHA University, Korea)**

**Kim, Jang-Hyun(Kunsan National University, Korea)**

*Discussant(s): Amelio L. Bello(University of Philippines Los Banos, Philippines)  
Kwon, Moon-Kyu(National Korea Maritime & Ocean University,  
Korea)*

## **7. A Policy Study for the Use of Women in the Distribution Industry in Japan**

**Mun, Sung-hyun(Baekseok University, Korea)**

**Lee, Young-Chan(Baekseok University, Korea)**

*Discussant(s): Bae, IL-hyun(Hyupsung University, Korea)  
Lee, Hyun-Joo(Hankyong National University, Korea)*

## **8. A Markov Chain Analysis of the Dynamic Relationship Between Crude Oil Prices and Exchange Rates**

**Li, Zonghuo(Nanjing University of Science and Technology, China)**

*Discussant(s): Yuqing Jian(Nanjing Audit University, China)  
Andrew Lim C(Nanjing Audit University, China)*

## **9. Determinants of Supplier-Buyer Transactions in South Korea: An Analysis of Industry Compatibility and Geographic Proximity**

**Prof. Young-Hyo Ahn (Incheon National University, Institute of Digital Economy, Korea)**

*Discussant(s): Meng Haiyang(Shandong Aerospace University, China)*  
*Qaiser Farooq Dar(Ministry of Health and Family Welfare*  
*of India, india)*

## **10. The Effect of Courier Service Quality on Customer Loyalty in the Chinese Parcel Delivery Industry**

**Meng Haiyang (Shandong Aerospace University, China)**

*Discussant(s): Ahn, Kyung-Ae(Soonchunhyang University, Korea)*

*Andrew Lim C(Nanjing Audit University, China)*

## **11. Assessing the Impact of ESG Performance on Supply Chain Resilience: Evidence from the COVID-19 Shock Using PSM and DID**

**Yoshimoto Koji(Soka University, Japan)**

*Discussant(s): Lee, Young-Chan(Baekseok University, Korea),*

*Mun, Sung-Hyun(Baekseok University, Korea)*

## **12. An Analysis of the Relationship Between Coffee Consumption Growth and Green Bean Import Structure**

**Amelio L. Bello(University of Philippines Los Banos, Philippines)**

*Discussant(s): Gullbadin Farooq Dar(St. Joseph's University, India)*

*Mun, Sung-Hyun(Baekseok University, Korea)*

### **13. How the Festive Mood of China's Online Shopping Festivals Influences Consumer Repurchase Intentions**

**Hokey Min(Bowling Green State University, USA)**

*Discussant(s): Lee, Young-Chan(Baekseok University, Korea),  
Mun, Sung-Hyun(Baekseok University, Korea)*

# **DO KOREAN EMPLOYERS USE THE HALLYU EFFECT IN THE UK AND USA?**

Gary Davies  
Alliance Manchester Business School UK  
Joon-Hye Han  
Sookmyung University

## **INTRODUCTION**

- Korean employers should signal their Korean identity as positively as they can. For example, they might reference the Hallyu!
- No research could be found that tests such thinking i.e. the application of the Hallyu to employer branding.
- This paper reports the findings from an analysis of recruitment ads posted online and tagged with 'Korea+'

## SIGNALLING BY KOREAN EMPLOYERS

- Firms signal prospective job applicants to attract the best talent (Lievens & Slaughter, 2016).
- Signalling theory in a recruiting context “any instance in which prospective applicants make inferences about unknown organizational characteristics” (Highhouse, et al., 2007: 136).
- The country of origin of an employer can influence its attractiveness to potential employees (Hong and Kim, 2017).



## HYPOTHESES

- **H1:** *Korean company recruitment ads in a foreign market will make direct or indirect reference to the imagery associated with the Hallyu.*
- **H2:** *Signalling by Korean companies will differ by country (USA vs UK)*
- **H3:** *Less established (i.e. local) employers will be more likely to use more Korea related signals in their job ads.*



# CONTENT ANALYSIS OF RECRUITMENT ADVERTISING

- Monitoring the skills required in a profession (Harper, 2012)
- Legal perspective (Leong et al., 2004).
- Content clarity and credibility (Wilden et al., 2010).
- Muruganantham et al. (2020) the wider the content relating to the job and the employer, the more positive the attitude of the job seeker.

## METHODS



- Download 100 recruitment ads tagged 'Korea....' in both the UK and USA from Indeed.com, a global listings service who 'scrape' job ads from various sources including company websites and recruitment services.
- Representativeness checked by reference to competitor websites Glassdoor and LinkedIn.
- Counts made of the number of references to Korea or Korean and separately of references to Korean language abilities
- Thematic analysis of the more affective content of each advertisement

## SAMPLE

- Firms operated in 55 different business areas, the most frequent being restaurants (45), cosmetics companies (21), electronics firms (15) and banks (12).
- Job titles varied widely, from director/vice president to warehouse operator. The most frequently advertised roles were for a retail assistant (7) and kitchen staff (7).
- Most jobs were full time or with a choice of full or part time. 17 were part time only and of these 16 were in the UK sample.

## FINDINGS

- Significantly more ( $p < .001$ ) of the American advertisements were from large, established firms predominantly MNCs (69%) compared to the British sample (28%).
- 53% of advertisements included competence in the Korean language as either mandatory or desirable.
- MNC's more likely to demand this in the UK

## LANGUAGE PREFERENCE

- One Samsung advertisement explained: *'we require an individual with fluent Korean / English speaking and writing skills for this role due to heavy interaction with colleagues at Samsung HQ in Korea'*. The use of a common language also helps create a corporate identity. Barriers can be created if communications require translation (Peltokorpi & Vaara, 2014).
- However, this could create a problem, particular in the UK where there are few ethnic Koreans and Korean is rarely taught as a second language

## FINDINGS

- MNCs appear to take the American market more seriously while in the UK, the absence of Korean MNCs might have encouraged entrepreneurs to market their businesses strongly and ahead of increasing attention from MNCs. H3 supported
- Of the 20 UK businesses which were not MNCs, only 2 appeared to have one or more directors who held Korean nationality. Companies with a less valid claim to be Korean were signalling a Korean identity significantly more than the group with their origins rooted in Korea itself (the MNCs). H2 supported.

## MNC VS LOCAL COMPANIES

- Advertisements from MNCs contained significantly ( $p < .005$ ) fewer Korea-related signals in both countries supporting H2.
- Our interpretation would be that if employers are small and less well known they would benefit more from 'borrowing' a Korean identity, and not having a Korean head office nor owners who spoke only Korean, language ability was less important.

## FINDINGS

- Significantly more ( $p < .001$ ) of the American advertisements were from large, established firms predominantly MNCs (69%) compared to the British sample (28%).
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## DETAILED EXAMPLES

- Cosmetics business **PureSeoul** ads asked for a *'strong passion and existing knowledge of the Korean beauty industry'*
- Food and general retailer **Oseyo** was seeking part time retail assistants and said: *we bring the elegance, tradition, vibrance and excitement of Korea to the UK and our name means 'Welcome' in Korean.*
- Island Spa & Sauna, *'welcomed its clients to your serene Korean oasis in Edison', explaining they were: 'upholding Korean jjimjilbang culture, we provide a stress-free escape'.*
- Larger companies could also use similar language. Korean Air said it was *'promoting Korean culture and hospitality worldwide'.*

## THEMATIC ANALYSIS: CULTURE (58 MENTIONS)

- Hyundai described *'a culture that is fast-paced, dynamic, energized, agile, and collaborative'.... 'where employees feel appreciated for their contributions, proud of their company, and thrive to be passionately invested in HCA's success'.*
- One restaurant business required a chef to *'have a deep understanding and passion for Korean culture and food'.*

## THEMATIC ANALYSIS: FAST PACED (68)

- An ad for a Senior Vice President for Human Resources at 174 Power Global specified applicants *'must be adaptable and able to thrive in a fast-paced environment'* and be able to *'quickly work into new tasks and accommodate new circumstances'*.
- Software company Marvellous Designer wanted candidates to have the *'ability to work in a fast-paced, business environment'*
- The Korean adverb ppalli means 'hurry up', 'quickly', or 'fast' in English. The frequent double use of ppalli ppalli not only serves to linguistically intensify time urgency in a particular communicative situation, but it also represents a Korean character trait denoting a desire to get things done very quickly (Hyun, 2020).

## THEMATIC ANALYSIS: PASSION(75)

- Woori America Bank explained *'we are now hiring people who have passion for providing our customers high-quality financial services'*.
- Advertising agency Cheil described themselves as *'sharing a passion for developing groundbreaking ideas rooted in data'*.
- Hyundai envisaged that *'the future of our organisation lies in the passion and capabilities of individual members'* and invited applicants who *'share our passion for rethinking what's possible'*.
- 'Passionate' translates to '열정 (yeoljeong)' in Korean, a combination of '열 (yeol - eagerness)' and '정 (jeong - attachment)'. It goes beyond simply interest or enthusiasm for or attachment to something. It signifies a state of being prepared to put in effort and make sacrifices for it. 'Passionate' is one of the top keywords in the ideal personnel profiles for leading Korean companies (Bae & Lee, 2015).



## DISCUSSION

- Few of the local group appeared to have links within Korea. Most were small or medium sized businesses, the largest being H Mart, which originated in the USA.
- Some founders appeared to be second generation Korean
- However, some founders were clearly not of Korean extraction but had still adopted a Korean identity for their business.
- As expected, smaller, less established businesses made the most Korea related references. What was not expected was that none of them originated from Korea!

## DISCUSSION

- Established Korean multinationals may have had two motives for focussing only on being bilingual (Korean-English) and not using Hallyu related signalling. Employing speakers of the MNC's home language improves knowledge transfer and communication (Peltokorpi and Vaara, 2014). And they may also see themselves as global rather than Korean companies.
- Smaller, local companies see an advantage in using the considerable investment by Korea building positive associations with things Korean

## CONTRIBUTIONS

- Much of the Hallyu literature emphasises consumers, the exports of Korean products and inbound tourism. Other stakeholders matter!
- Korean employers may wish to consider the benefits from cultural references to their homeland in their foreign recruitment ads. Be proud of being Korean!
- The work adds to the limited literature on the attractiveness of working for foreign firms (e.g. Froese et al., 2010), to current work on the role of the Hallyu in international business and to that on the recruitment of employees by foreign firms (Peltokorpi & Vaara, 2014).

## FURTHER WORK

- Monitoring recruitment advertising by MNC's can provide insights into globalisation
- No ads contained any visual material, not even a company logo.
- Most advertisements contained limited information about the employer, a worse picture than that painted in prior work (Ryan et al., 2000)
- The words passion or passionate, can denote something subtly different between Korean and English, with the danger that what a Korean employer is trying to signal is not what a British or American national might assume



## OTHER MANAGEMENT IMPLICATIONS

- Larger, established Korean companies often appear to see no need to or benefit from signalling their Korean identity. Should they?
- HR professionals appear to ignore the benefits from including affective content within recruitment advertising. Few in our sample used an appeal to an applicants' emotions.
- Employee advertisements are an opportunity for companies to promote a positive company image (Rafaeli, 2000) alongside information about the role itself (Ganesen et al., 2018). Few chose to do so here.



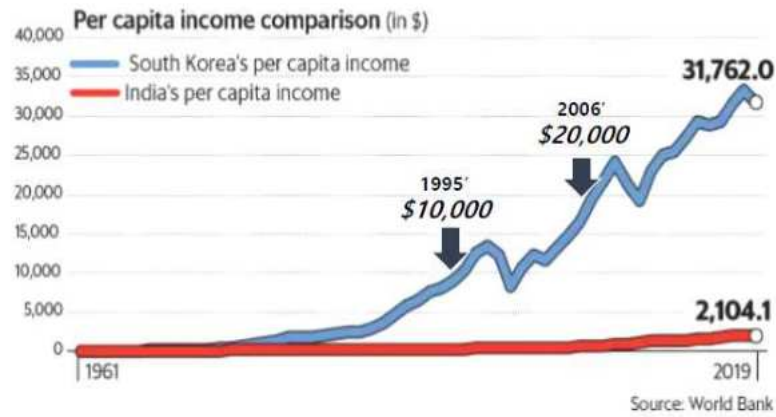
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### I . K-Success

### II. T-S Strategy

- 1) Time Strategy
- 2) Space Strategy

## South Korea's National Strength Today



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## South Korea's National Strength Today



### 1. Innovation & Technological Competitiveness

- WIPO Global Innovation Index (2024): **6th**
- Bloomberg Innovation Index (2021): **1st**
- IMD World Digital Competitiveness Ranking (2023): **8th**
- UN/WITS High-tech Exports (2022): **5th**

### 2. Digital Governance

- UN E-Government Index (2022): **3rd**

### 3. Cultural Influence & Human Capital

- Simon Anholt Good Country Index – Cultural Influence (2021): **6th**
- PISA Mathematics Performance (2022): **6th**

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## Time - Space Strategy



- Korea's national development has been guided by a **Time-Space strategy**—aligning industrial evolution over time with region-specific specialization.

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## T-S Strategy

strategic framework that combines historical timing with geographical specialization



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## II. T-S Strategy

### 1) Time Strategy

### 2) Space Strategy

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## Time Strategy (Hard Power)



**Hard Power 1.0** (1949')

### Land Reform

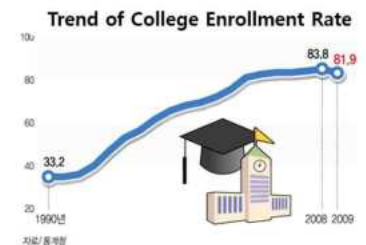
Land was redistributed to farmers, giving people ownership and a democratic foundation to build on.



**Hard Power 2.0** (1962~1996)

### 5 Year Economic Development Plans

Led by four presidents from Park Chung-hee to Kim Young-sam, Korea's seven 5-Year Economic Plans drove rapid industrialization.



**Hard Power 3.0** (2008~)

### Knowledge-Based Growth

83.8% university enrollment led to a knowledge-based economy.

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## 5-Year Economic Development Plan

Plan	Years	President	Main Projects	Key Industries	GDP per capita
1st	1962–1966	Park Chung-hee	Infrastructure, light industry	Textiles, clothing, food processing	~\$87 → ~\$130
2nd	1967–1971		Develop basic materials, boost exports	Cement, fertilizers, steel	~\$150 → ~\$250
3rd	1972–1976		Heavy & chemical industrialization	Steel, shipbuilding, petrochemicals	~\$310 → ~\$670
4th	1977–1981	Park Chung-hee -> Chun Doo-hwan (from 1980)	Energy projects, start of electronics	Oil refining, nuclear energy, electronics	~\$980 → ~\$1,700
5th	1982–1986	Chun Doo-hwan	Tech development expand exports	Semiconductors, computers, automation	~\$2,000 → ~\$2,800
6th	1987–1991	Roh Tae-woo	Market liberalization, infrastructure, autos	Telecommunications, automotive, construction	~\$3,400 → ~\$6,200
7th	1992–1996	Kim Young-sam	Knowledge economy, globalization, innovation	IT, multimedia, services	~\$7,200 → ~\$13,000

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## Time Strategy (Soft Power)



### Soft power 1.0 (1998~)

#### Government-led Cultural Opening

President **Kim Dae-jung** emphasized "culture as national power," laying the foundation for the Korean Wave (Hallyu).

### Soft power 2.0 (2002~)

#### Korean Wave's first boom

Korean dramas like **Winter Sonata** captured hearts across Asia, particularly in Japan and China.

### Soft power 3.0 (2017~)

#### Global K-culture expansion

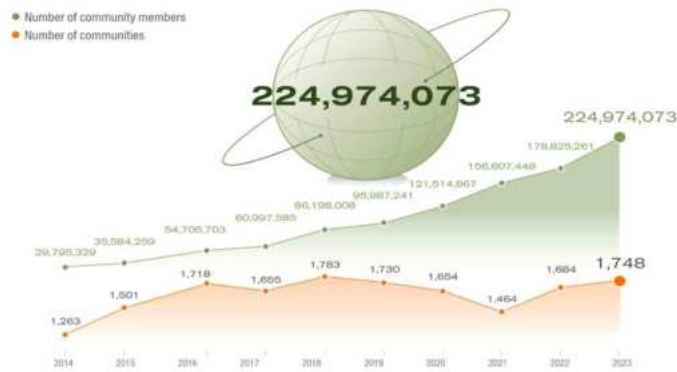
K-pop groups like **BTS** have become global icons, shaping youth culture, fashion, and politics.

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## Time Strategy (Soft Power)

- **Hallyu (Korean Wave)** : a term used to describe the global popularity of South Korean culture.
- Began in the 1990s and has had significant global influence for over 20 years since the 2000s.

Growth trend in the number of Hallyu community members worldwide



Source : 2023 Analysis of Global Hallyu Status, The Korea Foundation

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## II. T-S Strategy

1) Time Strategy

2) Space Strategy

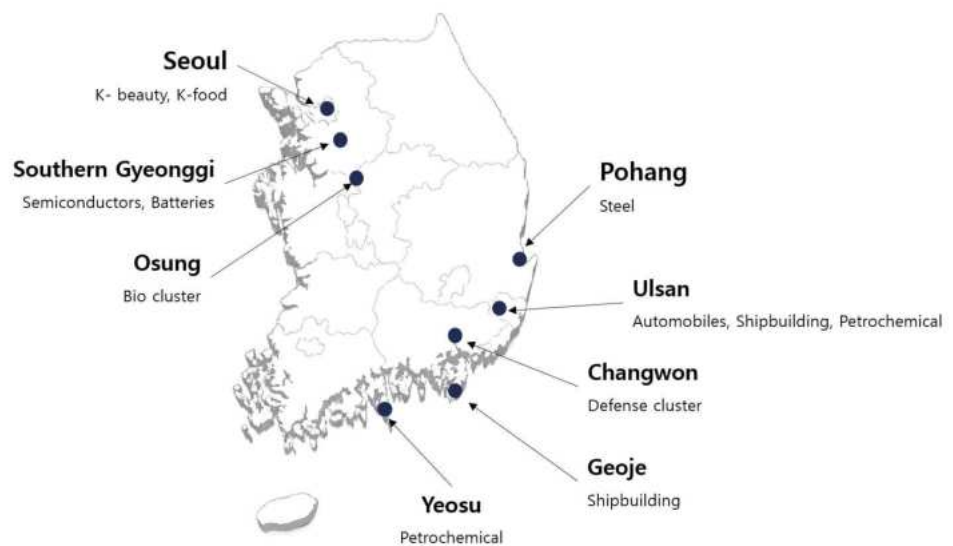
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## Korea's Top 10 Industry



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## Korea's Industry Clusters



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## Pohang



Population	492,518
Area	1,130.08 km²
GRDP per capita	36,113 USD

15



POSCO Plant in Pohang

posco

HYUNDAI  
STEEL

- POSCO, established in 1968, consistently ranks among the top 5 steel producers worldwide by crude steel output and revenue.
- In 2023, POSCO Holdings reported over USD 60 billion in revenue, highlighting Korea's strong position in the global steel value chain.

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## Ulsan



Population	1,098,728
Area	1,057.14 km <sup>2</sup>
GRDP per capita	65,352 USD(1 <sup>st</sup> )

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Hyundai Motor major industrial sites



S-Oil Petrochemical complex



Hyundai Heavy Industry

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## Changwon



Population	1,001,902
Area	747.1 km <sup>2</sup>
GRDP per capita	30,000USD

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K-9 Thunder



K-2 Black Panther



FA-50



- The Changwon Defense Innovation Cluster is Korea's core defense hub, home to major firms like Hanwha Aerospace, Hyundai WIA, and SNT Dynamics.
- It produces key systems such as the K9 howitzer, K2 tank, and aerospace engines, supported by strong R&D and academic networks.
- South Korea ranked 9th in global defense exports (2022), reaching \$17B in 2023, aiming for Top 5 worldwide.

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## Geoje



Population	232,921
Area	402.3km <sup>2</sup>
GRDP per capita	43,900 USD

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**SAMSUNG**  
**SAMSUNG HEAVY INDUSTRIES**

 Hanwha Ocean

- Korea ranks among the top 2 shipbuilding nations, competing with China for global leadership.
- In high-value ships like LNG carriers and VLCCs, Korea holds over 80% of global orders.
- Backed by advanced technology and large-scale shipyards, Korea leads in quality, efficiency, and innovation.

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## Yeosu



Population	268,823
Area	503.33 km <sup>2</sup>
GRDP per capita	36,000 USD

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Yeosu Petrochemical Complex



- Since the 1980s, Korea developed large-scale petrochemical complexes in Yeosu.
- These hubs produce fuels, plastics, synthetic rubber, and textiles, supporting Korea's materials exports. Yeosu was once the nation's most valuable industrial complex by annual output (~\$75–80 billion USD).

