Factor Analysis of Increasing Consumer Goods Imports & Countermeasures

Imja Rhee, Kyoungsook Lee, Jongki Kim, Kyungyou Kim, Jun Lee, Yongwon Cho, Sangsoo Park

1. Introduction

Despite continued slower economic growth and weak domestic demand, imports of consumer goods have continued to grow and their market share has continued to increase. Korea's GDP grew less than 3 percent (2.6%) in 2015, sparking concern that the Korean economy is trapped in structural low growth. From 2010 to 2014, Korea's exports of consumer goods grew at an average annual rate of 5.5 percent, whereas its imports increased 10.4 percent, a more than double growth. Of particular note is that, in 2015 when the domestic economy and consumption remained sluggish, the total value of imports recorded a 16.9 percent year-on-year increase, whereas consumer goods imports rose 3.4 percent during the same period. As of September 2016, total exports of consumer products fell 10.6 percent, whereas their imports grew 1.0 percent. Against this backdrop, there is a rising need to examine the multiple factors

at work in growth of Korea's imports of consumer goods.

It is a widely-known fact that growth in key export industries was the key driver behind Korea's economic development in the past. However, except for a few industries such as semiconductors, displays and shipbuilding, the manufacturing sector is producing more goods for domestic consumption than for export. This means the domestic market is still an important source of revenue for Korea's manufacturing industry. According to the findings of this study on six consumer goods industries, as of 2014, the share of exports among locally-produced goods stood at 37.3 percent, whereas that of goods for domestic consumption reached 62.7 percent. There is particular concern that if the market share of imported consumer goods continues to rise, the growth of unemployment, despite the recovery of Korea's economic growth rate, will accelerate for some of the leading labor-intensive assembly industries including automobiles, electronic appliances, apparel, and food. As such, as consumer goods imports continue increasing their presence on the domestic market, the very foundations of Korea's manufacturing industry will likely be shaken. Notwithstanding, the government's industrial policy has focused more on the facilitation of exports and the nurturing of promising future industries from a mid- and long term perspective, rather than on stimulus of the domestic market. Therefore, the time is now for Korea to closely examine the current situation of consumer goods imports onto the domestic market, and take prompt action in response to the current sharp increase in this area.

## 2. Current Domestic Consumption & Imports of Major Consumer Goods

☐ Domestic consumption and imports

Consumer goods refer to products that meet human desires and are ready for consumption, while the consumer goods industry refers to a sector encompassing a series of industrial activities ranging from production and distribution to consumption of goods for daily use. This study analyzed six key consumer product industries. Five of the six key industries were chosen due to their larger production scale: three durable goods items (autos, home appliances, mobile phones); apparel as a semi-durable goods item; and food as a non-durable goods item. The final choice, cosmetics, was added due to the fact that production and exports have been rising sharply recently.

When the selected items are classified in accordance with the supply and demand structure of the consumer goods sector, autos, mobile phones, electronic appliances, and apparel are considered mature industries, while cosmetics and food can be treated as growing industries. The former have been the major driving forces behind Korea's industrial development, but have growth rates and profit margins that are significantly slowing down. For these items, retaining price competitiveness and increasing efficiency have become important. To this end, the mature industries will undergo some changes such that production globalization will expand, market structure will be reorganized, and the number of brands will increase. Domestically, the mature industries have problems with

Figure1. Trends in Supply & Demand in Major Consumer Goods

■ Mature Industries

Autos

Mobile Phones

Home appliances

Apparel
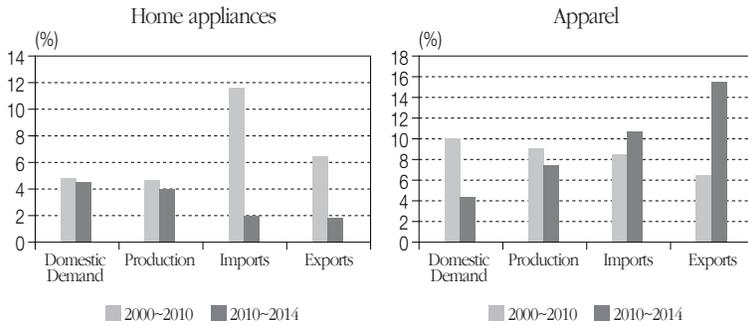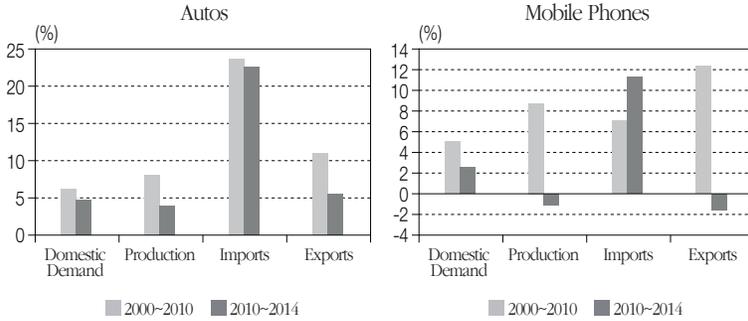
■ Growing Industries
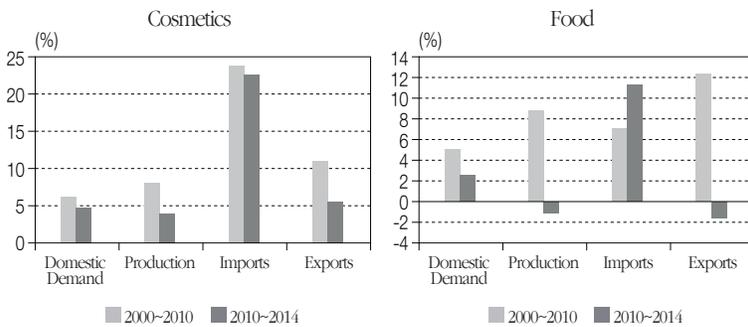
Cosmetics

