AN EMPIRICAL ANALYSIS OF VIOLENT CRIMES COMMITTED BY FOREIGN NATIONALS IN SOUTH KOREA

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ABSTRACT: As the number of foreigners residing in South Korea has increased, the overall scale of crimes committed by non-Korean nationals and the associated public anxiety have both risen. This paper seeks to explore the trends in violent crimes committed by foreigners in Korea by examining crime statistics from the Korean National Police Agency and immigration data from the Korean Ministry of Justice. Additionally, this paper empirically examines the attributes of the home countries of foreign criminals who are arrested in Korea. The results of our analysis, based on the violent crime statistics for foreign nationals of twelve types from 2003 to 2019, reveal that foreigners from higher-income countries with better educational environments are more likely to be involved in violent criminal activities. Individuals from countries with relatively strong law enforcement are less likely to engage in violent crime while residing in South Korea.

KEYWORDS: crime statistics, foreign crimes in Korea, country-level panel analysis

INTRODUCTION

As the number of foreigners residing in Korea² continues to increase, it is not difficult to find news reports about crimes committed by them. In particular,

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² The term 'Korea' in this paper refers to South Korea (Republic of Korea).

the appearance of 'foreign criminals' is often portrayed in movies and dramas. Korean news media frequently depicts towns densely populated with foreigners as high-crime areas and reports on crimes committed by foreigners on a daily basis. It seems clear that, over the past decade, Koreans' fear of foreigners has grown. In light of this situation, we aim to explore the actual trend of crimes committed by foreigners in Korea through statistical analysis and data about the home-country determinants of foreigners associated with the violent crime rate in Korea, utilizing econometric estimation methods with country-level panel data. The effect of country-level attributes, such as income level, educational environment, and level of law enforcement, on the violent crime rate among foreigners in Korea is examined.

Most of the research on 'foreign crimes' in Korea has primarily focused on examining the statistical trends of crime rates and explaining the latter with reference to domestic socio-cultural factors without considering the attributes of foreign criminals' nationality or home countries. The authors acknowledge that neither overseas nor prior studies conducted in Korea have extensively analyzed the economic, social, political, and educational characteristics of the home countries of criminals as contributing factors. This indicates that there may be a vacuum for potential research and suggests the need for a more indepth empirical analysis of foreign crimes.

In the second section, we review the literature on crimes committed by foreigners. In the third section, we present descriptive statistics about crimes committed by foreigners in Korea and discuss the trends in crimes committed by foreigners categorized by type and criminals' nationality. In the fourth section, we employ OLS fixed-effects estimation methods to identify significant determinants of the nationality of foreign criminals in Korea and estimate the effects of these on the violent crime rate among foreigners in Korea. Finally, in the last section, we provide our concluding remarks.

LITERATURE REVIEW

The debate regarding the relationship between immigration and crime has been extensively discussed in relevant academic circles for a significant period of time. Among these discussions, empirical analysis has emerged as the most prominent method, while economic-theory-based research, comparatively, has not received as much attention.

In particular, the immigration-crime debate is usually focused on examining whether immigration increases or decreases the crime rate. A comprehensive

analysis that explored the reasons for the positive and negative relationships between immigration and crime is a study conducted by Ousey and Kubrin (2009). This research examines the correlation between immigration and crime by analyzing the rates of violent crime in cities across the United States from 1980 to 2000. From this perspective, a positive immigration-crime relationship is suggested, and several factors, such as demographic transition, population instability, and changes in the labor market structure that result in a new pool of low-skill, low-wage labor, are identified as key contributors to increased crime rates. Conversely, factors supporting a negative immigration-crime relationship include 'immigrant selection effects,' as immigrants are a self-selected group with relatively high levels of 'achievement ambition' and low criminal propensity. Formal social control mechanisms are also considered influential, as public fear and concern exert pressure on law enforcement agencies to establish more formal crime-alert systems of social control. Additionally, social capital and family structure play a role, as immigration itself or the presence of ethnic enclaves may foster cultural preservation or maintain strong family ties, thereby bolstering informal social control mechanisms that help suppress crime.

Ozden et al. (2018) attempted to provide causal estimates of the overall impact of immigration on different types of crime. The respective study was focused on Malaysia, a major middle-income destination country where concerns about the impact of immigration on crime are significant. While previous research primarily concentrated on high-income OECD destination countries, this paper offers an analysis specific to Malaysia. By comparing case studies conducted in Italy, the United States, and the United Kingdom, this study identified several key determinants of crime rates. These include demographic composition, available legal earning opportunities for potential criminals, general economic conditions, poverty levels, economic incentives for engaging in criminal activities, deterrence measures implemented by law enforcement agencies, and population density. The study acknowledged the theoretical relationship between education and crime but did not incorporate the actual education level of migrants as a variable to determine its impact on crime rates. The findings of the study indicate that while the immigrant population in Malaysia increased from 10 to 11%, there was a decrease in the property crime rate from 0.83 to 0.75%, as well as a decline in the violent crime rate from 0.19 to 0.16%.

Wadsworth (2010) examined the findings from a time-series analysis focused on changes in homicide and robbery rates in the United States between 1990 and 2000. The study reveals that various factors, including economic disadvantage and divorce, affect crime rates. In addition, the study states that the relative size of the new immigrant population, rather than the foreign-born population, impacts crime rates. Cities experiencing growth in their new immigrant population

between 1990 and 2000 exhibited more pronounced declines in homicide rates. Furthermore, contrary to the results of cross-sectional models, an increase in the availability of low-skill jobs was associated with an increase in homicide rates. Similar patterns were observed for robbery, with economic disadvantage, divorce, and access to low-skill jobs influencing robbery rates. Additionally, immigration was inversely related to violent crime. Increases in the proportion of the foreign-born population were associated with smaller increases or greater decreases in robbery rates.

Finding research that specifically addresses the correlation between the education level of immigrants and crime rates is challenging. However, several articles discuss the impact of education on crime rates more broadly. One such article is by Machin et al. (2011). Their paper explores the theoretical reasons why education can influence crime rates through various channels. Three main mechanisms are considered: income effects, time availability, and patience or risk aversion. Regarding income effects, education can increase the reward associated with legitimate work and raise the opportunity cost of engaging in illegal activities. Empirical evidence supports this idea, indicating that declining real wages can contribute to increasing youth crime rates, while improvements in human capital through education can reduce crime rates. However, it is also recognized that certain skills acquired through education can be misused for criminal purposes, potentially increasing earnings from illegal activities. The amount of time spent in education is also crucial in limiting the availability of time for engaging in criminal behavior. Studies have demonstrated that there is a negative correlation between time spent in school or work and the likelihood of being arrested. Being arrested or incarcerated before completing school significantly increases the chances of dropping out. Various methods have been employed in studies to establish the incapacitation effect of education on criminal participation. However, it should be noted that violent offenses may increase during school hours. Education can also influence crime through its impact on patience and risk aversion. Individuals with higher levels of patience tend to value future earnings more highly and are less likely to engage in criminal behavior. Dropping out of school is associated with myopic thinking and focusing on immediate costs rather than long-term gains. Education can increase patience and reduce the inclination to commit crimes. Furthermore, education may enhance risk aversion, making individuals more mindful of potential punishment and reducing the likelihood of engaging in criminal activities.

