THE INFLUENCE OF THE ENTERTAINMENT INDUSTRY ON INTERNATIONAL TOURIST ARRIVALS IN SOUTH KOREA

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ABSTRACT

The growing popularity of the Hallyu wave, or Korean entertainment content, among international audiences since the early 2000s has been cited in previous research papers as one of the many reasons for the influx of international tourists to the Republic of Korea (ROK) in recent years. The phenomenon can be explained by Korean entertainment content, such as K-dramas and K-pop, which serve as soft power for its government, promote Korean culture and goods in the international community, and could potentially attract K-content fans to visit the country. Thus, this study examines the effects of Korean entertainment content, using Google search trends, the value of Korean exports, and the Korean government's cultural promoting budget as independent variables, on the number of international tourist arrivals in South Korea. The data includes tourists from 35 countries and territories, as identified by the Korean Tourism Knowledge and Information System (KCTI), over 8 years, from 2012 to 2019, quarterly. The international tourist arrivals by country of origin were further categorized by gender for deeper analysis. The study employed a multivariate regression analysis based on an augmented gravity model. The panel data analysis utilized a robust random-effects approach to investigate the impacts of the Hallyu wave on the number of international tourist arrivals. The findings indicated that Google search trends related to K-content demonstrated both negative and positive correlations with the international tourist inflows to South Korea depend on the gender and lagged period. Meanwhile, the Google search trends related to tourism in Korea, the exports of Korean goods, and the Korean government's cultural promoting budget showed a positive relationship with the dependent variable in the regression model.

Keywords: Tourism, International Tourist Arrivals, Entertainment Industry, Hallyu Wave, South Google Search Trends, Augmented Gravity Model

INTRODUCTION

The South Korean tourist industry is one of the country's service economic sectors that is relatively small yet important. Between 2013 and 2018, its international tourism revenue accounts for approximately 1.36 percent of its total GDP. The increase of international tourism revenue, aligned with the continued growth of South Korean GDP in the last decades, can be attributed to the continued increase in total international tourist arrivals to the country, as illustrated in the chart below. The interesting facts about the growing number of international tourists is the reason for their visit to the republic. According to the report done by the Ministry of Culture, Sport, and Tourism and Korean Tourism Organization, people in the online platforms from the top 20 countries that share the largest number of tourists to South Korea said that K-pop is the most cited reason for visiting the country, followed by Korean food, cosmetics and beauty, and cultural content (Dasom, 2023; Kelleher, 2024). K-pop emerged as the primary motivation for visiting the country and all the following reasons are somehow related to K-drama. This is not a coincident phenomenon promoting international tourism arrivals, but it is media that targets both domestic and international audiences from South Korea's entertainment industry with deliberate and active support from Seoul.

For K-pop, these "Super artists" are known to be highly talented in multi-artistic skills and fluent in foreign languages. With advertisements on various social platforms, music video promoting, and concerts, these artists are great at capturing popularity in the foreign market and making a profit after their debut (Shinada, 2015). In case of K-drama, there is almost always an eating scene in Korean series and films regardless the genre. Some Korean foods become popular due to their frequent appearance in K-drama (Yong, 2023). For another example, one popular TV drama series called "The Winter Sonata", which was originally broadcast in 2002 on KBS2 was one of the most successful entertainments that promoted tourism in South Korea. Even today, some tourism agency still lists some highlighted destinations where this famous drama was filmed. Similar cases like these consequently raise international visitors who come to Korea for cultural traveling purpose. Many international tourists, especially younger women, visit the country not only to meet their favorite Korean artists by attending their concerts but also to embrace their lifestyle, including enjoying the same food, shopping at the same places, and even learning to speak the language (Hills, 2023). K-pop and K-drama are two of the most successful examples of using domestic cultural goods to promote the country's awareness internationally. These are part of what the Korean government called "Cultural content". These contents are sometimes difficult to clearly define; however, it could be physical, digital, and intangible contents that are made in South Korea and can represent "Koreanness". Thus, this research aims to investigate the influence of Hallyu or Korean contemporary culture on international tourist arrivals from different countries across the globe using both cultural and travel search trends as determinants.

