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A Study on Factors affecting Housing Satisfaction among Foreign Residents in Korea

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Abstract

Purpose: This study investigates the factors influencing housing satisfaction among foreign residents in South Korea by examining their perceptions and values. It aims to provide insights for developing responsive and inclusive housing policies that cater to the diverse needs of this demographic amidst rapid technological and societal changes. **Research design, data and methodology:** The study, conducted from April to May 2024, surveyed 381 foreign residents in Seoul and major cities. Participants, selected based on a minimum one-year residency, completed structured questionnaires. The survey covered demographic details, housing preferences, and satisfaction. Data analysis using SPSS 27.0 involved frequency analysis, factor analysis, reliability analysis, correlation analysis, and regression analysis to identify significant factors affecting housing satisfaction among foreign residents. **Results:** Five of the six housing preference variables significantly impacted satisfaction, with housing facilities being the most influential. Housing environment, affordability, location, and management also had notable effects on satisfaction levels. **Conclusions:** The study reveals significant determinants of housing satisfaction among foreign residents in South Korea, highlighting the need for inclusive housing policies. Addressing the diverse needs of foreign residents is crucial for supporting Korea's transition to a multicultural society and enhancing foreign residents' integration and overall satisfaction. This includes tailored policies for different demographic groups based on their specific housing preferences and economic conditions.

Keywords: Foreign residents in Korea, Housing Perception, Housing Preference, Housing Satisfaction

JEL Classification Code:

1. Introduction¹²

In an era characterized by rapid technological advancement and changing global dynamics, the housing needs of foreigners living in South Korea have become an important area of research. This need arises from a variety of factors, including the evolution of personal values, the impact of digital transformation, the spread of the Korean Wave, and the severe demographic changes affecting the country. This study aims to investigate and highlight the

specific factors influencing housing satisfaction among foreign residents in South Korea. Understanding these factors is crucial for developing responsive and inclusive housing policies that cater to the diverse needs of this demographic amidst rapid technological and societal changes.

Since the late 1990s, the global popularity of Korean culture, including music and TV dramas, has not only boosted tourism, but also the desire to live in Korea for longer periods of time. According to the Ministry of Justice,

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the number of short- and long-term foreign residents grew at an average annual rate of 8.2 percent from 2013 to 2019. After a temporary decline due to COVID-19, the number began to increase again from 2021 to 2022. Since 2013, the resident population has grown at an average annual rate of 4.1%, reaching 2,245,916 in 2022.

With the rapid growth of the multicultural and multiracial population, which is expected to exceed 5% of the total population by the end of 2024, according to Statistics Korea's forecast for the migrant population, Korea will inevitably transform into a multicultural society. This transformation requires housing demand forecasts and supply policies to accommodate this diversified demographic. As more foreigners experience Korean culture firsthand, the demand for a variety of housing options to accommodate these diverse groups will increase significantly.

Moreover, the advent of the Fourth Industrial Revolution since the mid-2010s has brought about a fundamental shift in social values, driving the personalization of needs and preferences. In the housing sector, this shift is reflected not only in the acceptance of individual lifestyles, but also in the demand for living spaces. The traditional, one-size-fits-all approach to housing does not work well for foreigners living in Korea, who come from diverse cultural and personal backgrounds. Studying how housing preferences are shaped by demographic and cultural backgrounds will provide comprehensive insights for more responsive and inclusive housing policy and development.

In addition, the shift from quantitative to qualitative growth in the information age calls for a focus on creating quality living spaces that are more than just shelter. For foreigners who view their living space as temporary or semi-permanent, the quality of their housing will have a significant impact on their satisfaction and well-being. Incorporating research findings on their housing perceptions into policy will have a positive impact on their social integration. With a declining birthrate and aging population, this poses a serious challenge to South Korea's economic and social structure. Over the past decade, demographic data shows that the population growth rate decreased to 0.37% in 2021 and 0.39% in 2022. The birth rate also declined to 0.72 in 2023. In 2024, the birth rate is projected to drop to 0.6 births. These trends are not an easy problem to solve, which is why the country's population decline is a growing concern. This emphasizes the need for fundamental changes in immigration policy, with a particular focus on increasing the number of long-term foreign residents. Understanding the role of immigration in mitigating population challenges requires a reassessment of immigration policies and practices, especially in the housing sector. By understanding foreigners' housing needs and expectations, South Korea will be able to develop policies that can attract and retain

skilled labor from abroad, offset population decline, and contribute to the country's economic and social vitality. Comprehensive demographic research is urgently needed to gain practical insights into policy and development directions.