In the Korean literature, there are some studies that delve into theoretical approaches or employ empirical analyses specifically regarding foreign crime in Korea. Lim (2010) conducted an analysis and evaluation of prior criminology theories related to immigration-related crimes and examined the characteristics

of previous studies conducted in Korea. The study analyzed crimes committed by immigrants in Korea by examining various aspects such as illegal immigrants, areas with high foreign population ratios, the proportion of foreign criminals by nationality, the proportion of foreign criminals by crime type, and organized crime. Furthermore, by conducting a comparative analysis of the current status of immigration crimes in Germany, Japan, and Austria, the study aimed to provide suggestions for criminal-policy measures and responses to 'foreign crimes' in Korea.

Choi and Kang (2012) conducted comprehensive research that employed various methods, including literature research, statistical data analysis, case analysis, and in-depth interviews, to examine the characteristics of crimes in areas with a large foreign population share in Korea. The study specifically focused on analyzing data related to the number of foreign arrests between 2007 and 2011, obtained through collaboration with the National Police Agency. Furthermore, the study conducted a detailed analysis of violent crimes occurring in these foreign-concentrated areas. The findings revealed distinct factors contributing to these crimes, such as a lack of security, discrimination against and disregard of foreigners, an accumulation in the stress experienced by foreigners, foreign-perpetrated sex crimes, and conflicts of interest within foreign-concentrated areas.

Choi et al. (2022) present strategies aimed at enhancing the prevention of foreign crimes by analyzing the concept of foreign crimes, their characteristics and types, and the current status of such crimes. Notably, the study analyzes the underlying causes of foreign crimes by categorizing them according to socio-cultural factors related to occupation, economic fluctuations, poverty, and cultural conflicts in Korea. In addition, the study discusses the distinct characteristics and types of foreign crime observed in Korea. These include aspects such as ferocity, organization, specialization, maneuvering, wide-area impact, collectivization, internationalization, and political empowerment.

Seo (2012) analyzed the status of foreign crimes in Korea and provided an explanation of the theoretical frameworks that can be used to understand foreign crimes. The theoretical approaches discussed include social disorganization theory, differential opportunity theory, culture conflict theory, and social bonding theory. In employing these theoretical frameworks, the study analyzed the characteristics of foreign crimes in Korea, highlighting the following trends: (1) an increase in immigration-related crimes, (2) an increase in property crimes, (3) an increase in sex crimes, and (4) an increase in drug-related crimes.

Kim and Byeon (2021) conducted an empirical analysis focusing on crimes committed by foreigners in Korea. Their empirical analysis explored various factors in the social, cultural, and economic sectors that could potentially influence the increase or decrease of the crime rate. These factors included variables such as low education, unemployment, and average monthly wages by industry. The results showed that there was no statistically significant relationship between these factors and crimes.

As is evident from the previous studies discussed here, the majority of research on foreign crimes in Korea has primarily focused on examining the statistical trends and exploring the relationships between domestic socio-cultural factors and crime rates rather than considering the attributes of foreign criminals' nationalities or home countries. There has been limited empirical analysis conducted in this area, with Kim and Byeon's (2021) study standing out as a rare example of research employing an economic perspective and utilizing specific variables while still not incorporating the home-country effects associated with foreign criminals. Moreover, it appears that neither overseas nor prior studies conducted in Korea have extensively analyzed the economic, social, political, and educational characteristics of the home countries of immigrants as contributory factors. This indicates a potential research gap and highlights the need for further exploration that incorporates these broader dimensions into the analysis of foreign crime.

DESCRIPTIVE STATISTICS OF CRIMES COMMITTED BY FOREIGN NATIONALS IN KOREA

We will begin by examining the general statistics about foreign crimes in Korea, focusing on the number of criminal offenders arrested. The data utilized in this analysis have been obtained from two separate sources: the statistical documents of the Supreme Prosecutor's Office of Korea (SPO) and the Korean National Police Agency (KNPA). The reason for using data from both institutions is twofold. Firstly, there is some variation in the figures provided by each institution. Second, this allows us to highlight any differences in the statistical data provided by these institutions on the same subject matter.

It is important to note that the data used in this study cover a period of 20 years, specifically from 2002 to 2020. However, we would like to mention that data for the year 2021 could not be included in this analysis. This limitation arises from the fact that the SPO and KNPA data used in this study only extend until 2020. It should be noted that while the Ministry of Justice's Immigration Statistical Yearbook is released more promptly in the form of monthly statistical reports, the crime data from the Prosecutor's Office and the National Police Agency are typically released in the latter half of the year.

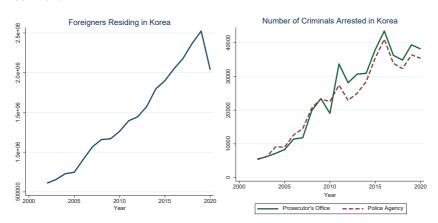


Figure 1. Foreign residents and foreign criminals arrested in Korea per year, 2002–2020

Source: Generated by the authors using data from Supreme Prosecutor's Office Crime Analysis Statistics and National Police Agency Crime Statistics.

As depicted in Figure 1, the population of foreigners residing in Korea trended upward from 2002 to 2020. Although there was a decrease of 50,000 in the number of foreigners residing in 2020 compared to 2019, largely due to the impact of the COVID-19 pandemic, the overall trend has been one of steady growth. Simultaneously, the number of criminals arrested has also increased, rising from 5,000 in 2002 to approximately 30,000 in 2020.

Between 2009 and 2010, the number of foreigners residing in Korea decreased by around 4,000. However, between 2010 and 2011, there was an increase of approximately 13,000. In terms of the rate of change compared to the previous year, the number of foreigners residing in Korea decreased only in 2020. On the other hand, the number of criminals arrested has experienced more frequent fluctuation, both in terms of increase and decrease. For more detailed information on the number of criminals, please see Table A1 and Table A2 in the *Appendix*.

Table 1. Number of Korean and foreign criminals arrested in Korea per year, 2002–2020

Year	To	otal	Ko	rean	For	reign
	SPO Data	KNPA Data	SPO Data	KNPA Data	SPO Data	KNPA Data
2002	2,297,030	1,942,987	2,291,659	1,937,458	5,371	5,529
2003	2,296,945	1,916,817	2,290,728	1,910,673	6,217	6,144
2004	2,284,095	2,266,982	2,276,922	2,257,879	7,173	9,103
2005	1,965,571	1,968,868	1,957,258	1,959,826	8,313	9,042
2006	1,932,729	1,992,087	1,921,308	1,979,430	11,421	12,657
2007	1,989,862	2,108,772	1,978,046	2,094,248	11,816	14,524
2008	2,472,897	2,333,120	2,453,038	2,312,497	19,859	20,623
2009	2,519,237	2,333,715	2,495,819	2,310,371	23,418	23,344
2010	1,954,331	1,986,319	1,935,262	1,963,076	19,069	22,543
2011	1,907,641	1,815,233	1,873,919	1,787,797	33,722	27,436
2012	2,117,737	1,723,815	2,089,617	1,700,901	28,120	22,914
2013	2,147,250	1,741,302	2,116,569	1,716,318	30,681	24,984
2014	1,879,548	1,712,435	1,848,618	1,683,979	30,930	28,456
2015	1,948,966	1,771,390	1,911,038	1,735,947	37,928	35,443
2016	2,020,196	1,847,605	1,976,733	1,806,561	43,463	41,044
2017	1,861,796	1,685,461	1,825,519	1,651,556	36,277	33,905
2018	1,749,459	1,581,922	1,714,629	1,549,609	34,830	32,313
2019	1,754,808	1,585,638	1,715,439	1,549,238	39,369	36,400
2020	1,638,387	1,494,421	1,600,232	1,459,031	38,155	35,390

Source: Ministry of Justice Immigration Statistical Yearbook; Supreme Prosecutor's Office Crime Analysis Statistics, SPO; Korean National Police Agency Crime Statistics, KNPA.

