The Effects of the Korean Wave on Export

: The Way Forward for Korean Government

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Abstract

The effects of the Korean Wave on exports have been an interest to economists and governments as Korean culture has been gaining more and more popularity. This paper concentrates on the following four questions. "What are the characteristics of the countries where Korea mainly exports its cultural goods?", "Does the Korean Wave increase the volume of its export?", "If so, how does the increased export influence the domestic market?", and "Does the Korean economy gain overall from the Korean Wave at the end?". This paper identifies these questions through both theoretical models and empirical data and then concludes the Korean Wave does increase the amount of export and it brings net gain to the Korean economy. Also, it demonstrates that GDP and GDP per capita are influential factors for trade volume, and cultural goods have unique features regarding prices and demand. Thus, this paper propose targeting high-income countries and aiding the expansion of Korean-styled products as potential policies to fully take advantage of the growing Korean Wave. Furthermore, Korea could possibly remove its future risks by participating more decidedly in global agendas based upon its soft power and setting reasonable regulations in its cultural industry.

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1. Introduction

Korean boy group 'BTS' has been at the top of the billboard chart ever since 2016. 'Parasite' won numerous international film awards in 2019 and 2020. Furthermore, Netflix's non-English top ten lists in many countries currently are dominated by Korean dramas. This trend can be described by Hallyu or the Korean Wave, a cultural phenomenon where the global popularity of South Korean pop culture has rapidly risen since the late 1990s.

The Korean Wave is not simply a premeditated strategy by the government. During the Asian financial crisis in the late 1990s, Korea was forced to limit cultural imports from Japan. This incentivized the Korean cultural industry to actively create new cultural-based content as Japan was the leading Asian country for international cultural exports. Along with this event, Korea had established itself as the eleventh largest economy in the world by the end of 1995, accompanied by the dramatic growth of technology and the info-communications industry. These macroscopic trends provided a solid ground for the emergence of the Korean Wave. Once the cultural industry showed successful outcomes and was beloved by foreign countries, the government started to aid the growth with great attention.

Ministry of Culture, Sports and Tourism is suggesting four phases of the Korean Wave as follows. First, Hallyu 1.0 is the first phase with a timeframe from 1997 to the mid-2000s. The main cultural exports were video content, especially dramas, and the primary export countries were Asian countries near Korea. The consumers were few manias. The next one is Hallyu 2.0 lasted from the mid-2000s to the early 2010s. This step is characterized by the spread of the Korean Wave and the development of K-pop idol stars. Thus, the key cultural exports began to include pop music. The range of primary export countries became broader, including more Asian countries and some American and European countries. The main consumers of Hallyu were shifted from few manias to teenagers and those who were in their 20s. Then Hallyu 3.0 started in the early 2010s. The focus of the third phase was on general pop culture, targeting people all around the world. The last and latest phase is Hallyu 4.0, also called 'New Hallyu'. This is regarded starting from 2020, having diversified and tailored cultural content.

The increasing popularity of Korean culture has been regarded to be positively affecting the growth of the Korean economy, especially in terms of trade. However, the correlation is somewhat ambiguous if we try dealing with the overall exports for a long period of time because of the contribution of technological development. Therefore, both limited timeframe and defining cultural goods are crucial

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¹https://www.soundoflife.com/blogs/experiences/how-korean-wave-made-global-splash#:~:text=According%20to%20Elite%20Asia%2C%20the.based%20departments%20within%20Korean%20universities.

to accurately look at the pure effect of the Korean Wave on export. As to limited timeframe, I analyze based upon periodic data. Regarding cultural goods, I suggest food, cosmetics, and tourism. People do care where their food comes from, which country their beauty products are from, and where they will travel while they are relatively indifferent to, for example, in which country their clothes are produced. Furthermore, I introduce the 'services exports' indicator sourced by WTO.

2. Theoretical Argument

To identify the correlation between the Korean Wave and the amount of export, I show two theoretical arguments first and then cross-check the theoretical models with empirical data in the next section.