In conclusion, the interplay of technological advancements, cultural changes, demographic shifts, and globalization calls for focused research on the housing perceptions of foreigners living in South Korea. Exploring this topic will provide stakeholders with valuable insights into developing responsive and inclusive housing strategies that meet the needs of diverse housing demand groups while enhancing Korea's competitiveness as a global destination. Examining the diverse housing cultures of foreign residents can help increase cultural inclusion and understanding in the housing sector, encouraging housing providers to develop and deliver housing options that cater to the specific characteristics and preferences of foreign consumers. For policymakers, it will highlight the need to comprehensively examine the housing cultures of foreign residents and formulate policies that effectively address their unique housing needs. It will also help to categorize foreign residents into groups to understand their housing needs and characteristics and guide stakeholders to effectively respond to the unique needs of these groups.

The spatial scope of the study centered on Seoul and the Seoul Metropolitan Area, where the majority of foreigners live, and some major provincial cities. The temporal scope of the study was from April to May 2024, and the content scope of the study was residential preference factors and housing satisfaction factors.

The analysis used in this study was conducted using the SPSS 27.0 program. A total of 400 copies of the data for empirical analysis were distributed and 381 valid samples were received, and frequency analysis, factor analysis, reliability analysis, correlation analysis, and regression analysis were conducted.

2. Theoretical Review

2.1. The Concepts and Current Status of Foreign Residents in Korea

Article 2 (1) of the Act on the Status of Aliens in Korea stipulates that "'Alien' means a person who is not a citizen of the Republic of Korea and is lawfully sojourning in the Republic of Korea for the purpose of residing in the country." Article 31 of the Immigration Control Act states that "If a foreigner intends to sojourn in the Republic of Korea for a period exceeding 90 days from the date of entry, he or she must register as an alien with the head of the local immigration office or foreign affairs office having

jurisdiction over his or her place of sojourn within 90 days from the date of entry, as prescribed by Presidential Decree." In addition, Article 6(1) of the Act on the Immigration and Legal Status of Overseas Koreans stipulates that "A foreign national who enters Korea as an overseas Korean may, if necessary to be covered by this Act, establish a residence in Korea and report his/her residence to the head of the local immigration office or foreign affairs office having jurisdiction over the residence." Therefore, the law stipulates that based on the above two laws, a alien of long-term sojourn is a person who has established a place of residence for a sojourn of 90 days or more and has registered with the relevant authorities, or a foreign national has notified the competent authorities of their residence. The dictionary meaning of sojourn is "to stay temporarily in a place away from one's hometown".

In order to select research subjects that meet the purpose of this study, the minimum period of residence should be about one year in order for the research subjects to have enough time to familiarize themselves with the Korean residential culture and have a proper perception of the residential experience. The dictionary meaning of residence is defined as "staying and living in a certain place or such a house," and the meaning of residence is generally defined as a place where one lives, while legally, it is defined as a place where one lives continuously for a certain period of time, although it is not a place with a close relationship such as an address (National Institute of the Korean Language: Standard Korean Dictionary). Korea's tax law stipulates that a resident is obligated to pay income tax, and defines a resident as 'an individual who has an address in Korea or a residence for more than 183 days. Therefore, the term "residence" can be defined as "a place where one stays and lives for a certain period." The issue arises as to what constitutes a "certain period," and this varies depending on the legal context and the specific purposes of different laws. In this study, a period of at least one year is considered sufficient for individuals to gain appropriate experience and familiarity with Korean residential culture and to integrate and interact with the residential environment and culture of Korea.

Therefore, this study operationally defines "foreign residents in Korea" as foreign nationals who have lived in Korea for more than one year who are registered as long-term residents for more than 90 days under the Immigration Control Act or who have registered their residence under the Act on the Immigration and Legal Status of Overseas Koreans.

Table 1: Annual status of Foreigners sojourning in Korea

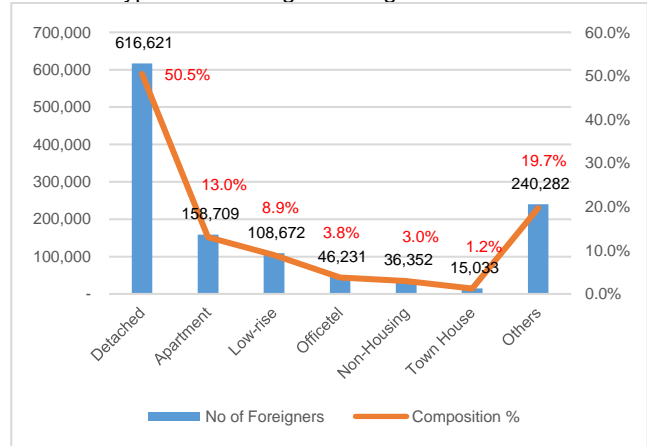
Sortation-	2012	2019	2022	CAGR
Short-term	324,504	792,853	557,057	5.6%
Long-term	1,120,599	1,731,803	1,688,853	4.2%

Total No. of Foreigners	1,445,103	2,524,656	2,245,910	4.5%
% of Long-term Foreigners	2.2%	4.2%	4.3%	4.1%
MBP %	NA	4.2%	4.5%	-

*MPB % : Migration Background Population % of ROK Population
 *Source : Minister of Law and Office of National Statistics of ROK

As mentioned earlier, the number of foreigners staying in Korea for a long period of time for various purposes such as business, studying abroad, experiencing Korean culture, and working has increased significantly over the past decade due to the spread of the Korean Wave and Korea's rising international status as a developed country. As shown in Table 1, the proportion of long-term resident foreigners to the total number of registered residents increased from 2.2% in 2012 to 4.3% in 2022 and the proportion of the migration background population increased to 4.5%. The Statistics Korea forecast for 2024 is that it will increase to 5%, which is the threshold for the Organization for Economic Cooperation and Development (OECD) to classify Korea as a multicultural and multiracial country. This means that Korea needs to start studying the housing issues of foreigners with the same concern as those of nationals.