LITERATURE REVIEWS

The use of Hallyu-related proxied as determinates of international tourist inflows

In order to study the relationship between international tourist inflows to the republic and the Korean Wave, we need to have relatable time series data that can be used for our analysis as it proxied. One of them is Expenditure on Korean cultural products which include things such as movies, TV series, and music. According to (Lim & Giouvris, 2021), they found that Cultural consumption per visitor (CCV) demonstrates a positive effect on international arrivals to South Korea for all countries which are included in their analysis model, especially those countries in East Asia, for instance, China, Hongkong, Japan, Taiwan, and Malaysia.

Another proxied that is used in the research literature is Korea's content export. In the work of (Huh & Wu, 2017), they studied whether the Hallyu Exports, which are proxied by Korean broadcasting content exports, promote Korea's Consumer Goods Exports and inbound visitor

flows between Korea and its 40 partners from 2006 to 2014. The results confirmed that Korean content exports show a positive effect on goods exports as well as international visitor inflows to its border. Similarly, the findings from the work of (Bae et al., 2017), which they examined the effect of Hallyu on tourism in Korea from 1997 to 2014 using panel data, confirmed that the rise in Hallyu content exports has a positive effect on tourism demand from the countries in their analysis (the United States, China, Japan, and Hong Kong).

The use of search data from Google Trend

With the age of information and communication technology and the rapid growth of internet and social media usage since the 2000s, the Tourism sector, like other economic sectors, has been disrupted by these developments. Tourists, especially the younger generations, have more relied on searching tourism information on the internet and social media for their individualized travel trips while a smaller number of people planning their schedule via travel agencies or joining group tours.

Thus, (Yang et al., 2015) saw this changing behavior of tourists worldwide and developed their research method to forecast the demand of Chinese tourists by incorporating search data from Google and Baidu into their AR(I)MA models. Their purpose is to assess and compare the forecasting capability of two search data from distinct search engines. They found that the AR models that used search data from each search engine could predict the future trend of Chinese tourists, whereas the models employing Baidu data exhibited better performance compared to both the baseline model and the models utilizing Google Trends.

As (Huh & Wu, 2017) stated about the positive impact of Korean wave exports on consumer exports and international visitor inflows, this thesis will exclusively focus on the field of tourism flow analysis and the Entertainment industry as a tourism-promoting strategy to use search data about the Korean wave collected by the Google search engine as well as Hallyu exports goods as Hallyu-related variables in this paper.

Therefore, this study will investigate the relationship between the Korean entertainment boom, which has been promoted as a strategy to enhance its international image and, hopefully, attract more foreigners to visit the Republic by the South Korean government, and the rising demand for foreign tourism inflow to Korea in recent years. I also aim to explain how effective the boom as a predictor is compared to the other control variables on the monthly number of international tourist arrivals to the Republic of Korea disseminated by the Korean Tourism Knowledge and Information System.

RESEARCH METHODOLOGY

In response to examining the influence of Hallyu on international tourist arrivals, the study was then designed to apply a quantitative research technique called the augmented gravity model to examine whether Korean content-related search data collected by the Google search engine (Google Trend) and other control variables are determinants of the international tourist inflow to the Republic of Korea as a dependent variable. The population in this study consisted of 1120 observations from 28 quarters (from 2012 to 2019) across 35 home countries of tourists. The number of international tourist arrivals from each nationality (y) is also categorized into gender (male and female). The results from this paper would contribute by bridging the existing gap in research literature concerning two main questions: 1) Is the search trend related to K-contents a determinant of the quarterly number of international tourism arrivals to the Republic of Korea from 2012 to 2019, and 2) If the search trend is a determinant, do they have different degrees of influence over the gender (male and female).