2.1 Gravity Model

According to a gravity model, the size of a trade depends on the GDP of both importing and exporting countries, and the distance between the two countries. However, GDP and distance affect trade in the exactly opposite way. While GDP and trade have a positive correlation, distance and trade show a negative correlation.

$$Trade = B \frac{GDP_1 GDP_2}{dist^n}$$

In the formula above, *B* is a constant as it is 1 over the world GDP. *GDP1* is also a constant as we can set *GDP1*, the economic size of the exporting country, as the GDP of Korea. Now, the trade partners of Korea can be divided into four types based on this model. Note that 'countries with high GDP' means the US and China here as their GDPs are on another level compared to the rest of the countries. The first type is a country near Korea with high GDP, so that would be China. The second type includes countries near Korea but with lower GDPs such as Japan and South East Asian countries. The third type is a country with high GDP but far away from Korea, so that would be the US. The Last type covers countries with both lower GDPs and large distances, for example, most of the South American countries.

Each of the four types is expected to show a different trade size with Korea. To estimate the size of the influence of each factor in a gravity model, I refer to the data for GDP and distance of Korea's top 25 trade partners.

Top 25 Trade Partners of Korea (2019)					
Partner Country	Export (US\$ Thousand)				
China	136202533				
United States	73598904				
Vietnam	48177749				
Hong Kong, China	31905990				
Japan	28420168				
India	15096301				
Singapore	12768034				
Mexico	10927016				
Malaysia	8843499				
Germany	8685312				
Philippines	8365340				
Australia	7890430				
Thailand	7775097				
Russian Federation	7774022				
Indonesia	7650051				
Canada	5567579				
United Kingdom	5539087				
Poland	5314948				
Turkey	5297808				
Brazil	4809207				
Netherlands	4243101				
Italy	3773365				
Saudi Arabia	3697120				
United Arab Emirates	3469772				
Marshall Islands	3443457				

Table 1 (Source: WITS)

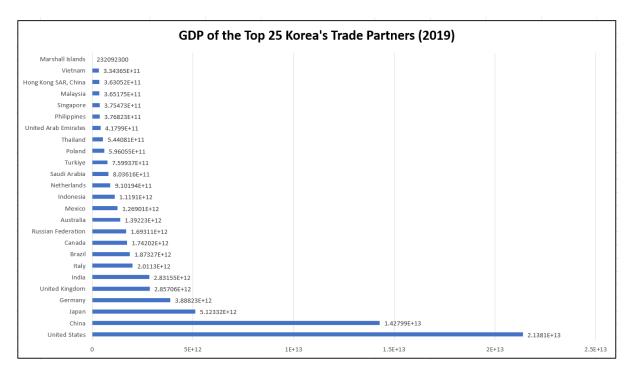


Figure 1 (Source: World Bank)

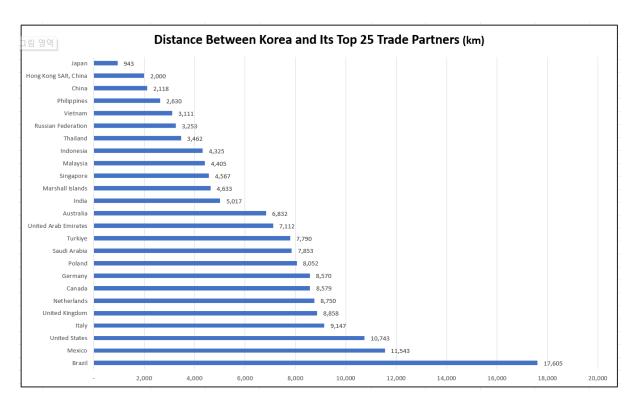


Figure 2 (Source: www.distancefromto.net)

It is obvious that countries vary more when it comes to GDP, comparing Figure 1 and Figure 2. In Figure 1, the GDP of the top first country is about 92,119 times that of the top 25th country. However, in Figure 2, the distance between Korea and the farthest country is approximately 19 times the distance between Korea and the closest country. The outcome is coherent even when we calculate with general data having nothing to do with the ranking of Korea's trade partners. This means that the GDP term has a much bigger variance than the distance term. Hence, I expect that the GDP term would be more powerful in the formula of the gravity model.

Supposing the gravity model is applied to the trade of cultural goods, I theoretically conclude the expected outcome regarding the trade size of each category based on the above interpretations. There is no doubt that the Korean Wave and Korean cultural goods would be exported the most to the first category country, China, and the least to the fourth category countries. Meanwhile, as the size of GDP is expected to be more influential than that of distance, the Korean Wave and Korean cultural goods would be exported more to category 3 country, the US, than category 2 countries.