Table 2: Types of Housing of Foreign Residents in Korea



Source: Residence Census of Office of National Statistics

When looking at the types of housing that foreign residents live in, according to Statistics Korea's Housing Census, 50.5% of foreign residents in Korea live in detached houses, compared to 13% in apartments, 8.9% in low-rise condominiums, 8.0% in others. The highest proportion of foreigners living in detached houses can be explained by the fact that foreigners from Asia are in the majority, which suggests that their economic status is generally not as good as that of Koreans. The combination of detached houses, low-rise condominiums, and officetel (Efficiency Apartment) makes up 70.8% of the total, which suggests that

the majority of foreigners living in Korea are living in housing types that are relatively low-end in terms of economic status.

2.2. Review of Previous Studies

Since the purpose of this study is to investigate the factors that affect the housing satisfaction of foreigners living in Korea, common variables that can affect housing satisfaction were explored through the review of previous studies, and the variables that were added arbitrarily by the researcher's insight to secure the differentiation of this study were extracted and constituted as the variables of this study. The following were identified from previous studies.

2.2.1. Previous Studies on Foreign Residence

The following summarizes the previous studies on the residence of foreigners in Korea.

Jung (2011) aimed to analyze the spatial distribution patterns of foreigners living in the Seoul metropolitan area and to identify the determinants of their residential choices. Through factor analysis and multiple regression analysis, Ji-Eun Jung (2011) found that foreigners from Europe and the United States tend to cluster around Seoul's downtown area, and that there are differences in residential choices by nationality. She found that foreigners from Southeast Asia are more likely to live near areas with a high concentration of manufacturing industries, and that proximity to foreign schools is an important factor for foreigners from Europe and the U.S. she also found that high-skilled foreigners consider the educational environment as an important factor in choosing a place to live.

In a comparative analysis of the housing conditions and needs of married women from Southeast Asia, including China, Vietnam, and Cambodia, living in Jeonju City, Hong-sung Lee (2013) found that the reasons for migration differed by country of origin, with Cambodian women seeking economic advancement, Vietnamese women seeking a better spouse, and Chinese women citing cultural affinity and liking, and preferring to live in a mixed-nationality community without strict cultural separation for cultural integration. Expectations regarding housing conditions in Korea were found to be low due to poor housing experiences in their home countries.

Hyun-ju Kang (2015) studied the spatial distribution of residences among foreigners staying in Busan for 90 days or more and found that foreigners tend to live in the city center or industrial areas, and that areas with established foreign communities are the most important factors in determining where to live, while Korean Chinese and Southeast Asians prefer areas with low housing costs and good access to work.

In a study to identify spatial distribution patterns and factors influencing residential segregation among foreigners

living in the Seoul metropolitan area, Hye-jin Kim (2017) found that socioeconomic status, nationality, and employment opportunities were the main influencing factors of residential segregation among foreigners, with Chinese and Southeast Asians more likely to live in certain areas with lower economic levels, and Western foreigners tending to live in more affluent areas, highlighting the need for socioeconomic integration programs that address socioeconomic disparities among foreigners to reduce racism and strengthen community cohesion.

2.2.2. Previous Studies on Housing Preference

Since this study aims to identify the factors that affect foreigners' housing satisfaction, I identified the main housing preference-related variables through previous studies.

In a study of the influencing factors of housing satisfaction among residents of 28 public rental housing complexes in Seoul, Kyung-won Han (2006) found that the physical condition and quality of housing, frequency of interaction with neighbors and community activities, access to public transportation, access to amenities, housing safety, access to natural environment, quality of housing management services, and degree of privacy were analyzed as the main influencing factors of housing satisfaction. It is also noteworthy that the provision of economic support programs had a very positive effect on housing satisfaction since the analysis was conducted among residents of rental housing.

In a study of intergenerational characteristics of housing preferences among baby boomers and eco-generation living in Busan Metropolitan City, Taek-hun Bang (2015) found that baby boomers value eco-friendliness, investability, and display value, while eco-generation values safety, quality, and location. The study also found significant differences between the two generations in terms of education, occupation, marital status, personal income, household income, asset size, and living area, and analyzed differences in terms of housing size and price, housing type, preferred apartment type, and preferred apartment location.