Food

partial over-equipment and inefficient facilities; lower competitiveness will cause exports to shrink while increasing imports.

On the other hand, local cosmetics and food are growing industries where supply and demand have been strong, which has led the market to expand and competition to intensify. In addition, other characteristics of growing industries include higher entry barriers and production and employment increases. As for companies in their growth phase, technological or functional differentiation becomes crucial and competition over product reliability and quality begins in earnest. Advertising and marketing campaigns are increasingly fierce to increase company market share and securing distribution channels becomes important.

When the attributes of major consumer goods imports by nation were analyzed, mobile phones, autos, and cosmetics were classified as luxury import goods; food, home appliances, and apparel were classified as reimports or low- and mid-priced imports.

Mobile phones, autos and cosmetics accounted for more than 90 percent of luxury brand imports. Vehicles imported from advanced economies including Germany (57.8%), the US (11.7%), England (7.4%), and Japan (6.6%) made up 97 percent of total vehicle imports; cosmetic products shipped from advanced countries including the US (30.1%), France (24.3%), Japan (12.1%), and Italy (4.7%) accounted for 90 percent of total cosmetics imports. Imports of high-end luxury brands in autos and cosmetics from advanced countries were a major driving force behind the expansion of Korea's total imports. On the other hand, although imports of high quality mobile phones made up 98 percent of total imports, imports from China constituted 97 percent, which is because most

US brand smart phone products, including Apple, were manufactured in Chinese factories. In addition, as production of mobile phones by LG and Samsung, two Korean smartphone makers, in Vietnam has increased, the share of Vietnam-made reimport products amounted to 1.6 percent of all mobile phones purchased on the domestic market. Likewise, although the proportion of luxury brand imports was higher, differences were found in major importers of autos and cosmetics as well as mobile phones, depending on overseas production capacities of the leading companies.

Meanwhile, the share of reimports and low- and mid-priced imports accounted for half of total food, electronic appliance, and clothing imports. In particular, clothing imports from advanced nations made up only 9 percent, whereas low- and mid-price imports made up 91 percent. Clothing can be classified as a key item that is manufactured overseas and then reimported to Korea. Big-name foreign imports of electronic appliances, along with goods made by companies in developing countries including China, accounted for approximately 40 percent of total imports in this sector. The share of reimports of goods produced overseas by Korean firms constituted 50 percent of the total. Imports of low-end products manufactured by local companies including in China accounted for 10 percent of total imports. As a result, reimports and cheap imports composed 60 percent of Korea's total imports. With regard to food, as the type of import has shifted from intermediate processed food products designed to produce food products to finished products such as dairy goods, coffee, and alcoholic beverages, the share of goods from advanced nations including the US (33.6%) and Japan (2%) has been on the rise. However, Korean

Figure 2. Characteristics of Imported Major Consumer Goods (as of 2015)
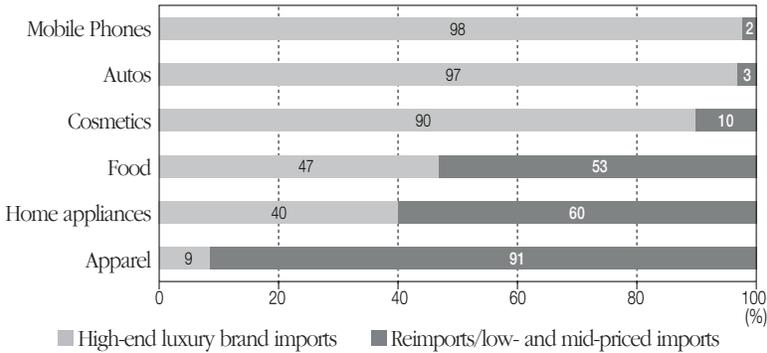
Source : www.kita.net

companies targeting the domestic market still remain more competitive than their foreign counterparts. For this reason, a notable feature of Korea's food imports is that imports of intermediate processed food products from China or the ASEAN made up a slightly larger share of the total.