For the main explanatory variables, **Search Trends** is an index (0-100) calculated by the total volume of search entries about South Korea collected by Google Trends. An index score of 100 indicates the peak level of popularity for the searching term in a certain period, a score of 50 represents half of its highest popularity while a score of 0 means insufficient data available

for this term. The analysis employed two kinds of search data: Tourism-related (KT) and Korean Culture-related (KC) search trends. For the tourism-related one, I looked at two keywords: "Korea" and "South Korea" on all websites categorized as Travel topics from 2012 to 2019 within each of the 35 national IP addresses of analysis. These search trends are then composed into one composite index based on their searching volume weight as a proxy for Tourism-related search trends. Similarly, for the other type of search trend, Korean Culture-related search trends are created by comprised of four trends. The first trend employed the keyword of "K-pop" which is an internationally recognized term that stands for Korean popular music or a type of music that originated from contemporary South Korea on all websites regarding music. The second to fourth trends derived from the same keyword: "Korean" on all websites regarding Korean idols representing girl's and boy's artist groups, Korean drama representing Korean-language television series, or recently, those series that also boast casts on streaming platforms such as Netflix, and Manhwa representing a Korean style of comic books, respectively.

Other controlled variables in the model consist of: **Korea's export of goods** (KExport), defined as the Export value from the Republic of Korea to their home countries of international tourism arrivals. Including this variable could greatly contribute to and complement the model as a more traditional pull factor of the international inflow, compared to the search trend, in the study on international economics. **Korean Governmental budgets to Hallyu** (Budget) which is the amount of budget deliberately funded activities regarding its culture and entertainment sectors by the Korean government. The **national income** is defined by the nominal Gross Domestic Product (GDP) in the Current USD value. Moreover, some **dummy variables**, namely tourist visa exemption (Visa); English-speaking country (Eng); and geographical regions (Regions), are included in the analysis as well. To conclude, the following is a summary table of all variables that are used in the model analysis

Table 1 Variables in the Model Analysis

Variable	Variable descriptions	Measurement	Expected relation	Sources
$LnY_{i,j,t}$	Number of international tourist arrivals (Total number, categorized by genders) and its log transformation	Number		Korean Tourism Knowledge and Information System
$KC_{i,j,t}$	The total volume of search entries about South Korea related to the K-contents collected by Google Trend	Number	+	Google Trend
$KT_{i,j,t}$	The total volume of search entries about South Korea related to the Tourism in South Korea collected by Google Trend	Number	+	Google Trend
$LnExport_{i,j,t}$	The log value of Korean exports to the home countries of tourist inflow in USD	Number	+	Korea International Trade Association (KITA)
$LnBudget_{j,t}$	The log value of Korean exports to the home countries of tourist inflow in USD	Number	+	Korea Creative Content Agency (KOCCA)
$LnGDP_{j,t}$	The log of nominal Gross Domestic Product (Current USD)	Number	+	CEIC

Variable	Variable descriptions	Measurement	Expected relation	Sources
Visa	Countries that do not require a Visa to entering the republic of Korea	Dummy	+	Ministry of Foreign Affairs of the Republic of Korea
Eng	Dummy variable for English-Speaking Country	Dummy	+	University of Sheffield

Regarding data analysis, I begin with a simplified version of Timbergen's gravity equation of international trade (Anderson, 2011; Tinbergen, 1962), which only has two main dependent variables, namely, GDP and Distance, and a constant term. The formula is written as:

$$Y_{i,j} = \alpha \frac{GDP_i \times GDP_j}{Dist_{i,j}} \quad (1)$$

When Y_{ij} is the volume of bilateral trade between country i and country j. The volume is determined by α as a constant term, the size of these two economies (GDP_i, GDP_j) as a numerator, meaning that the larger the GDP, the higher the volume of bilateral trade, and the distance between these two countries as the denominator indicating a negative relationship between the trade volume and the distance (Tinbergen, 1962). Another theory that needs to be mentioned is tourism demand theory which was used in some studies in this field (Chaiboonsri et al., 2010; Zhang et al., 2009). The equation can be expressed as follows:

$$TD_t = f(IN_t, TC_t, P_t) \quad (2)$$

When TD_t represents a tourism demand in time t is a function of income of tourist from a country of origin at time t (IN_t), transportation costs spent by tourists from their home to a host country at time t (TC_t), and a tourism price of goods and service at time t (Chaiboonsri et al., 2010). Next, I augmented equation 2 by changing the meaning TD_t to the number of international tourist arrivals ($N_{i,j,t}$), to South Korea, adding more dependent and control variables for the table 1, and incorporating a time dimension (t) which spanning from 2012 to 2019 from 35 countries and territories into the model.

I then applied a logarithmic transformation on some independent variables, Thus, here below is the model for the analysis in this paper.

$$LnY_{female\ East\ Asian*1}$$
$$= \beta_0 + \beta_1 KC_{t-n} + \beta_2 KT_{t-n} + \beta_3 LnKexport_t + \beta_4 LnBudgets_t$$
$$+ \beta_5 LnGDP_t + \beta_6 Visa_t + \beta_7 Eng + \gamma_1 Regions + \varepsilon$$

For a regional dummy variable

$$\gamma_1 Regions = \alpha_1 CENSOUTH + \alpha_2 MIDDLEA + \alpha_3 AFRICA + \alpha_4 EUROPE$$
$$+ \alpha_5 NAMERICA + \alpha_6 LAMERICA + \alpha_7 OCEANI$$

Regarding the model optimization, Firstly, to determine whether the model analysis has some significant panel effects or if just a pooled OLS is sufficient, I employed the Breusch-Pagan LM Test, the results from the test showed that the p-value = 0.0000, therefore, it is substantial to Reject H_0 which indicates the presence of panel effects. Next, I conducted the Hausman Test. The results also demonstrated that the p-value = 0.0000. Thus, I can reject H_0, and the Fixed Effects model is appropriate. However, there are dummy variable which explicitly estimate the effects of regional location of the home country and other time-invariant characteristics, therefore, Random Effects model is preferred over the Fixed Effects model for the econometrics analysis. Lastly, I employed White's test for heteroscedasticity and the result showed that the p-value = 0.0000, indicating the presence of heteroscedasticity. These test

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[1] Using the International tourist arrivals from East Asian Countries as the controlled population due to its closest proximity compared to the inflows of other regions.

results suggested that the random effects panel model with robust standard error is the most suitable for the analysis.

Chart 1: Model Selection Process Flow
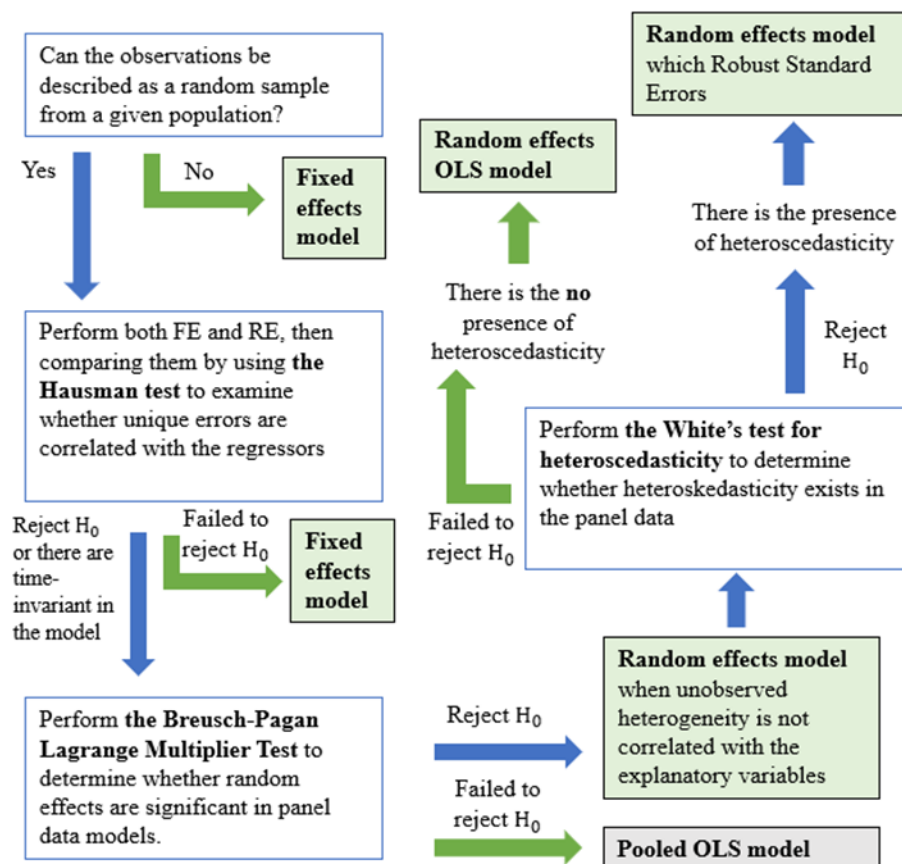
RESEARCH RESULTS