In a study on the impact of housing value and investment value on purchase intention among potential homebuyers in a specific city, In-sung Hwang (2015) found that the intrinsic value of a home has a significant impact on consumers' purchase intention, housing finance, subsidies, and taxation policies have an impact on purchase intention, and the potential for future appreciation and rental income have an impact on potential buyers' investment decisions. In addition, satisfaction with the current housing environment was identified as a moderating variable between perceived value and purchase intention. The integration of smart home technology was analyzed to increase the perceived value of a home. Among the demographic variables, age, income,

and family size were found to have a significant impact on the perceived value and investment value of a home.

In a study on the housing preferences and housing perceptions of the second generation of baby boomers, especially those born between 1968 and 1974, Ga-ram Kim (2019) found that 71.4% of the study participants live in apartments and 68.9% of them own their own homes, and after retirement, they mainly prefer detached houses. When it comes to choosing a place to live in retirement, people prefer to stay close to where they currently live due to established community ties. Overall, safety, economic viability, eco-friendliness, accessibility, investment value, and quality were the most important factors influencing housing preferences.

In a study of factors affecting housing choice satisfaction before and after moving due to redevelopment projects among tenants living in redevelopment areas, In-young Lee (2020) analyzed affordability, location, environmental factors, social factors, and physical characteristics as important factors in determining housing choice at the time of moving, and found that there was a significant difference between the factors that were considered important at the time of moving and satisfaction after moving. After moving, factors such as accessibility to schools and workplaces, accessibility to living amenities, safety, and space were identified as factors affecting housing satisfaction.

In a study of housing values, housing preferences, and housing satisfaction among MZ generations in their 20s and 30s, Jae-yong Yang (2021) analyzed that economic factors have the greatest impact on housing satisfaction of both M and Z generations, and Z generations consider housing management factors and community factors more important than M generations, and safety and privacy are perceived as important housing values by both MZ generations.

Based on the implications identified through the review of previous studies, demographic variables such as income, length of residence, and nationality of foreigners were identified as important factors that influence housing preference and housing satisfaction in relation to foreigners' housing perceptions, and factors such as facilities, management, environment, location, access to living amenities, affordability, safety, ease of commuting, and relationship with the local community were identified as factors that influence housing preference.

Therefore, this study selected seven preference factors as residential preference variables, including residential location, residential facilities, residential environment, residential management, affordability, relationship with the community, and safety, reflecting additional considerations to secure the differentiation of this study.

3. Research Design

3.1. Research Questions

This study aims to measure the housing satisfaction of foreigners living in Korea on seven variables selected from previous studies, namely, housing location, housing facilities, housing environment, housing management, affordability, relationship with the community, and housing safety, and to examine the influence of each of the seven variables on housing satisfaction.

In addition, I will examine the influence of demographic variables such as country of origin, gender, marital status, religion, income, wealth, family size, and education, and the influence of characteristics related to the current housing of the foreigners surveyed on their satisfaction such as length of residence, the types of housing, purpose of residence, family size, occupancy type, number of board members, location, and the types of preferred housing.

Therefore, the research questions are as follows.

Research Question 1: How does each of the housing preference factors affect the housing satisfaction of foreigners?

Research Question 2: How does each of the demographic variables of the foreigners surveyed affect their housing satisfaction?

Research Question 3: What is the influence of each of the variables related to the residential characteristics of the foreigners surveyed on their housing satisfaction?

3.2. Variable Selection

3.2.1. Housing Preference Attributes and Housing Satisfaction

The selection of variables corresponding to housing preference attributes and variables related to housing satisfaction to investigate the factors affecting the housing satisfaction of foreigners living in Korea was based on the implications gained from previous studies, as mentioned above, and categorized into major factors such as housing location, housing facilities, housing environment, housing management, housing affordability, relationship with the community, and housing safety.

For the selection of detailed items for the housing location factor, the variables were organized into six sub-factors, including access to of public transportation, commuting distance to school and work, access to living amenities, access to public facilities, availability of good educational facilities, and access to cultural and leisure facilities, based on the results of previous studies and to secure the differentiation of this study.

The housing facilities factor consisted of six sub-items:

size of the house and number of rooms, internal space structure and layout, building exterior and interior, high-tech facilities such as household automation and high-speed internet, sufficient parking space, ventilation, sound and light.

The housing environment factor was composed of four sub-items, including green spaces such as parks and trails, good sunlight and views, safety from disasters and crime, and privacy from the outside world.

The housing management factor was composed of four sub-items: efficiency of energy facilities such as electricity and water, separation of garbage and garbage disposal facilities, ease of maintenance and upkeep of the house, and convenience of management such as mail delivery and home delivery.

The housing affordability factor was composed of four sub-items: the price or rent level of the housing, the cost of home maintenance, the potential for future price appreciation, and the cost of commuting to work or school.

The relationship with the community factor was composed of four sub-items: local amenities in the housing complex, neighbors with similar living standards, the reputation and prestige of the neighborhood, and the likelihood of interacting with local social clubs.