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## Osong



Population	31,586
Area	40.72km <sup>2</sup>
GRDP per capita	30,000 USD

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- **Osong Bio Valley**, located in **Cheongju**, is Korea's national hub for **biopharma and medical technology**. It hosts key institutions like the **MFDS** and **KDCA**, integrating **research, regulation, and industry** in one site.
- Specializing in **vaccines, diagnostics, and biopharmaceuticals**, Osong plays a central role in Korea's global biotech strategy. Its strong infrastructure and strategic location make it a core base for biohealth innovation.

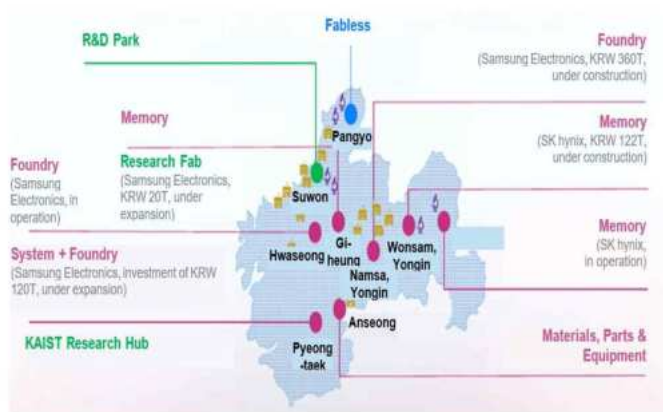
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## Southern Gyeonggi (Suwon)



<b>Population</b>	1,195,045
<b>Area</b>	121.04km²
<b>GRDP per capita</b>	31,300 USD

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Semiconductor Clusters in Gyeonggi



- Since the late 1980s, semiconductors have become Korea's core growth driver in IT and electronics.
- Samsung and SK hynix are global leaders in memory chips with new mega fabs expanding in Yongin and Pyeongtaek.
- Korea now envisions global leadership through a world-class mega cluster.

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 LG Energy Solution



LG Energy Solution's Ochang plant

**SAMSUNG SDI**



Samsung SDI's Cheonan battery factory

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## Seoul

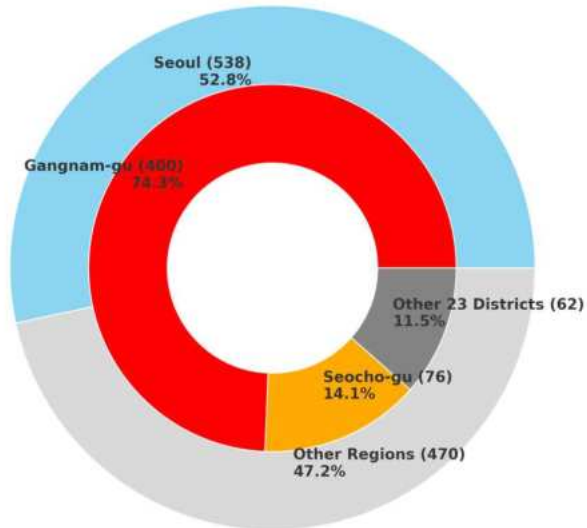


<b>Population</b>	9,605,419
<b>Area</b>	605.25km <sup>2</sup>
<b>GRDP per capita</b>	43,400 USD

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## K-Beauty Belt : Gangnam



\*\*Status of Plastic Surgery Clinics by Year and Region in Korea (as of June 2020)

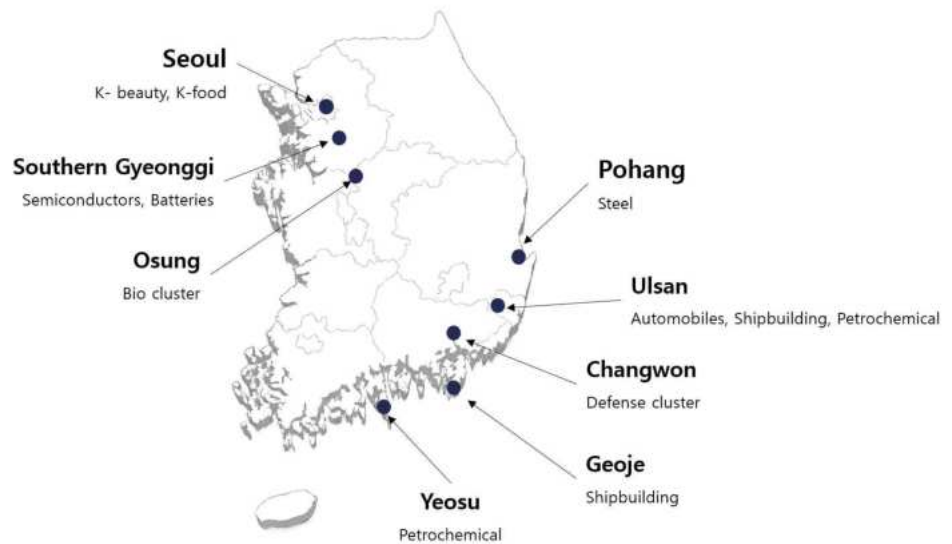


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## Rising of K-food



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**The history and importance of the Silk Road (A Selyem Út története és jelentősége)**

**Dr. Kornél Bányai, Ph.D.**

**(Budapest University of Economics and Business, Hungary)**



**Dr. BORAM LEE** Director, Design Thinking Museum    Ph.D. Design University of London, Goldsmiths

## **Museum Management in the Age of AI: Why Design Thinking Matters**



### **Academic and Professional Background**

Ph.D. in Design, Goldsmiths, University of London

Director, Design Thinking Museum (current)

Chair of International Affairs / Board Member, Korean Private Museum Association (current)

Adjunct Professor, Ewha Womans University (current)



Dr. Bo Ram Lee



Design Thinking Museum



## AI-Powered Exhibitions at the Design Thinking Museum



### The House of Tales | Artist AI

The House of Tales is a series of illustrations created through the collaboration of artificial intelligence (AI) and human imagination, reconstructing worlds inspired by fairy tales.

The artwork invites viewers into scenes reminiscent of classic fairy tales, encouraging them to envision the homes and castles where the characters might have lived. These prompts were designed to shape the visualization of homes or castles belonging to familiar characters from fairy tales and legends, which the AI brought to life visually.

Viewers are invited to engage actively with the artwork by speculating which character's space each image represents and imagining the stories surrounding it.



### 2025 Special Exhibition: The Story of Dano — Dano in Joseons | Artist AI

This exhibition showcases the thousand-year legacy of Dano, a traditional Korean festival, through animated traditional Korean paintings powered by AI.

Historical figures from Gangneung in the Joseon Dynasty—Shin Saimdang, Yi I (Yulgok), Heo Nanseolheon, and Heo Gyun—are reinterpreted as animated characters in the style of traditional Korean painting (hangukwa) using advanced AI technologies.

By merging tradition, technology, and art, the exhibition offers a unique and emotionally engaging experience that honors Korea's artistic heritage while opening new creative horizons through digital innovation.

- A museum serves as a public cultural platform with five core functions: Collecting, Preserving, Researching, Exhibiting, and Educating.
- All five functions share a central axis: archiving, which enables the preservation and sharing of cultural assets and fosters social experience and learning.



Collecting



Preserving



Researching



Exhibiting



Educating

- Museums are vast repositories of cultural data—ideal for AI’s data-driven learning and analysis.



Art Storage Area



Cultural Artifact Storage

- AI enhances both operational efficiency and visitor experience by supporting collection management, visitor analytics, and personalized exhibition recommendations.



- Curation: Automated classification, algorithm-based personalized recommendations



The Cultural Heritage Standard Management System was developed by the Korean government and is operated and managed by the National Museum of Korea.

All officially registered and authorized museums and art museums across South Korea are required to use this system register their collections accordingly.

- Content Creation: AI-generated images, voice and language-based storytelling



Museum of Jewish Heritage

Survivor Stories, An Interactive Experience

Partner Institution: USC Shoah Foundation

Technology: High-definition recorded interviews combined with an AI-based Natural Language Processing(NLP) system

Method: When a visitor asks a question, the AI searches through pre-recorded video responses and delivers the most relevant answer in real time.

Purpose: To allow visitors to experience historical events in a more emotional and personal way - by simulating a direct conversation with Holocaust survivors.

Significance: This exhibition presents a new form of AI-driven curation that enables future generations to engage in meaningful "dialogue" with survivors, preserving memory through interactive storytelling.

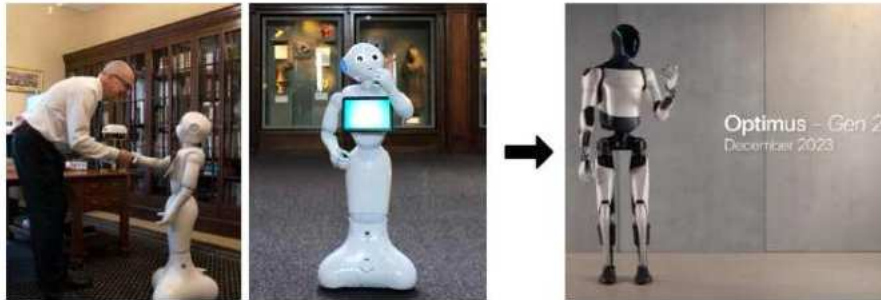


- Museum Operation: Personalized experiences can be delivered by integrating AI to reflect visitors' age, gender, and preferences.



Exhibition can be tailored to reflect the preferences and interests of visitors based on their age or gender. By integrating AI technology into museum membership programs, personalized content consumption can be enabled through mobile devices, offering each visitor a customized and engaging experience.

(Example) The Louvre: AI-based analysis of visitor movement patterns



#### AI-Powered Visitor Interaction: Pepper Robot

Several Smithsonian Institutions have introduced the Pepper robot to assist visitors by providing artwork information and encouraging interactive engagement. This AI-powered service robot enhances the museum experience through real-time communication and visitor support.

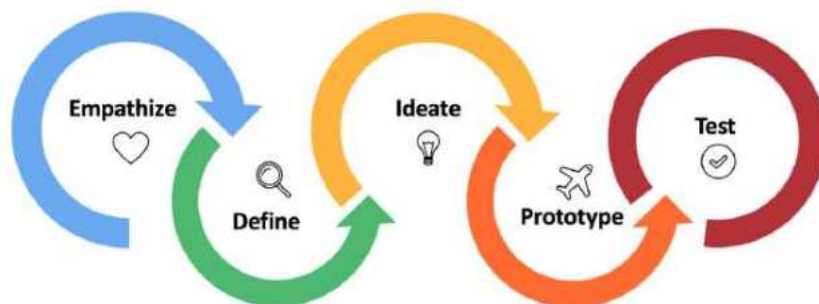
#### Predictive Maintenance System

The Smithsonian employs sensors and machine learning algorithms to predict failures in exhibition equipment and infrastructure. This proactive system ensures both the stability of the exhibition environment and operational efficiency.

As museums adopt AI technologies, how do human roles evolve to preserve meaning, emotions, and connection?

- Visitors interpret exhibitions through emotion, context, and cultural background.
- AI can process data but cannot read human emotional nuance.
- Humans perceive and translate emotional subtleties that AI cannot detect—this role is defined as the **Mediator**.

- Mediators must identify problems, interpret user experience, and collaborate with AI to generate meaningful solutions.



- This mirrors the core structure of Design Thinking: Empathy → Define → Ideate → Prototype → Test
- A human-centered problem-solving approach—not just technical operation—is essential.



## 1 Design Thinking Stage **Empathy** Analyzing Visitor Experience



Main Role of Human Mediator	Expected Impact
Conduct user research to understand visitor motivations and expectations. Interpret data with emotional context and supplement AI analysis with curatorial insight.	Improved personalized experiences through human-guided interpretation of AI visitor behavior analytics.

## 2 Design Thinking Stage **Define** Identifying Key Issues in AI Curation



Main Role of Human Mediator	Expected Impact
Define the boundaries of AI-based curation and highlight areas needing human intervention, such as emotional storytelling or ethical judgment.	Balanced curation where AI efficiency is complemented by human ethical and contextual judgment.

### 3 Design Thinking Stage **Ideate** Exploring Human-AI Collaboration Ideas



Main Role of Human Mediator	Expected Impact
Generate ideas that utilize AI tools but emphasize human-centered curation. Propose hybrid models of immersive storytelling and real-time human	Development of exhibitions that go beyond automation, offering emotionally engaging and interactive content.

### 4 Design Thinking Stage **Prototype** Simulating Human-AI Curation Models



Main Role of Human Mediator	Expected Impact
Develop and test AI-assisted prototypes with a focus on how curators and educators can guide and adapt digital interactions.	Implementation of AI tools that enhance but do not replace human storytelling and curatorial presence.

**5** Design Thinking Stage**Test** Improving AI Curation with Human Feedback

Main Role of Human Mediator	Expected Impact
Collect visitor feedback and refine AI systems. Evaluate how well the AI aligns with curatorial intent and emotional resonance.	A dynamic museum experience where AI continuously evolves through human-led feedback and quality control.

- While AI can automate museum operations, it is the human capacity for emotional interpretation that creates meaningful cultural experiences.
- Mediators connect AI with human emotion, and this process is guided by the creative framework of Design Thinking.
- AI is a tool. Humans are the designers. Design Thinking is the key that opens the path.

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## Thank You

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## A Comparative Study of Domestic and Foreign Visitors' Perceptions for Revitalizing the New Night-Time Economy and Tourism in the Hanyangdoseong (Seoul City Wall) Inner Area

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The nighttime economy is a key component of city competitiveness, generating significant economic impact in major cities such as New York, London, and Sydney. In particular, nighttime tourism has been recognized as an important area for increasing the sustainability of the nighttime economy, and the UK's Purple Flag certification program is considered a prime example of successful nighttime economy and tourism. By creating a safe and vibrant nighttime environment, the program has had a positive impact on the city as a whole. In this study, we define the new night economy and tourism as a future-oriented form of tourism that maximizes economic efficiency by focusing on specific venues and content, rather than simply extending operating hours.

Currently, Seoul's night economy and tourism policies are not systematically established, and it is necessary to develop high value-added tourism contents. Therefore, we selected the inner area of Hanyangdo Castle, which combines historical heritage and modern tourism resources, as an optimal destination for a new night economy and tourism study, and analyzed the differences in perceptions between domestic and foreign tourists.

As a result of the analysis, the introduction of night museum passes and the night opening of ancient palaces and public banks were evaluated as effective factors to revitalize tourism, and the possibility of creating specialized jobs such as nighttime professional docent operations was identified. In addition, the 24-hour weekend operation of the subway was highly desired, especially by foreign tourists, and K-food-based nighttime content was positively received by both Koreans and foreigners. Furthermore, it was analyzed that nighttime cultural heritage experiences and the creation of cultural streets would serve as attractive night tourism elements that fuse traditional and modern sensibilities.

**Key words:** night-time economy, night tourism, new night economy and tourism revitalization, Hanyangdoseong inner area (seoul's old city center), nighttime cultural facility opening, specialized night jobs, 24-hour weekend subway operations.

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## I. Introduction

The Night-Time Economy (NTE) has emerged as a new paradigm in urban economy and culture, first developed in the United Kingdom in the late 20th century to promote urban regeneration and economic growth (Jeong, 2021). Since the 1990s, policies supporting nighttime activities such as clubs, bars, restaurants, and theaters have laid the foundation for a global NTE model. Notably, the Purple Flag accreditation program, launched in the UK in 2006, has become an international model for creating safe and vibrant nighttime environments, with approximately 95 cities participating as of 2024 (ATCM, 2024).

With accelerating urbanization, cities have increasingly become hubs of economic, cultural, and social activity. It is projected that 68% of the global population will reside in urban areas by 2050, indicating the expanding role of cities (UN-Habitat, 2022). NTE has become a key pillar of urban economies, generating billions of dollars and millions of jobs annually in global cities such as New York and London. New York's night-time economy produces \$35.1 billion annually and supports 300,000 jobs, while London's NTE generates £26 billion and over 1 million jobs (WEF, 2024). These success stories suggest that urban areas must adopt integrated management approaches—ensuring safety, accessibility, and public order—for 24-hour vitality.

A major strategy to revitalize NTE is the promotion of night-time tourism, which extends visitor stays and energizes local economies. It enhances the mystical charm of cities by offering differentiated nighttime access to cultural facilities such as museums, art galleries, and heritage sites. Programs like "Culture Night" play a critical role in highlighting a city's unique character. According to the Korea Tourism Organization (2020), night tourism is estimated to have an economic impact of approximately KRW 7 trillion and can create about 40,000 jobs.

Jeong (2021) defines the emerging NTE and night tourism not merely in broad economic terms but as 'diverse forms of tourism occurring in designated night-time economy zones within cities,' emphasizing spatial specificity, economic efficiency, and wholesome tourism content. Cases such as the 95 cities with Purple Flag certification, over 300 provincial-level night cultural tourism consumption zones in China (Shen, 2024), and Korea's 10 night-tourism-specialized cities exemplify the fusion of economy and culture in nighttime development models.

Seoul, formerly known as Hanyang during the Joseon Dynasty, was the political and administrative heart of Korea, housing royal palaces and major government offices. Encircling this area, the Hanyangdoseong (Seoul City Wall) was a large-scale urban fortification that marked the boundary of the Joseon capital and symbolized its authority while defending against external threats (Hanyangdoseong Museum, 2024). The inner area of Hanyangdoseong contains abundant tourism resources, including Gyeongbokgung Palace, Changdeokgung Palace, Jongmyo Shrine, and traditional markets, and offers unique experiences when combined with

K-POP and K-drama-based Hallyu content. According to the Korea Tourism Organization (2024), approximately 80.3% of international tourists visit Seoul, and many are influenced by Korean Wave content in choosing it as a destination. However, Seoul's NTE and tourism policies remain less systematic compared to global cities like New York, London, and Sydney.

In response to this gap, the present study sets the inner area of Hanyangdoseong as a target zone for new NTE and tourism development, aiming to identify key elements for night-time activation based on visitor consumption patterns and experiential preferences. Furthermore, by comparing perceptions between domestic and international tourists, the study seeks to propose sustainable night tourism content that aligns the historical and cultural value of Hanyangdoseong with contemporary demands.

## II. Theoretical Background

### 1. New Night-Time Economy and Tourism

#### 1) Night-Time Economy

Recently, major cities around the world have come to recognize nighttime hours as a strategic means to enhance urban sustainability and competitiveness, and have been strengthening policy responses accordingly. For example, the city of London has established the "24-Hour City Vision," defining the night-time economy as an integrated concept encompassing transportation, health, culture, security, and tourism. It aims to create approximately 115,000 night-time jobs by 2030, promoting continuous growth and strengthening urban resilience (London 2017). Similarly, Sydney has concretized its strategies for the night-time economy through the "24-Hour Economy Strategy," with the New South Wales (NSW) state government systematically reviewing its policy outcomes through annual reports (NSW 2020). Japan's Tourism Agency under the Ministry of Land, Infrastructure, Transport and Tourism (2020) published the "Knowledge Collection for the Revitalization of the Night-Time Economy," proposing a policy approach that combines institutional foundations with practical tools.

Cities across Europe and the Americas have incorporated creative and culture-centered nighttime activities into urban strategies since relatively early on, nurturing the leisure and entertainment industries—centered on food, alcohol, and tourism—as core elements of the night-time economy (Bianchini 1995). However, the expansion of such activities has also led to new urban challenges, including noise, crime, light pollution, and gentrification. As a result, the need for a complex governance system that reflects temporal and spatial characteristics and fosters cooperation among diverse stakeholders has emerged, prompting a shift in night-time economy policies (Acuto, Seijas, McArthur and Robin, 2022; Lovatt and O'Connor, 1995).



Urban nighttime management systems involve a wide range of actors, from state institutions such as law enforcement to community-based informal monitoring systems. However, traditional nighttime governance models have often simply applied daytime control systems without fully addressing the unique characteristics and demands of urban life at night (Seijas and Gelders 2019). Consequently, the need for specialized administrative structures to coordinate and support nighttime activities has been increasingly recognized. The “Night Mayor” system has emerged as a new urban governance model in response to this demand.