According to the aforementioned supply and demand structure and characteristics of imports, the six imports items can be classified in the following way. Discussion of this will follow in the analysis below.

In accordance with developmental stages, the consumer goods sector was divided into growing industries and mature industries. The attributes of imported goods were reflected and then the two industry types were subdivided. According to categorization of the sector herein, mature industries include autos and mobile phones in which premium brand imports form the greater part of total imports, where participants are vying for premium status; home

Figure 3. Categorization of Imported Major Consumer Goods
(by industrial characteristics)
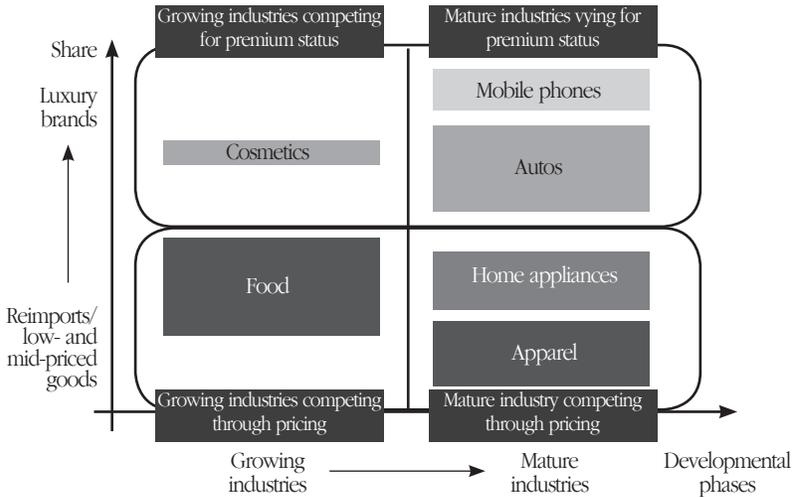
appliances and clothing are categorized as mature industries with a higher proportion of reimports/low- and mid-priced imports, competing through pricing; the cosmetics industry, which is showing strong growth in domestic consumption, has been led by high-end brand imports vying for premium status; and the food industry, where growth has been driven by low- and mid-priced imports competing through pricing.

☐ Imports forecast

Although imports of major consumer products are expected to keep growing for years to come, there was a slight difference by item. In the domestic market imports of autos and mobile phones, which are part of the growing industries vying for premium sta-

tus, are likely to shift from luxury brands to low- and mid-priced goods, expanding the base of imported products. For vehicles, as Koreans in their 20s to 30s are showing a greater preference for imports despite their relatively lower levels of income, diesels, luxury compact, and low- and mid-priced imported cars are expected to boost growth of the imported car market in Korea. Higher-income professionals, compared to Koreans in other occupational clusters, are expected to continue as traditional core buyers of luxury import cars. The domestic smartphone market is expected to have a competitive structure that remains unchanged, but imports of mobile phones from China will increase on the back of their significantly strengthened competitiveness. Although it is unlikely for Chinese-made mobile phones to substantially expand market share in the domestic market due to the higher brand recognition of Korean smartphones, their market presence is expected to be further broadened on the back of a growing number of Chinese smartphone makers such as Huawei, Xiaomi, and Oppo entering the Korean market.

Electronic appliances and apparel, which are classified as growing industries competing through pricing, are also forecast to see their imports continue to rise. As for home appliances, soaring imports of Chinese-made products as a result of the effectuation of the Korea-China FTA as well as reimports owing to the expansion of overseas production by Korean firms, are expected to contribute to an increase in imports of these items. In terms of clothing, multiple factors are predicted to greatly boost imports: polarization of consumption, growing demand for functional products, expansion of SPA business development, market differentiation and seg-

mentation, and increased e-commerce. Unlike the auto and mo-
bile phone sectors which vie for premium status, it is expected
that the home appliance and clothing sectors will segment into
strong performance goods and higher value-added goods, so as
to survive competition against low- and mid-priced products, and
competition for market share will further intensify. As part of the
other growing industry competing with pricing, imports related to
intermediate processed food products are expected to continue to
grow and raise price competitiveness of the industry. Furthermore,
imports of finished goods are also likely to continue increasing due
to the expanding aging population, diversification of and growing
demand for imported finished food products, and increases in in-
come and purchasing power. However, considering that the food
industry is dependent on domestic consumption for its source of
revenue, expansion of imports is anticipated to be limited.

As domestic demand has expanded, cosmetics competing for
premium status make up the only sector in which imports are
expected to decline: as Korean consumer preference for national
brands has heightened, Korean cosmetic products have not suf-
fered at the hands of global brands in terms of quality and tech-
nology, the degree of cosmetic goods self-support has continued to
rise since 2011. If such trends persist, domestic consumer demand
for imported cosmetics is expected to be replaced by demand for
local products.

