



## Current Status and Future Prospect of the Kimchi Industry

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### Abstract

**Purpose:** This study analyzed the general status and conditions of the kimchi industry in Korea. The purpose of this study is to contribute to the information of a desirable kimchi market by analyzing the distribution, price, market, and consumers of kimchi based on the current status and status of the kimchi industry in Korea. **Research design, data and methodology:** This study basically conducted research design and analysis based on theoretical consideration and kimchi market data. **Results:** The conclusion of the study is that in order to globalize kimchi, it is expected that a strategy to target overseas markets with relatively low competition through a low-salt diet and premium strategy along with the image of Western health is expected. **Conclusions:** In Korea, small and medium-sized companies can target the B2B (Business-to-Business) market first and then target department stores or convenience stores at a stable time in the future to expand sales channels and profitability through premium or low-cost policies. Another strategy is to target overseas markets as soon as the company stabilizes through B2B. Therefore, in the kimchi industry, it is necessary to establish a sales/marketing strategy according to what position and position of one's own company in the kimchi industry.

**Keywords :** Kimchi, Industry, Market, Taste, Package company

**JEL Classification Codes :** D30, E20, H00, M11

## 1. Introduction

### 1.1. Food and Related Materials Suitable for Small

## and Medium-sized Enterprise (SME)

### 1.1.1. Definition and Scope

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Recently, people are interested in foods and related materials in industries suitable for SMEs. The Shared Growth Committee for SMEs is implementing the SMEs suitable business category and item system to protect the business areas of SMEs by inducing rational division of roles between SMEs and large enterprises. Out of a total of 73 industries, food is 21 items, and kimchi, rice cake, and paste are defined in the food codes and standards for traditional foods. Kimchi is a Korean traditional salted food made by naturally fermenting live-breathing ingredients with whole cabbage and radish as the main ingredients and added red pepper powder, green onion, garlic, ginger, salted fish, and various spices (Cho, 2008). Rice cake refers to dough or cooked with rice flour, glutinous rice flour, potato flour, or starch or other grain flour as the main ingredients, and salt, sugar, grains, beans, vegetables, fruits, or alcoholic beverages are added thereto.

## 1.2. Government Support Policy

Regarding the Korean government support policy, the Shared Growth Committee received applications from SMEs, etc. approved by the government through related announcements. After reviewing the submitted documents and conducting a survey, review by the coordination committee and working-level committee, and through deliberation and resolution by the Eastern Growth Committee, the business type suitable for SMEs is selected and announced. The purpose is to provide safe food through systems such as traditional food quality certification system, food master system, organic processed food certification system, and Hazard Analysis and Critical Control Points (HACCP).

## 1.3. SMEs' Market Response

SMEs' market response strategies are diverse. SMEs are pursuing a strategy through technological innovation that actively reflects the market demand of traditional foods according to the establishment of flexible commercialization strategies and well-being trends. Industry-related analysis encompasses the entire national economy and organically combines the whole and the part, and has been applied to various fields for the past 40 years (Park et al., 2016).

## 2. Overview of the Kimchi Industry

### 2.1. Definition and Necessity of Kimchi

In the food code, there is no separate definition of "cabbage kimchi". However, as a sub-item of 'pickles or

stewed foods', there is 'kimchi type', and cabbage kimchi is included in kimchi type. Fermented vegetables, which are fermented and aged for a certain period of time by mixing seasonings, are representative Korean traditional foods that have a unique taste, and are side dishes that occupy the largest portion of our diet (Park, 2020). According to the food standard, kimchi is processed by fermenting or as it is through pickling and seasoning mixing processes using vegetables such as cabbage as the main raw material. It refers to kimchi and kimchi used to make kimchi. Among them, kimchi containing cabbage kimchi is mainly made of vegetables such as cabbage. It refers to one that has been fermented or processed as it is through a process of pickling or mixing seasonings as a raw material.

### 2.2. Kimchi Range and Classification

Kimchi is a Korean traditional food, and there are various systems related to kimchi. Since cabbage kimchi is a type of kimchi, there are certifications and systems related to cabbage kimchi through a system related to kimchi. Kimchi has been recognized as an international standard by the International Food Standards Committee (CODEX) in 2001, and has since established itself as one of the top five health foods in the world (Park et al., 2016). The traditional food quality certification system is a system in which the government guarantees the quality of excellent traditional foods that are manufactured, processed, and cooked with domestic agricultural and fishery products as their main raw materials, and give the taste, aroma, and color unique to Korea. The designation of traditional food items is decided by the Minister of Agriculture, Food and Rural Affairs of Korea. In order to support and foster the traditional food industry, the Minister directly designates the items deemed necessary for the development and succession of traditional foods that produce a unique taste, aroma, and color that are manufactured and processed using domestic agricultural products as traditional foods. Or, with the recommendation of a special mayor, mayor, or provincial governor, the minister designates and announces it.