Major cities such as Berlin, Zurich, and San Francisco have established committees or organizations representing nightclub and bar communities, acting as intermediaries between night-time economy stakeholders and city policy. These bodies contribute to nighttime urban management across various areas, including policy development, advocacy, capacity building, and infrastructure improvements (Acuto et al. 2022). Recently, this movement has been expanding on a global scale. In particular, VibeLab has developed the “Nighttime Advocacy Map,” which visually organizes night mayors, dedicated offices, and committees worldwide. This enables policymakers and urban stakeholders to compare and reference various governance models, strategies, and success cases (VibeLab 2024). According to VibeLab, more than 60 cities around the world have adopted night mayor systems or operate dedicated night-time administration offices.

The responsibilities of the night mayor system can be broadly categorized into three areas: first, the hardware aspect of improving physical infrastructure such as night transportation, public restrooms, and lighting; second, institutional improvements, including legal and regulatory reforms and noise management; and third, facilitating cooperation and mediating conflicts among various night-time stakeholders (Seijas and Gelders, 2019). Acuto et al. (2022) proposed several action principles for strengthening night-time urban governance, including institutionalizing night-time policies; ensuring co-responsibility among all stakeholders, including governments; adopting context-specific approaches tailored to each city; protecting the rights of low-wage night workers; promoting inclusivity to alleviate social inequality; transitioning to a fair-wage, sustainable-infrastructure-based night-time economy; collecting and analyzing night-time specific data; and developing strategies that consider urban sustainability. These are evaluated as key guidelines for comprehensive and sustainable development of the night-time economy.

Meanwhile, the U.S.-based Night Time Economy Culture & Policy Alliance (NITECAP, 2024) emphasizes that “a livable city requires a vibrant night-time economy.” As evidence, they cite the Economist Intelligence Unit’s (EIU) Global Livability Index, which includes the efficiency of nighttime economic activity as an indicator directly tied to urban quality of life (EIU 2024).

The Purple Flag program is a certification system aimed at promoting safe and attractive night-time environments and stimulating urban night-time economies. It is managed by the Association of Town and City Management

(ATCM) in the UK and recognizes exemplary cases of cities and districts contributing to regional revitalization through the night-time economy. As of June 2024, 95 cities across six countries have received Purple Flag certification. To be certified, cities must meet five core criteria: clear strategy, wellbeing, mobility, appeal, and placemaking. These standards serve as critical components for building a successful night-time economy through the Purple Flag program.

Trends in nightlife research also support this direction. Notre (2023) highlights that nightlife has evolved beyond mere consumption into a cultural domain that contributes to community building, multicultural understanding, and socio-emotional wellbeing. He underscores the need for sustainable and inclusive nightlife strategies in future urban policies and calls for a shift in perspective to recognize the social and cultural value of night-time culture within the broader scope of urban governance.

## 2) Night Tourism

Night tourism is increasingly recognized as a key factor underpinning the sustainability of the night-time economy, drawing heightened interest from governments and major cities around the world. The United Nations World Tourism Organization (UNWTO, 2019) defines tourism as the act of individuals or groups traveling to a region outside their usual environment for purposes such as rest, enjoyment, education, and cultural experiences. Tourists are defined as those who stay at least one night in a destination outside their home country for reasons such as leisure, business, family visits, medical treatment, or religious purposes. The Korea Tourism Organization (2020), applying the concept of nighttime to tourism, defines night tourism as “a tourism phenomenon based on the utilization of various local resources that can only be enjoyed at night.”

Definitions of nighttime hours vary by country and policy objective. For instance, Sydney’s 24-Hour Economy Strategy (NSW, 2020) divides the 24-hour day into four periods: daytime (6:00 AM – 6:00 PM), evening (6:00 PM – 9:00 PM), night (9:00 PM – 2:00 AM), and late night (2:00 AM – 6:00 AM). The Korea Tourism Organization (2020) further classifies night tourism into three segments: early night tourism (6:00 PM – 9:00 PM), core night tourism (9:00 PM – midnight), and mobility activation time (midnight – 3:00 AM). These segmentations serve as a framework for the systematic analysis and management of nighttime economic and tourism activities. Jeong Kang-Hwan (2021) categorizes the time from 6:00 PM to midnight as the “Evening Economy” and from midnight to 6:00 AM as the “Late Economy,” highlighting differences in economic activities by time period.

In London, one in eight jobs is classified as a night-time job, with approximately 725,000 people engaged in industries related to culture, tourism, leisure, and services during the night, underscoring the significance of the night-time economy to the city’s overall economic structure (Greater London Authority, 2017). In Korea, the Korea Tourism Organization (2020) reported that direct tourism expenditure associated with night tourism is estimated at approximately KRW 3.9 trillion, with potential job creation of



around 40,000 across all sectors, including tourism. As such, global cities are increasingly formulating tourism strategies based on the economic value of nighttime hours, developing sound cultural and tourism content for the night, and reinforcing public safety. This trend reflects a growing recognition of the night-time economy not as a supplementary activity, but as a core element of urban economic development and tourism revitalization.

The futurist and 'father of modern management,' Peter Drucker (1935), argued in *Innovation and Entrepreneurship* that "the 21st century will see nations compete through their cultural industries," positioning culture as a critical pillar of national competitiveness. Media scholar Henry Jenkins (2006), in *Convergence Culture*, introduced the concept of "convergence culture," emphasizing the interactive relationship between various media and users. This phenomenon refers to the merging of media such as television, film, the internet, and gaming into an integrated experience, characterized by user participation and creativity.

With the expansion of the internet and digital platforms, global services like YouTube and Netflix have emerged at the forefront of cultural content competition. In response, nations have strengthened policies to protect and foster their domestic cultural industries. Korea's Hallyu (Korean Wave) promotion policy is part of this global trend, and the cultural industry is now regarded as a primary driver of national growth in what is often referred to as the "Century of Culture." Major countries like the United States and the United Kingdom are also providing strategic support to their cultural sectors, with the international competition over cultural content in the digital age increasingly framed as a "culture war."

### 3) New Nighttime Economy and Tourism

In his book, Jeong Kang-hwan (2021) defines the 'new nighttime economy and tourism' as "various forms of tourism occurring within newly designated nighttime economy zones, encompassing primarily wholesome tourism products and including tourism activities and strategies shaped by specific locations and time periods." He emphasizes that this form of night tourism possesses economic efficiency and forward-looking potential, and has the capacity to evolve into innovative and concrete tourism content. In other words, the nighttime economy is no longer a concept limited to specific consumption behaviors but is now recognized as a strategic tool for enhancing urban competitiveness and sustainability.

At the global level, the advancement of urbanization and technology has further highlighted the importance of the nighttime economy. The United Nations' World Cities Report (UN-Habitat 2022) forecasts an increase of over 2.2 billion in the urban population across Asia and Africa by 2050 and identifies the nighttime economy as a key strategy for sustainable urban growth. The World Economic Forum (2024) also reported that as of 2023, approximately 56% of the global population resides in urban areas, 65% are internet users, and 75% of jobs require digital skills. This underscores the necessity of adopting 24-hour urban operation strategies in the digital age. Furthermore, the nighttime economy generates tens of billions of dollars in

economic value annually and creates millions of jobs. For example, New York City's nighttime economy contributes USD 35.1 billion annually and supports approximately 300,000 jobs, while London's nighttime economy contributes GBP 26 billion and supports over 1 million jobs (WEF 2024).

Climate change and shifting urban living conditions further support the need to activate the nighttime economy. In Saudi Arabia, due to extreme heat, it is common for citizens to enjoy nighttime picnics in parks. Similarly, countries like the United States and the United Arab Emirates have implemented policies such as opening parks, beaches, and public spaces at night and installing lighting. According to the Mastercard Economics Institute (MEI 2024), weekend nighttime spending in New York City's financial district increased by 135% post-pandemic, highlighting the role of nighttime consumption and tourism in economic recovery.

Institutional approaches for promoting both the nighttime economy and night tourism are also spreading. A representative example is the 'Purple Flag' certification program administered by the UK's Association of Town and City Management (ATCM), which designates areas that provide safe and vibrant nighttime urban environments. In China, the central government is actively promoting nighttime cultural tourism consumption, designating a total of 345 nighttime cultural tourism consumption zones between 2022 and 2024. In 2023 alone, the 243 designated zones recorded a cumulative 3.12 billion visitors, marking a 56.4% increase from the previous year (Shim Gi 2024).

In Korea as well, the activation of night tourism has been adopted as a major policy task to achieve qualitative advancement in the tourism industry. According to a 2020 survey by the Korea Tourism Organization, night tourism activities increased the average length of stay for travelers from 7.2 to 7.9 days, generated approximately KRW 330.9 billion in value-added effects, and induced KRW 1.3592 trillion in production effects. Furthermore, the results included the creation of approximately 15,835 jobs and 9,093 employment opportunities, confirming its tangible economic benefits. In response, the Ministry of Culture, Sports and Tourism launched the 'Night Tourism Specialized Cities' initiative in 2022, starting with Incheon Metropolitan City and Tongyeong in Gyeongnam Province, and designated a total of 10 cities as night tourism hubs by 2024, steadily expanding related policies.

Amidst these global trends, the convergence of the "nighttime economy" and "night tourism" signifies the emergence of a new urban tourism model, conceptualized as the "new nighttime economy and tourism." This model centers on specific urban zones and operates tourism programs and events tailored to nighttime hours. By organically combining cultural, artistic, and economic elements, it offers differentiated experiences to tourists while revitalizing the local economy. In addition, infrastructure development and policy support to enhance the safety and accessibility of nighttime tourist sites are pursued in parallel, contributing to the formation of a sustainable urban tourism ecosystem.

Therefore, this study defines the new nighttime economy and tourism not



merely as a shift in time but as a future-oriented, economically efficient, and complex tourism model based on spatial specificity and operational constraints.

## 1. Hanyangdoseong(Seoul City Wall) and Hallyu(or Korean Wave)

### 1) The Inner Area of Hanyangdoseong (Seoul's Historic City Center)

Following his enthronement, King Taejo of the early Joseon Dynasty designated Hanyang as the capital and constructed Hanyangdoseong (Seoul City Wall) to defend against external invasions. Gyeongbokgung Palace served as the political center, while Jongmyo Shrine and Sajikdan Altar, located within forested areas, emphasized sacredness as ritual spaces. The wall was built along the ridgelines of the city's four inner mountains—Baegaksan, Inwangsan, Namsan (Mokmyeoksan), and Naksan—with eight gates, including Heungnamun (Dongdaemun) and Dornimun (Seodaemun), installed around Unhyong-ro, the city's main thoroughfare. King Taejong reinforced the urban structure by constructing Changdeokgung Palace, and under King Sejong, additional fortifications completed the delineation of Harseongbu, the capital jurisdiction. During this period, Namdaemun-ro and Unhyong-ro developed into major commercial hubs (Seoul Museum of History, Hanyangdoseong Research Center 2015).

Hanyangdoseong functioned as a defensive barrier when closed and as a passageway when open, regulating the daily rhythms and routines of city residents. Initially built in 1396 using earth in flat areas and stone in mountainous regions, the wall underwent a transformation under King Sejong when the earthen sections were replaced with stone, giving rise to its current form. Although the structure suffered partial demolition during the Japanese colonial period and the Korean War, full-scale restoration efforts began in the 1970s. Today, it stands as a prominent historic and cultural landmark within the urban landscape. With an average height of 5 to 8 meters and a total length of approximately 18.6 kilometers, Hanyangdoseong is recognized as one of the world's largest and longest-functioning city walls. It was designated Historic Site No. 10 in 1963 and was officially renamed "Seoul Hanyangdoseong" in 2011 (Hanyangdoseong Museum Website 2024).

The inner area of Hanyangdoseong, in particular, has evolved into a composite cultural tourism destination where tradition and modernity coexist, supported by diverse tourism resources such as royal palaces, museums, traditional markets, and craft alleys. Historic palaces and traditional architecture serve as venues for experiencing historical depth and Korean identity, while hands-on cultural activities—such as hanbok (Korean traditional attire) experiences, visits to K-drama filming sites, and participation in Korean cuisine and K-beauty programs—provide international visitors with authentic cultural engagement and enhance the

appeal of the area.

According to a 2023 survey by the Ministry of Culture, Sports and Tourism, approximately 80% of foreign tourists visit Seoul, with major destinations within Hanyangdoseong, such as Myeongdong (14.9%) and Gyeongbokgung Palace (8.7%), ranking among the top 10 tourist attractions. Notably, those in their 20s and 30s account for 49.2% of foreign tourists, and when including teenagers and early 40s, the proportion rises to 62.6%, indicating that younger generations now form the core segment of Seoul's tourism market. This trend suggests that the inner area of Hanyangdoseong—rich in historical and cultural significance—must provide attractive nighttime tourism content and experiences tailored to the interests of this demographic.

Therefore, the inner area of Hanyangdoseong possesses strong potential for expanding unique night tourism offerings grounded in Seoul's tradition and identity. Systematic tourism revitalization strategies and policy support are urgently required to realize this potential. Through the preservation of its historic and cultural heritage, and the development of night tourism content that reflects the preferences of young travelers, the inner city area can be positioned as a globally recognized hub for cultural tourism.

### 2) Hallyu within the Hanyangdoseong Area

Hallyu, also known as the Korean Wave, refers to the global popularity of Korean pop culture. According to the Standard Korean Language Dictionary by the National Institute of the Korean Language, it began in the late 1990s in China, Japan, and Southeast Asia. The Oxford English Dictionary describes Hallyu as the growing international interest in Korea and Korean popular culture, represented by the global success of Korean music, film, television, fashion, and cuisine. The Korea Foundation for International Cultural Exchange defines Hallyu as the widespread consumption of 11 types of Korean cultural content—such as dramas, variety shows, films, K-pop, animation, publications, webtoons, games, fashion, beauty, and Korean cuisine—recognized internationally as distinctly Korean.

The Hanyangdoseong area, which encompasses the historical city center of Seoul, is rich in Hallyu-related content. This area offers diverse experiences for foreign visitors, such as drama and film shooting locations, hanbok experiences, K-beauty, Korean cuisine, entertainment and busking performances, as well as traditional crafts and webtoons. These contents are implemented within traditional spaces of Seoul, allowing foreign tourists to simultaneously experience both Korea's heritage and its contemporary sensibilities.

The global spread of Hallyu has had a positive effect on enhancing Korea's "soft power." Soft power, as defined by Nye (1990), is the ability to achieve desired outcomes through attraction rather than coercion or payment. Korea is highly regarded in this regard. In 2021, the Oxford English Dictionary newly listed 26 Korean-origin words related to Korean culture, reflecting its strong global influence. Furthermore, according to the IMF's 2024 report, Korea ranked highest in the Global Soft Power Index, indicating



that the worldwide spread of Hallyu continues to strengthen Korea's cultural influence (Serhan Cevik & Tales Padilha, 2024).

According to the 2024 issue report by the Korea Tourism Industry Portal, the travel style of foreign MZ generation tourists has changed significantly in the post-pandemic era, showing a clear preference for experiencing the daily life of Koreans, as seen in the trend of "dailycation" (daily + vacation). These tourists prefer local attractions discovered through social media and YouTube rather than traditional tourist sites, and seek personalized travel experiences in places like Sinsalla-gil in Seoul. Therefore, within the Hanyangdoseong area, there is a need to enhance local experience elements and offer creative, immersive tourism experiences through digital content. The MZ generation includes Millennials born between the 1980s and early 2000s and Generation Z born from the mid-1990s to the early 2010s (Choi Young-woo, 2020). They are familiar with digital environments and value personal preferences and experiences.

As the cultural and historical heart of Korea, the old city center of Seoul is home to numerous traditional heritage sites and cultural spaces, including Gyeongbokgung Palace, Changdeokgung Palace, and Jongmyo Shrine. These spaces, when combined with modern Korean pop culture, have garnered high interest from the MZ generation and are being reinterpreted as relatable cultural content rather than mere remnants of the past. For example, taking photos in hanbok around palaces has sparked interest in traditional fashion and culture among the MZ generation. Additionally, historical spaces in the city center that served as filming locations for dramas and movies have become familiar tourist spots for global fans. Street performances and busking in areas like Cheonggyecheon and Daehangno offer opportunities for the MZ generation to experience Korean pop culture firsthand.

In its "Seoul Tourism Future Vision Declaration" (2023), the Seoul Metropolitan Government set goals of attracting 30 million tourists and achieving a 70% return visit rate. To meet changing tourism trends, the city selected strategies such as "creating a city that's easy to travel alone," "expanding hands-on tourism content," and "generating demand for nighttime tourism." These policy directions should be actively applied to the Hanyangdoseong area as well. Content such as nightscape viewing, culinary tours, and traditional market night markets will play a key role in transforming Seoul's night into a more attractive and vibrant experience.

### 3) Major Night Tourism Resources within the Hanyangdoseong Area

#### (1) Palaces within Hanyangdoseong

In Korea, the term *gung* (宮) refers to the residence of the king and the royal family, while *gunggwol* (宮闕) refers to an architectural complex that encompassed these royal residences along with political and administrative functions (Standard Korean Language Dictionary, National Institute of Korean Language, 2024). During the Joseon Dynasty, five royal palaces were built in the capital city of Hanyang (modern-day Seoul), with

Gyeongbokgung as the main palace (*jeonggung*), and Changdeokgung, Changgyeonggung, Deoksugung, and Gyeonghuiung forming a multi-palace system within the Hanyangdoseong city walls. These palaces were established with diverse purposes: political functions of the king, royal residences, emergency refuges, residences for crown princes and royal family members, and for royal ancestral rites. In the later period of Joseon, multiple palaces were even used concurrently (Cultural Heritage Administration, 2022).

Globally, it is extremely rare to find five distinct palaces concentrated within a single walled city. Examples like the Forbidden City in Beijing, the Imperial Palace (Kokyo) in Tokyo, and the Grand Palace in Bangkok have maintained a centralized, singular palace system. Most countries developed secondary palaces in regional areas or adopted decentralized palace structures. In Europe, although multiple palaces exist—such as the Louvre and Versailles in Paris, Buckingham Palace and St. James's Palace in London, and the Hofburg and Schönbrunn Palaces in Vienna—they are typically either spread between the city center and outskirts or centralized into one political hub (UNESCO World Heritage Centre, 2023).

In contrast, Seoul's multi-palace system within the Hanyangdoseong city wall is exceptional in that the palaces were built at different times but remain clustered in the urban center. The sites and major buildings of these palaces are still well preserved, making this configuration globally unique. From historical, urban planning, and cultural heritage perspectives, this palace network in Seoul holds significant value and rarity.

Among them, Jongmyo Shrine and Changdeokgung Palace are notable heritage sites that collectively embody the political, cultural, and artistic values of the Joseon Dynasty. Their originality and universal value have earned them UNESCO World Heritage status. Jongmyo is a Confucian shrine where ancestral tablets of kings and queens are enshrined, and rituals are performed. The continuation of traditional rituals, music, and architecture gives it high intangible cultural value. It was inscribed as a UNESCO World Heritage Site in 1995 and is regarded as the world's only surviving royal ritual site (UNESCO, 1995). Changdeokgung, used as a secondary palace (*igung*), exemplifies the beauty of traditional Korean architecture and garden design that harmonizes with the natural topography. It was designated a World Heritage Site in 1997 (UNESCO, 1997). Both heritage sites are central to the historic identity of old Seoul and are now being reinterpreted as cultural hubs where tradition and modernity coexist.

Today, Seoul's royal palaces go beyond being mere historical relics and are being transformed into cultural stages that reinterpret tradition for contemporary citizens and tourists. Since 2014, the Cultural Heritage Administration has hosted the Royal Culture Festival to balance preservation and public engagement. Now held regularly in spring and autumn, the festival takes place in Gyeongbokgung, Changdeokgung, Changgyeonggung, Deoksugung, and Gyeonghuiung. It offers immersive programs such as traditional performances, exhibitions, interactive experiences, and re-enactments, tailored to each palace's historical and



spatial characteristics (Cultural Heritage Administration, press release). Since 2016, free admission has been granted to visitors wearing hanbok (traditional Korean attire), promoting traditional fashion culture. Nighttime programs like “Starlight Night Tour,” “Moonlight Tour,” and “Waterlight Performance” have also become popular for offering unique nightscape experiences. Kim Yoon-hye (2021) emphasized the need for strategic approaches to enhance the competitiveness of the festival through thematic program specialization, increased entertainment value, high-quality “killer” content, and brand image development.

Another prominent example of palace utilization for night tourism is the Jeongdong Night Walk. First launched in 2015 around Deoksugung Palace, this urban nighttime festival is praised for successfully linking Seoul’s historical-cultural assets with night tourism demand. Held every spring and autumn, the festival includes nighttime openings of historical sites, guided tours, street performances, and culinary experiences, enabling an enjoyable blend of tradition and modernity. Centered around Deoksugung Stone Wall Road, Jeongdong Theater, and Seoul Museum of Art, the festival invites citizens and tourists to engage with history and culture naturally in their daily lives.