2.2 S-D in a Small Exporting Country

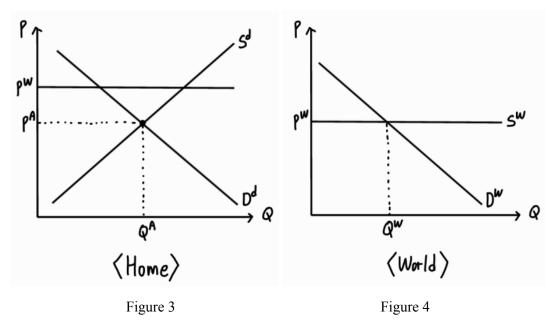
The second theoretical model that could explain the effects of the Korean Wave on export is the supply and demand model of a small exporting country. In this model, I also introduce the love of variety for a couple of good reasons. First, this theoretical model can be established only with the love

of variety. The trend of globalization had already existed before the emergence of the Korean Wave. This would make the price of Korean goods the same as the world price under homogenous product assumption. Thus, there cannot be a new change in trade caused by the Korean Wave in this case. Second, it is more realistic to assume the love of variety. It is general to have numerous goods and services in the same product category produced by different companies in different countries, and especially for cultural goods, people do love the variety and they do care about the country where their products are produced.

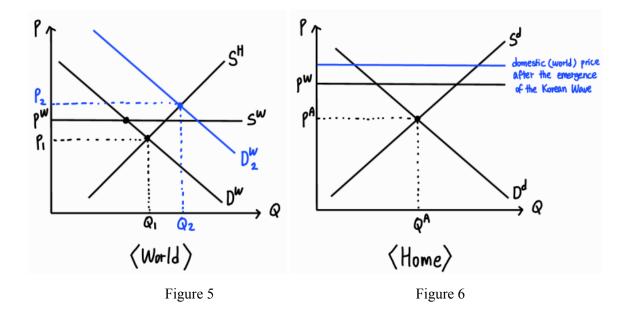
There are two possible cases in this model. The first one is a case where the autarky price is lower than the world price before the Korean Wave whereas the second one is a case where the autarky price is higher than the world price before the Korean Wave.

2.2.1 Lower Autarky Price Compared to the World Price

The market of cultural goods 'X' in Korea before the emergence of the Korean Wave can be demonstrated in Figure 3. The world price can be regarded as the average price of products in category Y where X belongs, assuming the love of variety. Also, the world market of category Y before the Korean Wave can be represented in Figure 4.



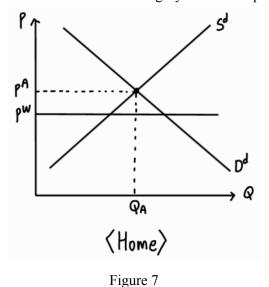
Once the Korean Wave starts and Korean cultural products begin to gain popularity, Korea starts to export goods X to the world market (Figure 5). As the Korean Wave becomes bigger and bigger, the world demand for goods X grows, which leads the world demand curve to move to the right. The new equilibrium price of goods X can exceed the world price if consumers prefer goods X specifically among the goods in category Y.



The risen price of good X would increase the domestic price of good X (Figure 6). Consumers in Korea now have to pay more to buy one unit of goods X and this generates a loss of consumer surplus. On the other hand, the amount of decreased consumer surplus becomes the gain of producer surplus so there is no change in the total social surplus. Moreover, the international profit gain would probably be way over the domestic profit loss because Korea is a tiny market compared to the rest of the world. Therefore, the Korean Wave would positively affect the Korean economy in this scenario.

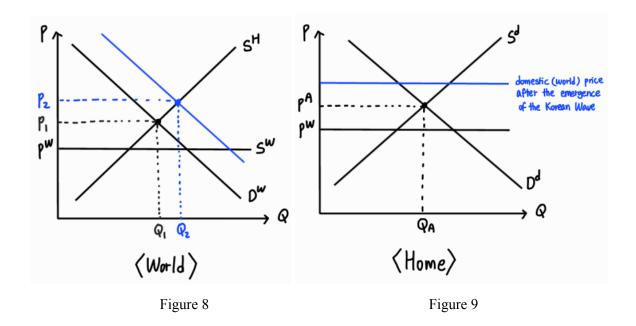
2.2.2 Higher Autarky Price Compared to the World Price

The logic of this case is quite similar to the prior one. First, the autarky market of good X can be demonstrated in Figure 7, and the world market of category Y can be represented by Figure 4 again.



After the Korean Wave creates a new foreign demand, good X enters the world market (Figure 8). The world demand curve may move to the right with the increasing popularity of Korean cultural goods,

which results in a higher preference for goods X. This would also increase the price of good X in the domestic market (Figure 9). However, it is less likely for the price of good X to go up because the price was already above the world price. Even if the love of variety exists, the prices of goods are still one of the crucial factors to determine the demand.