According to Table 1, the total number of arrests of Koreans displays a somewhat irregular pattern with both increases and decreases. In contrast, the total number of arrests of foreigners shows a consistent upward trend, apart from minor decreases in 2010, 2012, 2017, and 2020 compared to the previous years.

The statistics from the Korean National Police Agency (KNPA) indicate that Koreans account for 99.72% (1,937,458 individuals) of the total number of arrests, and foreigners account for 0.28% (5,529 individuals). In 2009, the proportion of foreigners arrested reached 1% for the first time. Since then, the share has steadily increased, reaching 2% in 2015. Despite some fluctuations, as of 2020, the proportion of foreigners arrested stood at 2.37% (35,390 individuals). Thus, while Koreans are those most commonly arrested, the number of foreigners arrested in Korea has steadily risen, and their proportion among all arrested individuals has also increased over time.

In terms of the proportion of criminal law offenses to special offenses,³ it is observed that for Koreans, the proportion of special offenses accounted for over 50% of the total from 2002 to 2011. However, it decreased to 47.9% in 2012 and has fluctuated since then. Subsequently, the share steadily decreased, reaching 42.3% in 2020. As for foreigners, the proportion of special criminal offenses exceeded 40% for the first time in 2004, after which it decreased and remained at around 20% until 2008.⁴

In terms of specific criminal offenses, the greatest proportion of violent crimes (involving assault) until 2020 occurred in 2002 for both Koreans and foreigners. Among foreigners, the proportion of violent crimes (assault) remained the greatest among all criminal offenses until 2018. However, in 2019, there were more property crimes than other crimes for the first time, which continued until 2020. Regarding violent crimes (heinous), the proportion among Koreans remained below 1% until 2009, then increased to 1.2% in 2010 and continued to rise, reaching 2.2% in 2020. On the other hand, among foreigners, the proportion of violent crimes (heinous) decreased from 3.4% in 2002 to 2008, reaching a low of 1.7%. It then slightly increased but declined again to 2.9% in 2019 and 2.4% in 2020. Please note that the analysis is based on data from the Crime Analysis Statistics of the Supreme Prosecutor's Office of Korea from 2002 to 2020. This extended 20-year timeframe enables us to assess long-term trends. Please refer to Table A3 in the *Appendix* for detailed annual statistics on the types of crimes committed by foreign nationals and Koreans.

³ See *Appendix* for definitions.

⁴ See Table A2 and A3 in the *Appendix* for more information.

Table 2. Number of arrested foreign criminals by nationality, 2011–2020

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	National total for 10 years
Annual total	27,436 (100)	22,914 (100)	24,984 (100)		35,443 (100)	,	33,905 (100)	32,313 (100)	36,400 (100)	35,390 (100)	318,285 (100)
China	16,267 (59.3)	13,152 (57.4)	14,557 (58.3)	,	21,279 (60.0)	_	18,965 (55.9)	17,603 (54.5)	18,177 (49.9)	17,116 (48.4)	176,515 (55.5)
Vietnam	2,438	1,819	1,666	1,740	2,038	2,355	1,753	1,539	2,255	2,764	20,367
	(8.9)	(7.9)	(6.7)	(6.1)	(5.8)	(5.7)	(5.2)	(4.8)	(6.2)	(7.8)	(6.4)
Thailand	932	576	597	1,249	1,738	3,211	2,168	2,463	3,713	2,995	19,642
	(3.4)	(2.5)	(2.4)	(4.4)	(4.9)	(7.8)	(6.4)	(7.6)	(10.2)	(8.5)	(6.2)
USA	1,751	1,668	1,799	1,779	1,737	1,881	1,775	1,687	1,717	1,494	17,288
	(6.4)	(7.3)	(7.2)	(6.3)	(4.9)	(4.6)	(5.2)	(5.2)	(4.7)	(4.2)	(5.4)
Mongolia	1,470	1,381	1,274	1,085	1,270	1,647	1,244	1,153	1,189	1,160	12,873
	(5.4)	(6.0)	(5.1)	(3.8)	(3.6)	(4.0)	(3.7)	(3.6)	(3.3)	(3.3)	(4.0)
Uzbekistan	710	710	993	1,070	1,418	1,755	1,448	1,350	1,533	1,863	12,850
	(2.6)	(3.1)	(4.0)	(3.8)	(4.0)	(4.3)	(4.3)	(4.2)	(4.2)	(5.3)	(4.0)
Russia	245	270	260	374	451	818	1,027	1,061	1,464	1,452	7,422
	(0.9)	(1.2)	(1.0)	(1.3)	(1.3)	(2.0)	(3.0)	(3.3)	(4.0)	(4.1)	(2.3)
Taiwan	515	427	496	579	481	506	529	484	529	442	4,988
	(1.9)	(1.9)	(2.0)	(2.0)	(1.4)	(1.2)	(1.6)	(1.5)	(1.5)	(1.2)	(1.6)
Philippines	542	270	364	429	481	673	370	276	315	456	4,176
	(2)	(1.2)	(1.5)	(1.5)	(1.4)	(1.6)	(1.1)	(0.9)	(0.9)	(1.3)	(1.3)
Sri Lanka	459	354	351	365	633	559	326	284	237	266	3,834
	(1.7)	(1.5)	(1.4)	(1.3)	(1.8)	(1.4)	(1.0)	(0.9)	(0.7)	(0.8)	(1.2)
Canada	271	323	292	306	373	376	312	342	307	279	3,181
	(1.0)	(1.4)	(1.2)	(1.1)	(1.1)	(0.9)	(0.9)	(1.1)	(0.8)	(0.8)	(1.0)
Pakistan	244	198	226	219	254	367	248	185	358	358	2,657
	(0.9)	(0.9)	(0.9)	(0.8)	(0.7)	(0.9)	(0.7)	(0.6)	(1.0)	(1.0)	(0.8)
Indonesia	179	189	186	220	406	385	214	170	180	219	2,348
	(0.7)	(0.8)	(0.7)	(0.8)	(1.1)	(0.9)	(0.6)	(0.5)	(0.5)	(0.6)	(0.7)
Japan	125	171	169	181	244	196	221	226	208	133	1,874
	(0.5)	(0.7)	(0.7)	(0.6)	(0.7)	(0.5)	(0.7)	(0.7)	(0.6)	(0.4)	(0.6)
Bangladesh	123	115	128	106	137	205	139	106	139	172	1,370
	(0.4)	(0.5)	(0.5)	(0.4)	(0.4)	(0.5)	(0.4)	(0.3)	(0.4)	(0.5)	(0.4)
Kyrgyzstan	98	84	79	78	111	186	139	133	140	169	1,217
	(0.4)	(0.4)	(0.3)	(0.3)	(0.3)	(0.5)	(0.4)	(0.4)	(0.4)	(0.5)	(0.4)
Other	1,067	1,207	1,547	1,844	2,392	3,357	3,027	3,251	3,939	4,052	25,683
	(3.9)	(5.3)	(6.2)	(6.5)	(6.7)	(8.2)	(8.9)	(10.1)	(10.8)	(11.4)	(8.1)

Source: Supreme Prosecutor's Office Crime Analysis Statistics.