The Royal Culture Festival and Jeongdong Night Walk go beyond being temporary events—they serve as leading examples of modern utilization of historical spaces, showcasing how cultural heritage preservation and night tourism can be harmoniously integrated.

## (2) Museums and Art Galleries

Within the Hanyangdoseong area, approximately 43 museums and art galleries—including the National Palace Museum of Korea, the National Folk Museum of Korea, and the National Museum of Modern and Contemporary Art—along with around 187 performance venues of varying sizes, offer diverse cultural experiences to tourists.

In modern society, museums and galleries serve not only as educational institutions but also as spaces for leisure and cultural enjoyment. Among strategies to boost visitor engagement, nighttime opening hours have proven highly effective. The Louvre Museum in France is a prime example of how evening operations can provide a distinct, emotionally immersive experience, enhancing visitor satisfaction and attracting new demographics. Florian Germain (2023), in his analysis of the Louvre, highlighted that night openings elevate sensory and emotional immersion, transforming museums into spaces for leisure and social interaction.

This trend has expanded across Europe, giving rise to the European Night of Museums initiative, where over 3,000 institutions participate each May with extended hours and cultural programs. Examples include “A Night at the Museum” at the Toulouse Museum and “Pyramas&al” at CAPC Bordeaux Contemporary Art Museum, offering audiences fresh and imaginative nighttime experiences.

## (3) Hanok and Hansik (Traditional Korean Food)

Hanok, or traditional Korean houses, represent a core symbol of Korean cultural identity alongside hanbok and hansik. Hanok villages located in Bukchon, Seochon, Insa-dong, and Daeon-dong—within the Hanyangdoseong area—serve as key cultural tourism resources, blending historical value with urban aesthetics. Numerous hanok hotels, guesthouses, artisan workshops, and public hanoks are now in operation, offering integrated lodging and cultural experiences to tourists.

UNWTO (2016) and KCTI (2016) have evaluated the combination of traditional architecture and regional culture as a model for creative tourism. To boost the competitiveness of hanok tourism, the development of nighttime content is essential. Foreign tourists, in particular, express great interest in experiencing traditional culture and food in hanok settings. Accordingly, evening openings on the last Friday and Saturday of each month, hanok strolls under traditional lighting, and tea ceremonies or traditional food-making workshops can offer deeply emotional and authentic night tourism experiences.

Hansik, or Korean cuisine, is more than just food—it is a complex cultural asset encapsulating Korea’s history, society, and culture. Legally defined by the Hansik Promotion Act, it includes both tangible and intangible resources rooted in traditional ingredients and cooking methods. It combines deep-rooted traditions tied to court rituals and seasonal customs with commercial potential as a modern industry. Elements such as Confucian meal etiquette and regionally adapted seasoning techniques have been pivotal in shaping its identity.

Today, hansik has evolved into a global cultural content that transcends traditional boundaries through fusion cuisine and the spread of Hallyu (Korean Wave). Known for its fermented foods and color harmony (obangsaek), hansik promotes a healthy image, and its demand has surged even in the convenience food market, especially after COVID-19. This shift reflects hansik’s transformation into a flexible and evolving cultural product that adapts to the times.

Traditional markets and Korean restaurants within Hanyangdoseong are transforming this culinary identity and charm into nighttime tourism resources.

# III. Empirical Survey and Analysis of Results

## 1. Research Design

This study aims to identify key factors for revitalizing the “new night-time economy and tourism” within the Hanyangdoseong inner area of Seoul and to analyze perception differences between domestic and foreign tourists. As the epicenter of the Korean Wave (Hallyu), Seoul enjoys high global recognition, with various Hallyu-related contents spreading from the city. Consequently, there is a growing demand among both domestic and

international tourists to visit Seoul and experience not only Hallyu culture but also traditional Korean heritage firsthand.

The study focuses on the inner area of Hanyangdoseong, one of the most visited spaces in Seoul, as the research site. Hanyangdoseong, with its historical and cultural significance, is considered a suitable location for integrating 24-hour city and night-time tourism policies. Accordingly, this study seeks to identify tourist demand by focusing on new night-time economy and tourism content that enables diverse experiences even after dark.

The survey consisted of 26 items, covering demographic characteristics and factors related to night-time economy and tourism revitalization. The target respondents included both Korean and foreign individuals aged from their late teens (university students) to their 40s. In particular, foreign respondents were limited to those from Europe and North America, where advanced night-time economy and tourism systems are already in place. This age group was selected because they represent a core segment of Seoul's tourism market (Ministry of Culture, Sports and Tourism, 2023) and show high demand for new experiences and night-time activities, making them a strategic target group for future policy development.

The survey was conducted using both online and offline methods, and a total of 411 valid responses were collected (214 from Koreans and 197 from foreigners). Data analysis was performed using the SPSS statistical software. Exploratory Factor Analysis (EFA) and reliability analysis were conducted, and independent sample t-tests were used to examine significant differences between the two groups. All statistical analyses were carried out at a 95% confidence level, with a significance threshold of .05.

## 2. Demographic Analysis of Domestic and Foreign Respondents

To identify the demographic characteristics of both Korean and foreign respondents, a frequency analysis was conducted. The results are as follows:

First, in terms of gender distribution, among the total 411 respondents, 131 were male (31.9%) and 280 were female (68.1%), indicating a relatively higher proportion of female participants.

By age group, the majority were in their twenties, with 272 respondents (66.2%). Teenagers accounted for 18 individuals (4.4%), those in their thirties were 100 (24.3%), and respondents in their forties numbered 21 (5.1%).

Regarding marital status, 340 respondents (82.7%) were single, while 71 (17.3%) were married.

In terms of educational background, 15 respondents (3.6%) had a high school education or less, 11 (2.7%) were attending or had graduated from a junior college, 285 (69.3%) were attending or had graduated from a university, and 100 (24.3%) were attending or had completed graduate school.

Looking at occupational distribution, students comprised the largest group with 258 individuals (62.8%), followed by office workers (87, 21.2%),

self-employed individuals (20, 4.9%), and other occupations (22, 5.4%). Notably, civil servants (4, 1.0%), public institution employees (3, 0.7%), and professionals (17, 4.1%) were all foreign respondents.

<Table 1> Demographic Characteristics of Korean and Foreign Nationals

Category	Total Frequency		Korean		Foreign		
	Total	Percentage	Frequency	Percentage	Frequency	Percentage	
Gender	Total	411	100.0%	214	52.1%	197	47.9%
	Male	131	31.9%	73	17.8%	58	14.1%
	Female	280	68.1%	141	34.3%	139	33.8%
Age	Total	411	100.0%	214	52.1%	197	47.9%
	10s	18	4.4%	13	3.2%	5	1.2%
	20s	272	66.2%	143	34.8%	129	31.4%
	30s	100	24.3%	50	12.2%	50	12.2%
	40s	21	5.1%	8	1.9%	13	3.2%
Marital Status	Total	411	100.0%	214	52.1%	197	47.9%
	Single	340	82.7%	178	43.3%	162	39.4%
	Married	71	17.3%	36	8.6%	35	8.5%
Education Level	Total	411	100.0%	214	52.1%	197	47.9%
	High School	15	3.6%	3	.7%	12	2.9%
	Associate Degree	11	2.7%	8	1.9%	3	.7%
	Bachelor's Degree	285	69.3%	175	42.8%	110	26.8%
	Graduate Degree	100	24.3%	28	6.6%	72	17.5%
Occupation	Total	411	100.0%	214	52.1%	197	47.9%
	Student	258	62.8%	153	37.2%	105	25.5%
	Government Employee	4	1.0%	0	.0%	4	1.0%
	Public Institution	3	.7%	0	.0%	3	.7%
	Professional	17	4.1%	0	.0%	17	4.1%
	Office Worker	87	21.2%	44	10.7%	43	10.5%
	Self-employed	20	4.9%	7	1.7%	13	3.2%
	Others	22	5.4%	10	2.4%	12	2.9%

## 3. Descriptive Analysis of Measurement Items

The descriptive statistical analysis of factors related to the revitalization of the new night-time economy and tourism within the Hanyangdoseong inner area is as follows. The survey employed a 5-point Likert scale, with responses ranging from "Strongly Agree" (5 points), "Agree" (4 points), "Neutral" (3 points), "Disagree" (2 points), to "Strongly Disagree" (1 point). The overall mean score across the 26 items was 3.79, with a standard deviation of .99.

Among all items, the highest-rated was "Introduction of a Night Museum Pass System", with a mean score of 4.45. This was followed by "Night Opening on International Museum Day" (4.30), "Night Opening of Royal Palaces" (4.26), "K-Food Evening Street Food Tour" (4.10), "Training of Night-Time Palace Storytellers" (4.08), "24-Hour Weekend Subway Operation" (4.03), "K-Dessert Night Events in Traditional Streets" (4.02), and "Traditional Alleyway Lighting with Korean Lanterns" (4.00), all of which scored above 4.0, indicating high demand.

Other items such as "Night Opening of Public Hanok Facilities" (3.96), "Weekend Discounts for Nonverbal Night Performances" (3.92), "Training of Night-Time Docents" (3.87), "City Bus Tours with Night Performances" (3.79), "Introduction of Night-Time Palace Patrols" (3.76), "Pop-up Stores for Cultural Goods in Daehak-ro" (3.75), "Utilization of K-Food Night-Time Content" (3.74), "Media Facade Projection on Palace Walk" (3.73), "Michelin



Korean Cuisine Dinner Tour" (3.68), "Operation of Night-Time Antique Markets" (3.67), "Night Performances Featuring Popular Western and K-Drama Productions" (3.63), "Overnight Experiences at Museums and Art Galleries" (3.63), and "Seasonal Late-Night Sales in Shopping Districts" (3.54) also received average scores above 3.5, indicating generally positive responses.

In contrast, four items received scores below 3.5, reflecting relatively lower demand: "Indirect Lighting for Night-Time Window Displays in Traditional Shopping Streets" (3.48), "Expansion of Night-Time Sports Programs in Public Squares" (3.44), "Unique Night-Time Experiences at Royal Palaces" (3.35), and "Operation of Traditional Rickshaw-style Night Tours" (3.27). Notably, "Operation of Luxury Accommodation Facilities within Royal Palaces" received the lowest score at 2.99, indicating limited perceived feasibility or necessity.

<Table 2> Descriptive Analysis of Measurement Items

Rank	Measurement Item	Total (N=411)		Korean (N=214)	Foreign (N=197)
		Mean	Standard Deviation		
1	Introduction of Night Museum Pass System	4.45	.78	4.38	4.51
2	Night Opening on International Museum Day	4.30	.69	4.34	4.25
3	Nighttime Operation of Royal Palaces	4.26	.84	4.36	4.17
4	K-Food Evening Street Food Tour	4.10	.85	3.93	4.27
5	Training Storytellers for Royal Palace Night Tours	4.08	.89	4.10	4.06
6	24-Hour Weekend Subway Operation	4.03	1.00	3.56	4.51
7	Nighttime K-Dessert Events in Traditional Streets	4.02	.90	4.04	4.01
8	K-Street Lighting (Cheongsachong) in Traditional Alleys	4.00	.95	4.26	3.73
9	Nighttime Opening of Public Hanok Houses	3.96	.86	4.00	3.93
10	Weekend Discounts for Nonverbal Night Performances	3.92	.98	3.93	3.92
11	Training Nighttime Specialist Doerim	3.87	.96	4.04	3.70
12	Introduction of Night View City Bus with Street Performances	3.79	1.02	3.83	3.76
13	Introduction of Nighttime Royal Guard Patrols in Palaces	3.76	.99	3.85	3.66
14	Introduction of Goods Pop-up Stores in Daehak-ro	3.75	1.06	3.57	3.94
15	Utilization of K-Food Nighttime Content	3.74	1.07	3.61	3.87
16	Media Facade Display on Palace Walls	3.73	1.06	3.71	3.75
17	Michelin Korean Cuisine Dinner Tour	3.68	1.07	3.77	3.59
18	Operation of Nighttime Antique Market	3.67	.94	3.58	3.76
19	Night Performances of Popular Western Music and K-Dance	3.63	1.04	3.63	3.62
20	Mystical Overnight Experience at Museums and Galleries	3.63	1.05	3.62	3.63
21	Seasonal Late-Night Mega Sales in Shopping Districts	3.54	1.17	3.53	3.54
22	Indirect Nighttime Lighting for Traditional Storytelling	3.48	1.11	3.61	3.35
23	Expanded Nighttime Sports Activities in Public Squares	3.44	1.00	3.30	3.58
24	Unique Nighttime Experiences in Royal Palaces	3.35	1.20	3.69	3.02
25	Night Operation of Traditional Sedan Chair-style Rickshaws	3.27	1.09	3.13	3.42
26	Operation of Luxury Accommodations in Royal Palaces	2.99	1.18	3.04	2.94
Total		3.79	.99	3.78	3.79

#### 4. Factor Analysis and Reliability Verification

To identify the underlying structure of the revitalization factors for the new night-time economy and tourism within the Hanyangdoseong inner area, a Principal Component Analysis (PCA) was conducted on all 26 measurement items. To eliminate correlations among factors, Varimax rotation, an orthogonal rotation method, was applied.

The criterion for factor extraction was set at an eigenvalue of 1.0 or higher, resulting in the extraction of six distinct factors. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.88, which is interpreted as "excellent." Bartlett's test of sphericity was also significant ( $p = .00$ ), confirming the presence of correlations among the variables. The cumulative variance explained by the rotated factors was 50.93%, indicating a moderate level of explanatory power.

The reliability analysis for each factor showed Cronbach's alpha values ranging from 0.77 to 0.64, indicating an overall "acceptable to good" level of internal consistency. Factor loadings for the individual items ranged from 0.78 to 0.43, all exceeding the minimum threshold of 0.40, thereby validating the inclusion of all 26 items in the analysis.

Each of the six extracted factors was conceptually labeled based on its unique characteristics, offering practical implications for developing strategic approaches to revitalizing the new night-time economy and tourism within the Hanyangdoseong area.

<Table 3> Factor Analysis

Factor Name	Eigenvalue	Explained Variance (%)	Cronbach's Alpha
Factor 1: Nighttime Food, Performance & Shopping	2.85	10.99	.77
Factor 2: Creation of Nighttime Cultural Streets	2.33	8.97	.65
Factor 3: Creation of Unique Nighttime Jobs	2.25	8.67	.68
Factor 4: Nighttime Cultural Heritage Experiences	2.18	8.38	.66
Factor 5: Operation of Nighttime Cultural Facilities	2.04	7.84	.64
Factor 6: Introduction of Nighttime Transportation Policies	1.58	6.08	.76

#### 5. Independent Sample t-Test Results: Perception Differences Between Domestic and Foreign Respondents

To analyze perception differences between domestic and foreign respondents regarding the revitalization factors of the new night-time economy and tourism in the Hanyangdoseong inner area, an independent sample t-test was conducted. Among the 26 measurement items, 11 showed statistically significant differences at the  $p < .05$  level.

In the "Night-Time Food, Performance, and Shopping" category, the items "K-Food Evening Street Food Tour," "Pop-Up Stores for Cultural Goods in Daehak-ro," and "Utilization of K-Food Night-Time Content" all



showed significant differences at the  $p < .01$  level, with foreign respondents perceiving a higher level of necessity.

In the "Night Cultural Street Development" category, "Traditional Alleyway Lighting with Korean Lanterns" was significant at  $p < .01$ , and "Indirect Lighting for Night-Time Window Displays in Shopping Streets" at  $p < .05$ . In both cases, Korean respondents showed a higher perceived need.

Conversely, "Operation of Traditional Rickshaw-style Night Tours" was significant at  $p < .01$ , with foreign respondents indicating a higher level of necessity.

In the "Creation of Night-Time Jobs" category, "Training of Night-Time Docents" was significant at  $p < .01$ , with Korean respondents showing greater interest, while "Expansion of Night-Time Sports Programs in Public Squares" was significant at  $p < .01$ , with foreign respondents perceiving higher necessity.

In the "Night-Time Cultural Heritage Experience" category, "Providing Unique Night-Time Experiences at Royal Palaces" showed a significant difference at  $p < .01$ , with foreign respondents expressing greater interest.

In the "Operation of Night-Time Cultural Facilities" category, "Night Opening of Royal Palaces" was significant at  $p < .05$ , with Korean respondents perceiving a higher need.

Finally, in the "Night-Time Transportation System" category, the item "24-Hour Weekend Subway Operation" was significant at  $p < .01$ , with foreign respondents overwhelmingly recognizing its necessity.

<Table 4> Independent Samples t-Test Results by Factor: Perception Differences Between Korean and Foreign Nationals

Factor Name	Variable...	Nationality	N	Mean	Standard Deviation	t	p-value
Factor 1: Nighttime Food, Performance & Shopping	K-Food Evening Street Food Tour	Korean	214	3.93	.91	-3.99	.01**
		Foreign	197	4.27	.79		
		Total	411	4.10	.85		
	Weekend Discounts for Nonverbal Night Performances	Korean	214	3.93	1.00	.07	.95
		Foreign	197	3.92	.96		
		Total	411	3.92	.98		
	Introduction of Goods Pop-up Stores in Deopangdo	Korean	214	3.57	1.19	-3.44	.01**
		Foreign	197	3.94	.99		
		Total	411	3.75	1.09		
	Utilization of K-Food Nighttime Content	Korean	214	3.61	1.16	-2.46	.01**
		Foreign	197	3.67	.99		
		Total	411	3.74	1.07		
	Michelin Korean Cuisine Dinner Tour	Korean	214	3.77	1.09	1.69	.09
		Foreign	197	3.59	1.04		
		Total	411	3.68	1.07		
Factor 2: Creation of Nighttime Cultural Streets	Night Performances of Popular Western Works and K-Dramas	Korean	214	3.63	1.14	.063	.95
		Foreign	197	3.62	.94		
		Total	411	3.63	1.04		
	Seasonal Late-Night Mega Sales in Shopping Districts	Korean	214	3.53	1.15	-0.46	.96
		Foreign	197	3.54	1.19		
		Total	411	3.54	1.17		

\* $p < .05$ , \*\* $p < .01$

<Table 4> Independent Samples t-Test Results by Factor: Perception Differences Between Korean and Foreign Nationals

Factor Name	Variable...	Nationality	N	Mean	Standard Deviation	t	p-value
Factor 2: Creation of Nighttime Cultural Streets	Nighttime K-Dessert Bents in Traditional Streets	Korean	214	4.04	.92	.36	.72
		Foreign	197	4.01	.88		
		Total	411	4.02	.90		
	K-Street Lighting (Cheongsachorong) in Traditional Alleys	Korean	214	4.26	.84	5.57	.01**
		Foreign	197	3.73	1.07		
		Total	411	4.00	.95		
Factor 3: Creation of Unique Nighttime Jobs	Indirect Nighttime Lighting for Traditional Storefronts	Korean	214	3.61	1.16	2.44	.02*
		Foreign	197	3.35	1.06		
		Total	411	3.48	1.11		
	Night Operation of Traditional Sedan Chair-style Rickshaws	Korean	214	3.13	1.26	-2.73	.01**
		Foreign	197	3.42	.92		
		Total	411	3.27	1.09		
Factor 4: Nighttime Cultural Heritage Experiences	Training Storytellers for Royal Palace Night Tours	Korean	214	4.10	.93	.48	.63
		Foreign	197	4.06	.85		
		Total	411	4.08	.89		
	Training Nighttime Specialist Docents	Korean	214	4.04	.89	3.54	.01**
		Foreign	197	3.70	1.02		
		Total	411	3.87	.96		
	Introduction of Night View City Bus with Street Performances	Korean	214	3.83	.95	.70	.49
		Foreign	197	3.76	1.09		
		Total	411	3.79	1.02		
	Introduction of Nighttime Royal Guard Patrols in Palaces	Korean	214	3.85	.99	1.95	.05
		Foreign	197	3.66	.99		
		Total	411	3.76	.99		
	Operation of Nighttime Antique Market	Korean	214	3.58	.97	-1.97	.05
		Foreign	197	3.76	.90		
		Total	411	3.67	.94		
Factor 5: Operation of Nighttime Cultural Facilities	Expanded Nighttime Sports Activities in Public Squares	Korean	214	3.30	1.06	-2.90	.01**
		Foreign	197	3.58	.94		
		Total	411	3.44	1.00		
	Media Facade Display on Palace Walls	Korean	214	3.71	1.08	-.44	.66
		Foreign	197	3.75	1.03		
		Total	411	3.73	1.06		
	Mystical Overnight Experience at Museums and Galleries	Korean	214	3.62	1.10	-1.08	.94
		Foreign	197	3.63	1.01		
		Total	411	3.63	1.05		
	Unique Nighttime Experiences in Royal Palaces	Korean	214	3.68	1.17	5.66	.01**
		Foreign	197	3.02	1.22		
		Total	411	3.35	1.20		
	Operation of Luxury Accommodations in Royal Palaces	Korean	214	3.04	1.24	.88	.38
		Foreign	197	2.94	1.11		
		Total	411	2.99	1.18		
Factor 5: Operation of Nighttime Cultural Facilities	Introduction of Night Museum Pass System	Korean	214	4.38	.85	-1.62	.11
		Foreign	197	4.51	.70		
		Total	411	4.45	.78		
	Night Opening on International Museum Day	Korean	214	4.34	.70	1.21	.23
		Foreign	197	4.25	.68		
		Total	411	4.30	.69		
	Nighttime Operation of Royal Palaces	Korean	214	4.35	.82	2.21	.03*
		Foreign	197	4.17	.86		
		Total	411	4.26	.84		
	Nighttime Opening of Public Hapok Houses	Korean	214	4.00	.90	.78	.44
		Foreign	197	3.93	.83		
		Total	411	3.96	.86		



**<Table 4> Independent Samples t-Test Results by Factor: Perception Differences Between Korean and Foreign Nationals (Continued)**

Factor Name	Variable...	Nationality	N	Mean	Standard Deviation	t	p-value
Factor 6: Introduction of Nighttime Transportation Policies	24-Hour Weekend Subway Operation	Korean	214	3.56	1.24	-9.40	.01**
		Foreign	197	4.51	.77		
		Total	411	4.03	1.00		

## IV. Research Findings and Implications

This study identified key factors for revitalizing the new night-time economy and tourism within the Hanryangdoeong inner area and analyzed perception differences between domestic and foreign visitors. Based on these findings, strategic directions for enhancing Seoul's urban competitiveness and global image as a night-time destination are proposed.