To sum up, this case possibly results in the same outcome, the net gain of the Korean economy.

3. Empirical Evidence

In this section, I verify the theoretical models, using empirical data. First, as to the first theoretical model, I identify which countries were influenced by the Korean Wave the most and whether the Korean Wave positively affects Korean export. Next, for the second theoretical model, I explore the change in both the domestic and global market of Korean cultural goods and identify whether it brings net gain to the Korean economy.

3.1 Gravity Model Verification

3.1.1 The Countries Where the Korean Wave and Cultural Goods Arrived

BOP6 is a measure of cultural goods developed by WTO. BOP6 - SK represents personal, cultural, and recreational services comprehensively, including artistic-related services and audio-visual services such as movies, books, sound recordings, etc. Table 2 shows Korea's export of BOK6 - SK to each country.

-	2016 ▽	2017 ▽	2018 =	2019
World	1132	925	1108	13
United States of America	309	235	297	3
United Kingdom	165	132	162	1
China	75	57	70	_
Japan	66	49	62	
Australia	47	54	53	
Germany	38	32	37	
India	24	22	24	
Brazil	23	21	24	
Hong Kong, China	23	20	22	
Netherlands	23	19	23	
Singapore	22	17	22	
France	22	18	21	
Italy	20	17	20	
Canada	20	16	19	
Switzerland	18	14	17	
Russian Federation	13	13	14	
Spain	12	10	12	
New Zealand	10	8	10	
Norway	9	9	10	
Sweden	9	8	9	
Israel	8	7	8	
			8	
Philippines Chinese Toinei	8	7		
Chinese Taipei	8	7	8	
Mexico	7	6	7	
United Arab Emirates	6	6	7	
Poland	6	5	6	
Belgium	6	5	6	
South Africa	6	5	6	
Austria	6	5	5	
Ireland	6	5	5	
Czech Republic	5	4	5	
Other Countries, n.e.s.	5	4	5	
Saudi Arabia, Kingdom of	5	4	5	
Cyprus	5	4	4	
Indonesia	5	4	4	
ba, the Netherlands with respect to	4	4	5	
Macao, China	4	4	4	
Denmark	3	4	4	
Argentina	4	3	4	
Curação	4	3	4	
	4	3	4	
Hungary				
Greece	4	3	3	
Luxembourg	3	3	3	
Thailand	3	3	3	
Türkiye	3	3	3	
Portugal	3	2	3	
Egypt	3	2	3	
Finland	2	2	2	
Kazakhstan	2	2	2	
Pakistan	2	2	2	
Romania	2	2	2	
Venezuela, Bolivarian Republic of	3	1	2	
Malaysia	2	2	2	
Tunisia	2	2	2	
Chile	2	1	2	
Fiji	2	1	2	
Papua New Guinea	2	1	2	
Slovak Republic	2	1	2	
Slovenia	2	1	2	
Ukraine	1	1	1	
Belarus	1	1	1	
Belize	1	1	1	
Brunei Darussalam	1	1	1	
Bulgaria	1	1	1	
Colombia	1	1	1	
Croatia	1	1	1	
Ecuador	1	1	1	
Guinea	1	1	1	
Jordan	1	1	1	
Kenya	1	1	1	
Lithuania	1	1	1	
Malta	1	1	1	
Qatar	1	1	1	
Suriname	1	1	1	
Viet Nam	1	1	1	
	1	0	1	
Morocco				
Nigeria	1	0	1	
Panama	1	0	1	
Uzbekistan	1	0	1	
Azerbaijan	0	0	0	
racionjan			0	

The overall trend observed in Table 2 follows what we expected in the gravity model. USA, UK, China, and Japan ranked in the top 4, followed by other South East Asian countries and European countries. Also, South American and African countries were ranked relatively low.

However, there are a couple of points that should be highlighted as they suggest different perspectives that can be added to the gravity model. First, GDP matters more than distance. Although China was expected to be the country with the largest import under the gravity model, we see that the USA imports nearly 4 times China on average. Also, only Japan and China, further Hong Kong and Singapore, which have high GDPs, ranked high among countries closest to Korea, including Taiwan, Macao, Mongolia, Phillippines, and Guam.