 $Note: \ Numbers\ in\ brackets\ represent\ the\ percentage\ share\ of\ the\ (annual)\ total\ number.$

Table 2 presents data on the nationality of criminals from the Crime Analysis Statistics of the Supreme Prosecutor's Office of Korea, covering the years 2011 to 2020. The countries listed in the table include China, Vietnam, the United States, Russia, Mongolia, Uzbekistan, Taiwan, the Philippines, Sri Lanka, and Japan. When examining the proportion of foreign crimes by criminal nationality over the past ten years, China accounted for the largest number of arrests at 55%, followed by 'Other' countries (8.1%), Vietnam (6.4%), and Thailand (6.2%). This trend can be attributed to China's top ranking in terms of the number of foreigners residing in Korea.⁵

EMPIRICAL ANALYSIS

Dependent variables and conjectures

We will examine three variables that could potentially influence the patterns and behaviors of foreign criminals. The first variable is the income level of their home country, which may serve as a significant factor in determining the foreign crime rate. Foreigners from lower-income countries are more likely to have a stronger incentive to avoid committing crimes in Korea. This is because they aspire to stay longer in Korea, associated with improved economic conditions and a better environment, and to avoid the risk of deportation resulting from engaging in criminal activity.

Second, the number of years of schooling may be another significant characteristic that influences the likelihood of foreign individuals committing crimes in Korea. This variable can lead to two contrasting hypotheses. Some may argue that highly educated foreigners are liable to possess a greater awareness of Korean laws and cultural norms, resulting in fewer conflicts in society and a lower crime rate. At the same time, highly educated foreigners may possess a deeper understanding of Korean laws, which could paradoxically enable them to plan and carry out crimes intelligently while exploiting loopholes in the legal system. Consequently, they might exhibit greater confidence in committing crimes, believing they are less likely to be easily apprehended by Korean authorities. Additionally, Machin et al. (2011) suggest the possibility that skills acquired through education can be misused for criminal activities. For instance, A knowledge of or education in management and business studies

⁵ See Table A4 in the *Appendix* for more information on the number of foreigners residing in Korea by nationality.

can prove essential for establishing and operating a criminal organization. Alternatively, knowledge of chemistry could be employed in planning arson attacks. It is important to note that even knowledge of law or criminology could assist criminals in evading arrest.

Third, the rule of law in the home country can also impact the crime rate of foreigners in Korea. If a country has a strong law enforcement system, foreigners originating from that country are less likely to engage in criminal activities in Korea. This is due to their heightened fear of punishment and the potential consequences of committing crimes. Furthermore, they may be more cognizant that if extradited to their home country, the penalties imposed upon them would be more severe. These three variables, namely the income level of the home country, years of schooling, and the rule of law will serve as the key explanatory factors in our models that aim to elucidate the dependent variable, which is the rate of violent crime.

Control variables

We have included several control independent variables in our analysis. One of these variables is the proportion of residents living with temporary visas. This variable is included because individuals with temporary visas may be more likely to engage in criminal activities than those with longer-term residency status. This could be due to factors such as their imminent return to their home countries, which may create a sense of urgency or reduced accountability. Additionally, individuals with temporary visas may have less familiarity with Korean culture and laws, potentially leading to more conflict with other members of Korean society.

The extradition treaty variable is included as a control in our analysis. This variable may help account for the possibility that foreigners from countries with an extradition treaty with Korea are less likely to commit crimes as they face the risk of being deported back to their home country upon arrest. If the country they would be extradited to is a low-income country, the foreigner may have a stronger incentive to avoid committing crimes in Korea to maintain their residence there. Among the countries in our sample, Canada (1995), Philippines (1996), USA (1999), Mongolia (2000), China (2002), Japan (2002), Vietnam (2005), and Indonesia (2007) are the countries that have signed an extradition treaty with Korea, as indicated by the years specified in parentheses next to the respective country names.

Furthermore, the real effective exchange rate variable is included because when the exchange rate for the currency of the criminal's home country is high against the Korean won (KRW), the latter can acquire more of their home currency with the revalued KRW they earn on Korean territory. This may incentivize them to become law-abiding citizens in Korea, as they aim to steadily earn money there. The trade-with-Korea variable is included as it measures the economic relationship between Korea and the criminal's home country. It takes into account factors such as imports and exports, reflecting the level of economic interaction between the two countries. The inflation rate of Korea is included since it can reflect the stability of the Korean economy. When the inflation rate is high, people tend to tighten their budgets and face challenges due to increased price levels.

We thus have a regression data sample consisting of twelve countries: Bangladesh, Canada, China, Indonesia, Japan, Sri Lanka, Mongolia, Pakistan, Philippines, Russia, USA, and Vietnam. The data available for these countries covers the period from 2003 to 2019. The summary statistics for the sample data are presented in Table 3.

Table 3. Summary statistics

Variable	Observations	Mean	Std. Dev.	Min.	Max.
Violent crime rate (%)	189	0.270	0.348	0.000	2.116
Log(GDP per capita)	189	8.644	1.324	6.645	11.013
Years of schooling	189	9.192	2.994	4.015	13.611
Rule of law index	189	-0.001	0.956	-0.979	1.891
Ratio of temporary residents	189	8.439	14.145	0.380	63.987
Inflation rate in Korea	189	1.458	0.325	1.021	2.161
Extradition treaty	189	0.661	0.474	0.000	1.000
Real effective exchange rate	189	1.061	0.217	0.588	1.700
Log(Trade with Korea/ GDP of Korea)	189	-4.641	1.079	-6.038	-1.774

Note: The violent crime rate is calculated by dividing the number of violent criminals by the number of residents living in Korea with non-temporary visas. Therefore, if the number of violent criminals who have temporary visas or who are illegal immigrants is sufficiently large, it is possible for the violent crime rate variable to exceed one (1). Also, there are some countries for which there are observations starting later than the year 2003, making the total number of observations 189 (observations for Bangladesh begin in 2005, Canada from 2006, Sri Lanka from 2011, and Mongolia from 2005).

Empirical strategy

We employed the fixed-effects ordinary least squares (OLS) estimation method to examine the effects of the three country-level determinants of violent crime rate in Korea. By including fixed effects for each country, we aim to capture country-specific characteristics that are not explicitly accounted for in the regression model. Likewise, the inclusion of fixed effects for each year allows us to capture unobserved time-dependent effects, such as the influence of policies pertaining to foreign crimes or immigration that may have been implemented in specific years.