First, the empirical analysis revealed no statistically significant differences between Korean and foreign respondents regarding the operation of night-time cultural facilities. Both groups recorded high average scores, confirming this as a core strategy for revitalizing Seoul's night-time economy and tourism. Items such as the Night Museum Pass, Night Opening on International Museum Day, Night Access to Royal Palaces, and Public Hanok Night Programs all received average scores above 4.0, indicating strong positive evaluations. These programs are effective in extending visit or stay time and promoting immersive cultural experiences, contributing to both economic revitalization and cultural value enhancement. Given their high public support and feasibility, these items should be actively incorporated into Seoul's tourism policies. In particular, the Night Museum Pass and International Museum Day Night Opening offer unique content, while the night-time opening of palaces and hanoks modernizes traditional cultural assets, reinforcing Seoul's identity as a cultural city. Aligning operating hours with the Korea Tourism Organization's recommended night tourism window (9 PM to 12 AM) could further encourage voluntary participation and repeat visits, strengthening the foundation of Seoul's night-time economy. Therefore, these contents should be prioritized based on empirical evidence and managed through strategic and sustainable systems.

Second, statistically significant differences were found between domestic and foreign respondents regarding the creation of distinctive night-time jobs, offering important policy implications for Seoul's night-time economy. The t-test results showed significant differences ( $p < .01$ ) for Training of Night-Time Docents and Expansion of Night-Time Sports Programs at

Gwanghwamun Square. These findings suggest that strategies to create diverse job sectors tailored to night-time activities would be positively received by both groups. In particular, fostering night-time docents and storytellers at museums, art galleries, and royal palaces can simultaneously promote Seoul's historical identity and youth employment. Additional programs such as night-time sports at Gwanghwamun Square, city buses linked to street performances, antique night markets, media façade productions, and 24-hour public transportation could generate demand for various roles including operators, guides, and planners. Thus, Seoul should actively pursue night-time economy policies centered on job-based content, not only to improve tourism quality but also to stimulate the local economy and support sustainable urban development.

Third, in the category of Night-Time Food, Performance, and Shopping, items such as K-Food Evening Street Food Tour and Utilization of K-Food Night-Time Content showed statistically significant differences ( $p < .01$ ), with foreign respondents giving higher ratings. This indicates that creative night-time tourism content based on Korean cuisine is effective in attracting and satisfying international tourists. The K-Food Evening Street Food Tour goes beyond simple dining, offering cultural immersion in a uniquely Korean atmosphere and contributing to extended stays and economic revitalization. Premium and trendy content such as the Michelin Korean Dinner Tour and K-Dessert Night Events can enhance the distinctiveness and brand value of Seoul's night tourism. Furthermore, integrated content combining Korean food with K-Dramas, K-Pop, and traditional markets can generate synergy and viral effects on social media. As a global cultural brand that blends tradition and modernity, Korean cuisine can improve accessibility and satisfaction through multilingual menus, food-related media content, and cooking classes. Therefore, Seoul should strategically plan and operate night-time tourism content based on Korean cuisine to boost night-time consumption and strengthen both cultural identity and global competitiveness.

Fourth, in the category of Night-Time Transportation Systems, the item 24-Hour Weekend Subway Operation showed a statistically significant difference ( $p < .01$ ), with foreign respondents perceiving it as particularly important. This underscores the need to improve basic infrastructure to support Seoul's night-time economy and tourism. A 24-hour public transportation system is crucial for attracting foreign visitors, extending their stay, and improving access to night-time commercial areas. Cities like London and New York have already established night-time economies through 24-hour subway operations, yielding benefits such as job creation, reduced traffic congestion, and enhanced safety. Seoul could adopt a phased model focused on weekends and holidays to improve mobility for tourists, night workers, and local residents, thereby enhancing the conditions for night-time commerce and consumer access. Ultimately, this initiative could position Seoul as a "24-hour global city," contributing to long-term growth in the night-time economy, urban branding, and revitalization of local commercial districts. Thus, transportation infrastructure innovations such as



24-hour subway service should be considered not merely as transit expansions but as strategic policy priorities for enhancing night-time tourism competitiveness and sustainable urban development.

## V. Conclusion

This study empirically analyzed strategies for revitalizing the new night-time economy and tourism within the HanYangDoseong inner area, aiming to contribute to enhancing Seoul's urban competitiveness at night and establishing a sustainable tourism strategy. Notably, this research goes beyond the facility-centered approaches of previous night tourism studies by integrating various elements such as cultural content, employment, and infrastructure, thereby offering both academic and policy-level significance.

The findings indicate that the operation of night-time cultural facilities, the creation of night-specific jobs, K-food-based content, and night-time transportation infrastructure are all effective in extending visitor stay time and promoting immersive experiences, which in turn generate positive ripple effects for the local economy.

In particular, Hallyu (the Korean Wave) is identified as a strategic asset capable of transforming Seoul's night-time economy and tourism into a high-value-added industry. K-pop, K-dramas, K-food, and traditional culture are already globally recognized cultural brands. When integrated

into night tourism content, these elements can significantly enhance the appeal of Seoul to international visitors. This study also found that programs such as K-Food Night-Time Content, K-Dessert Street Events, and Night Performances with Media Facades were especially well-received by foreign respondents, highlighting their potential to elevate Seoul's status as a global cultural city.

Furthermore, the night-time opening of traditional heritage sites such as royal palaces and public hanoks, combined with docent and storyteller programs, can be linked with Hallyu's storytelling capabilities. This approach can evolve beyond simple sightseeing into an experiential platform that conveys the essence of Korean culture. Ultimately, it can play a pivotal role in branding Seoul as the "Night Capital of Hallyu."

Therefore, the Seoul Metropolitan Government should actively pursue night tourism policies that strategically leverage Hallyu content. Such efforts will not only strengthen the city's cultural identity and global competitiveness but also serve as a foundation for transforming the night-time economy from a consumption-driven model into a core of the global cultural ecosystem.

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# **A Study on the Acquisition of Intellectual Property Rights for Emerging Korean Fashion Designer Brands in the Global Market**

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## **Introduction**

Over the past few years, Korea has developed a variety of support policies for emerging fashion designers, led by government agencies, local governments, and private companies. These policies have made it easier for aspiring entrepreneurs or new designers to start fashion businesses based on their creative ideas. As K-culture continues to grow globally, these support efforts have helped K-fashion demonstrate both results and potential in expanding its presence in the global market.

In particular, the Korea Fashion Association discovered and supported emerging designers through the Indie Brand Fair from 2011 for eight years. Since 2019, this initiative has been expanded and rebranded as the K-Fashion Audition to more actively support overseas expansion. The program has produced visible results by helping designers participate in international exhibitions and more.

However, because emerging fashion designers' core strength lies in creative design, they naturally focus on that area. As previous studies have shown, these designers often struggle with other essential aspects of running a business, such as management, production, and marketing.

Fashion brand businesses by emerging designers aim to develop brands based on creative fashion items. For such businesses to grow sustainably and build brand value, securing intellectual property rights, especially trademark rights, is a crucial prerequisite. Today, many emerging designer brands aim to be "born-global brands", so acquiring intellectual property rights not just in the domestic market but also in global markets is essential for expanding K-fashion internationally. As the popularity of K-fashion rises globally, so do the risks of counterfeits and trademark theft, making simultaneous trademark applications both domestically and abroad critical to securing rights.

This study focuses on the securing of trademark rights, which can be seen as the starting

point of brand asset management for emerging fashion designers. It analyzes the current status of domestic and international trademark applications by Korean designers, with a particular focus on China — identified as both the most serious market for trademark theft and the largest potential market. Based on this analysis, the study aims to propose strategic approaches to trademark management.

## **Background Literature**

### **1. Trademark Systems in Korea and China**

Although trademark systems vary slightly between countries, Korea and China share very similar goals, timelines, and registration principles.

The purpose of Korea's trademark system is to "maintain the relationship between trademarks and goods to prevent unfair competition, protect the business reputation of trademark holders, and safeguard traders and consumers." China's system shares this same objective.

Both countries follow the "first-to-file" or "prior application" principle, where trademark rights are granted to the first applicant, even before the product is launched on the market. In contrast, countries like the U.S., Canada, and Australia follow the "first-to-use" system, where one must prove that a trademark was used in the country first to gain priority.

Despite their similarities, Korea and China show some differences. For example, when applying for a trademark or service mark in Korea, the similarity of goods or services (based on Nice Class 35) is examined. However, in China, this similarity is not reviewed, which can lead to abuses if both goods and service marks are not filed simultaneously.

### **2. "Trademark Squatting" by Trademark Brokers under the First-to-File Principle**

As K-culture gains global recognition across various industries, including fashion, some individuals or companies attempt to exploit the system by preemptively filing for trademarks with high awareness or potential in their own country, intending to resell them to the original brand owners or third parties for unfair economic gain. These individuals are called "trademark brokers."

Such malicious preemptive registration is on the rise in China due to the Korean Wave (Hallyu). Industries like cosmetics, food, and franchising have been heavily affected — and fashion brands, especially those by emerging designers with limited marketing capabilities, are



increasingly targeted.

As K-culture spreads to other Asian countries, cases of trademark brokers are also increasing in Vietnam, which follows the first-to-file principle, and are expected to rise in Taiwan, Indonesia, and other regions. Fashion brands, being easy to imitate and image-based, are particularly vulnerable.

In Korea, the number of companies affected by trademark squatting in China has skyrocketed in recent years. In 2020, 2,753 Korean companies suffered from trademark theft in China, which is the growth of 245% from 2019.

Trademark brokers often list these Korean trademarks for sale on Chinese trademark trading websites like HAOTM.cn. One notorious broker, Kim Kwang-Choon (金光春), filed 400 trademarks in 2010 alone and, through his subsidiaries, had filed 3,155 trademarks by 2023. Another well-known broker, Shijiazhuang Zhuan'ai E-Commerce Co., Ltd. (石家庄专爱电子商务有限公司), stockpiled over 600 trademarks, including 196 Korean fashion brands. The real issue is that most Korean companies are unaware that their trademarks have been preemptively registered (Lee Jong-Ki, 2023).

The Korea Fashion Association, with government support, has made efforts to reclaim trademark rights for Korean fashion brands affected by brokers and malicious filings in China through legal action. However, the fashion industry inherently involves a large number of trademarks, making early filing the most efficient and proactive measure to secure trademark rights.

## Methods

- The primary data collection involved 57 brands that won awards in the K-Fashion Audition from 2019 to 2024. Data was collected from the Korean Intellectual Property Office (KIPO) regarding their trademark application status, classification code (Nice Classification), and application date.
- Secondary data collection was conducted using the trademark search function of the China National Intellectual Property Administration (CNIPA) to gather information about the trademark application status, product classification codes, and application dates of South Korean emerging brands. Additionally, information on identical or similar trademarks, their Chinese trademark holders' application status, classification codes, and application dates was collected.
- The purpose of trademark applications by Chinese companies (or individuals) was analyzed based on the application date and the total number of applications filed by the



applicant. The analysis categorized them into four types: 1) Professional trademark broker applications, 2) Early applications of identical or similar products by Chinese companies (or individuals), 3) Simple applications during a similar period, and 4) Cases of malicious preemption that are suspected but not by trademark brokers.

## **Results & Discussion**

1. Current Status of Trademark Applications by Emerging Designer Brands in Korea and China, and Comparison of Trademark Types
  - Among the 54 emerging designer brands that won the "K-Fashion Audition" over the past six years, 34 brands (63%) have applied for trademark rights in Korea, while the remaining 37% did not even attempt to apply. Among the 34 brands that filed applications, 19 brands applied for both Korean and English trademarks, 14 applied only for English trademarks, and one brand applied only for a Korean trademark (see Table 1).
  - Analyzing the status of Chinese trademark applications by emerging designer brands, only 14 out of the 34 brands that filed in Korea also applied in China. Among the 20 brands that did not file in Korea, only one was found to have filed in China.
  - When examining the status of similar trademark applications in China, there are a total of 35 similar trademarks, and the timing of these applications provides significant insight. Among the 14 trademarks that were filed with both the Korean Intellectual Property Office and the China National Intellectual Property Administration, 11 similar trademarks were found. Of these, 3 were filed by trademark brokers, and 9 were filed in China after the brands had already been launched, suggesting the possibility of malicious intent. A further issue arises with 4 trademarks that were filed as original trademarks in China before the corresponding Korean designer brands were launched. In these cases, the Korean designer brands could be viewed as infringing upon the intellectual property rights of the Chinese trademarks.
  - Additionally, among the 19 brands that filed trademarks in Korea but not in China, 3 have similar trademarks that were filed by brokers, and nearly half (8) were filed in China after the designer brand had been launched, indicating potentially malicious intent. Notably, of the 19 emerging designer brands that did not file for trademarks even in Korea, 13 similar trademarks were found. Among these, 6 were filed after the designer brand was launched, and 1 case was filed by a broker.

Table 1. Trademark registrations of the new Korean designer brands in Korea and China

Trademarks Registration in Korea		Registration in China (n)	Registration by Chinese (n)	Date of Filing (n)	Korean New Rising Designer's Trademarks
Filed (34)	Trademarks in Korean & English (19)	Filed (7)	Filed (6)	Prior (1)	MUNN
				Post (6)	CAHIERS, DOUCAN, MUNN, NACHE, HANNAH SHIN, FromWhere
				Broker (1)	NACHE
		Not filed (12)	Filed (7)	Prior (4)	OVER LAB, CHAE (NEWYORK)
				Post (3)	MMAM, waviness, IOEDLE
				Broker (2)	MMAM, waviness
			Not filed (5)		yunse, MUOH, WNDERKAMMER, RE RHEE, SEOKWOON YOON
	English only (14)	Filed (7)	Filed (5)	Prior (2)	nuer, FROMYITH
				Post (3)	ul:kin, AFTER PRAY, GOCORI
				Broker (0)	
			Not filed (2)	Broker (2)	Lang & Lu*, VEGANTIGER
		Not filed (7)	Filed (7)	Prior (2)	MASCOLANZA, YOOGANG
				Post (5)	J.Chung, KANEITEI, VDR, OPEN PLAN,AMAG STUDIO
				Broker (1)	MASCOLANZA
	Koreans only (1)	Not filed (0)	Filed (1)	Original (1)	뮤제 (MYSEE)
Not filed (20)	Filed (1)	Filed (1)	Original (1)	OJOS	
			Post (1)	OJOS	
			Broker (0)		
	Not filed (19)	Not filed (13)	Filed (13)	Prior (7)	err, WOVEMENT, OHM, PARTY-001, 02 ARMOIRE, THE IMPERFECTIONIST, SUN
				Post (6)	RSVP, (n)Dim, 51PERCENT, KICHELEEHE, SAIMI JEON, HOLY NUMBER 7
				Broker (1)	51PERCENT
		Not filed (6)		DEUXFACE, KIIMYS KIM,PETER DONGHUN HAN, DUHN, THE GOOD OLD DAYS, THE BLAH.D.STUDIO	

## 2. New Fashion Designer Brand by the Trademark Registration in Korea

Similar trademark applications within Korea could also pose a serious problem. As shown in Table 2, out of the 34 brands that filed trademark applications, 11 similar trademarks were found. Among them, 6 were filed after the brand launch, while 5 were filed as original trademarks even before the brand launch, suggesting that these emerging designer brands could themselves face trademark infringement issues. Among the 20 brands that did not file trademarks in Korea, 8



Table 1. Trademark registrations of the new Korean designer brands in Korea and China

Trademarks Registration in Korea		Registration in China (n)	Registration by Chinese (n)	Date of Filing (n)	Korean New Rising Designer's Trademarks		
Filed (34)	Trademarks in Korean & English (19)	Filed (7)	Filed (6)	Prior (1)	MUNN		
				Post (6)	CAHIERS, DOUCAN, MUNN, NACHE, HANNAH SHIN, FromWhere		
				Broker (1)	NACHE		
		Not filed (12)	Filed (7)	Prior (4)	OVER LAB, CHAE (NEWYORK)		
				Post (3)	MMAM, waviness, IOEDLE		
				Broker (2)	MMAM, waviness		
			Not filed (5)		yunse, MUOH, WNDERKAMMER, RE RHEE, SEOKWOON YOON		
			English only (14)	Filed (7)	Filed (5)	Prior (2)	nuer, FROMYITH
						Post (3)	ul:kin, AFTER PRAY, GOCORI
	Broker (0)						
	Not filed (2)	Broker (2)		Lang & Lu*, VEGANTIGER			
				Not filed (7)	Filed (7)	Prior (2)	MASCOLANZA, YOOGANG
						Post (5)	J.Chung, KANEITEI, VDR, OPEN PLAN,AMAG STUDIO
	Broker (1)	MASCOLANZA					
	Koreans only (1)	Not filed (0)	Filed (1)	Original (1)	뮤제(MYSEE)		
Not filed (20)	Filed (1)	Filed (1)	Original (1)	OJOS			
			Post (1)	OJOS			
			Broker (0)				
	Not filed (19)	Filed (13)	Prior (7)	err, WOVEMENT, OHM, PARTY-001, 02 ARMOIRE, THE IMPERFECTIONIST, SUN			
			Post (6)	RSVP, (n)Dim, 51PERCENT, KICHELEEHE, SAIMI JEON, HOLY NUMBER 7			
			Broker (1)	51PERCENT			
		Not filed (6)		DEUXFACE, KIMYS KIM,PETER DONGHUN HAN, DUHN, THE GOOD OLD DAYS, THE BLAHD STUDIO			

## 2. New Fashion Designer Brand by the Trademark Registration in Korea

Similar trademark applications within Korea could also pose a serious problem. As shown in Table 2, out of the 34 brands that filed trademark applications, 11 similar trademarks were found. Among them, 6 were filed after the brand launch, while 5 were filed as original trademarks even before the brand launch, suggesting that these emerging designer brands could themselves face trademark infringement issues. Among the 20 brands that did not file trademarks in Korea, 8

similar trademarks were filed before and 4 after the brand launch. The remaining 12 brands for which no similar trademark applications were attempted may be interpreted as having little potential value in terms of trademark registration.

Table 2. Classification of New Fashion Designer Brand by the Trademark Registration in Korea

Trademark registration in S. Korea (n)		Simila Korean Trademarks (n)		Korean New Rising Designer's Trademarks
Filed/ Registered (34)	Trademarks in Korean & English (19)	Filed(7)	Prior(2)	DOUCAN, CHAE (NEWYORK)
			Post(5)	CAHIERS, CHAE (NEWYORK), OVER LAB, yunse, MUOH
		Not filed(12)		
	English Trademarks only (14)	Filed(3)	Prior(2)	nuer, YOOGANG
			Post(1)	ul:kin
		Not filed(11)		
Not Filed(20)	Korean Trademark only(1)	Filed(1)	Prior(1)	뮤제(MYSEE)
		Not filed(12)		

## Conclusions

Based on the findings of this study, the following recommendations can be made to government agencies or local governments that support Korean emerging designers or solo fashion startups: while excellent product development is the responsibility of the designer, brand management must be prioritized to ensure business sustainability. The most critical prerequisite is that the designer's brand name—i.e., trademark—be secured in both domestic and global markets. Therefore, marketing support must be provided to help secure trademark rights, and designers should be educated to research existing trademarks in target countries before launching their brands.