Second, GDP per capita matters. The GDPs of European countries are not as huge as that of the USA or China. They are even less than South East Asian or South American countries in some cases. What is more, they are far away enough from Korea compared to Asian countries. Nevertheless, they took more than 50% of the top 20 import countries of Korean personal, cultural, and recreational services, ranking higher than most South East Asian countries that are much closer to Korea. Here, GDP per capita could explain why this happens. Figure 10 indicates the top 30 countries in terms of GDP per capita in 2019, and this is comprised of European countries mostly. High GDP per capita means a high standard of living, which leads to more time and money spent on cultural activities. Hence, GDP per capita should be taken into account when it comes to the trade of cultural goods.

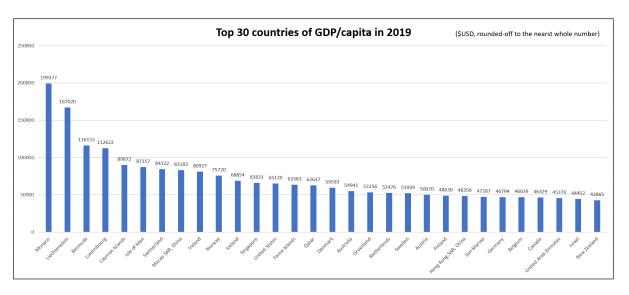


Figure 10 (Source: World Bank)

Meanwhile, the data of 2022 countries tweeting most about K-content provides the actual popularity or the size of deep-dive interest in the Korean Wave as Twitter is one of the most activated places for cultural content and cultural exchange.

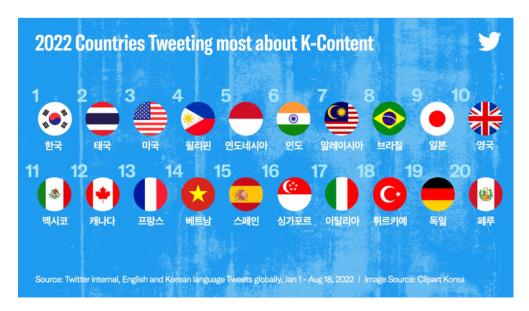


Figure 11 (Source: Twitter)

The top 6 countries ranked below Korea are all South East Asian countries except for the US. We can also see that South East Asian countries tweeted more about K-content compared to European countries. That is, the pure interest in Korean content in South East Asian countries would be greater than in European countries. However, as we looked at previously, the economic value of cultural export seems to be higher in European countries than in South East Asian countries. This can be caused by several factors, including exchange rate, purchasing power, etc, but the thing is that this indicates there is a huge potential economic benefit residing in Europe when the Korean Wave becomes a major cultural wave in European countries.

3.1.2 The Changes in Export Caused by the Korean Wave

The following tables show the Korean Wave did have been facilitating the exports of cultural goods. Table 3 demonstrates the perfumery and cosmetics export of Korea. While China and Japan have exponential growth rates in the early 2000s, the growth rates in other regions, especially Europe and South America, tend to be growing in the late 2010s. This corresponds to the time when the Korean Wave was introduced to each region. Also, the growth rate of perfumery and cosmetics export has been outpacing that of total export for the last 20 years. Moreover, Korea still shows outstanding perfumery and cosmetics export growth rates even when it is compared to the growth rate of the global cosmetics market, which has been 3.9% on average for the last 20 years.

Country	1999	2004	2009	2014	2019
China	15170473	94047776	124053781	584491472	2694254642
		(519.9%)	(31.9%)	(371.2%)	(361.0%)
Japan	7777518	33065552	85836895	146819515	399959387
		(325.1%)	(160.0%)	(71.0%)	(172.4%)
South East Asia & South Asia	24049466	63490870	143870874	761466572	1787389877
		(164.0%)	(126.6%)	(429.3%)	(134.7%)
USA	16389336	37214855	43006074	155250765	542126326
USA	10389330	(127.1%)	(15.6%)	(261.0%)	(249.2%)
F	6132529	15038457	22853056	85302753	451803050
Europe		(145.2%)	(52.0%)	(273.3%)	(429.6%)
South America	1000326	1151838	1632171	3867095	14286955
South America		(15.1%)	(41.7%)	(136.9%)	(269.4%)
Total Francist	152B	266B	378B	582B	556B
Total Export		(75%)	(42.1%)	(54.0%)	(-4.5%)

 Table 3 (Source: The Observatory of Economic Complexity)

The food export growth rate shows a less dramatic increase and a more volatile trend compared to perfumery and cosmetics data. However, the food export growth rate in most of the regions still has been outpacing the growth rate of total export as time goes by. Furthermore, according to WTO, the world trade volume and value expanded 4% and 6% respectively on average since 1995.² That is, the growth rate of food export of Korea has always been outperforming for the last 20 years.