As previously outlined, we selected three explanatory variables: income level, years of schooling, and the rule of law index. These variables represent the characteristics of the nationality of foreign criminals and are employed to explain the foreign crime rate in Korea. The regression models are represented by three reduced-form equations such that:

$$vcrime_{i,t} = \beta_0 + \beta_1 Log(y_{i,t|t-1|t-2}) + \beta_2 tvisa_{i,t} + \beta_3 infkor_t + \beta_4 extradite_{i,t} + \beta_5 RER_{i,t} + Log(trade_{i,t}) + \gamma_t + \mu_t + \varepsilon_{i,t}$$

$$(1)$$

$$\begin{split} vcrime_{i,t} &= \beta_0 + \beta_1 school_{i,t|t-1|t-2} + \beta_2 tvisa_{i,t} + \beta_3 infkor_t + \beta_4 extradite_{i,t} + \\ &\beta_5 RER_{i,t} + Log(trade_{i,t}) + \gamma_t + \mu_t + \varepsilon_{i,t} \end{split} \tag{2}$$

$$\begin{aligned} vcrime_{i,t} &= \beta_0 + \beta_1 rol_{i,t|t-1|t-2} + \beta_2 tvisa_{i,t} + \beta_3 infkor_t + \beta_4 extradite_{i,t} + \\ &\beta_5 RER_{i,t} + Log(trade_{i,t}) + \gamma_t + \mu_t + \varepsilon_{i,t} \end{aligned} \tag{3}$$

where

- vcrime is the violent crime rate for country i in year t, and calculated as the number of violent criminals with the nationality of country i divided by the number of residents of the nationality residing in Korea with a non-temporary visa, in percentage terms. Also, y is GDP per capita, which is referred to as income level in this paper, with the unit of constant 2015 USD taken from the World Development Indicators (WDI) database.
- *school* denotes years of schooling and is from the Penn World Table (PWT) 10.0's Labor Detail dataset. The Human Capital Index, and Rule Of Law Index;
- rol is the Rule of Law: Estimate variable from the World Governance Indicators (WGI) database, being the measure for the 'extent to which agents have confidence in and abide by the rules of society,' and ranges from −2.5 to 2.5.
- -tvisa is the share of foreigners from country i who are living with temporary visas among all foreigners from the same country residing in Korea.

- *infkor* is the yearly inflation rate of Korea, which is only dependent on time, not on country *i*, in this regression model.
- extradite is a dummy variable which takes a value of one if the country i has an extradition treaty with Korea and takes zero if it does not.
- The regional real effective exchange rate of the currency of the country where the foreign criminal is from against Korean Won, *RER*, is generated as follows:

$$RER_{i,t} = (NER_{i,t} * CPI_{i,t}) / (NER_{KOR,t} * CPI_{KOR,t})$$
(4)

where *NER* and *CPI* denote US dollars per country of *i*'s currency and the consumer price index of country *i*, and are from the *XR* and *CPI* variables of PWT 10.0, respectively.

- trade is calculated as trade flow between country i and Korea divided by the GDP of Korea, where the bilateral trade flow data is from the CEPII Gravity database, and GDP data is from the WDI database.
- Last, γ_t , μ_t , and $\varepsilon_{i,t}$ denote time-specific fixed effects, country-specific fixed effects, and an error term of the corresponding OLS regression model, respectively.

Further, the attributes of foreign criminals' home countries can be affected by both the country's contemporary characteristics modified via foreigners' communications with their hometown friends or relatives and the country's characteristics in the past when the foreigners had not emigrated to Korea yet. Thus, we also tested one- and two-year lagged versions of the explanatory variables, as indicated as t-1 and t-2. In addition, all of the regression coefficients and their significances are estimated with robust standard errors.

RESULTS

The results presented in Table 4 indicate that the three explanatory variables, namely income level, years of schooling, and rule of law in the criminal's home country, exhibit significant associations with the violent crime rate. However, they have different directions of impact. First, the income level and years of schooling variables have a positive relationship with the crime rate. This suggests that higher income levels and more years of schooling in the home country of the criminals are associated with an increased likelihood of committing violent crimes in Korea. On the other hand, the rule of law variable exhibits an inverse association with the crime rate. Stronger rule of law in the criminal's home country is linked to a lower incidence of violent crime committed by foreigners in Korea.

According to the findings presented in Table 4, we observe the following associations between the explanatory variables and the violent crime rate, assuming other control variables are constant:

- 10% increases in contemporary GDP per capita, as well as in the one-year and two-year lagged GDP per capita, are associated with increases in violent crime rate by 0.071, 0.066, and 0.054 percentage points, respectively (OLS Models 1, 2, and 3).
- One-year increases in contemporary years of schooling, as well as the one-year and two-year lagged years of schooling, all contribute to an approximately 0.18 percentage point increase in the violent crime rate (OLS Models 4, 5, and 6).
- One-unit increases in the contemporary rule of law index, as well as in the one-year and two-year lagged rule of law indexes, lead to decreases in the violent crime rate by 0.26, 0.45, and 0.58 percentage points, respectively (OLS Models 7, 8, and 9).

Furthermore, the values of R-squared for all the models are above 0.7, indicating the sufficiently robust fit of the regression models to the data.

			Depend	ent variable	e: Violent C	Crime Rate t	(%)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Log(GDP per capita) t	0.712 (0.000)***								
Log(GDP per capita) t-1		0.661 (0.000)***							
Log(GDP per capita) t-2			0.543 (0.000)***						
Years of schooling t				0.179 (0.000)***					
Years of schooling t-1					0.182 (0.000)***				
Years of schooling t-2					_	0.180 (0.000)***		_	
Rule of law index t	• • • • • • • •						-0.256 (0.091)*		
Rule of law index t-1	# • • • • • •			*				-0.451 (0.012)**	
Rule of law index t-2						_			-0.604 (0.001)***

Table 4. Regression results – OLS models

			Depend	ent variable	e: Violent C	rime Rate	t (%)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	-0.002	-0.002	0.000	0.004	0.004	0.004	0.005	0.005	0.004
Proportion of temporary	(0.395)	(0.526)	(0.913)	(0.168)	(0.166)	(0.163)	(0.097)*	(0.120)	(0.188)
residents t	-0.005	0.010	0.022	0.015	0.007	0.003	0.083	0.144	0.167
Extradition treaty t	(0.941)	(0.884)	(0.758)	(0.824)	(0.915)	(0.971)	(0.334)	(0.103)	(0.067)*
Real effective exchange rate t	-0.339	-0.343	-0.336	-0.390	-0.394	-0.396	-0.252	-0.286	-0.329
Real effective exchange rate t	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.015)**	(0.003)***	(0.000)***
	0.084	0.088	0.079	-0.099	-0.095	-0.088	0.020	0.029	0.028
Log(Trade with Korea/	(0.070)*	(0.057)*	(0.079)*	(0.028)**	(0.039)**	$(0.068)^{\circ}$	(0.697)	(0.600)	(0.635)
GDP of Korea) t	0.365	0.349	0.291	0.210	0.216	0.217	0.017	-0.024	-0.064
Inflation rate of Korea t	(0.000)***	(0.000)***	(0.000)***	(0.001)***	(0.001)***	(0.001)***	(0.775)	(0.707)	(0.293)
Constant	-4.692	-4.254	-3.375	-1.256	-1.233	-1.163	0.198	0.194	0.182
Constant	(0.000)***	(0.000)***	(0.000)***	(0.002)***	(0.003)***	(0.007)***	(0.463)	(0.498)	(0.561)
Country & Year FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	189	189	189	189	189	189	189	189	189
R-squared	0.774	0.769	0.759	0.754	0.751	0.749	0.738	0.747	0.760
Adjusted R-squared	0.728	0.722	0.709	0.703	0.700	0.697	0.684	0.695	0.710

Note: Robust standard errors are used; p-values in parentheses (*: p<0.1, **: p<0.05, ***: p<0.001); FE denotes fixed effects.