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# A Recent Study on Logistics Costs for Korean Companies\*

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*	This research was supported by the research grant of Gangneung-Wonju National University in 2025
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## Abstract

**Purpose:** In this study, regarding quantitative evaluation attributes related to the causes of decrease in Korean corporate logistics costs, domestic industries are classified and subdivided into clusters with similar attributes and visually arranged in two dimensional space.

**Research design, data, and methodology:** As part of the survey on the actual state of corporate logistics costs, 1,500 businesses are sampled and data is collected by dividing them into 18 industries and corporate sizes into small and medium-sized enterprises and large corporations.

**Results and conclusions:** As a result of classifying industries with strong similarity in terms of internal and external factors centered on the evaluation attributes of the causes of decrease in corporate logistics costs, it is found that they could be classified into four and five types, respectively. The Korean logistics industry is seeking new growth engines centered on technological innovation and eco-friendly strategies. It is important for logistics companies to strengthen digital transformation and sustainable operation strategies and actively participate in government policies to proactively respond to changes.

**Keywords:** Corporate Logistics Costs, Cluster Analysis, Industry

## 1. Introduction

As of 2025, Korea's logistics industry is rapidly evolving in response to technological innovation and environmental changes. In 2024, digital transformation accelerated as technologies such as the IoT, AI, and big data are actively introduced into the logistics industry. The spread of IoT-based real-time monitoring systems and AI-based demand prediction and transportation route optimization technologies has significantly improved the efficiency and accuracy of logistics operations.

As interest in carbon neutrality and eco-friendly logistics grows, the introduction of eco-friendly transportation based on electricity and hydrogen is expanding. In addition, eco-friendly packaging solutions such as the use of biodegradable packaging materials are becoming more active, and companies are responding to environmental regulations and strengthening their social responsibility.

Cold chain logistics continues to grow due to increasing demand for fresh food and biopharmaceuticals. Advances in precise temperature control and real-time monitoring technology have made it possible to maintain product quality and ensure stable distribution. Customized delivery services and real-time tracking systems are being strengthened to meet the diverse needs of customers, and customer satisfaction is improving. In addition, improvements to the return system are simultaneously reducing logistics costs and increasing customer convenience.

The supply of new logistics centers is decreasing, especially in the metropolitan area, and the transition to room-temperature logistics centers is underway due to the increasing vacancy rate of low-temperature logistics centers. In the Busan-Ulsan area, including Busan, Yangsan, and Gimhae, the demand for logistics centers is increasing, and logistics bases are being actively reorganized.

The government is continuously promoting the smartening and digitalization of the logistics industry and is seeking to strengthen the competitiveness of the logistics industry by introducing a standard freight rate system and improving the transportation market structure. Amid these changes, Korea's logistics industry is responding to new challenges with a focus on technological innovation and



sustainability. Companies are strengthening their competitiveness through digital transformation and eco-friendly strategies, and government policy support is also supporting these changes.

The logistics costs of Korean companies have been steadily increasing in recent years due to various factors, which is placing a significant burden on corporate management. Corporate logistics costs are largely composed of transportation costs, storage and inventory management costs, and unloading costs.

As of 1997, transportation costs accounted for 63.6% of total logistics costs, showing the largest proportion, while storage and inventory management costs accounted for 22.7% and unloading costs accounted for 6.0%. These proportions vary by industry. For example, in the distribution industry, transportation costs account for an absolute proportion of 93.0%, while in the manufacturing industry, the proportion of storage and inventory management costs is relatively high.

The recent factors driving up logistics costs are as follows: Due to China's economic slowdown and decreased consumption, Korean companies are experiencing disruptions in their export and import logistics. In particular, logistics costs are increasing as container freight rates with China rise and port congestion worsens. For example, freight rates on the Shanghai-Busan route have increased by 18% since early 2024.

The rise in energy and raw material prices is leading to increased transportation costs, which is increasing the burden of logistics costs for companies. According to a survey by the Federation of Korean Industries, research center directors at securities firms pointed out that the increase in shipping logistics costs is one of the factors that has a major impact on corporate management.

Lee and Park (2014) used actual data from clothing company P, which has its own logistics center and is reducing logistics costs by consistently managing product classification, inventory management, and delivery, to calculate and compare logistics costs using the existing algorithm and the genetic algorithm proposed in this study using a search method.

In this work, major industries are categorized and segmented based on the several

traits of the causes of decrease in corporate logistics costs, which are divided into internal and external factors. Furthermore, feature and patterns of all 18 industries and 16 industries can be relatively evaluated by picturing appearance of proximities on four and five attributes of reasons for the decrease in corporate logistics costs

## 2. Research Results and Conclusion

The values given in the dissimilarity distance matrix are expressed in a matrix by calculating the degree of dissimilarity between corresponding companies based on the attributes of reduction in corporate logistics costs arising from internal and external factors, respectively. A larger value indicates greater dissimilarity between the two companies.

Using the hierarchical clustering method, the appropriate number of clusters can be determined at the point where the distance changes relatively significantly during the merging process, that is, the coefficient in the clustering schedule increases rapidly. Since the number of points where the coefficient increases rapidly in the clustering schedule for internal and external factors can be found in four and five places, respectively, they can be classified into four and five clusters. By examining the dissimilarity distance measurement, cluster analysis, and multidimensional scale for the four internal factors that reduce corporate logistics costs by industry, the importance of the causes of reduction in corporate logistics costs by business type can be evaluated (Aldenderfer & Blashfield, 1985; Jeong, 2013; Jeong, 2014; Jeong, 2015; Kaufman & Rousseeuw, 2005; Savaresi & Boley, 2004; Shepard, 1962; Yang, 2013).

Derived stimulus configuration describes a two-dimensional scatterplot after calculating the relative coordinates of the 15 different industries. Each attribute has a strong characteristic as it moves away from the origin in the horizontal or vertical axis direction (Torgerson, 1952; Kruskal, 1964; Kruskal & Wish, 1978; Borg & Groenen, 2005; Takane et al, 1977).

The Korean logistics industry is seeking new growth engines centered on technological innovation and eco-friendly strategies. However, challenges remain, such



as uncertainty in the global supply chain and structural changes in the logistics center market. Accordingly, it is important for logistics companies to strengthen digital transformation and sustainable operation strategies and actively participate in government policies to proactively respond to changes.

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# INTERNATIONAL LOGISTICS STATUS AND ISSUES

-FOCUSING ON THE CURRENT STATUS AND  
COUNTERMEASURES OF JAPAN-

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## INTERNATIONAL LOGISTICS STATISTICS IN EUROPE

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- European Road Freight Transport Market (2022)
- Top 5 countries — Germany, Britain, France, Spain, and Italy —
  - Accounted for over 50% of total European market sales
- Germany
  - Largest national market in Europe
  - Slight decline in market share compared to 2021
- Britain & France
  - Continue to hold significant portions of the European market, ranking just behind Germany
- Spain
  - Market size: €42.13 billion
  - 9.35% of the total European market
  - 4.8% growth vs. 2021 (€41.34 billion)

## INTRODUCTION

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- Kyoto Protocol (2005) enhanced Japan's environmental initiatives
- Logistics sector aims to increase efficiency and reduce environmental impact
- MLIT promotes logistics efficiency, revises laws, and supports CO<sub>2</sub> reduction projects

## WHAT IS A MODAL SHIFT?

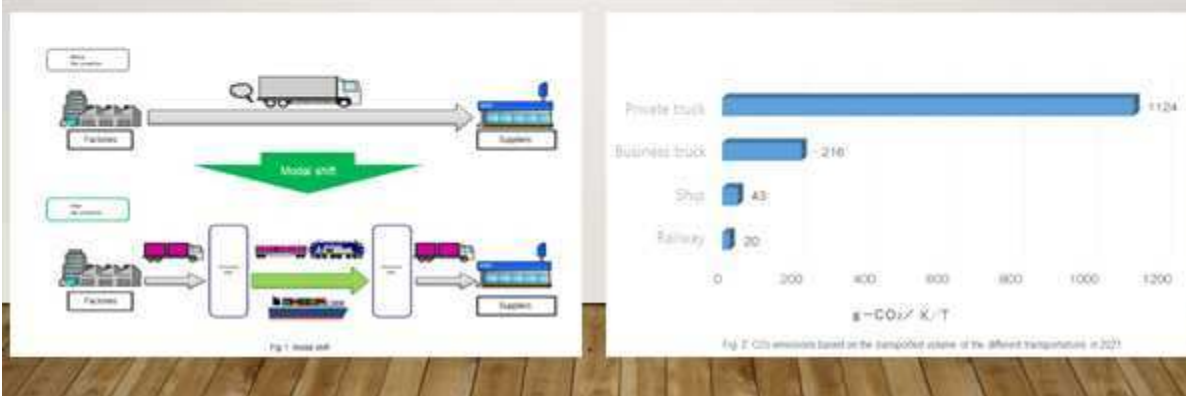
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- Shift from trucks to railways/ships to reduce environmental burden
- Adopted as part of CSR initiatives by companies
- CO<sub>2</sub> emissions per ton/km:
  - Truck: 216g • Rail: 20g • Ship: 43g



## WHY MODAL SHIFT?

- Addresses labor shortages and improves work practices
- Increasing use for shorter distances (300-400km)
- Enhances efficiency and reduces emissions



## GOVERNMENT SUPPORT POLICIES

- Policies to improve logistics efficiency and energy savings
- Projects based on Comprehensive Logistics Efficiency Act
- Green Logistics Partnership awards and promotes best practices

## GREEN LOGISTICS PARTNERSHIP MEETING

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- Established in 2005, over 3,400 member companies
- Features lectures, discussions, and awards
- Joint effort by MLIT, METI, and logistics associations

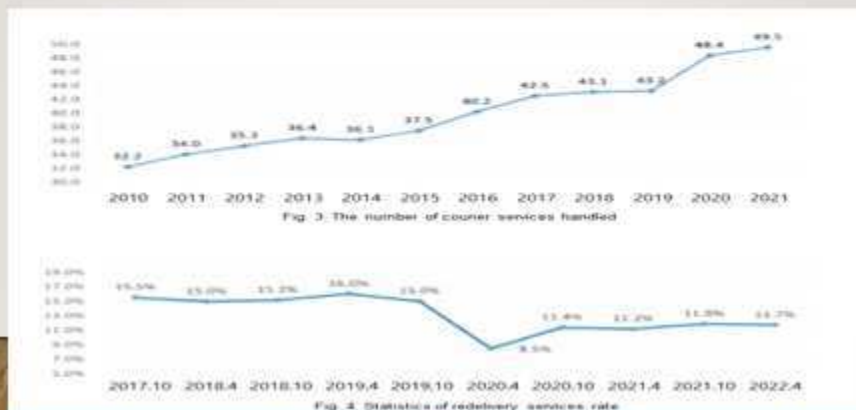
## ADVANCED TECHNOLOGY PROJECTS

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- Support logistics decarbonization and societal transformation
- Projects include:
  - Zero-Energy Warehouses
  - Drone logistics in depopulated areas
  - LNG fuel and advanced CO<sub>2</sub> reduction systems

## PARCEL REDELIVERY ISSUES

- E-commerce growth → 4.95B parcels (2021), 11.8% redelivered
- Wastes 60,000 driver-labor equivalents annually
- Adds ~254,000 tons of CO<sub>2</sub> emissions per year



## REDELIVERY REDUCTION CAMPAIGN

- "COOL CHOICE: Receive Once if Possible" campaign
- Highlights hidden shipping costs and environmental impact
- Encourages national participation and awareness



## CONCLUSION

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- Logistics Policy (2021–2025) aligns with post-COVID challenges
- Future logistics goals:
  1. Supply chain optimization (DX, standardization)
  2. Labor reform and structural changes
  3. Resilient and sustainable logistics networks

# **The impact of electronic voting systems on the transparency of the board, sustainable growth rates, and corporate value.**

**Ryu, Sung Yong(Soonchunhyang University, Asan, Korea)**

## **1. Introduction**

The interest of a company arises due to the issue of distributing compensation for the provision of resources between investors, creditors, suppliers, and employees, who are resource providers, and companies, which are consumers of resources. This interest is fundamentally due to the fact that a company has a contractual relationship between various parties, and stakeholders need information to assess whether the contract is being performed fairly. Financial information provided by a company is centered on financial statements, and other stakeholders use non-financial information related to the company to make their own economic decisions.

On the other hand, in a corporation, the owner is the shareholder, and the highest decision-making body is the general shareholders' meeting. Therefore, shareholders are very interested in the decision-making process of the general shareholders' meeting and expect the fair exercise of their rights based on the principle of majority rule. However, in reality, it is very difficult for minority shareholders to participate in the general shareholders' meeting and express their opinions compared to the majority shareholders. This is because the shareholders' meeting is a majority decision proportional to the number of shares owned, so the influence of the majority shareholders, who absolutely own a lot of shares, is greater than that of minority shareholders.

In modern companies, ownership is well distributed, and even though the individual ownership of minority shareholders is low, the sum of the minority shareholders' ownership of the entire company is usually greater than the ownership of the majority shareholders. Therefore, institutional mechanisms to protect the rights and interests of minority shareholders may be necessary. One of these institutional devices is the electronic voting system. The electronic voting system is an online voting method in which shareholders exercise their voting rights through a computer or smartphone, and if it is difficult to attend the general shareholders' meeting due to physical constraints, it is a system that



exercises voting rights by accessing the Internet and expressing votes for or against a specific agenda without attending the site. This system was implemented in May 2010, but it allowed companies to freely decide whether to introduce it. As a result, none of the listed companies had introduced this system until the end of June 2013. Since then, some companies have introduced and implemented the system, and the electronic voting exercise rate in 2022 and 2013 was 10.09% and 11.62%, respectively, indicating that many companies still have not used it (Side View, March 22, 2024).

The reason why it is difficult for minority shareholders to attend shareholders' meetings is that most of the listed companies in Korea hold shareholders' meetings in March, and especially in the third week, many companies not only hold shareholders' meetings, but also concentrate on Friday. On the other hand, individual shareholders own an average of 5.97 shareholders, so they have the right to attend an average of six shareholders' meetings, but in reality, it is difficult for minority shareholders to attend all shareholders' meetings (Side View, March 22, 2024). Therefore, by activating the voting rights of minority shareholders using Internet voting, it can help secure management transparency. Despite these advantages, managers or controlling shareholders argue that if the electronic voting system is mandated, it will be difficult to defend management rights from speculators who seek to usurp management rights through malicious rumors.

In agency theory, because there is an information asymmetry between the two parties, the interests of the owner, the trustee of the resource, are infringed by the agent making decisions to maximize his or her own private interests[1]. However, such an agent problem does not only occur between shareholders and managers, but can also occur between controlling shareholders and minority shareholders[2].

Since managers or controlling shareholders can exert absolute influence on voting rights by using their relative information advantage over internal affairs of the company, they are motivated to make decisions that maximize their wealth even if they damage the interests of minority shareholders[3]. In particular, unlike Western companies such as the United States, Korean companies where ownership and management are not well separated, the controlling shareholder can exercise voting rights in combination with the shares owned by a related person, so it is more likely that the rights and interests of minority shareholders will be damaged as a result of this[4].

The electronic voting system, which was introduced to protect the rights and interests of minority shareholders from the tyranny of controlling shareholders at the general shareholders' meeting, is expected to play an important role in resolving the proxy issue between controlling shareholders and minority shareholders. However, as we have seen, companies in Korea are not actively



introducing the electronic voting system, so the purpose of the system is not well utilized. In a situation where individual investors are increasingly participating in the capital market, it is important to create a structure that allows minority shareholders to actively monitor and check the controlling shareholders, and it is important to secure accounting transparency and increase the wealth of the company as a whole, and the electronic voting system is a system that can perform this function.

Therefore, this study focuses on empirically analyzing whether the introduction of the electronic voting system in Korea has helped to secure accounting transparency and increase corporate value. The specific objectives of this study are as follows. First, the effect of the introduction of the electronic voting system on the profit sustainability of accounting profits is analyzed. Second, we will analyze the impact of the introduction of the electronic voting system on corporate value. Third, analyze whether the difference in profit continuity due to the introduction of the electronic voting system causes a difference in corporate value. The analysis results of this study can help improve the awareness of companies to adopt the electronic voting system, and it is thought that investors can be helped in making decisions about choosing investment alternatives.

## 2. Prior Researches

### 2.1 Agent theory and corporate value

In a corporate organization that conducts business activities through the conclusion of various contracts, the degree of goal agreement between the owner and the agent decreases due to information asymmetry between the contracting parties, and the agent can make decisions to maximize his or her personal interests. For example, in the contractual relationship between shareholders and managers, shareholders, who are owners, cannot observe all the activities of managers, so they can make decisions to maximize their own personal interests rather than shareholders' interests[1]. The agent problem raised by the agency theory arises because the quantity and quality of information held by the owner and the agent are different, and this creates a difference between the quality of decision-making that maximizes the owner's profit and the quality of decision-making made by the manager. The difference between the two decision-making outcomes can be seen as agency costs, and minimizing them is very important to maximize corporate value.

It was argued that the agent problem could be solved to a large extent[5],[6]. In addition, Jensen & Murphy(1990) argued that compensation related to stocks in the long term is more conducive to resolving conflicting interests between shareholders

and managers than short-term cash compensation [7]. If the shareholders' compensation system is designed to allow the manager to own the shares of the company he manages, the degree of alignment of interests between shareholders and managers increases. According to the coincidence hypothesis, the alignment of interests between shareholders and management reduces agency costs, which in turn helps maximize corporate value [1]. However, there are also opposing arguments. There is a complacency hypothesis that if the manager's holdings increase, the control of management decision-making increases, and the value of the company decreases because the utility of pursuing private profits may be greater than the benefit of the increase in the value of the holdings[8],[9].

Such proxy issues can also arise between controlling shareholders and creditors[10], and can also arise between controlling shareholders and minority shareholders[2]. According to a study by Eisdorfer(2008), companies with high financial risk invest in relatively risky investments, and when profits are realized, they are distributed between shareholders and creditors, so that shareholders benefit but have an incentive to transfer the risk to creditors if they fail [11],[12]. In addition, planters have an incentive to maximize their wealth even at the expense of minority shareholders[3]. An example of this is tunneling, in which the controlling shareholder transfers the wealth of minority shareholders using affiliates in which they own a large amount of equity [13]. In particular, in East Asian countries including Korea, the owners monopolize management decision-making based on strong control, which is likely to sacrifice the wealth of minority shareholders [14], which can lead to a decrease in overall corporate value.

## **2.2 Electronic Voting System and Management Transparency**

The electronic voting system is a system that can solve the location constraints so that minority shareholders can easily exercise their voting rights at the general shareholders' meeting. In other words, it allows voting rights to be exercised through the Internet without directly participating in the general shareholders' meeting, and it can be introduced and adopted through the resolution of the board of directors. The electronic voting system can reduce the inefficient costs incurred in holding the existing general meeting of shareholders, and the work efficiency of the general meeting of shareholders can be improved by expediting the business procedures related to the general meeting of shareholders using electronic documents[15]. In addition, shareholders can easily exercise their voting rights without attending the general meeting in person, reducing the cost and time incurred in attending. The speed and simplicity of the electronic voting system makes it convenient to exercise voting rights, and it can be expected to revitalize the general shareholders' meeting because it can reflect the will of various shareholders in the company's important policy-making process[16]. Since its introduction in 2009, the number of companies using the electronic voting system



has been continuously increasing, and the number of shares exercising voting rights through it has been recognized as effective [17]. In addition, as the participation of minority shareholders expands, it is possible to check minority controlling shareholders, which is helpful for protecting the rights and interests of minority shareholders and practicing transparent management [18].

Bae(2018) analyzed whether companies that adopted the minority shareholder rights protection system preferred the professional management system for management efficiency. The analysis showed that companies that have introduced the minority shareholder rights protection system prefer professional managers compared to those that do not. In addition, the introduction of the minority shareholder rights protection system has been shown to have a positive impact on corporate value. These results show that the minority shareholders' rights protection system is a means to check the pursuit of private interests and arbitrary management activities of owners and controlling shareholders through the appointment of directors and management participation that reflects the will of minority shareholders, and it is helpful for efficient management of companies[19].