Food Export of Korea (US\$ Thousand)							
Region	1999	2004	2009	2014	2019		
East Asia & Pacific	718729.37	1004414.34	1466759.99	2945795.27	4135322.54		
East Asia & Pacific		(39.7%)	(46.0%)	(100.8%)	(40.4%)		
South Asia	13134.64	17090.67	81959.27	26828.17	39519.94		
South Asia		(30.1%)	(379.6%)	(-67.3%)	(47.3%)		
United States	141282.96	274531.15	283395.58	500099.46	784709.28		
United States		(94.3%)	(3.2%)	(76.5%)	(56.9%)		
Erope & Central Asia	177871.29	257589.95	309693.92	401586.41	455666.4		
crope & Central Asia		(44.8%)	(20.2%)	(29.7%)	(13.6%)		
South America	9056.5	4140.3	8269.5	23690	24446.9		
South America		(-54.3%)	(99.7%)	(186.5%)	(3.2%)		
World	1141431.96	1774319.8	2538628.16	4537328	6088749.08		
world		(55.4%)	(43.1%)	(78.7%)	(34.2%)		
Total Evport	152B	266B	378B	582B	556B		
Total Export		(75%)	(42.1%)	(54.0%)	(-4.5%)		

Table 4 (Source: WITS)

 $\frac{^2\text{https://www.wto.org/english/res_e/statis_e/trade_evolution_e/evolution_trade_wto_e.htm\#:}{\text{As}\%200f\%202022\%2C\%20\text{world}\%20\text{trade_at}\%20\text{an}\%20\text{average}\%20\text{of}\%209\%25}$

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The last cultural product is tourism. The data below indicates the top 25 nationalities of international visitors of all purpose in Korea. The key features of this table are as follows. First, as to the composition of the countries, China used to take nearly the half of tourists in Korea. However, after the conflict caused by Korea's THAAD deployment, China government restricted group tourism to Korea, and it resulted in a negative growth rate of international visitors in 2017. Yet, China still takes around 30% of international visitors. Second, 64% of the top 25 nationalities belong to Asia, especially East Asian and South East Asian countries. Two potential causes can be suggested for this phenomenon. East Asian and South East Asian countries are relatively close to Korea, and geographical closeness is one of the main factors that people consider when they plan to travel. Also, people living in East or South East Asian countries are more likely to be familiar with Korea and willing to visit Korea as those countries have a much longer history of the Korean Wave. The last takeaway from this data is the fact that the growth rate of the number of international visitors in Korea has always been outpacing the number of international arrivals across the world for the last five years except for 2017.

country	2019	2018	2017	2016	2015
China	6,023,021	4,789,512	4,169,353	8,067,722	5,984,170
Japan	3,271,706	2,948,527	2,311,447	2,297,893	1,837,782
Taiwan	1,260,493	1,115,333	925,616	833,465	518,190
United States	1,044,038	967,992	868,881	866,186	767,613
Hong Kong	694,934	683,818	658,031	650,676	523,427
Thailand	571,610	558,912	498,511	470,107	371,769
Vietnam	553,731	457,818	324,740	251,402	162,765
Philippines	503,867	460,168	448,702	556,745	403,622
Malaysia	408,590	382,929	307,641	311,254	223,350
Russia	343,057	302,542	270,427	233,973	188,106
Indonesia	278,575	249,067	230,837	295,461	193,590
Singapore	246,142	231,897	216,170	221,548	160,153
Canada	196,153	194,259	176,256	175,745	145,547
Australia	173,218	153,133	150,378	151,979	133,266
United Kingdom	143,676	130,977	126,024	135,139	123,274
India	143,367	119,791	123,416	195,911	153,602
Germany	120,730	115,789	109,860	110,302	110,182
Mongolia	113,599	113,864	103,916	79,165	77,918
France	110,794	100,096	92,347	91,562	83,832
Uzbekistan	88,276	82,984	75,928	67,314	56,986
Myanmar	73,722	71,094	69,906	68,458	58,936
Italy	52,894	46,546	44,080	63,906	46,147
Macau	52,462	52,831	51,822	51,005	33,768
Cambodia	41,734	33,395	30,795	30,002	25,800
Netherlands	39,138	37,134	33,638	33,328	28,366
6	16,549,527	14,400,408	12,418,722	16,310,248	12 412 161
Sum	(14.9%)	(16.0%)	(-23.9%)	(31.4%)	12,412,161
International tourism,	2 402 074 000	2 220 200 004	2 240 070 724	2 1 40 442 200	
number of arrivals	2,403,074,088	2,339,399,881	2,248,870,724	2,140,443,306	2,071,785,910
of the world	(2.7%)	(4.0%)	(5.1%)	(3.3%)	