There are 79 certified items such as traditional Korean sweets, fermented soybeans, and extra fermented paste soup, and kimchi is included in the certified items under the standard number T020. In September 2016, in order to revitalize traditional foods and promote consumption of domestic agricultural products through this system, new standards were enacted, standards of existing products were revised, and kimchi was partially revised.

#### 2.2.1. Food Master System

The food master system was established with the intent to designate and nurture masters in the fields of food

manufacturing, processing, and cooking (traditional food masters and general food masters) for the succession and development of excellent foods. Food names are selected according to strict screening criteria. This system refers to 'those who have devoted themselves to food in one field for more than 20 years' or 'those who can preserve and realize traditional methods'. It must be 'a person who has completed five or more years of training' on the skills they possess from a master and has been in the business for ten or more years. In the organic processed food certification system, an accredited certification body examines the raw materials used and the manufacturing process of the processed food. This is a system that allows only products that ensure that the management system meets the standards of the law can use the certified logo and organic name. This has been in force since 2008.

### 2.2.2. HACCP

HACCP is used in each stage of food from raw materials through manufacturing, processing, preservation, distribution, and cooking stages until the final consumer consumes. Identify the hazards that may occur in the future. This is a scientific hygiene management system to secure food safety through autonomous, systematic and efficient management by determining important control points for intensive management.

## 3. Analysis of the External Environment of the Kimchi Industry

### 3.1. Analysis of the Industrial Environment of Kimchi

The Business to Consumer (B2C) share of commodity kimchi is 20%. Kimchi sold as a commodity accounts for 80% of the Business to Business (B2B) portion that goes to restaurants and catering companies. The proportion of B2C in offline retail channels, side dish stores, and online appears to be around 20%. Amid the change in food culture, kimchi was mainly purchased at supermarkets (62.8%) and internet shopping malls (20%). In the changing food culture, kimchi is mainly purchased at supermarkets (62.8%) and internet shopping malls (20%), the average monthly cost of people buying kimchi was the highest at less than 50,000 Korean won (77%) (Jang & Kim, 2019).

The total kimchi market, including cabbage kimchi, is estimated to be about 3,960 billion won in 2016. Through B2C and B2B market, the kimchi market is estimated to account for about 30.3% of the total kimchi market. As of 2016, it is estimated to be about 1.2 trillion won. As of 2016, the offline retail channel of cabbage kimchi was South

Korean Won (KRW) 157.3 billion, in 2012. It increased by 29.9% compared to KRW 121.1 billion a year. Along with the spread of awareness that Kimchi is convenient and improvement of awareness of processed foods, instability in the supply and demand of cabbage in 2016 was met. It is believed that this led to an increase in the market size in 2016 compared to 2015. In particular, the number of households with 1-2 people who prefer small packaged kimchi is on the rise. As distribution to convenience stores has expanded, the market size of small-capacity products under 200g has grown the most recently.

Currently, the total consumption of cabbage kimchi is showing a slowdown. However, in the product kimchi market, changes such as the appearance of cabbage kimchi that implements the traditional manufacturing method, changes in packaging containers for small cabbage kimchi, collaboration with hotel kimchi and distributors, and acquisition of Halal and Kosher certifications to diversify exports are trending. For reference, cabbage per person per day for the past 5 years Kimchi intake decreased by 3.1% from 68.6 to 66.5g, and men (3.3% decrease) showed a greater decrease than women (2.7% decrease). In terms of gender, the decrease in kimchi intake over the last 10 years was statistically significant (25.0g for men and 29.9g for women), and the average intake adjusted for sex and age also decreased significantly (Park & Hae, 2017).

As a result of investigating what is the biggest reason for purchasing cabbage kimchi, the responses that 'because the making process is cumbersome' (24.2%) and 'because they want to buy and eat a little bit by bit (21.0%)' were found to be high. The response of buying and eating because the process is cumbersome was relatively high in three-person households (28.5%), while the response that they wanted to buy and eat little by little because the amount of food was small was particularly high in single-person households (35.2%). In summary, it was found that the frequency of procurement of most food products such as fruits, vegetables, and fish was lower in single-person households, elderly households, and elderly households living alone (Jeon & Ahn, 2016). As for the type of cabbage kimchi products that are mainly purchased, the packaged products of abandoned kimchi accounted for the most at 59.6%. Subsequently, it was investigated as a packaged product of cut cabbage kimchi (21.0%). It is characterized by a relatively low age group, and a high proportion of respondents who are unmarried (39.5%) and who are not housewives (23.9%) who purchase Sun cabbage kimchi packaging products.