CONCLUSION

As the number of foreigners residing in the Republic of Korea has increased, the overall scale of foreign crimes in Korea has also increased. According to Statistics Korea, the number of foreign criminals arrested has grown more than sixfold, from 5,529 in 2002 to 35,390 in 2020. However, due to media reports about violent crimes, drug offenses, sexual crimes, etc., the general curiosity about and fear of foreign criminals have grown, and hatred of foreigners from certain countries is now prevalent.

With this background, this paper attempts to explore the trends in crimes committed by foreigners in Korea by examining statistics on foreign crimes in Korea in a time-series manner. We use data on crimes from the Korean National Police Agency and immigration data from the Korean Ministry of Justice and empirically test some attributes of the home countries of foreign criminals arrested in Korea, using the crime rate data based on the nationality of the foreign criminals. The contribution of our paper lies in the fact that it describes in-depth empirical research that helps explain the violent crime rate of foreigners using the attributes of foreign criminals' nationality. Most research on crimes committed by foreigners has primarily focused on examining the statistical trends of crime rates and explaining the trends using domestic socio-

cultural factors without considering the characteristics of foreign criminals' home countries.

The results of our empirical analysis, based on the violent crime statistics for twelve foreign nationalities from 2003 to 2019, reveal that the income level and years of schooling in the home country of foreign criminals are positively associated with violent crimes committed by foreigners in Korea. On the other hand, it is found that a stronger rule of law has a negative effect on the violent crime rate of foreigners in Korea. These findings suggest that foreigners from higher-income countries with better educational environments are more likely to commit violent crimes, while those from countries with relatively strict law enforcement are less likely to engage in violent crimes in Korea. Therefore, the Korean immigration office and police should consider employing differentiated approaches when dealing with the prevention of crimes committed by foreigners, taking into consideration their nationalities. Furthermore, South Korean police organizations should be aware of the rising trend of crimes committed by foreigners and take into account the types of crimes that have been increasing in recent years when designing preventive policies.

Although the research has various limitations due to the limited scope of the statistical data used, this study aims to provide an overall understanding of the trends in foreign crime in Korea. It also addresses issues regarding the socioeconomic characteristics of the nationalities of foreign criminals that have not been well-addressed in previous studies. By examining the associations between the determinants of foreign criminals' home countries and the violent crime rate, we hope to contribute to the policymaking process of immigration offices and police agencies when they design prevention policies targeted at crimes committed by foreigners.

Limitations

The authors acknowledge several limitations to the regression analysis, which are considered weaknesses of the presented empirical results. First, using country-of-origin-level observations may result in a weaker estimation of the effects of explanatory variables on the violent crime rate compared to using individual-level immigrant population data. However, the authors were unable to find such micro-level data regarding crime statistics. Second, the sample county list does not encompass all nationalities of criminals arrested in South Korea but only a subset of them, potentially leading to sample selection bias. Additionally, the dependent variable, the violent crime rate, is derived from the number of foreign criminals arrested. Consequently, it does not account

for foreign criminals who have committed crimes but have not been arrested, prosecuted, or are currently under investigation. Some of these individuals may be declared guilty in the future, which means the independent variable may not accurately represent the true violent crime rate. Last, due to the focused scope of data on foreign crimes in Korea, this research may only provide insights specific to South Korea.

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APPENDIX

Table A1. Trends of yearly foreign residents and foreign criminals arrested in Korea, 2002–2020

	г :	. 17		Criminals	Arrested	
Year	Foreigner	s in Korea	Prosecutor's	Office Data	Police	e Data
	Number	% change	Number	% change	Number	% change
2002	609,797	_	5,371	_	5,529	_
2003	656,380	7.6	6,217	15.8	6,144	11.1
2004	728,339	11.0	7,173	15.4	9,103	48.2
2005	747,467	2.6	8,313	15.9	9,042	-0.7
2006	910,149	21.8	11,421	37.4	12,657	40.0
2007	1,066,273	17.2	11,816	3.5	14,524	14.8
2008	1,158,866	8.7	19,859	68.1	20,623	42.0
2009	1,168,477	0.8	23,418	17.9	23,344	13.2
2010	1,261,415	8.0	19,069	-18.6	22,543	-3.4
2011	1,395,077	10.6	33,722	76.8	27,436	21.7

	г :	. 17		Criminals	Arrested	
Year	Foreigner	s in Korea	Prosecutor's	Office Data	Polic	e Data
	Number	% change	Number	% change	Number	% change
2012	1,445,103	3.6	28,120	-16.6	22,914	-16.5
2013	1,576,034	9.1	30,681	9.1	24,984	9.0
2014	1,797,618	14.1	30,930	0.8	28,456	13.9
2015	1,899,519	5.7	37,928	22.6	35,443	24.6
2016	2,049,441	7.9	43,463	14.6	41,044	15.8
2017	2,180,498	6.4	36,277	-16.5	33,905	-17.4
2018	2,367,607	8.6	34,830	-4.0	32,313	-4.7
2019	2,524,656	6.6	39,369	13.0	36,400	12.6
2020	2,036,075	-19.4	38,155	-3.1	35,390	-2.8

Source: Ministry of Justice Immigration Statistical Yearbook, Supreme Prosecutor's Office Crime Analysis Statistics, Korean National Police Agency Crime Statistics.

Note: Unit for number is persons, and that for % change is a percentage.

Table A2. Trends in the yearly number of Korean and foreign criminals by crime type, 2002–2020 (Continued)

			200)2			200)3			200)4			200)5			200	6	
Cı	rime Type	Korean	%	Foreign	%	Korean	%	Foreign	n %												
	Total	2,291,659	100	5,371	100	2,290,728	100	6,217	100	2,276,922	100	7,173	100	1,957,258	100	8,313	100	1,921,308	100	11,421	100
	Property Crime	385,953	16.8	866	16.1	434,817	19.0	927	14.9	433,550	19.0	948	13.2	375,694	19.2	996	12.0	397,872	20.7	1,408	12.3
	Violent (heinous)*	15,492	0.7	180	3.4	17,349	0.8	225	3.6	14,701	0.6	215	3.0	13,559	0.7	198	2.4	15,179	0.8	229	2.0
	Violent (assault)*	449,514	19.6	1,811	33.7	442,178	19.3	1,976	31.8	368,092	16.2	1,645	22.9	347,155	17.7	1,556	18.7	287,109	14.9	1,651	14.5
Criminal	Forgery	17,525	0.8	375	7.0	17,747	0.8	585	9.4	22,184	1.0	977	13.6	24,522	1.3	2,263	27.2	28,497	1.5	5,239	45.9
law	Offenses of Public Officials	3,000	0.1	0	0	3,190	0.1	2	0.03	2,864	0.1	1	0.01	2,599	0.1	0	0.0	2,527	0.1	0	0
	Indecent Exposure	61,480	2.7	82	1.5	47,546	2.1	121	1.9	46,609	2.0	127	1.8	38,397	2.0	214	2.6	48,937	2.5	203	1.8
	Negligence	6,310	0.3	19	0.4	6,394	0.3	33	0.5	6,105	0.3	16	0.2	5,462	0.3	30	0.4	5,739	0.3	26	0.2
	Others	51,935	2.3	86	1.6	51,948	2.3	102	1.6	51,970	2.3	85	1.2	52,580	2.7	100	1.2	60,280	3.1	170	1.5
Sp	pecial Law	1,300,450	56.7	1,952	36.3	1,269,559	55.4	2,246	36.1	1,330,847	58.4	3,159	44.0	1,097,290	56.1	2,956	35.6	1,075,168	56.0	2,495	21.8