Table 5 (Source: Korea Tourism Organization, World Bank)

After all, the export of cultural goods, including cosmetics, food, and tourism, is giving solid empirical evidence for the thesis that the Korean Wave is positively affecting export.

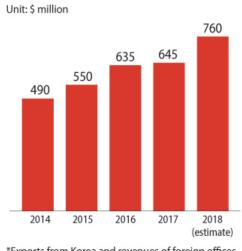
3.2 S-D Model in a Small Exporting Country Verification

3.2.1 The Result that the Change in Export Brings in to the Entire Korean Economy

The aftereffect of increased export in a small exporting country now can be empirically observed as it has proven that the Korean Wave does increase the export of cultural goods. The size of benefits that the Korean economy would gain from the Korean Wave can be observed by comparing domestic and overseas markets of cultural goods.

To closely look at the market dynamics, I focus on food market analysis. For the food market, the variety of products may be vast. However, according to Morgan Stanley analysts, Korea has specific three areas that contribute to the growth; snacks, instant noodles, and ready-made meals.³ Therefore, I specifically choose the instant noodles industry and Nongshim, a South Korean food and beverage company headquartered in Seoul and well-known as a producer of 'Shin Ramyun'.

Nongshim's overseas revenue has been showing overall increasing trend since it started to export in 1987. Currently it is exporting Shin Ramyun to 100 countries, and it sold more of Shin Ramyun internationally than it did in the home market in 2021. Diverse causes, including the firm's brilliant market strategy, increased demand for instant food due to the change of lifestyle or COVID, etc, contributed to this growth. However, it cannot be perfectly explained without the emergence of the Korean Wave. According to Nongshim, sales of its ramyun rose in part due to the appearance of its products in "Parasite", the Oscar-winning film, and "Squid Game", the Netflix drama series ranked at the top globally.⁴



*Exports from Korea and revenues of foreign offices combined

Figure 12 (Source: Korea Joong Ang Daily, Nongshim)

³ https://www.morganstanley.com/ideas/korean-food-revolution

https://koreajoongangdaily.joins.com/2021/10/05/business/industry/ramyeon-nongshim-samyangfoods/20211005184434589.html

Meanwhile, the domestic revenue growth of Nongshim is faltering in recent years. In 2017, the domestic ramyun market showed negative revenue growth with the overall sales of instant noodles of below 2 trillion won. Specifically, Nongshim's sales decreased from 1.13 trillion won to 1.12 trillion won. This was due to an absence of new big-hit products and an exponentially growing domestic home meal replacement (HMR) market. The growth of the HMR market, especially, was driven by an increasing number of single-person households. Moreover, in 2022, Nongshim recorded a deficit for the first time in 24 years. This was caused by the government's price control of key foods while the price of raw materials such as palm oil and white flour soared due to the Russia-Ukraine war. Eventually, led by Nongshim, the number one company in the instant noodles market, major ramyun producing companies increased the prices about 11% on average.

Domestic Ramyun Market Trend (KRW) 국내 라면시장 추이 단위: 원 1조 9870억 1조 8800억 8470억 2014 2015 2016 2017년 자료: 날은코리아

Figure 13 (Source: The Dong-A Ilbo, Nielsen Korea)

As for the prices of Shin Ramyun, it is being sold at around \$0.68 per package in Korea whereas it is being sold at \$3 in the US. In Korea, ramyun has been a key processed food, especially for the lower income. Thus, it is not widely acceptable to increase the price of ramyun dramatically. However, in the long run, it is plausible for domestic prices to go up, closing the gap between Korean price and international price. This would decrease domestic consumer surplus, but the firms would not lose domestic consumers as much as other firms producing non-cultural homogenous products would. This is because there are not many alternatives, considering ramyun is a Korean specialty. Also, the consumers already having a preference and caring about the flavor can be another reason.