☐ Comparison of competitiveness on the domestic market

Imported autos, mobile phones, and cosmetics, which are com-

peting to gain a premium image, were deemed far superior in quality, technology, and design over similar Korean products. European car makers received accolades for their quality and technical competitiveness; they were also evaluated to be far superior in design than their American and Japanese counterparts. Vehicles imported from the US and Japan were evaluated as comparable to each other in product competitiveness, revealing a slight difference from the reception Japanese cars have been receiving on global markets, where Japanese cars are praised for their superior technological sophistication and quality. Such a disparity can be attributed to Korean consumer perceptions towards German cars. Strong-selling premium German car brands such as Mercedes Benz and BMW have been very popular for Korean consumers, and this popularity continues the impression that German products are superior in quality.

With regard to mobile phones, as a majority of Korean consumers tend to prefer products from Korean makers over imports, the market share of Korean makers is much higher than for imported products. Buyers have only two premium American models to choose from, whereas Korean makers offer a diverse product line up and appeal to a broader customer base with top-to-bottom pricing. For these reasons, US mobile phones were evaluated as slightly better than their Korean counterparts in product competitiveness. Regarding cosmetics, local products rated as more competitive than their imported counterparts showed a significant gap in quality, technology, and design from their European counterparts. However, it was found that the competitiveness gap between Korean and Japanese or American cosmetics was not so wide.

Korean-made home appliances and apparel competing with pricing in the domestic market were losing the battle to imports from developing countries in terms of price, while the pricing gap was not so wide with imported goods manufactured by companies from advanced countries. In terms of clothing, imported goods from advanced countries held the competitive advantage in material processing technologies, brand recognition, and design, whereas imports from developing countries, including China and the ASE-AN, yielded greater price competitiveness. As for the food sector, ethnic food with strong Korean characteristics enjoyed a competitive edge in the domestic market and an almost infinitesimal number of imports. Of ethnic food, the larger share of imports was made up by intermediate processed food mostly shipped through China. These food products were designed to maximize price competitiveness in the value chain. Chinese food products were evaluated as more highly competitive in terms of price than their locally-produced counterparts. Food products featuring lesser Korean characteristics were imported in the form of finished goods, which are priced to target customers in the premium market. Another finished goods item, and for which imports have recently risen sharply, were high-end processed food products from the US, Japan and European countries such as coffee, dairy products, alcoholic beverages, processed meat products, and sauces. The foregoing food products were evaluated as more competitive in quality, technology and design.

Table 1. Competitiveness of Major Consumer Goods on the Domestic Market

Mature industries vying for premium status: autos and mobile phones

Unit : Seven-point scale (Four is given if equal to Korea)

	Autos			Mobile phones	
	US	EU	Japan	US	China
Quality/technology	5.31	5.63	5.29	4.85	3.03
Price	2.82	2.52	2.85	3.49	5.28
Design	5.10	5.38	4.94	4.77	3.11

Mature industries vying for premium status: electronic appliances & apparel

		US	EU	ASEAN	China	Japan
Electronic appliances	Quality/technology	4.89	5.02	2.87	2.80	4.97
	Price	3.33	3.00	5.10	5.28	3.06
	Design	4.61	4.83	3.02	3.03	4.77
Garments	Quality/technology	4.77	5.00	2.99	2.65	4.57
	Price	3.33	2.91	5.18	5.31	3.22
	Design	4.58	4.92	3.04	2.90	4.47

Growing industry vying for premium status: cosmetics

	US	EU	ASEAN	Japan
Quality/technology	4.89	5.22	2.78	4.81
Price	3.00	2.75	5.14	3.04
Design	4.59	4.83	3.01	4.63

Growing industry competing through price: food

	US	EU	China	Japan
Quality/technology	5.02	5.14	2.63	4.98
Price	3.54	3.14	5.24	3.03
Design	4.62	4.77	2.89	4.75

Source : Survey results released by Korea Institute for Industrial Economics and Trade (KIET)

3. Analysis of Determining Factors in Imports of Major Consumer Goods

To analyze the influence major factors have on determining imports of major consumer goods, import demand functions were estimated. The model for estimation of long-term import functions in this study was based on one suggested by Goldstein and Kahn (1978, 1985), while Arellano and Bond (1991)'s "first difference GMM (Generalized Method of Moments)" as well as Arellano and Bover (1995), and Blundell and Bond (1998)'s "system GMM" were employed as an estimator. The outcomes of estimation were also compared by using the pooled least square method and the panel fixed effect model. To estimate long-term import functions of the six consumer goods industries, it was assumed that the volume of imported goods in Korea would be influenced by factors such as import prices, income levels, exchange rates, and international oil prices and a dynamic panel data model as seen in Equation (1) was used.