 $Source: Supreme\ Prosecutor's\ Office\ Crime\ Analysis\ Statistics,\ SPO.$

Note: *According to the Korean Prosecutors' Office's classification of crime statistics, violent crimes in Korea are largely divided into two categories. (1) Violent (heinous): murder, robbery, arson, sexual assault. (2) Violent (assault): assault, battery, intimidation, harassment, drugging and luring, abduction and confinement, acts of violence such as vandalism, coercion, home invasion, and acts of violence related to criminal organizations and their activities. (Supreme Prosecutor's Office Crime Analysis Statistics, SPO.)

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Table A2. Trends in the yearly number of Korean and foreign criminals by crime type, 2002–2020 (Continued)

			200)7			200)8			200)9			201	10			201	1	
Cı	rime Type	Korean	%	Foreign	%																
	Total	1,978,046	100	11,816	100	2,453,038	100	19,859	100	2,495,819	100	23,418	100	1,935,262	100	19,069	100	1,873,919	100	33,722	100
	Property Crime	365,162	18.5	2,596	22.0	415,689	16.9	3,553	17.9	476,766	19.1	4,079	17.4	411,941	21.3	3,317	17.4	421,945	22.5	5,254	15.6
	Violent (heinous)*	14,460	0.7	267	2.3	19,517	0.8	331	1.7	22,128	0.9	436	1.9	22,934	1.2	398	2.1	25,499	1.4	696	2.1
	Violent (assault)*	309,226	15.6	2,298	19.4	407,241	16.6	4,468	22.5	405,833	16.3	4,801	20.5	348,130	18.0	4,435	23.3	340,224	18.2	8,032	23.8
Criminal	Forgery	26,151	1.3	2,786	23.6	31,651	1.3	4,743	23.9	32,148	1.3	2,739	11.7	26,621	1.4	1,604	8.4	22,987	1.2	1,523	4.5
law	Offenses of Public Officials	2,285	0.1	2	0.02	3,346	0.1	5	0.03	3,934	0.2	4	0.02	4,232	0.2	6	0.03	3,621	0.2	2	0.01
	Indecent Exposure	39,429	2.0	220	1.9	46,004	1.9	521	2.6	69,962	2.8	1,673	7.1	40,765	2.1	977	5.1	41,449	2.2	2,885	8.6
	Negligence	5,196	0.3	40	0.3	6,253	0.3	50	0.3	6,731	0.3	66	0.3	6,460	0.3	62	0.3	6,426	0.3	92	0.3
	Others	63,426	3.2	263	2.2	80,123	3.3	452	2.3	86,433	3.5	520	2.2	72,555	3.7	416	2.2	73,069	3.9	925	2.7
Sp	pecial Law	1,152,711	58.3	3,344	28.3	1,443,214	58.8	5,736	28.9	1,391,884	55.8	9,100	38.9	1,001,624	51.8	7,854	41.2	938,699	50.1	14,313	42.4

Table A2. Trends in the yearly number of Korean and foreign criminals by crime type, 2002–2020 (Continued)

			201	12			201	.3			201	4			201	5			201	6	
Cr	rime Type	Korean	%	Foreign	%	Korean	%	Foreign	n %												
	Total	2,089,617	100	28,120	100	2,116,569	100	30,681	100	1,848,618	100	30,930	100	1,911,038	100	37,928	100	1,976,733	100	43,463	100
	Property Crime	516,328	24.7	4,709	16.7	551,598	26.1	5,368	17.5	405,979	22.0	5,104	16.5	425,218	22.3	6,523	17.2	422,868	21.4	7,028	16.2
	Violent (heinous)*	24,773	1.2	712	2.5	27,307	1.3	873	2.8	29,071	1.6	790	2.6	30,783	1.6	992	2.6	32,517	1.6	1,012	2.3
	Violent (assault)*	371,722	17.8	7,913	28.1	341,090	16.1	8,215	26.8	323,909	17.5	8,028	26.0	335,779	17.6	9,088	24.0	340,873	17.2	9,006	20.7
Criminal	Forgery	27,035	1.3	1,028	3.7	27,281	1.3	829	2.7	22,975	1.2	568	1.8	21,825	1.1	653	1.7	20,447	1.0	545	1.3
law	Offenses of Public Officials	4,619	0.2	3	0.01	4,485	0.2	1	0.0	4,227	0.2	1	0.0	4,947	0.3	4	0.01	5,044	0.3	5	0.01
	Indecent Exposure	37,696	1.8	1,005	3.6	32,665	1.5	812	2.6	27,684	1.5	683	2.2	29,415	1.5	909	2.4	35,163	1.8	646	1.5
	Negligence	7,953	0.4	89	0.3	8,034	0.4	105	0.3	8,267	0.4	104	0.3	8,846	0.5	116	0.3	9,214	0.5	144	0.3
	Others	97,676	4.7	1,221	4.3	99,327	4.7	1,236	4.0	111,018	6.0	1,451	4.7	117,095	6.1	1,739	4.6	120,552	6.1	1,984	4.6
Sp	pecial Law	1,001,815	47.9	11,440	40.7	1,024,782	48.4	13,242	43.2	915,488	49.5	14,201	45.9	937,130	49.0	17,904	47.2	990,055	50.1	23,093	53.1

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Table A2. Trends in the yearly number of Korean and foreign criminals by crime type, 2002–2020 (Continued)

			20	017			20)18			20)19			20	20	
C	rime Type	Korean	%	Foreign	%												
	Total	1,825,519	100	36,277	100	1,714,629	100	34,830	100	1,715,439	27.3	39,369	100	1,600,232	100	38,155	100
	Property Crime	407,894	22.3	6,884	19.0	419,619	24.5	7,437	21.4	444,028	2.2	8,147	20.7	437,602	27.3	8,364	21.9
	Violent (heinous)*	35,441	1.9	1,142	3.1	35,489	2.1	1,152	3.3	36,236	2.1	1,154	2.9	34,530	2.2	931	2.4
	Violent (assault)*	324,526	17.8	8,253	22.7	310,017	18.1	7,859	22.6	304,654	17.8	8,015	20.4	272,765	17.0	7,211	18.9
Criminal -	Forgery	19,070	1.0	469	1.3	18,574	1.1	275	0.8	19,371	1.1	486	1.2	17,925	1.1	367	1.0
law	Offenses of Public Officials	6,159	0.3	2	0.01	8,518	0.5	1	0.0	7,246	0.4	4	0.01	7,371	0.5	8	0.02
	Indecent Exposure	26,404	1.4	537	1.5	22,083	1.3	477	1.4	24,186	1.4	501	1.3	22,864	1.4	570	1.5
	Negligence	10,017	0.5	167	0.5	10,322	0.6	166	0.5	10,972	0.6	197	0.5	10,815	0.7	172	0.5
	Others	114,261	6.3	1,549	4.3	119,804	7.0	1,483	4.3	123,774	7.2	1,714	4.4	120,163	7.5	1,757	4.6
Sp	pecial Law	881,747	48.3	17,274	47.6	770,203	44.9	15,980	45.9	744,972	43.4	19,151	48.6	676,197	42.3	18,775	49.2