Profiles and Studied Variables descriptives

Table 2 displays the mean, standard deviation, minimal value, and maximal value of variables in the analysis (except dummy variables). Some variables are in logarithmic terms.

Table 2 Mean, Standard Deviation, Minimal Value, and Maximal Value of Variables

| Variables	Mean	Std. Deviation	Min	Max
Dependent variables				
lnyall	9.447899	1.561144	6.508769	13.76979
lnymale	8.769767	1.422886	5.837730	12.85086
lnyfemale	8.122687	1.881582	4.532599	13.24351
Independent variables				
KC	55.35481	17.73590	5.272663	92.42520
KT	38.95303	17.49320	0.00010	89.53558
lnExport	6.806328	1.318990	3.610918	9.916502
lnBudgets	5.204506	0.143644	4.978026	5.379897
lnGDP	12.06710	1.145015	9.688749	15.53185

Model Development and Lag Selections

Since the Random Effects model is optimal for this panel data, the assumption of the independent and dependent variables to be stationary must be confirmed by using the ADF test. In case the time series of variables has a unit root, implying the characteristic of non-stationary data, the regression results could show spurious correlation such as an overstated relationship and lack of causality even though appearing statistically significant. Therefore, transformations such as differencing, logarithmic transformations, and detrending might be applied to make them stationary. The ADF test assumes a single-unit root. So, I conducted the ADF test on all variables in the model up to four lags except those dummy variables. The results are shown that all the variables (excepting the dummies) in the regression model have a unit root and are confirmed as stationary by the ADF test. Thus, additional testing for cointegration is not required, and their long-term relationship in the regression results can be directly interpreted as it is. Nevertheless, I further employed a robust check for autocorrelation with its past values directly and indirectly on the dependent variables.

Next, I analyzed those three predicting variables by utilizing Granger causality. This was done to investigate 1) the causality if the regressors are determinants of the dependent variable, and 2) whether their lagged values in the time series could influence the dependent variable. The Null Hypothesis (H_0) for this test means no Granger cause between the lagged regressors and regressand. Meanwhile, the Alternative Hypothesis (H_1) indicates otherwise. Although the results from this test do not directly imply true causation, they are still useful to indicate that the explanatory variables somewhat contain some predictive information about the dependent variable.