Ahn, Wi, and Ko(2010) analyzed the characteristics of outside directors and the impact of the minority shareholder protection system on corporate briefings. As a result of the analysis, it was found that the independence of the audit committee, the independence of the board of directors, and the centralized voting system were significantly related (+) to the number of company briefings as a device to effectively control managers. These results indicate that companies with appropriate control mechanisms and small shareholder protection systems can be a means of increasing management transparency by resolving information asymmetry through voluntary corporate briefings[20].

## **2.3 Shareholder Protection System and Corporate Value**

The minority shareholder protection system is also very important in establishing proper governance. Park(2018) analyzed the impact of corporate governance on tax avoidance and corporate value using evaluation data from the Korea Corporate Governance Service. As a result of the analysis, the total score of corporate governance expressed by the interaction between the tax avoidance measurement and the corporate governance item, the disclosure of the board of directors, and the audit organization showed a significant positive (+) regression coefficient. These results show that factors that perform monitoring and supervision functions, such as the board of directors, audit bodies, and disclosures, can mitigate the negative impact on corporate value [21].

Kim, Ahn, and Hwang(2020) analyzed the relationship between voluntary disclosure in corporate governance reports and corporate value, and found that voluntary disclosure had a positive (+) significant relationship between Tobin's Q and the



corporate value measured by the price-to-book ratio (MTB). These results show that corporate governance reports mitigate information asymmetry between stakeholders by providing useful information [22].

Hong, Lee, and Seo(2010) analyzed the effect of a company's board structure on corporate value. As a result of the analysis, it was found that the ratio of outside directors is low in companies with high managerial influence, and the higher the ratio of outside directors in the audit committee, the higher the corporate value in the next term, indicating that strengthening the independence of outside directors reduces the cost of representation between shareholders and management, and helps to create corporate value by functioning well in checks and monitoring functions[23].

Kim and Shin(2016) analyzed the relationship between the independence of the board of directors and the corporate value by measuring the social connection between outside directors and inside directors, such as delay, academic ties, and past experience. As a result, the more independent the outside directors are from the inside directors, the more they can perform appropriate checks and monitoring functions, which has a positive impact on corporate value[24].

Lee, Lee, and Kim(2017) reported that the corporate value measured by Tobin's Q is higher when the largest shareholder and institutional investors, not related companies, send outside directors to the board of directors who can reflect their opinions. This suggests that institutional investors' participation in the board of directors effectively monitors and supervises companies, thereby enhancing corporate value [25].

Bae, Choi, and Jeon(2009) analyzed the effects of the centralized voting system and the outside director system on corporate value as a protection system for minority shareholders. As a result of the analysis, it was found that companies with a high proportion of outside directors with a concentrated voting system had a high corporate value measured by Tobin's Q. This shows that the operation of the centralized voting system and the outside director system can prevent the controlling shareholder from monopolizing the major management decision-making process, and the function of monitoring and checking the exercise of influence for the private interests of the manager or controlling shareholder can be carried out well, contributing to increasing corporate value[26].

### **3. Hypothesis and research model**

#### **3.1 Research Hypothesis**

Among the various minority shareholder protection systems, the electronic voting

system focuses on improving the physical conditions under which minority shareholders can exercise their voting rights. The electronic voting system can improve the work efficiency of the shareholders' meeting[15], and it helps to revitalize the shareholders' meeting by reducing the cost and time of attendance for minority shareholders, as well as expressing their opinions on important corporate decisions[16]. A system that can protect the rights and interests of minority shareholders will also contribute to increasing accounting transparency by making operational decisions more transparent[20]. Therefore, the introduction of the electronic voting system, which is a protection system for minority shareholders, can be expected to affect the sustainability of profits, which is the quality of accounting profits. To verify this, this study establishes the following hypotheses.

[Hypothesis 1] The introduction of the electronic voting system will have a positive (+) effect on profit sustainability.

Since the major operations of a company are carried out through the board of directors, it is very important to secure independence from the CEO or controlling shareholders in the composition of the board of directors. However, the appointment of directors is done through the general shareholders' meeting, and the more directors are appointed that reflect the opinions of minority shareholders, the more independent the board of directors can be formed. In order to appoint directors who can represent minority shareholders, it is necessary for minority shareholders to easily exercise their voting rights at the general shareholders' meeting, but in the case of an electronic voting system, it is easy to exercise voting rights because they do not have to participate in the general meeting of shareholders, which increases the participation of minority shareholders in exercising their voting rights.

Previous studies(Hong et al., 2010; Kim and Shin, 2016; Lee et al., 2017, etc.) have shown that strengthening the independence of the board of directors makes it easier to monitor and check the management or controlling shareholders, which helps to reduce agency costs and ultimately increase corporate value[23],[24],[25]. Similarly, the introduction of the electronic voting system, which is a minority shareholder protection system, can be expected to help enhance corporate value as it helps to strengthen the independence of the board of directors. The hypothesis to verify this is as follows.

[Hypothesis 2] The introduction of the electronic voting system will have a positive (+) effect on the corporate value.

As a system for protecting the voting rights of minority shareholders, if the



electronic voting system helps to secure management transparency, it will also contribute to alleviating the proxy problem that arises between the management or controlling shareholder and the minority shareholder. In this case, it lowers the company's cost of capital[27] and ultimately contributes to the creation of corporate value[24]. The introduction of the electronic voting system secures management transparency, and if accounting transparency increases, profit sustainability will increase. In addition, since increased profit continuity will contribute to the creation of corporate value, the following hypothesis is set and tested.

[Hypothesis 3] In companies that have adopted the electronic voting system, the impact of accounting profits on corporate value will be greater.

### 3.2 Measurement of Research Models and Variables

This study focuses on the effect of the introduction of the electronic voting system as a minority shareholder protection system on profit continuity and corporate value, which is the quality of accounting profits. To do this, we first estimate the profit continuity using [Model 1].

$$[Model\ 1] \quad OI_{i,t+1} = a_0 + a_1 OI_{i,t} + \epsilon_{i,t}$$

$$OI = \frac{\text{operating income}}{\text{total assets}}$$

In [Model 1], the larger the size of the effect of the operating profit of the current year on the operating profit of the next period, the higher the profit sustainability. Next, [Model 2] was set up to analyze whether the profit continuity of companies that adopted the electronic voting system was different from those that did not.

$$[Model\ 2] \quad OI_{i,t+1} = b_0 + b_1 OI_{i,t} + b_2 EV * OI_{i,t} + b_3 MajS_{i,t} + b_4 FnS_{i,t} \\ + b_5 LEV_{i,t} + b_6 SIZE_{i,t} + b_7 MKT \\ + b_8 YD + b_9 IND + \epsilon_{i,t}$$

$EV =$  If a company has electronic voting system, 1,  
otherwise 0

$MajS =$  Largest shareholder's equity

$FnS =$  foreign investors' equities

$LEV = \frac{\text{liability}}{\text{total assets}}$

$SIZE = \ln(\text{assets})$

$MKT =$  If a company is traded in KOSDAQ, 1,  
otherwise 0

$YD =$  year dummy



In [Model 2], if the company that adopted the electronic voting system has higher profit continuity than the company that did not, the regression coefficient of the interaction between the electronic voting system and operating profit will be shown as a positive (+). Next, [Model 3] was set up as follows to analyze the effect of the introduction of the electronic voting system on corporate value.

$$[Model\ 3] \quad R_{it} = c_0 + c_1EV + c_2OI_{it} + c_3MajS_{it} + c_4FnS_{it} \\ + c_5LEV_{it} + c_6SIZE_{it} + c_7MKT + c_8YD \\ + c_9IND + \epsilon_{it}$$

$R$  = stock return over a year

In [Model 3], if the introduction of the electronic voting system has a positive effect on corporate value, it is expected to appear as this amount (+). Finally, [Model 4] was set up to analyze the effect of profit continuity differences on corporate value of companies that adopted the electronic voting system.

$$[Model\ 4] \quad R_{it} = d_0 + d_1OI_{it} + d_2EV * OI_{it} + d_3MajS_{it} + d_4FnS_{it} \\ + d_5LEV_{it} + d_6SIZE_{it} + d_7MKT + d_8YD \\ + d_9IND + \epsilon_{it}$$

In [Model 4], if the quality of the accounting profit disclosed is improved by the introduction of the electronic voting system and the corporate value increases as a result, it will be shown as positive (+).

### 3.3 Selection of samples

This study focuses on analyzing the impact of the electronic voting system as a minority shareholder protection system on profit continuity and corporate value. In order to empirically analyze whether the introduction of the electronic voting system is effective in protecting the rights and interests of minority shareholders and has a positive effect on corporate value, an analysis sample was extracted based on the following criteria for companies traded on the Korea Exchange(KRX).

- (1) Companies that traded on KRX between 2014 and 2019
- (2) Companies other than finance, insurance, and securities
- (3) Settlement corporations at the end of December
- (4) Companies whose audit opinions are appropriate
- (5) Companies whose business reports can be viewed on DART
- (6) Companies that can extract financial statement data and stock price information from Fn-Guide's database

The reason why the data was extracted from 2014 is that the electronic voting system was

activated in earnest in 2014 as a result of checking with the Electronic Disclosure System(DART). The reason for excluding companies in the finance, insurance, and securities industries is that the financial statement composition of the industry is different from that of the general industry. The reason for limiting the settlement to the corporations at the end of December is to secure homogeneity at the time of analysis. In order to limit the analysis sample to companies whose disclosed financial statements met the audit standards, only companies with appropriate audit opinions were sampled. As a result of reviewing the business reports of companies listed on the Korea Exchange, it is confirmed that a significant number of companies have introduced the electronic voting system, but there are still many companies that have not adopted it. The number of companies that have adopted the electronic voting system that meet all of these sampling criteria is 2,037.

## 4. Empirical Analysis Results

### 4.1 Descriptive Statistics of Variables

This study analyzes how the introduction of the electronic voting system affects profit continuity and corporate value. A corresponding sample was constructed to compare companies that have adopted the electronic voting system with those that have not adopted it.

<Table 1> Summary of Descriptive Statistics

	EV	N	Min	Max	Mean	Std. dev.
$OL_{t+1}$	adoption	2,037	-1.437	0.502	0.016	0.094
	non adoption	4,074	-0.732	0.645	0.023	0.088
$R_{12}$	adoption	2,037	-0.628	2.603	0.066	0.480
	non adoption	4,074	-0.630	2.589	0.055	0.423
$R_3$	adoption	2,037	-0.825	2.467	-0.045	0.459
	non adoption	4,074	-0.786	2.546	-0.056	0.395
$OI$	adoption	2,037	-0.865	0.476	0.022	0.084
	non adoption	4,074	-1.452	0.553	0.028	0.086
$MajS$	adoption	2,037	0.019	0.857	0.350	0.165
	non adoption	4,074	0.000	0.908	0.402	0.165
$FrS$	adoption	2,037	0.000	0.676	0.065	0.094
	non adoption	4,074	0.000	0.897	0.070	0.109
$LEV$	adoption	2,037	0.018	0.979	0.442	0.196
	non adoption	4,074	0.011	0.999	0.410	0.205
$SIZE$	adoption	2,037	16,218	26,009	19,200	1,483
	non adoption	4,074	15,533	26,589	19,142	1,393

Companies that did not adopt the electronic voting system were selected as many companies that belong to the same industry as the adopted company and have similar asset size and capital structure by 2 times according to the Korean Standard Industry Classification Standard. The descriptive statistics for the main variables are shown in <Table 1>.



<Table 1> shows that the average of operating profit after one year is 0.016 for introduced companies and 0.023 for non-introduced companies. The average operating profit in the introduction year is 0.022 and 0.028, respectively, which is not much different, but on average, it is found that the non-introduced companies are achieving a large operating profit. However, the average enterprise value shows 6% and 5% of the adopted and non-adopted companies, respectively, and the enterprise value measured as of the end of March is also higher for the adopted companies. The largest shareholder equity ratio of companies that have not adopted the electronic voting system is higher than that of the companies that have not adopted it, and the higher the control of the controlling shareholders, the less they prefer the introduction of the electronic voting system to protect minority shareholders. It seems to be.

## 4.2 Correlation Results of Variables

The purpose of this study is to analyze the effect of the introduction of the electronic voting system on profit continuity and corporate value, which is the quality of accounting profits. The results of the correlation analysis of the main variables for the empirical analysis are shown in <Table 2>.

<Table 2> Results of Correlation Analysis

	$OI_{t+1}$	$R_{12}$	$R_3$	$OI$	$MnS$	$FnS$	$LEV$	$SIZE$
$OI_{t+1}$		0.108 <sup>***</sup>	0.133 <sup>***</sup>	0.599 <sup>***</sup>	0.207 <sup>***</sup>	0.217 <sup>***</sup>	-0.091 <sup>***</sup>	0.190 <sup>***</sup>
$R_{12}$	0.134 <sup>***</sup>		0.633 <sup>***</sup>	0.155 <sup>***</sup>	-0.025	-0.010	-0.063 <sup>***</sup>	-0.068 <sup>***</sup>
$R_3$	0.190 <sup>***</sup>	0.525 <sup>***</sup>		0.122 <sup>***</sup>	-0.043 <sup>*</sup>	-0.054 <sup>***</sup>	-0.065 <sup>***</sup>	-0.113 <sup>***</sup>
$OI_t$	0.608 <sup>***</sup>	0.152 <sup>***</sup>	0.161 <sup>***</sup>		0.248 <sup>***</sup>	0.294 <sup>***</sup>	-0.181 <sup>***</sup>	0.250 <sup>***</sup>
$MnS$	0.186 <sup>***</sup>	-0.017	-0.010	0.177 <sup>***</sup>		0.066 <sup>***</sup>	-0.045 <sup>***</sup>	0.310 <sup>***</sup>
$FnS$	0.177 <sup>***</sup>	-0.008	-0.003 <sup>***</sup>	0.208 <sup>***</sup>	-0.011		-0.106 <sup>***</sup>	0.471 <sup>***</sup>
$LEV$	-0.114 <sup>***</sup>	-0.018	-0.064 <sup>***</sup>	-0.174 <sup>***</sup>	-0.075 <sup>***</sup>	-0.066 <sup>***</sup>		0.297 <sup>***</sup>
$SIZE$	0.178 <sup>***</sup>	-0.067 <sup>***</sup>	-0.08 <sup>***</sup>	0.212 <sup>***</sup>	0.197 <sup>***</sup>	0.439 <sup>***</sup>	0.264 <sup>***</sup>	

1) The upper part of the diagonal is the Pearson correlation coefficient of companies that have adopted the electronic voting system, and the lower is the Pearson correlation coefficient of companies that have not adopted the electronic voting system.

2) \*\*\*, \*\*, and \* are significant at the levels of 1%, 5%, and 10%, respectively.

<Table 2>, the correlation coefficient between operating profit and operating profit after one year is 0.599 and 0.608, respectively, in both the sample that introduced the electronic voting system and the sample of companies that did not adopt the electronic voting system, but the coefficient of the companies that adopted it is lower, which raises the question of whether the introduction of the electronic voting system contributes to improving the quality of profits. The correlation coefficient between the enterprise value at the end of December and the enterprise



value at the end of March of the following year is 0.633 in the sample of companies that have adopted the electronic voting system, and 0.526 in the sample of companies that have not adopted the electronic voting system. Regardless of this, the current operating profit, the enterprise value at the end of December, and the enterprise value at the end of March all showed a significant positive (+) correlation in all samples, confirming that accounting profit is the decisive variable of corporate value.

### 4.3 Profit Continuity Analysis Results

This study examines the effect of the introduction of the electronic voting system as a minority shareholder protection system on profit sustainability and corporate value. The results of estimating the profit continuity of companies that have adopted the electronic voting system and those that have not adopted it are presented in <Table 3>.

<Table 3> Estimation of Earnings Persistence

	adoption		non-adoption	
	coef.	t-value	coef.	t-value
cons.	0.002	1.056	0.005	4.762***
OI	0.599	33.770***	0.608	48.886***
R <sup>2</sup>	0.359		0.370	
F-value	1,140,422***		2,389,859***	
N	2,037		4,074	

\*\*\*p<0.01, \*\*p<0.05, \*p<0.1

<Table 3> shows that the profit continuity of companies that have introduced the electronic voting system is 0.599, and the profit continuity of companies that have not adopted it is 0.608, which is relatively high.

In order to verify whether there is a difference in the profit continuity of companies that have adopted the electronic voting system and those that have not adopted it, the interaction between the electronic voting system introduction variable and the operating profit was added, and the analysis was conducted by controlling for variables that can affect profit sustainability. The results are presented in <Table 4>.

<Table 4> Electronic Voting System and Earnings Persistence

	coef.	t-value
Constant	-0.040	-2.254***
OI	0.567	44.221***
EV*OI	0.015	1.252
MajorS	0.077	7.121***
ForS	0.047	3.985***
LEV	-0.001	-0.047
SIZE	0.020	1.340
MKT	0.008	0.666
YD	included	
IND	included	
ADJ. $R^2$	0.375	
F-value	136.617***	
N	6,111	

\*\*\*p<0.01, \*\*p<0.05, \*p<0.1

<Table 4> shows that the company that introduced the electronic voting system has a high profit continuity by the regression coefficient of . The regression coefficient of was not statistically significant in the analysis results, so the research hypothesis 1 of this study was not supported. This means that the profit continuity of companies that introduced the electronic voting system did not differ from the profit continuity of companies that did not adopt the electronic voting system. These results mean that the introduction of the electronic voting system strengthens the independence of the board of directors, which makes it difficult to check whether it is effective in checking the arbitrary decision-making of controlling shareholders or managers, and it is difficult to find evidence that it can help ensure accounting transparency. Unlike the centralized voting system, the electronic voting system is less related to the strengthening of the voting rights of minority shareholders, and it is difficult to find evidence that it can simply exercise voting rights. The focus is on providing convenience. Therefore, the introduction of the electronic voting system will be less related to enhancing the independence of the board of directors or the performance of the check and monitoring functions of the CEO and the largest shareholders, so the analysis results of this study can be considered to reflect this.

#### 4.4 Impact of the introduction of electronic voting on corporate value

The results of analyzing whether investors accept the introduction of the electronic voting system as a positive factor in the market and reflect it in the corporate value are presented in Table 5> <Table 5.

<Table 5> The Impact of Electronic Voting System on Corporate Value

	$R_{12}$		$R_3$	
	coef.	t-value	coef.	t-value
cons.	0.495	4.789***	0.531	5.587***
EV	0.015	1.199	0.019	1.606
OI	0.187	14.175***	0.165	12.875***
MajS	-0.022	-1.687*	-0.017	-1.328
EnS	0.011	0.737	-0.004	-0.263
LEV	0.029	2.180**	-0.003	-0.196
SIZE	-0.106	-6.066***	-0.109	-6.379***
MKT	0.009	0.589	-0.012	-0.865
YD	included		included	
IND	included		included	
adj. $R^2$	0.099		0.146	
F-value	25.776***		39.658***	
N	6,111		6,111	

\*\*\*p<0.01, \*\*p<0.05, \*p<0.1

In Table 5, if the enterprise value of the company that introduced the electronic voting system is higher than the company that did not adopt the electronic voting system, the regression coefficient of the electronic voting system variable should be positive (+) and significant. As can be seen from the analysis results, all the variables introducing the electronic voting system showed a positive (+) sign regardless of the time of measuring the corporate value, but it was not statistically significant, so the research hypothesis 2 of this study was not supported. These results mean that the introduction of the electronic voting system is not effective in increasing the transparency of the operation of the board of directors and monitoring and checking the CEO or the largest shareholder. The electronic voting system, which was introduced as a way to remove the restriction on physical distance in exercising the voting rights of minority shareholders, may be effective in encouraging minority shareholders to participate in the general shareholders' meeting, but it does not seem to have the effect of improving corporate value by lowering the cost of representation through the resolution of agency relationships surrounding corporate management.

#### 4.5 Impact of Profit Continuity Difference on Corporate Value

In the previous <Table 4>, there was no difference between the profit continuity of companies that introduced the electronic >voting system and the profit continuity of the companies that did not adopt it.