The housing safety factor consisted of three sub-items: protection from noise and pollution, security systems and safety facilities in the house, and the appearance and structure of the house.

Seven housing preference factors were selected as independent variables, and each preference factor was measured on a 7-point Likert scale ranging from 'not at all' (1 point) to 'very much so' (7 points).

As the dependent variable, I selected the degree of satisfaction that foreigners living in Korea feel with their current housing. For the housing satisfaction variables, eight detailed items, including the seven preference factors selected as independent variables and the overall satisfaction factor with the current housing, were organized into the dependent variable, the housing satisfaction variable. Like the independent variables, the dependent variables were measured on a 7-point Likert scale ranging from 'very dissatisfied' (1 point) to 'very satisfied' (7 points).

3.2.2. Extracting Method of Variables

The following Table 3 shows the main factors that were extracted as measures for housing preference variables and housing satisfaction variables based on the review of previous studies and the differences of this study.

Table 3: The process of extracting independent and dependent variables

Variables		Han (2006)	Bang (2015)	Lee (2020)	Yang (2021)	This study
Housing Location	Public Trans.	○	○	○	○	○
	Commuting	○		○	○	○
	Amenities	○	○	○	○	○
	Public Facil.		○		○	○
	Education	○	△	○	○	○
Housing Facilities	Cultral Facil.		○			○
	Size	○	△	△	○	○
	Space layout				△	○
	Exterior, Interior	○	○			○
	High-tech					○
Housing Environ.	Parking	○	○	○		○
	Ventilation				○	○
	Green space	○	○	○	○	○
	Light/View			○	○	○
	Disaster Safety	○	○	○	○	○
Housing Manage.	Privacy		○		○	○
	Energy				○	○
	Garbage disposal				○	○
	Mainten.	△				○
Housing Afford.	Mail delivery				○	○
	Price			○	○	○
	Upkeep cost				○	○
	Value increase		○		○	○
Relation w/ Commu.	Commuting expense		○		○	○
	Community			△		○
	Neighbors				○	○
	Reputation		○	○	○	○
H. Safety	Local clubs			△	○	○
	Pollution safe					○
	Security Fac.		○		○	○
Housing Satisf.	Durability					○
	Location	○	△	○	○	○
	Facility	○	△	○	○	○
	Eanviron.	△		○	○	○
	Mainten.	△	△		○	○
	Affordability			△	○	○
	Community			△	○	○
	Safety		△	△		○
Overall				○	○	

*Excerpts from each of these studies and adapted for this study

** △ Similar concepts

4. Empirical Analysis

4.1. Demographic Characteristics of the Sample

Based on the survey of 381 foreigners living in Korea, the general demographic characteristics of the respondents were 167 men (43.8%) and 214 women (56.2%), with women outnumbering men by about 1.3 to 1. In terms of age, those in their 30s were the most common (48%), followed by those in their 20s (39.1%), and 15% were in their 40s or older. The most common education level is a graduate degree (45.9%), followed by 37% with a bachelor's degree and 21.5% with a high school diploma or less. In terms of occupation, office workers (employees with local companies or expatriates working for global companies or embassies) accounted for 52%, followed by students at 21.5% and self-employed business men at 20.7%.

Table 4: Demographic Characteristics of the Sample

Classification		Freq.	Ratio(%)	Classification		Freq.	Ratio(%)
Gender	Male	167	43.8	Marriage	Married	151	39.6
	Female	214	56.2		Not married	230	60.4
Education	High school or lower	65	17.0	Origin	Asia	149	39.0
	College graduated	141	37.0		Europe	129	33.8
	Graduate	175	45.9		America, Australia	103	27.0
Job	Student	82	21.5	Monthly Income	~ 2M won	126	33.1
	Self-employed	79	20.7		2~4M won	142	37.3
	Employee	198	52.0		Over 4M won	113	29.7
	Etc	22	5.8	Net Asset	~ 100M Won	274	71.9
Age	20s	149	39.1		100~300M won	50	13.1
	30s	183	48.0		Over 300M won	57	15.0
	40s or older	57	15.0	Total	381	100.0	

Asia was the largest continent with 149 (39.6%), followed by Europe with 129 (33.8%), and the Americas with 103 (27%). The monthly household income of 142 respondents (37.3%) was between 2 million won and less than 4 million won, followed by 126 respondents (33.1%) earning less than 2 million won and 113 respondents (29.7%) earning more than 4 million won. The wealth of 274 respondents (71.9%) was less than 100 million won, followed by 50 respondents (13.1%) between 100 million won and less than 300 million won, and 57 respondents (15%) with more than 300 million won.