Thus, I employed a lag length of up to four, as it is already sufficient to capture all seasonality in the quarterly data. For KC, none of the four lags exhibited any Granger causality at the p-value is more than 0.05. (p-value = 0.7595 for lag 1, p-value = 0.2840 for lag 2, p-value = 0.2095 for lag 3, and p-value = 0.6025 for lag 4). Hence, it failed to reject the null hypothesis, and these confirmed no statistically significant evidence that KC Granger caused the predicted variable for all four lags. On the other hand, three of the four lags of KT show a significant Granger causality with the dependent variable which is sufficient to reject the null hypothesis. Those lags are lag 2 (p-value = 0.0064), lag 3 (p-value = 0.0076), and lag 4 (p-value = 0.0250). Similarly, the first and last lags of LnExport (p-value = 0.0417 and p-value =0.0033, respectively) illustrated a Granger causality with the explained variable. As KC shown no Granger caused on the predicted variable, I run two separated Random Effects models with robust standard errors: with and without KC as its prediction to compare whether KC as an effective policy for promoting the international inflow of tourists or demonstrates any long-term relationships since Granger causality focus more on short-run relationship, meaning lacking of the cause does not necessarily imply irrelevance in the long-term.

Chart 2: Lag selection Process Flow
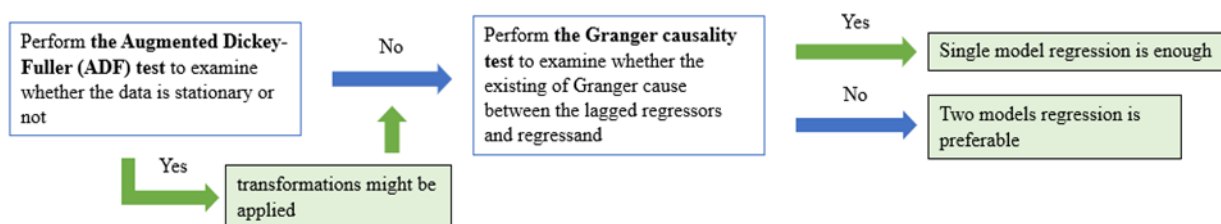
Hypothesis Analysis and the Regression Results

Table 3 KC Included Regression Results

Variables	All Populations			Male Populations			Female Populations		
	Coefficient	R.Std. err.	P-Value	Coefficient	R.Std. err.	P-Value	Coefficient	R.Std. err.	P-Value
KCLag2	-0.0033	0.0013	0.009	-0.0031	0.0012	0.008	-0.0044	0.0017	0.009
KCLag3	-0.0022	0.0016	0.173	-0.0015	0.0016	0.354	-0.0039	0.0021	0.056
KCLag4	0.0015	0.0016	0.338	0.0006	0.0015	0.712	0.0050	0.0020	0.013
KTLag3	-0.0020	0.0006	0.002	-0.0010	0.0005	0.040	-0.0021	0.0010	0.027
KTLag4	0.0034	0.0009	0.000	0.0020	0.0007	0.005	0.0052	0.0011	0.000
lnKexport	0.0591	0.0232	0.011	0.0601	0.0220	0.006	0.0507	0.0306	0.098
lnlaggedBud	1.0453	0.1858	0.000	0.9401	0.1832	0.000	1.7713	0.2142	0.000
LnNominal	0.4409	0.1236	0.000	0.4866	0.1171	0.000	0.5885	0.1383	0.000
SOUTHA	-1.5785	0.2340	0.000	-1.0048	0.2181	0.000	-3.2357	0.1973	0.000
MIDDLEA	-3.4566	0.2742	0.000	-2.7920	0.2637	0.000	-4.0246	0.3334	0.000
CENTRALA	-2.0471	0.2286	0.000	-1.8101	0.1878	0.000	-1.6435	0.2339	0.000
EUROPE	-2.9122	0.3182	0.000	-2.5318	0.2587	0.000	-3.5491	0.3087	0.000
AMERICA	-3.5154	0.4844	0.000	-3.2451	0.4505	0.000	-3.8504	0.4579	0.000
AFRICA	-3.6662	0.2105	0.000	-3.5065	0.1776	0.000	-3.8117	0.1976	0.000
OCEANIA	-3.8269	0.7475	0.000	-3.4726	0.6912	0.000	-3.8570	0.7089	0.000
Visa	0.5248	0.1967	0.008	0.6359	0.1466	0.000	0.5172	0.1463	0.000
Eng	1.9896	0.6697	0.003	1.9737	0.6507	0.002	2.0522	0.6652	0.002
cons	0.1911	1.8464	0.918	-0.8779	1.5508	0.571	-6.2811	2.0467	0.002
Overall R^2	0.8343			0.8498			0.8775		