To sum up, while companies were struggling with domestic market circumstances, the overseas market of cultural goods, ramyun, showed exponential growth, even exceeding the revenue of the domestic market. However, South Korea is a tiny country in terms of both size and population compared to the rest of the world. Hence, as a whole, companies are better off by this trend. This conclusion would stay the same even when the price in the domestic market goes up.

4. Policy Recommendations

I suggest Ministry of Culture, Sports, and Tourism the following policies that could maximize the benefit that the Korean Wave brings to the Korean economy. Furthermore, I also propose a couple of approaches that could mitigate the potential risks.

4.1 Targeting High-Income Countries

The first potential policy for efficiently utilizing the Korean Wave for the Korean economy is targeting high-income countries. As we have looked up till now both theoretically and empirically, GDP is more influential than distance in terms of trade size. Moreover, countries with high GDP per capita, mostly European countries, bring larger economic gain to Korea even though they have been relatively less exposed to the Korean Wave. In other words, enormous economic potential is expected in high-income countries with the growing popularity of Korea. A possible concrete strategy could be funding creators producing Europe-based Korean content that could draw more attention of Europeans to Korean culture. The government can also encourage the export of cultural goods to high-income countries by subsidizing.

4.2 Supporting the Development of Korean-Styled Products

Supporting the development of Korean-styled products could be another potential policy. Under the love of variety, especially for cultural goods, the more unique the product is, the more inelastic the demand becomes. This is not only because consumers have a strong specific preference toward cultural goods but also because it is hard to imitate unique cultural products that demonstrate specific colors of a country. This policy can be conducted in various ways. The government could back up content production with Korean culture such as traditional play or Korean history. For example, 'Squid Game' includes a lot of Korean traditional games such as Squid, Ddakji, Statues, Dalgona Challenge, etc, which got the eye globally. Supporting fashion brands developing clothes with the features of Korean traditional clothes, Hanbok, could also be a potential policy as Hanbok has been starting receiving international attention recently.

4.3 Risk Mitigations

Mitigating potential risks is as crucial as promoting the Korean Wave and cultural products. I put forward both macroscopic and microscopic strategies to alleviate possible risks.

4.3.1 National Risk Mitigation

Korea has been facing great and small events because of its geopolitical circumstances where it has to show a well-balanced posture between two big players, the US and China. However, Korea can lower the risk by more actively engaging in global issues by expanding its soft power driven by the Korean Wave. BTS gave a UNICEF speech as a part of the #ENDviolence program aimed to protect people, especially children, from violence. Also, BLACKPINK called for climate action during a UN speech. This influence is a robust resource of Korea that could further help it to be a major player having a distinctive position in dealing with numerous international agendas. Additionally, Korea's unique past experience of building a prosperous economy and democracy in a short period of time would also provide a solid background for being a major player in coping with complicated global agendas. This is the way that Korea can realize the full potential of the existing soft power.

4.3.2 Industry Risk Mitigation

K-pop, the core part of the Korean Wave, has a couple of aspects to be reflected on. First, the age of K-pop idol stars tends to become younger and younger as time goes by. This is problematic because many of the young dreaming to be K-pop stars drop out of formal school within K-pop trainee system. Also, this industry pushes the young idols to finish grueling schedules that may lead to child labor exploitation. For example, New Jeans, a newly debuted K-pop girl group with the youngest 14-year-old member at that time they debuted, was criticized to use child labor, especially among international fans. Next, K-pop has produced health issues for teenage girls. K-pop idols, especially female idols, are forced to stay in shape which is beyond a proper healthy body. This strict beauty standard has been also affecting the public, specifically teenage girls. Statistics show that Korean teenage girls are getting more and more skinny while boys are getting more and more fat. This, of course, generates health problems such as anorexia. Although these have been regarded as a natural industry ecosystem within Korea, the government should be cautious and prepare the guidelines for the sustainable Korean Wave as it started drawing global attention.

5. Conclusion

This paper verifies the effects of the Korean Wave on export. With the gravity model and S-D model in a small exporting country, it shows theoretically that Korea exports more cultural goods to countries with high GDPs, higher GDP per capita, and smaller distances from itself. This is also proven by empirical data, including export data of BOP6, food, perfumery & cosmetics, and tourism. The observations of this study suggest a good reason for why the Korean government should implement policies targeting high-income countries and supporting the development of Korean-styled products. Also, the risk mitigation approaches mentioned above would buttress Korea to become more secure both economically and politically. In the era of springing up OTT platforms and social media along with a strong globalized world, this paper would provide a sensible insight helpful to the Korean government.

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