4.2. Residential Characteristics of the Sample

Looking at the characteristics related to the sample's residency, 136 (35.7%) have lived in the country for less than 3 years, followed by 112 (29.4%) for more than 5 years but less than 10 years, and 88 (23.1%) for more than 3 years but less than 5 years. In terms of current housing, 135 (35.4%) were living in a studio or office, followed by 117

(30.7%) in a multi-family or villa, 85 (22.3%) in an apartment, and 44 (11.5%) in a single-family home. As for the purpose of residence, 176 (46.2%) were employed, 76 (19.9%) were studying, 55 (14.4%) were married, 52 (13.6%) were working in business or arts, and 22 (5.7%) were retired or other. Apartments were the most popular housing choice with 155 (40.7%) respondents, followed by detached houses with 80 (21%), studio types or officetel with 76 (19.9%), and multi-family or villas with 70 (18.3%).

Table 5: Residential Characteristics of the Sample

Classification		Freq.	%	Classification		Freq.	%
Duration of Sojourn	~ 3 yrs	136	35.7	Further sojourn	~ 3 yrs	85	22.3
	3~5 yrs	88	23.1		3~5 yrs	62	16.3
	5~10 yrs	112	29.4		5~10 yrs	85	22.3
	Over 10 yrs	45	11.8		Over 10 yrs	149	39.1
Current House	Studio type, Officetel	135	35.4	Preferred house	Studio, Officetel	76	19.9
	Detached H.	44	11.5		Detached H.	80	21
	Multi-family, Town house	117	30.7		Multi-family, Town house	70	18.3
	Apartment	85	22.3		Apartment	155	40.7
Purpose of sojourn	Study	76	19.9	Occupation Type	Owned	42	11
	Employ.	176	46.2		Jeonse or Ban-Jeonse	231	60.6
	Marriage	55	14.4		Etc	108	28.4
	Business, Entertain.	52	13.6		Total	381	100.0
	Etc	22	5.7				

*Jeonse : rent a house with security deposit but no monthly rent

**Ban-Jeonse : rent a house with some security deposit and monthly rent

4.3. Reliability and Factor Analysis

Reliability analysis evaluates the consistency and stability of a measurement tool: it determines how reliably it measures a variable when measuring the same thing repeatedly.

Table 6: Result of Exploratory Factor Analysis for independent variables

KMO measure for sample adequacy	0.929	
Bartlett's Test of Sphericity	Approx. X ²	7298.670
	df	435
	P-Value	0.000***

*p<.05, **p<.01, ***p<.001

Item		Factors					
Variable	Comm.	1	2	3	4	5	6
V_50	0.753	.822	.105	.130	.079	.122	.168
V_51	0.779	.771	.162	.198	.215	.129	.237
V_52	0.697	.715	.288	.154	.237	.114	.098
V_62	0.648	.611	.058	.374	.230	.192	.204
V_63	0.627	.553	.088	.403	.233	.203	.237
V_49	0.570	.540	.202	.148	.292	.140	.332
V_35	0.763	.155	.845	.030	.103	.097	.06
V_38	0.712	.059	.813	.121	.021	.157	.085
V_36	0.709	.079	.791	.083	.028	.248	.091
V_37	0.600	.065	.744	.035	.123	.120	.111
V_33	0.569	.132	.71	.085	.155	.019	.126
V_34	0.518	.129	.645	.048	.173	.132	.191
V_40	0.817	.118	.124	.835	.217	.068	.199
V_39	0.768	.001	.100	.789	.264	.084	.244
V_41	0.740	.349	.103	.745	.088	.203	.058
V_42	0.689	.426	.100	.665	.013	.231	.048
V_43	0.619	.507	-.009	.568	-.019	.198	.023
V_44	0.615	.437	.046	.534	.083	.306	.188
V_53	0.805	.097	.118	.110	.873	.047	.073
V_54	0.773	.228	.152	.13	.813	.120	.076
V_55	0.518	.198	.075	.237	.588	.264	.045
V_56	0.543	.200	.301	.06	.569	.174	.235
V_60	0.711	.163	.298	.161	.088	.745	.082
V_59	0.737	.275	.205	.286	.087	.726	.062
V_57	0.741	.133	.313	.129	.247	.670	.314
V_58	0.662	.166	.134	.194	.306	.655	.236
V_45	0.701	.116	.162	.110	.102	.245	.761
V_47	0.707	.319	.275	.163	.167	.082	.684
V_46	0.639	.381	.158	.335	.026	.087	.590
V_48	0.599	.408	.224	.218	.146	.159	.538
Name of Factor		MGT.	LOCA.	FACI.	AFFO.	COMM.	ENVI.
Eigen	11.747	3.081	1.702	1.487	1.217	1.098	
Variance(%)	39.156	10.270	5.672	4.955	4.058	3.659	
Cumul. Variance(%)	39.156	49.426	55.098	60.053	64.111	67.770	
Cronbach's Alpha	.854	.877	.860	.869	.857	.853	

High reliability means that the instrument repeatedly produces similar results under consistent conditions. Cronbach's alpha coefficient is often used as a tool to measure internal consistency.