Table 4 KC Excluded Regression Results

Variables	All Populations			Male Populations			Female Populations		
	Coefficient	R.Std. err.	P-Value	Coefficient	R.Std. err.	P-Value	Coefficient	R.Std. err.	P-Value
KTLag3	-0.0024	0.0007	0.000	-0.0014	0.0006	0.018	-0.0027	0.0010	0.006
KTLag4	0.0032	0.0008	0.000	0.0018	0.0007	0.007	0.0054	0.0011	0.000
lnKexport	0.0570	0.0311	0.067	0.0589	0.0298	0.048	0.0477	0.0380	0.209
lnlaggedBud	0.8248	0.1158	0.000	0.7150	0.1203	0.000	1.6006	0.1381	0.000
LnNominal	0.4272	0.1392	0.002	0.4600	0.1373	0.001	0.5791	0.1559	0.000
SOUTHA	-1.4777	0.2695	0.000	-0.8983	0.2094	0.000	-3.1653	0.2019	0.000
MIDDLEA	-3.4793	0.2939	0.000	-2.8171	0.2868	0.000	-4.0472	0.3203	0.000
CENTRALA	-1.9878	0.2775	0.000	-1.7642	0.2236	0.000	-1.5873	0.2623	0.000
EUROPE	-2.9240	0.3301	0.000	-2.5408	0.2717	0.000	-3.5627	0.3102	0.000
AMERICA	-3.5125	0.4841	0.000	-3.2389	0.4548	0.000	-3.8524	0.4514	0.000
AFRICA	-3.6178	0.2247	0.000	-3.4584	0.1830	0.000	-3.7781	0.1932	0.000
OCEANIA	-3.8943	0.7652	0.000	-3.5672	0.7138	0.000	-3.9103	0.7188	0.000
Visa	0.6454	0.2146	0.003	0.7669	0.1555	0.000	0.6054	0.1424	0.000
Eng	1.9912	0.6842	0.004	1.9987	0.6705	0.003	2.0507	0.6805	0.003
cons	1.2316	1.8950	0.516	0.3223	1.7086	0.850	-5.4894	2.0980	0.009
Overall R^2	0.8251			0.8399			0.8755		

After optimizing the regression analysis by selected the combination of KC and KT lagged values that provide the highest R-squared value, the results between the two models are not vastly difference as its explanatory variables provided some momentum and similar Overall R^2. Hence, the results from the table 3 are preferred, and I found that:

Search Trends: The results show search trends related to Korean tourism significantly impact overall international tourist arrivals. Moreover, when examining gender, the results revealed a

small but significant influence of tourism-related search trends of third and four Quarters lagging period. In contrast, 1 quarter-lagged content-related search trends illustrated a negative relationship with the international inflow of tourists. Focusing on the gender dimension, tourism-related search trends indicate the same results. Meanwhile, 4 quarter-lagged content-related searching trends demonstrate a positive influence over female population.

Korea's export of goods: For the influence of the Korean exports of goods to the home countries of international tourists, the results of the regression indicated a strong significance of the goods exports for the overall population. In terms of gender, only male populations are found to be significantly affected by the value of Korea's export of goods.

Korean Governmental Budgets allocation to Hallyu industries: As it intends to be used to promote Hallyu industries, the positive correlation between the Korean government's budget allocation and the number of international tourist arrivals is demonstrated at a significant level in the regression's results in all populations regardless the gender.