$$
\ln MQ_{ict} = \beta_0 + \beta_1 \ln MQ_{ict-1} + \beta_2 \ln\left(\frac{PM_{ict}}{CPI}\right) + \beta_3 \ln GDP_t + \beta_4 \ln REX_{ct} + \quad (1)
$$

$$
\beta_5 \ln OIL_t + \beta_6 FTA_{us} + \beta_7 FTA_{euro} + \beta_8 FTA_{asean} + \beta_9 Y2009 +
$$

$$
\sum_{q=2}^{4} \gamma_q DS_q + v_{ic} + \epsilon_{ict}
$$

An explanation of the components of Equation (1) follows:

i : The six consumer goods industries: food and beverages, apparel, cosmetics, electronic appliances, mobile phones, and autos.

c : Importing countries and regions: the US, China, Japan, the EU, ASEAN, Central and South America, and the entire world

t : Time (quarter)

MQ : Volume of imports

GDP : Gross Domestic Product

PM : Unit cost of import

CPI : Consumer price index by item

REX : Real effective exchange rate of the Korean won against currencies of its trading partners

FTA : Dummy for Korea's FTAs with the US, the EU, and ASEAN

$Y2009$: Dummy for the 2009 global financial crisis

DS : Seasonally-adjusted dummy

v_{ic} : Error terms representing industrial, national, and regional differences

ϵ_{it} : Pure error term (idiosyncratic error term)

Estimation of import demand functions in the six major consumer goods industries resulted in the following: according to the results of the panel model (Model 2) of the Hausman specification test, the null hypothesis was rejected at the 1 percent significance level and the fixed effect model proved to be more appropriate than the random effect model. The results of the Sargan test for the over-identification of the dynamic panel model (Model 3) and the system GMM (Model 4) showed that over-identification was found to be justifiable in the four industries besides food and cosmetics, which thus indicates that the instrumental variables used in this study were valid. Finally, the results of the autocorrelation test for error terms of AB-AR (1) and AB-AR (2) of the dynamic panel model and system GMM showed a difference in test statistics by indus-

Table 2. Example of Estimated Import Demand Function of Major Consumer Goods Sectors: Dynamic Panel Model

Variables	Mature Industries Vying for Premium Status		Mature Industries Competing through Pricing		Growing Industry Vying for Premium Status	Growing Industry Competing through Pricing
	Autos	Mobile phones	Electronic appliances	Apparel	Cosmetics	Food
Amount of imported electricity	0.174*** (0.061)	0.319*** (0.062)	0.642*** (0.051)	0.832*** (0.038)	0.393*** (0.046)	0.275*** (0.030)
Import unit price	-0.361*** (0.076)	-0.355*** (0.120)	-0.175** (0.082)	-0.380*** (0.122)	-0.911*** (0.111)	-0.952*** (0.042)
Real national income per capita	4.407*** (1.048)	1.837 (2.379)	0.700 (0.803)	1.073* (0.585)	2.199* (1.177)	0.784** (0.351)
Real effective exchange rate	0.370 (0.254)	-1.580** (0.624)	-0.137 (0.212)	0.146 (0.150)	-0.475 (0.313)	0.308*** (0.094)
International oil prices	0.048 (0.132)	0.243 (0.323)	-0.036 (0.108)	0.047 (0.079)	-0.012 (0.159)	0.102** (0.048)
Dummy for Korea's FTA with ASEAN	-0.036 (0.158)	-0.826** (0.389)	-0.157 (0.132)	-0.054 (0.094)	-0.191 (0.189)	0.084 (0.057)
Dummy for Korea's FTA with the US	0.260** (0.129)	-0.531* (0.321)	0.145 (0.107)	-0.065 (0.077)	0.163 (0.154)	-0.022 (0.047)
Dummy for Korea's FTA with the EU	-0.075 (0.139)	0.182 (0.344)	-0.085 (0.114)	-0.028 (0.083)	-0.223 (0.166)	0.007 (0.050)
Dummy for the financial crisis in 2009	-0.072 (0.128)	-0.163 (0.310)	-0.037 (0.105)	0.056 (0.076)	-0.277* (0.154)	-0.026 (0.046)
Constant term	-18.165*** (6.565)	3.237 (15.298)	2.223 (5.188)	-3.936 (3.729)	-1.941 (7.560)	7.353*** (2.279)
Seasonal dummy	included	included	included	included	included	included
Hausman Test [3]						
Sargan Test [4]	$\chi^2(232)$ 231.65 (p=0.494)	$\chi^2(232)$ 223.10 (p=0.650)	$\chi^2(232)$ 215.49 (p=0.774)	$\chi^2(1)$~1.20 (p=0.27)	$\chi^2(1)$~1.20 (p=0.27)	$\chi^2(232)$ 412.44 (p=0.000)
AB-AR (1) [5]	$N(0,1)$ -9.43 (p=0.000)	$N(0,1)$ -9.25 (p=0.000)	$N(0,1)$ -7.45 (p=0.000)	$N(0,1)$~1.20 (p=0.27)	$N(0,1)$~1.20 (p=0.27)	$N(0,1)$ -4.32 (p=0.000)
AB-AR (2) [6]	$N(0,1)$ 1.53 (p=0.125)	$N(0,1)$ 2.30 (p=0.021)	$N(0,1)$ -0.40 (p=0.688)			$N(0,1)$ -4.30 (p=0.000)
Adjusted coefficient of determination						
Number of observations	248	252	252	252	250	252