Table A3. Top 10 crimes committed by Koreans and foreign nationals by year, 2016–2020

						Top 10 0	Crimes				
	Korean	Fraud	Assault	Road Traffic Act (Drunk driving)	Traffic Accident Handling Special Act	Theft	Injury	Road Traffic Act (Driving without license)	Car Damage Compen- sation Guarantee Act	Road Traffic Act (No action after the accident)	Other Special Laws
2016	%	11.8	11.7	10.1	9.8	5.3	4.1	3.2	2.6	2.5	2.3
2	Foreigner	Assault	Road Traffic Act (Driving without license)	Road Traffic Act (Drunk driving)	Theft	Fraud	Injury	Act on the Punish- ment of Prostitution	Traffic Accident Handling Special Act	Car Damage Compen- sation Guarantee Act	Immi- gration Control Act
	%	13.3	10.7	7.5	6.5	6.5	6.0	5.2	4.7	4.0	2.8
	Korean	Assault	Fraud	Traffic Accident Handling Special Act	Road Traffic Act (Drunk driving)	Theft	Injury	Other Special Laws	Road Traffic Act (Driving without license)	Labor Standards Act	Car Damage Compen- sation Guarantee Act
	%	12.2	12.1	10.3	9.7	5.7	3.9	3.0	2.5	2.2	2.2
2017	Foreigner	Assault	Road Traffic Act (Drunk driving)	Theft	Fraud	Road Traffic Act (Driving without license)	Injury	Traffic Accident Handling Special Act	Car Damage Compen- sation Guarantee Act	Act on the Punish- ment of Prostitution	Other Special Laws
	%	14.9	8.1	8.0	7.0	6.7	6.1	5.1	3.9	3.1	3.1

Source: Korean National Police Agency Crime Statistics, KNPA.

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Table A3. Top 10 crimes committed by Koreans and foreign nationals by year, 2016–2020 (Continued)

		Top 10 Crimes									
	Korean	Fraud	Assault	Traffic Accident Handling Special Act	Road Traffic Act (Drunk driving)	Theft	Injury	Other Special Laws	Labor Standards Act	Embez- zlement	Damage
2018	%	14.0	12.6	11.4	8.1	5.6	3.7	3.0	2.4	2.2	2.1
20	Foreigner	Assault	Theft	Fraud	Road Traffic Act (Drunk driving)	Traffic Accident Handling Special Act	Injury	Road Traffic Act (Driving without license)	Immi- gration Control Act	Act on the Punish- ment of Prostitution	Other Special Laws
	%	15.3	8.4	8.4	7.3	6.1	5.5	4.3	3.6	3.3	3.2
	Korean	Fraud	Assault	Traffic Accident Handling Special Act	Road Traffic Act (Drunk driving)	Theft	Other Special Laws	Injury	Labor Standards Act	Damage	Embezzle- ment
2019	%	15.0	12.4	11.8	6.2	5.8	3.4	3.4	2.4	2.2	2.2
20	Foreigner	Assault	Fraud	Theft	Traffic Accident Handling Special Act	Road Traffic Act (Drunk driving)	Immi- gration Control Act	Road Traffic Act (Driving without license)	Injury	Act on the Punish- ment of Prostitution	Medical Laws
	%	13.9	8.3	8.1	6.0	6.0	5.4	4.6	4.3	3.4	3.0
	Korean	Fraud	Traffic Accident Handling Special Act	Assault	Theft	Road Traffic Act (Drunk driving)	Injury	Other Special Laws	Damage	Defama- tion	Embez- zlement
2020	%	15.9	11.8	11.6	6.0	6.0	3.2	3.0	2.4	2.3	2.3
	Foreigner	Assault	Fraud	Theft	Traffic Accident Handling Special Act	Road Traffic Act (Driving without license)	Road Traffic Act (Drunk driving)	Immi- gration Control Act	Injury	Narcotics Control Act (Psychotropic drugs)	Other Special Laws
	%	12.1	10.4	7.2	6.4	5.6	5.4	5.2	4.6	3.7	3.0

In Table A3, the data for the period 2016 to 2020 was extracted from the same statistical dataset used in Table A2. In the case of Koreans, from 2016 to 2019, Fraud and Assault accounted for the largest share, and the number of people arrested for the Traffic Accident Handling Special Act ranked second after fraud in 2020 for the first time. For foreigners, from 2016 to 2020, Assault accounted for the largest proportion, followed by Road Traffic Act (Driving without a license), Road Traffic Act (Drunk driving), Theft, and Fraud. Additionally, unlike Koreans, those arrested for violating the Act on Punishment of Prostitution are included in the top 10 crimes (2016~2019), and the violation of the Immigration Control Act is included in the years 2016, 2018, 2019, and 2020. Furthermore, it can be seen that for the first time in 2020, violation of the Narcotics Control Act (Psychotropic drugs) became the ninth most common crime among the top 10 foreign crimes.

Table A4. Number of foreigners residing in Korea by nationality and year, 2016–2020

201	6	2017	2017 2018 2019		2020				
Korean Chinese	627,004	Korean Chinese	679,729	Korean Chinese	708,082	Korean Chinese	701,098	Korean Chinese	647,576
China	389,603	China	338,345	China	362,484	China	400,684	China	247,330
Vietnam	149,384	Vietnam	169,738	Thailand	197,764	Vietnam	224,518	Vietnam	211,243
USA	140,222	Thailand	153,259	Vietnam	196,633	Thailand	209,909	Thailand	181,386
Thailand	100,860	USA	143,568	USA	151,018	USA	156,982	USA	145,580
Philippines	56,980	Uzbekistan	62,870	Uzbekistan	68,433	Japan	86,196	Uzbekistan	65,205
Uzbekistan	54,490	Philippines	58,480	Japan	60,878	Uzbekistan	75,320	Philippines	49,800
Japan	51,297	Japan	53,670	Philippines	60,139	Philippines	62,398	Mongolia	42,511
Indonesia	47,606	Cambodia	47,105	Indonesia	47,366	Indonesia	48,854	Cambodia	41,405
Cambodia	45,832	Mongolia	45,744	Cambodia	47,012	Mongolia	48,185	Nepal	39,743
Mongolia	35,206	Indonesia	45,328	Mongolia	46,286	Cambodia	47,565	Indonesia	36,858
Nepal	34,108	Nepal	36,627	Taiwan	41,306	Nepal	42,781	Kazakhstan	29,278
Taiwan	34,003	Taiwan	36,168	Nepal	40,456	Taiwan	42,767	Korean Russian	26,708

Source: Ministry of Justice Immigration Statistical Yearbook.