Other controlled variables: As a proxy for the mass originally described in the early application of the gravity model in international economics, **Income or Gross Domestic Products (GDP)** has been shown to have a significant positive correlation with the overall population, regardless of gender. For the dummy variables, having a **free visa** is undeniably a strong determinant of international tourist arrivals across nearly all categories, irrespective of gender. Meanwhile, the **distance proxy variable** based on the geographical location of the countries of origin dictates the flow of tourism as well. I conducted a regression analysis on the population from East Asian countries as a controlled group since these countries share the closest proximity to South Korea. The findings showed a negative relationship between the distance of the home countries and international tourism demand. This means that the farther the home countries are, the less outflow of tourist arrivals to the Republic. Lastly, having **English** as an official language has also proven to be a significant determinant of the number of international tourist arrivals to South Korea, such as tourists from countries like the United States, the United Kingdom, Australia, and New Zealand, despite their geographical locations on different continents.

DISCUSSION & CONCLUSION

The findings from this study confirmed that almost all controlled variables are determinants of international tourism arrivals even in terms of gender, and they aligned with the research hypothesis. Nevertheless, it can be observed from the study that the Korean contents-related search trends are less significant than most of the variables in the analysis such as KExport, or Korean travel-related search trends. Thus, it is still unclear whether a fast indicator like this can capture the significant influence of intangible soft power on international tourist inflows.

The findings could be useful for researchers and government officials studying the effectiveness of leveraging cultural soft power as a foreign policy tool to enhance the country's global image and attract international tourists. Furthermore, by using search trends related to tourism and Korean entertainment media gathered from search engines, The paper aims to explore whether this information can effectively influence the demand. Through the case study of South Korea, this research provides practical implications for policymakers and stakeholders involved in tourism promotion strategies.

However, the study contained some limitations that could lead to improvements and more accurate results if considered. One of the key limitations is the reliance on secondary data, which might not fully capture the whole nuanced and dynamic relationship between cultural soft power and tourism demand. The research constraint included the length of the period analyzed, which spanned only 28 quarters (from 2012 to 2019). This timeframe may not sufficiently capture long-term trends. By extending the analysis to a longer period could provide more robust insights into the sustainability and effectiveness of soft power as a tool to

attract tourists. For instance, examining data before and after significant events related to cultural issues or the emergence of cultural rivals as a comparison could reveal more meaningful patterns.

Another limitation is limitations in its cross-gender and age-group analysis in this study. Because the international inflow of tourists can only be categorized into distinct genders, it is unable to examine overlapping or intersectional dimensions, for instance, investigating the K-content influence on female tourists in their 20s or male tourists in their 40s. the existing patterns at the intersection of these demographic categories could deepen our understanding of how different demographic combinations respond to cultural soft power influences. Therefore, Future studies could incorporate primary data collection, such as surveys or interviews with international tourists whether Korean soft powers like K-pop and drama are the primary reason for visiting Korea, and how long they had been exposed to Korean cultural content before they began planning their trips. This would complement to the gap in cross-demographic category analysis and affirm or identify whether K-content search trends and could accurately reflect real-world situations.

Thirdly, the impact of Internet censorship and surveillance in some countries, particularly the PRC. The access restriction to social media platforms and online search engines such as Google greatly distorts the analysis by blocking access to platforms like Google, YouTube, Netflix, and potentially other travel websites, which are crucial sources of data for tracking trends in Korean cultural and travel content. Consequently, this excluded international tourist arrivals which shared the largest number by nationality in the Republic of Korea from the model. Thus, future research could explore alternative search engines that are available both in the PRC and other countries to gather data for an improvement on the regional analysis perspective.

Lastly, in terms of studying cultural power as a pull factor for international tourists, the sole focus on the Republic of Korea as the only home country for inbound tourists may not capture the whole of the global dynamics of cultural soft power. Conducting comparative studies between most visited countries that utilize its culture as a tourist attraction strategy in future research, for example, Thailand's gastro-diplomacy versus Japan's anime culture, etc., could offer a more holistic understanding of cultural soft power and its success.

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