try, but the second-order autocorrelation did not occur. This also means the instrumental variables used in this study were valid.

In comparison of estimated coefficient value of the explanation variables, in most industries, variables including 'volume of electricity imports (+),' 'import unit price (−),' and 'real national income per capita (+)' were found to be statistically significant and have expected signs. However, it was found that the estimated coefficient of 'real effective exchange rates' and 'international oil prices' was statistically insignificant in a majority of models. The effects of the conclusion of FTAs with trading partners were found to be statistically significant in just a few industries.

Of particular note is that the absolute value of price elasticity of import demand was larger in consumer goods belonging to the growing industries – cosmetics and food – than goods belonging to the mature industries – autos, mobile phones, home appliances, and clothing. This means Korean consumers felt more sensitive to import prices of goods in these growing industries. As for import demand of income elasticity, goods vying for premium status were more sensitive to income levels than goods competing through prices, a result corresponding to earlier expectations.

4. Survey on Competitiveness and Imports of Consumer Goods

A consumer survey was conducted with a structured questionnaire designed to evaluate influencing factors in consumption of imported consumer goods, to compare competitiveness and current conditions of consumption on the six major consumer goods

Table 3. Evaluation of Factors Influencing Consumption of Imported Major Consumer Goods

Unit : Seven-point Scale

Factors		F-Test	Mature Industries				Growing Industries	
			Vying for premium status		Competing through pricing		Vying for premium status	Competing through pricing
			Autos	Mobile Phones	Electronic Appliances	Apparel	Cosmetics	Food
Consumption Patterns	Increase in single person households	5.22***	4.79	4.82	4.90	4.87	4.85	5.09
	Younger consumers	2.13	4.86	4.96	4.88	4.93	4.88	5.05
	Development of low birthrate/aging society	0.58	4.58	4.51	4.61	4.57	4.58	4.63
	Expansion of cultural consumption	2.51*	5.07	5.02	5.12	5.19	5.19	5.20
	Stronger tendency toward differentiated consumption	1.36	5.33	5.29	5.32	5.44	5.40	5.34
	Increased consumer desire for premium goods	4.06**	5.45	5.19	5.39	5.37	5.49	5.37
	More emphasis on trends and fads	2.34*	5.33	5.33	5.38	5.49	5.48	5.35
	Stronger conspicuous consumption propensity	5.80***	5.69	5.35	5.50	5.62	5.60	5.42
Prices/ Income	Lower import price	3.33**	5.72	5.51	5.76	5.74	5.75	5.76
	Lower income level	5.35***	5.58	5.26	5.50	5.47	5.58	5.42
	Higher growth rate	4.00**	5.41	5.09	5.22	5.24	5.31	5.23
	Lower interest rate	4.43***	5.08	4.76	4.93	4.89	5.02	4.92
	Lower exchange rate	2.58*	5.30	5.08	5.30	5.25	5.28	5.28

(Continue)

Factors		F-Test	Mature Industries				Growing Industries	
			Vying for premium status		Competing through pricing		Vying for premium status	Competing through pricing
			Autos	Mobile Phones	Electronic Appliances	Apparel	Cosmetics	Food
Quality/ Technology	Higher brand recognition/preference	4.57***	5.50	5.37	5.43	5.58	5.65	5.49
	More excellent design	9.08***	5.56	5.45	5.51	5.63	5.41	5.24
	Higher use quality	1.15	5.64	5.50	5.65	5.59	5.64	5.60
	More product diversity	1.61	5.48	5.39	5.53	5.48	5.53	5.57
	Easier access to A/S	4.15***	5.61	5.55	5.67	5.48	5.51	5.39
	More satisfactory additional services	1.84	5.22	5.31	5.33	5.26	5.39	5.25
	Domestic production difficult or impossible	3.66**	5.25	5.13	5.35	5.26	5.41	5.34
Marketing/ Distribution	Activated degrees of publicity/marketing	2.40*	5.36	5.23	5.34	5.33	5.41	5.43
	More active in online/mobile purchase	11.5***	5.14	5.30	5.50	5.54	5.58	5.57
	Increasing popularity of SNS	4.33***	5.23	5.25	5.39	5.39	5.49	5.43
Policies	More market opening to foreign goods	2.25*	5.36	5.21	5.34	5.29	5.42	5.36
	Stronger market expansion policies	2.38*	4.94	4.82	4.84	4.78	4.99	4.78
	Growing sophistication of industrial structures	1.91	4.61	4.54	4.47	4.37	4.56	4.47
	More stringent environmental regulations	2.68*	4.72	4.51	4.58	4.48	4.61	4.53