In this study, an exploratory factor analysis was conducted to identify the influencing factors on the housing satisfaction of foreign residents in Korea, which simplifies the set of variables into fewer factors through correlation analysis, making the data easier to understand and analyze. In order to find out whether the variables derived from the

factor analysis have internal consistency, reliability analysis was measured by Cronbach's alpha, and the results are shown in Table 6.

Principal component analysis is a factor analysis method that transforms the original variables into a new set of uncorrelated variables called principal components. Principal Component Analysis (PCA) has the advantage of simplifying analysis and visualization by summarizing data into major components. Varimax rotation was used for factor rotation. The eigen value is the amount of variance that can be explained by a factor. Variables with eigen values of greater than 1 and factor loadings greater than 0.5 were extracted as meaningful variables.

Based on the above criteria, six factors were extracted as a result of factor analysis, and as shown in Table 6, all of the residential preference attributes were found to be internally consistent. The Kaiser-Meyer-Olkin (KMO) scale of sample adequacy is higher than 0.5 to interpret that the data is suitable for factor analysis, which was 0.929. This data is suitable for factor analysis, indicating that the variables have a significant amount of common variance that can be explained by underlying factors.

The cumulative variance of the six loaded factors was 67.77%, and the Cronbach's α coefficient, which examines the reliability of each factor, ranges from 0.854 for factor 1 to 0.853 for factor 6, indicating internal consistency.

The factor analysis and reliability analysis for the dependent variable were also conducted in the same way, and the results are shown in Table 7 based on the analysis criteria. The KMO value of sample adequacy of the dependent variable is 0.931, indicating that the factor analysis was appropriate, and it was extracted into 8 factors, showing a variance of 64.003%. Cronbach's α coefficient is 0.855, indicating internal consistency.

Table 7: Result of Exploratory Factor Analysis for dependent variables

KMO measure	0.931	
Bartlett's Test of Sphericity	Approx. X ²	1895.557
	df	28
	P-Value	.000***

*p<.05, **p<.01, ***p<.001

Item		Community	Factor Loading
Housing Satisfaction	Overall	.779	.882
	H. Facility	.721	.849
	H. Environ.	.685	.844
	H. MGT.	.685	.828
	H. Safety	.656	.810
	H. Location	.550	.741
	Affordability	.515	.718
	Community	.503	.709
Eigen		5.120	
Variance(%)		64.003	

Cronbach's Alpha	.855
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4.4. Correlation Analysis

Correlation analysis was conducted to determine whether and to what extent the extracted factors were correlated with each other.

As a result of the correlation analysis in terms of the independence of each factor through factor analysis and reliability analysis, the correlations were generally positive. The significance of the correlation between the variables was less than 0.001, indicating that they were all significant, and the contents are as follows in Table 8.

Table 8: Correlation Analysis between Factors

Factor	Satis.	Loc.	Fac.	MGT.	Aff.	Comm.	Envir
Satisfaction	1						
Facilities	0.425**	1					
Environment	0.621**	0.286**	1				
Affordability	0.581**	0.407**	0.605**	1			
Management	0.496**	0.402**	0.434**	0.498**	1		
Location	0.543**	0.510**	0.556**	0.534**	0.502**	1	
Community	0.596**	0.467**	0.572**	0.637**	0.461**	0.550**	1

*p<.05, **p<.01, ***p<.001

5. The Result of Analysis and Discussion

5.1. The Result for The Entire Population

The results of the multiple regression analysis for the entire population to examine the effects of the six extracted factors on housing satisfaction as latent variables are shown in Table 9.

Table 9: Result of Analysis for the Entire Population

Variable	Unstandardized		Stand.	t	p	VIF
	B	SE	β			
Intercept	1.173	.217		5.404	.000	
Facility	.252	.041	.304	6.153	.000	1.930
Environment	.165	.045	.187	3.644	.000	2.084
Affordability	.124	.042	.131	2.961	.003	1.543
Management	.101	.042	.124	2.386	.018	2.126
Location	.098	.041	.104	2.369	.018	1.512
Community	.076	.044	.087	1.733	.084	1.978
F(p)	69.554***					
adj. R ²	.520					
Durbin-Watson	1.705					

*p<.05, **p<.01, ***p<.001

First, to check the appropriateness of the multiple regression model, it is necessary to check whether there is multicollinearity among the independent variables. If there is multicollinearity, the derived regression model is not appropriate. Therefore, to test this, the variance inflation factor (VIF) value should be less than 10 for all variables, and the Durbin-Watson value, a test tool to detect autocorrelation of residuals, should be close to 2. In this analysis, the VIF value is much smaller than 10 for all variables, and the Durbin-Watson value is 1.705, which shows that there is no positive autocorrelation, and the explanatory power of the regression model is also moderate, as the modified R² value is 0.520, which shows that about 52% of the variance of the dependent variable is explained by the independent variables of the model, and the significance level for the model is less than 0.001, which shows that the model is significant. However, among the six independent variables, the community factor is not significant in the regression model with a significance probability greater than 0.05. Overall, the regression model between the five independent variables and the dependent variable is appropriate.