<Table 6> The Impact of Earnings Persistence Differentials on Corporate Value

	$R_{12}$		$R_3$	
	coef.	t-value	coef.	t-value
cons.	0.696	6.715***	0.397	4.176***
OI	0.177	11.499***	0.159	10.577***
EV*OI	0.018	1.238	0.012	0.863
MajS	-0.024	-1.872*	-0.020	-1.573
EnS	0.010	0.679	-0.005	-0.337
LEV	0.030	2.217**	-0.002	-0.143
SIZE	-0.106	-6.037***	-0.107	-6.313***
MKT	0.009	0.608	-0.012	-0.828
YD	included		included	
IND	included		included	
ADJ. $R^2$	0.099		0.146	
F-value	25.780***		39.578***	
N	6,111		6,111	

\*\*\*p<0.01, \*\*p<0.05, \*p<0.1

<In Table 6>, the effect of profit sustainability of companies that have introduced the electronic voting system on the corporate value can be judged by the regression coefficient of the interaction between the electronic voting system and operating profit. The regression coefficient of the interaction term of the electronic voting system and operating profit shows a positive (+) sign in both the enterprise value at the end of December and the enterprise value at the end of March of the following year as dependent variables, but it is not statistically significant, so the research hypothesis 3 of this study is not supported. As a result, there is no change in influence in establishing a board structure that can check the management and controlling shareholders. As a result, the electronic voting system does not contribute to increasing accounting transparency and does not contribute to the enhancement of corporate value.

## 5. Summary and conclusion

Unlike Western companies, Korean companies, where ownership and management are not well separated, often have a gap between ownership and voting rights as the largest shareholder exercises voting rights by combining the shares of related parties. In such an environment, minority shareholders are inferior in information to the owner or controlling shareholder, and they are often excluded from the

process of major management decision-making, so there is a high possibility that the wealth of minority shareholders will be damaged. As a system to alleviate the proxy problem that occurs between the owner or controlling shareholder and the minority shareholder, and to protect the rights and interests of minority shareholders, the electronic voting system is a system that facilitates the exercise of voting rights at the general shareholders' meeting and encourages participation in important management decision-making. The activation of the electronic voting system is expected to play a very important role in protecting the rights and interests of minority shareholders and practicing transparent management. In this study, we empirically analyzed whether the introduction of the electronic voting system improved accounting transparency and improved corporate value.

The results of the analysis in this study are summarized as follows.

First, there was no difference between the profit continuity of companies that introduced the electronic voting system and the profit continuity of companies that did not adopt it. This suggests that the electronic voting system makes it easier for minority shareholders to exercise their voting rights, but in order to strengthen the independence of the board of directors and help secure accounting transparency, the participation of minority shareholders should be higher than the current level. Second, there was no evidence that the introduction of the electronic voting system increased corporate value. These results suggest that the introduction of the electronic voting system contributes to the creation of a board structure that can be checked and monitored by the management or major shareholders, and that minority shareholder participation is not active enough to practice transparent management based on this. Third, the degree to which the profit continuity of companies that introduced the electronic voting system was reflected in the corporate value was no different from that of companies that did not adopt it. This suggests that in order for the electronic voting system to help secure accounting transparency and consequently increase corporate value, minority shareholder participation should be more active.

None of the research hypotheses established in this study were supported. An important reason for these results is that Korean companies are very reluctant to use the electronic voting system, and only about 10% of listed companies actually use it, so it is very likely that the sample did not represent Korean companies. Nevertheless, although statistical significance was not secured, the code of the analysis showed results consistent with expectations, so if more companies adopt the electronic voting system in the future, it is still highly likely that the hypothesis set in this study will be supported.

Putting these results together, it seems that the electronic voting system, which was introduced to protect the rights and interests of minority shareholders, should induce higher participation than the current level in order to create a structure that can secure the independence of the board of directors by forming a board of



directors that can reflect the opinions of minority shareholders, and to prevent the arbitrariness of management decision-making by managers or the largest shareholders. In order to induce companies to actively adopt the electronic voting system, one way to evaluate the use of the electronic voting system and the centralized voting system in matters related to governance in the evaluation of ESG management can be evaluated.

Despite these implications, there are many companies that have not introduced electronic voting in reality. This study did not analyze the factors that can promote companies to adopt the electronic voting system. Future research will need to find out what are the main factors that have not led to the introduction of the electronic voting system, and how to promote the introduction of the electronic voting system, which can benefit both companies, shareholders, and capital market participants.

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# **The Impact of Relational Experiences on Recommendation Intent: A Focus on the Vietnamese Market**

**Heejung Lee (First Author)**

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**Janghyun Kim (Corresponding Author)**

## **Introduction**

- Brand trust and advocacy are crucial in service industries
- Relational experience impacts service quality and value perceptions
- Objective: Examine how relational experience drives brand trust and advocacy in Vietnam
- Context: Samsung Service Center & Lotte Mart

## Literature Review (1/2)

### **\*\*Relational Experience\*\***

- Emotional bond, personal attention, sense of belonging
- Enhances perceptions of service quality and value

### **\*\*Service Encounter Quality\*\***

- Focus on customer-staff interaction
- Relational tone improves quality perception
- H1: Relational experience → Service encounter quality

## Literature Review (2/2)

### **\*\*Value for Money\*\***

- Perceived benefit vs. cost
- Enhanced by relational warmth
- H2: Relational experience → Value for money

### **\*\*Brand Trust\*\***

- Built via service quality & value
- H3: Service encounter quality → Brand trust
- H4: Value for money → Brand trust

### **\*\*Brand Advocacy\*\***

- H5: Brand trust → Recommendation intention



## Research Context and Sample

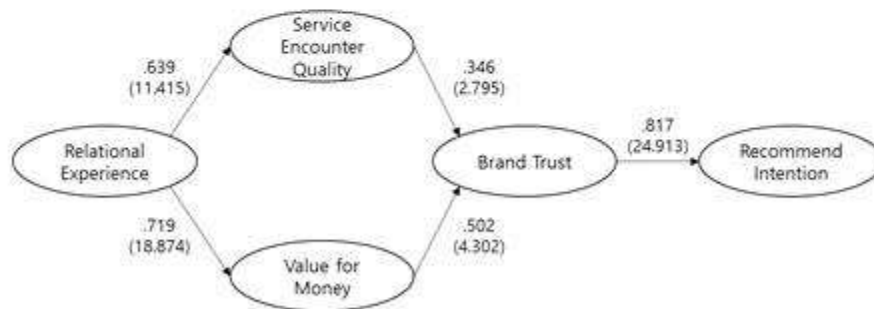
- Two brands: Samsung Service Center (n=60), Lotte Mart (n=60)
- Survey via Macromill Embrain (Sep–Oct 2024)
- Screened for recent visits
- Balanced gender and age quotas

## Measures and Instrument Design

- Constructs: Relational experience, Service quality, Value for money, Brand trust, Brand advocacy
- 7-point Likert scale
- English → Vietnamese (back-translation)
- Sample items: “I trust [Brand]”, “I recommend [Brand] to others”

## Results (1/2)

- Measurement model validated (Cronbach's  $\alpha$ , AVE, CR)
- Path coefficients (PLS-SEM):



## Results (2/2)

- Indirect effects significant (e.g., RE → SQ → Trust → Advocacy)
- Multi-group analysis:
  - No significant difference between Samsung and Lotte Mart groups
  - Model generalizable across service types

## Summary and Discussion

- Relational experience = key driver of trust and advocacy
- Practical insights:
  - Invest in customer relationships
  - Focus on both service quality and emotional value
  - Align service delivery with cultural expectations (Vietnam)
  - Applicable across industries

## Q&A / Thank You

- Thank you for your attention!
- Questions & Discussion



# **A Policy Study for the Use of Women in the Distribution Industry in Japan**

Mun Sunghyun  
(Baekseok University, Korea)

Lee Youngchan  
(Baekseok University, Korea)

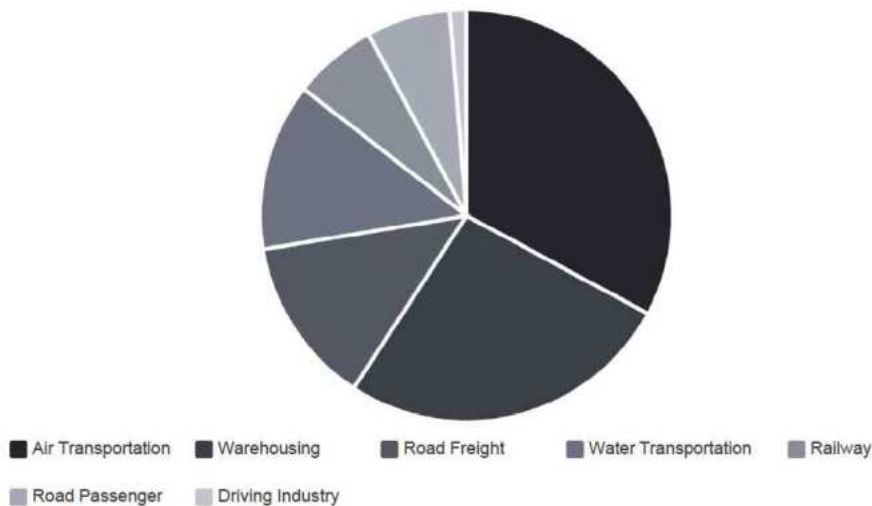


## **Changes in the labor market surrounding the distribution industry**

Japan's distribution industry faces significant challenges due to labor shortages stemming from the country's declining birthrate and aging population. The labor force is projected to decrease dramatically, falling to approximately 57 million by 2030 and 38 million by 2060. This demographic shift is creating intense competition for workers across all sectors.

The distribution industry specifically struggles with negative perceptions, including the "3K" image (tight, dirty, dangerous) and "new 3K" (tight, cheap salary, can't go home). These challenges are compounded by changing lifestyle values among workers, with dual-income households now being the norm rather than the exception.

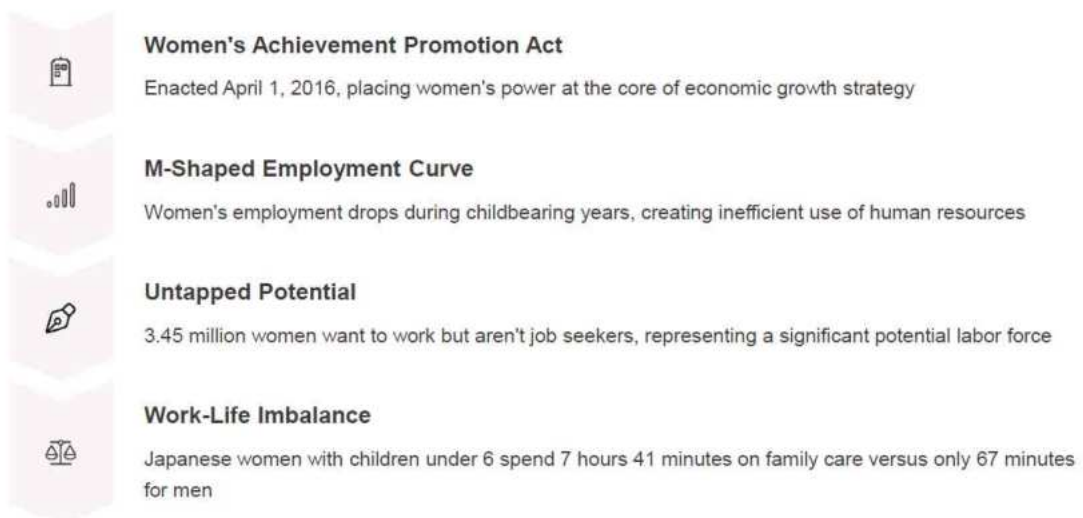
## Labor Market Challenges in Distribution



The distribution industry is experiencing a labor shortage that exceeds the average across all industries. For heavy-duty truck drivers alone, a shortage of approximately 106,000 people is predicted for 2020. About 70% of shippers have already felt this driver shortage, with about 50% having been refused transportation due to lack of personnel.

The workforce in transportation is aging rapidly, with over 70% of workers aged 40 and above, compared to 65% across all industries. Young people under 29 make up only 10% of the transportation workforce versus 16% in all industries. Female representation is particularly low, with women comprising less than 20% of the transport and postal services workforce, compared to 43.8% across all industries.

## The Potential of Women in the Workforce



The Abe Cabinet recognized women as a source of economic growth rather than a group needing "protection." Despite increasing employment rates (67.4% in 2017 for women aged 15-64), about half of women leave work after their first child, creating the characteristic M-shaped employment curve that reflects declining labor participation during childbearing years.

# Barriers to Women's Participation



The main factors impeding women's success in Japan's workforce are fixed gender role-sharing awareness and male-centered labor practices formed during the high-growth period. Japan's culture of long working hours particularly disadvantages women with time constraints, preventing them from developing skills as full members of the workforce.

This system also prevents men from participating in family life, resulting in women bearing excessive family responsibilities. Compared to other developed countries, Japanese men spend remarkably little time on childcare and household duties, creating an imbalance that forces many women to choose between career and family.

## Transforming Work Systems for Women

Flexible Work Arrangements	On-Time Departure Culture	Regional Delivery Options
Implementing teleworking, flex-time throughout the year, and short-time work options allows employees with family responsibilities to maintain careers. Some transportation companies now determine driver working hours based on when drivers want to work, rather than fixed schedules.	Establishing a culture where employees leave on time improves work-life balance, enhances personal lives, and promotes health. This enables male employees to participate in household chores, reducing the burden on women and supporting their career continuity.	Logistics companies can offer short-time work in regional food delivery and home delivery services with limited work days and time zones, creating more accessible entry points for women in the industry.

Creating diverse work systems is fundamental to supporting women's participation in the distribution industry. When companies prioritize work-life balance and offer flexible arrangements, both men and women benefit, leading to reduced resignation rates among female employees and earlier returns from childcare leave or reduced working hours.



## Addressing Physical Demands and Facilities

### Separating Operation and Handling

Introducing trailers and swap bodies allows drivers to concentrate on operation duties without cargo handling, making positions more accessible to women and seniors.

### Automation and Assistance

Implementing automatic warehouses, unmanned transport vehicles, power assist suits, and promoting palletization reduces physical demands of cargo handling work.

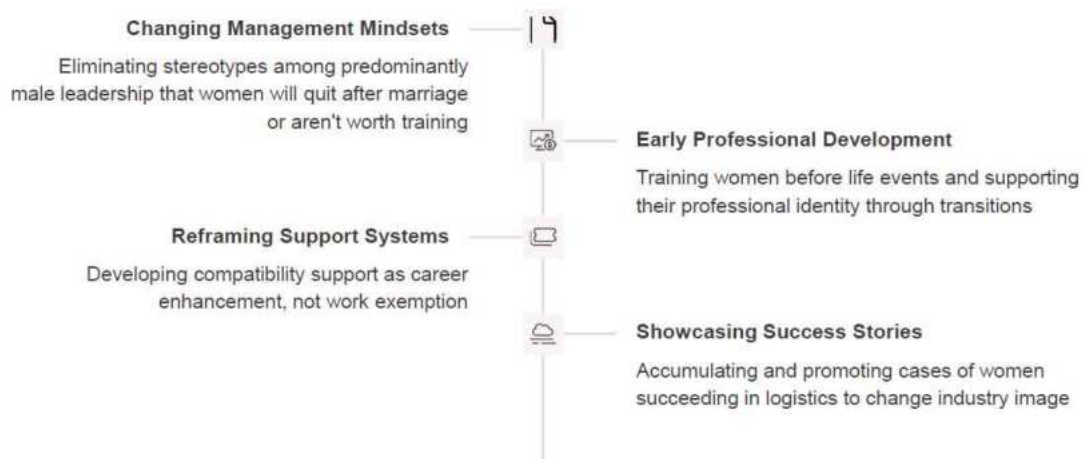
### Facility Improvements

Creating clean, comfortable workplaces with women's private toilets and changing rooms transforms the traditionally inorganic, minimal-function logistics facilities.

The physical demands of cargo handling work have traditionally deterred not only women but also young people and seniors from entering the logistics industry. By implementing technological solutions and redesigning workflows, companies can make these positions more accessible to a diverse workforce.

Workplace environment is equally crucial. Traditional logistics facilities often prioritized minimal functionality to reduce costs, creating inorganic, sometimes dirty spaces. Modern facilities need to provide the same comfortable environment as general offices, with appropriate amenities for all workers.

## Cultural and Organizational Changes



Beyond structural changes, the distribution industry needs significant cultural transformation. With predominantly male leadership, stereotypical attitudes persist, such as believing "women should enter the home if they get married" or that training women is "useless because they'll quit soon." Eliminating these biases is essential for progress.

Companies must invest in women's professional development before life events like marriage or childbirth, and support their continued professional identity through these transitions. Support systems should be framed as career enhancement tools rather than work exemptions. Building and showcasing success stories of women in logistics will help transform the industry's "male society" image.

# The Path Forward for Japan's Distribution Industry



Japan's economic growth depends on fully utilizing women in the workforce, alongside elderly people, people with disabilities, and foreign workers. The distribution industry must expand "positive action" to promote women's work environment, improving the traditionally severe working conditions and treatment.

These changes will transform distribution into an industry where more diverse people can become actively involved. By accepting diverse lifestyles and ways of working, the industry can attract women seeking long-term careers in supportive environments. This transformation is not just beneficial but necessary for the industry's survival and Japan's economic future.

**European Supply Chains regarding the geopolitical changes (Az európai ellátási láncok a geopolitikai változások tükrében)**

**Dr. Zoltán Domboróczy, Ph.D.**

**(Budapest University of Economics and Business, Hungary)**

**A Markov Chain Analysis of the Dynamic Relationship Between Crude Oil Prices and Exchange Rates**

**Li, Zonghuo(Nanjing University of Science and Technology, China)**

**Determinants of Supplier-Buyer Transactions in South Korea**

*An Analysis of Industry Compatibility and Geographic Proximity*

Presenter: Professor Young-Hyo Ahn

Affiliation: Incheon National University



## Research Background

- Supplier-buyer relationships are crucial in supply chain management.
- Traditional focus: Geographic proximity.
- Emerging view: Industry compatibility as a stronger determinant.
- Research Context: South Korea' s industrial ecosystem.

## Research Objectives

- **Investigate the impact of industry compatibility vs. geographic proximity.**
- **Quantify transaction possibility using a DNN-based model.**
- **Provide empirical evidence using nationwide supplier-buyer data.**

## **Key Research Questions**

- **Which factor more strongly determines successful transactions?**
- **How does proximity vary by industry sector?**
- **How does compatibility enhance collaboration and innovation?**

## **Theoretical Framework**

- **Strategic Alignment Theory**
- **Supply Chain Coordination Theory**
- **AI-Driven Models to measure compatibility**
- **DNN-based predictive analytics**

## **Methodology**

- **Data: National-level supplier-buyer dataset in South Korea**
- **Metrics:**
  - **Industry sector codes**
  - **Geographic distances**
  - **Historical transaction volume**
  - **Transaction possibility score**
- **Tool: Deep Neural Network (Lee & Kim, 2022)**

## **DNN-Based Recommendation Model**

- **Representation phase: Vectorization of company features**
- **Prediction phase: Multi-layered DNN model**
- **Output: Transaction Possibility Score (0 to 1 scale)**



## **Key Findings (1) – Proximity**

- **No significant correlation between distance and transaction success ( $R^2 \approx 0$ )**
- **Some regional and sectoral differences**
- **Proximity still relevant in perishable/regulated sectors**

## **Key Findings (2) – Compatibility**

- **Strong ANOVA significance in compatible industry pairings**
- **High compatibility between:**
- **Machinery ↔ Electronics**
- **Construction ↔ ICT**
- **Heatmap confirms compatibility outperforms proximity**

## **Implications**

- **For Theory:**
  - **Compatibility is central in modern SCM theory**
  - **Validates strategic alignment frameworks**
- **For Practice:**
  - **Invest in compatibility-driven partnerships**
  - **Use AI tools to evaluate transactional fit**
- **For Policy:**
  - **Support cluster development and digital infrastructure**

## **Conclusion**

- **Compatibility outweighs proximity in Korean supplier-buyer dynamics**
- **AI-driven models offer valuable predictive insights**
- **Sector-specific strategies are essential**
- **Future research: Cross-country comparison, real-time supply chain AI applications**

**The Effect of Courier Service Quality on Customer Loyalty in the Chinese Parcel Delivery Industry**

**Meng Haiyang (Shandong Aerospace University, China)**

**Assessing the Impact of ESG Performance on Supply Chain Resilience: Evidence from the COVID-19 Shock Using PSM and DID**

**Yoshimoto Koji(Soka University, Japan)**



**An Analysis of the Relationship Between Coffee Consumption Growth and Green Bean Import Structure**

**Amelio L. Bello(University of Philippines Los Banos, Philippines)**

**How the Festive Mood of China's Online Shopping Festivals Influences Consumer Repurchase Intentions**

**Hokey Min(Bowling Green State University, USA)**