Source : Survey results released by KIET

Note : 1) In the seven-point scale, 1 indicates the most significant decrease and 7 the most significant increase

2) Significance probability of ANOVA analysis results: *<0.05, **<0.01, ***<0.001

that were selected for analysis in this study. Diverse qualitative variables, which were excluded in quantitative analysis, including consumption patterns, quality/technology, marketing/distribution, and relevant policies, were included into sub-entries of the questionnaire to identify factors influencing consumption of imported consumer goods. The survey asked a total of 1000 male and female consumers nationwide aged 19 and over who were using or had ever purchased imported goods.

The results of average analysis (ANOVA test) on factors influencing consumption of imported consumer goods showed statistically significant differences by goods item. In terms of sub-entry items, the results showed statistically significant differences in all evaluation entries, except for sub-entries such as consumer age, low fertility/aging, use quality, diverse product line-up, additional services, and sophistication of industrial structure.

On the consumer patterns front, increasingly influential factors in the consumption of imported consumer goods include the increase of single-person households, the expansion of cultural consumption, increased consumer desire for high-quality goods, emphasis on trends and fads, and conspicuous consumption propensity. These variables had statistically significant differences in each sub-entry. In particular, in all consumer goods, conspicuous consumption propensity and increased consumer desire for high quality goods had the greatest impact on the consumption of imported consumer goods. As a result, both price-oriented consumption propensity and showing-off consumption were simultaneously detected in recent consumption patterns. Such patterns are in line with social media-led trends including activation of publicity cam-

paigns/marketing, media effects such as dramas, and popularity of social networking services (SNS).

The price and income variables showed statistically significant differences in all sub-entry items by individual good. In particular, it was found that higher income levels and lower import prices had a significant impact on the consumption of imported consumer goods. The price variable was found to be an influential factor across all import items, whereas the income level variable had relatively greater influence on the consumption of autos, home appliances, and cosmetics. As for the quality/technology variable, brands and design were evaluated as key factors in consumption decisions. Statically-significant differences were also found in all industries. Use quality in all product items had the greatest impact on the consumption of imported goods, but there were no statistical differences found in each item. The after service (A/S) variable had relatively greater impact on the consumption of imported durable goods, including autos, mobile phones, and home appliances. For cosmetics, additional premium services, including beauty consulting, personalized services, and massage, were found to be an important factor in consumers' buying decisions. Government policies regarding imported consumer goods also showed statistically significant differences across all imported items, but their influence was negligible.

5. Counteractive Development Strategy against Expanding Imports of Consumer Goods

Of the counteractive measures available to firms, which are fac-

ing slow growth of domestic consumption, differentiation of goods quality and related services are of more importance than other factors in overcoming competition with imported consumer goods and revitalize domestic demand.

First, the auto industry needs to establish a flexible manufacturing system and develop customizable vehicle models that are customer-centered and improve designs to better meet customer needs to differentiate its product quality from that of imported vehicles on the domestic market. Improvement of quality competitiveness should be a basic condition to win the fight against imported goods over market share. Mobile phone makers would do well to differentiate their functions and aim for high-end quality and competitiveness in design. In addition, forward-looking investment needs to be made in technological innovation so as to dominate the future market now and improve technological competitiveness. Promising areas for investment include software, post-smart devices such as those that are wearable, foldable, and flexible, and improvement of core components. In the home appliance market, market differentiation strategies should be implemented through development of Korean customer-centered electronic appliances, as was done with the kimchi refrigerator, customization of home appliances such as with exterior color or functions that can meet varying customer needs, and development of electronic goods suitable for an aging society such as smart beds or electronic health care appliances. Likewise, for the apparel industry, areas in which investment is needed include product differentiation through improvement of quality and design, development of proprietary brands instead of the existing OEM strategies, and

development of high performance materials and high-tech apparel through IT convergence.

The growing cosmetics industry needs to upgrade its infrastructure including having its domestic standards meet their international counterparts so as to improve quality and reliability. International certification is particularly required in the high-end market. More investment in the development of container and package designs is also needed. Regarding the food industry, value improvement is needed and can be obtained by distinguishing domestically-manufactured product brands and those manufactured overseas. In addition, revitalizing domestic demand will be possible through the development of diverse new products that will meet consumer preferences. Strong cooperation with domestic firms dealing in locally-produced raw materials is also needed to give domestic food a premium status.