The analysis revealed that five of the six housing preference variables identified through factor analysis significantly impacted housing satisfaction, with housing facilities exerting the greatest influence. Next, housing environment was found to have a significant impact on satisfaction, followed by housing affordability, housing management, and housing location.

5.2. The Result of Analysis by Continent of Origin

To check the moderating effect on satisfaction by continent, I used the Process Macro function in the SPSS statistical program to analyze the results, and found that the housing affordability factor had a statistically significant effect on housing satisfaction, which is summarized in the following Table 10.

Table 10: Impact of Affordability by Continent

model	B	SE	t	p
Intercept	5.046	.076	66.084	.000
Affordability	.303	.071	4.247	.000
Europe_Dummy	.016	.112	.141	.888
America_Dummy	.194	.12	1.627	.105
Interact_1	.227	.102	2.23	.026
Interact_2	.279	.104	2.693	.007
Adequacy of Model	R = .5201, R ² = .2705, F = 27.8096, p = 0.0000			

The main effect analysis of the difference in housing

satisfaction by continent shows that there is no significant difference in housing satisfaction by continent with a significance probability of more than 0.05, and the interaction effect between housing economic factors and housing satisfaction is less than 0.05, indicating that there is a difference. Interaction_1 indicates that there is an interaction effect between Europe and Asia, the reference category, with a significance rate of 0.026, showing a significant difference between Asia and Europe, and interaction_2 indicates that there is an interaction effect between the Americas and Asia, with a significance rate of 0.007, showing a significant difference between Asia and the Americas. In other words, the effect of housing economic factors on housing satisfaction is different between Asia and Europe and different between Asia and the Americas. The difference in the size of the influence between continents can be seen in Table 11.

Table 11: Effects by Continent of Origin

Continent	Effect	SE	t	p
Asia	.303	.071	4.247	.000
Europe	.529	.073	7.271	.000
America/Australia	.581	.075	7.737	.000

Table 11 shows how the impact of the housing affordability factor on housing satisfaction varies by continent. In Asia, the impact of affordability on satisfaction is 0.303, Europe is 0.529, and the Americas/Australia is 0.581, which is the largest impact among the three continents, as an increase of 1 in the affordability factor score in the Americas/Australia increases housing satisfaction by 0.581, which means that foreigners from the Americas/Australia have the largest impact on overall housing satisfaction based on their satisfaction with the affordability factor. The magnitude of the impact is in the order of Americas/Australia, Europe, and Asia.

6. Conclusion and Implications

This study focuses on the housing perceptions and satisfaction of foreigners living in South Korea in the context of rapid technological advancements and changing global dynamics that are significantly impacting demographic and cultural trends in the country. With the influx of foreign residents due to the Korean Wave and changes in the global economy, an in-depth understanding of foreigners' housing needs and preferences is necessary to develop housing policies that respond to this influx and provide implications for housing providers.

Based on the characteristics of the valid samples, slightly

higher proportion of women than men. The age demographic is overwhelmingly young, with a majority in their 30s and 20s. Educationally, almost half have a graduate degree, and about one-third are college graduates, making this study a highly educated group overall. In terms of occupation, the largest proportion of respondents were corporate or embassy employees, followed by students and self-employed. The sample was primarily composed of Asians, Europeans, and Americans/ Australians.

The most common type of current housing is a studio or officetel, followed by a low-rise condominium or a multi-family house and an apartment. In terms of home ownership, 60.6% rented with security deposit or with some security deposit and monthly rent, followed by rent with only monthly rent. The most common reason for living in Korea is employment, followed by education and marriage. The most preferred housing type is apartment, followed by detached house, studio type and officetel.

The analysis utilized multiple regression models to examine the impact of various housing preference factors on housing satisfaction. The main findings show that of the six factors identified, five of them have a significant impact on housing satisfaction, except for the relationship with the community. Housing facilities were found to be the most influential factor, followed by housing environment, housing affordability, housing location, and housing management. The affordability aspects of housing also showed significant moderating effects across continents, with significant differences in the impact of housing affordability on satisfaction between respondents in Asia and Europe and Asia and the Americas/Australia. This variation highlights the different determinants of housing satisfaction among different demographic groups and underscores the need for tailored housing policies to effectively address these differences.

The significance of this study lies in its contribution to understanding the diverse housing needs of foreign residents in Korea. This understanding is essential for developing inclusive housing policies that support Korea's transition to a multicultural society, increasing overall housing satisfaction, and enhancing integration into Korean society. The study's findings emphasize the importance of considering demographic, cultural, and economic factors in housing policy development, ensuring that policies are responsive and adaptive to the specific needs of foreign residents.

Future research should aim to expand the sample size to capture a wider variety of housing needs across different regions and demographic groups in Korea. This will provide more comprehensive insights into the housing preferences and satisfaction of foreign residents, ultimately contributing to more effective and inclusive housing policies and practices.

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