Second, the selected industries will be empowered to expand their footprint in the domestic market by improving and strengthening product-related services. As for the auto industry, after service and other relevant services should be strengthened; for the mobile phone industry, mobile payment, music streaming, and cloud services, etc. can be strengthened to augment competitiveness, through which the industry is expected to gain the upper hand in competing with imported goods on the domestic market. For the home appliances industry, increasing ease-of-use, such as offering smart user manuals, will help to achieve market differentiation. In the cosmetics sector, differentiated marketing campaigns, including incorporating eco-friendly functional features into oriental herb cosmetics, would make it possible for the industry to

Table 4. Countermeasures against the Increase in Imported Major Consumer Goods: Corporations

		Countermeasures
Mature industries competing for premium status	Autos	• Distinguish domestic cars from import cars by improving relevant services including A/S
	Mobile phones	• Quality improvement including high quality, differentiated functions and excellent designs • Related services need to be enhanced including mobile payment, music streaming, and cloud services • Proactive investment in technological innovation: enhancement of competitiveness in software, preemptive investment into next generation smart device development, and improvement of core component competitiveness
Mature industries competing through pricing	Home appliances	• Development of home appliances oriented to Korean customers (such as with the kimchi refrigerator) • Development of customized home appliances • Development of electronic appliances in response to the aging society (smart beds and health care devices) • Development of smart manuals (market differentiation)
	Apparel	• Product differentiation by improving quality and design as well as developing own brands • Development of high performance materials and material differentiation • Development of high-tech apparel through IT convergence
Growing industries competing for premium status	Cosmetics	• Quality improvement, including improving domestic standards to meet their international counterparts • Improvement of design • Differentiated marketing: incorporating eco-friendly functional features into oriental herb cosmetics
Growing industries competing through pricing	Food	• Brand differentiation between local products and those manufactured overseas • Development of diverse new products that will meet consumer preferences • Building of close cooperation networks with domestic raw material suppliers

expand its market share.

The Korean government needs to take approaches that vary with the characteristics of each industry in order to effectively respond to the sharp increase in the import of major consumer goods and boost domestic demand. First, the expansion of technology development and R&D investment is required so as to reinforce quality competitiveness. For the auto industry, it is necessary to provide support for investment in technological developments, including improvement of fuel efficiency and development of low emission vehicles. With regard to the mobile phone industry, competitiveness for the future should be secured by taking the lead in developing 5G mobile communications technology and international standards. As for the apparel industry, it is necessary to increase support for R&D efforts including development of ICT-based convergence technology so as to create a future growth engine for the industry. To this end, it is essential to establish a cooperative network among IT firms, related services industries, and clothing firms.

Second, a variety of measures can be worked out including institutional improvements pertinent to the distribution structure, establishment of fair trade structures, and promotion of online commerce including mobile transactions. As for mobile phones, it is necessary to stabilize distribution structures in order to boost domestic consumption in response to increasing imports. With regard to clothing, encouraging and establishing fair trade relations between front-to-back industries including textile materials suppliers and larger distributors, will go a long way.

With respect to related laws and regulations, it is necessary to

Table 5. Countermeasures against the Increase in Imported Major Consumer Goods: Government

		Countermeasures
Mature industries competing for premium status	Autos	• Expansion of investment into technological developments including improvement of fuel efficiency and development of low emission vehicles
	Mobile phones	• Boosting domestic demand by stabilizing distribution structures • Nurturing small and mid-sized venture start-ups in promising new industries • Securing competitiveness in the future mobile phone segment by taking the lead in developing 5G mobile communications technology and international standards
Mature industries competing through pricing	Home appliances	• Policy to boost domestic consumption • Providing support for the development of IoT-based smart home appliances • Shifting from ex-ante regulations to ex-post regulations • Reinforcing monitoring of imports
	Apparel	• Encouraging and establishing fair trade relations between front-to-back industries • Increasing support for development of ICT-based convergence technology • Support for encouraging reverse overseas direct purchases
Growing industries competing for premium status	Cosmetics	• Adjustment of institutions governing the domestic cosmetic industry to international standards
Growing industries competing through pricing	Food	• Creating a competitive environment by deregulating the domestic market • Removing factors of reverse discrimination against national cosmetics products • Support with sophistication of the food industry ecosystem

adjust institutions governing the domestic cosmetics industry to international standards to promote consumer safety and build a sound distribution system. As for food, deregulation of the domestic market is needed so as to create an environment for fair competition. For alcoholic beverages in particular, institutional factors

need to be removed if they impose reverse discrimination against local products.

Regarding the improvement of industry-related ecosystems, the home appliances industry needs to support development of smart-electronic appliances and create a related ecosystem; the food industry urgently needs to improve its ecosystem structure; the mobile phone industry needs to invigorate its ecosystem by developing promising new business areas and supporting small and mid-sized start-ups.