As a result of investigating whether there is any change in the recent purchase of cabbage kimchi, 51.2% of respondents said that there was no significant change. However, the proportion of kimchi purchases increased even by full-time housewives and older people. Compared to the past, the response that they buy more cabbage kimchi was

higher in their 40s (28.7%), married (27.8%), full-time housewives (31.1%), and households of four (30.3%). This shows that even full-time housewives of high age are showing interest in product kimchi in recent years, and consumption behavior is changing. In addition, it was found to be widely used in nuclear families consisting of couples and children (Kim et al., 2012).

### 3.2. Analysis of the Market Environment of Kimchi

The total kimchi market, including cabbage kimchi, is estimated to be about 3,960 billion won in 2016. B2C and B2B commodity kimchi market accounts for about 30.3% of the total kimchi market, and as of 2016, it is about 1.2 trillion won. The marinated kimchi (home-made) market occupied 92% of the B2C market as of 2016. However, when the total market is estimated by inverting this, the market size of marinated kimchi is estimated to be about 2,760 billion won. The market share of product kimchi is B2C: B2B = 20: 80, and marinated kimchi: product kimchi consumed in B2C is considered to be 92: 8. The market size of kimchi products viewed by the industry is about 1.2 trillion won, and based on this, the market for marinated kimchi is 2.76 trillion won. Therefore, the product kimchi (1.2 trillion won) and the market size of marinated kimchi (2,76 trillion won) are combined. 3,960 billion won is the size of the kimchi market.

## 4. Technical Analysis

### 4.1. Technology Development Issues

As premium kimchi is gaining popularity, kimchi manufacturers are looking for ways to raise the taste and quality to the next level. As part of this, cabbage kimchi, which has recently implemented a traditional manufacturing method, has been released and sold on the market. As of 2010, commercially-available kimchi, including domestically produced kimchi and imported kimchi, accounted for about 38% of the total consumption (Choi et al., 2014). CJ CheilJedang launched 'Bibigo Royal Cabbage Kimchi', a kimchi that is aged in broth. In order to taste properly aged royal kimchi, it is put in a special fermentation container and aged at a low temperature of 5 degrees or less, similar to the temperature of the land in winter. A 'nurumpan' was added to the lid of the container, imitating the traditional method of preventing rancidity of kimchi by air by placing a push stone on the kimchi so that the ingredients are immersed in the broth.

Effective microorganisms participating in kimchi fermentation become more active as the temperature decreases, preventing spoilage and abnormal fermentation (Cho, 2008). Pulmuone launched "Seoul Banga Kimchi," an

implementation of the Seoul Yangbanga Kimchi manufacturing method. Traditional Central Region of South Korea-style Kimchi Recipe Pulmuone, a recreated kimchi, flavored with only anchovy sauce developed by Pulmuone. In this way, the consumption of salted fish was reduced, and the sodium content was lowered by about 10% compared to the company's existing products by pickling cabbage with low-concentration brine. In addition, by applying the "ice-temperature aging method," which helps the activation of lactic acid bacteria by aging it at -2 degrees Celsius for more than 120 hours, it maintains the crispy and cool taste of kimchi for a long time. The existing small-sized cabbage kimchi was mainly pouch-type products, but recently, small-sized cabbage kimchi products that differentiated packaging containers by emphasizing convenience have been released.

CJ CheilJedang launched a small volume (300g) kimchi in a container, and it is a product for one or two households, and it uses a jar-shaped container different from the existing small pouch-type products. In the case of pouch-type products, there are inconveniences such as having to hold the pouch when taking out kimchi with chopsticks, and tipping it over or putting it on the hand. However, this product is contained in a jar-shaped container, so people can eat it neatly. In addition, problems that appear in fermented foods are minimized by sealing with a lead film that combines a membrane filter that controls fermentation gas and a one-way valve that prevents the inflow of external oxygen. In addition, it features a patented container. Dongwon F&B launched 'Yangban Can Kimchi,' which can be conveniently carried in cans. Unlike products packaged in pouches or plastic containers, kimchi is sealed in cans so that kimchi soup or smell does not leak, so it can be easily carried for various outdoor activities such as travel, fishing, and camping, and can be stored at room temperature. It is produced in a pasteurized method that has obtained Food Safety Management Certification (HACCP) from the Ministry of Food and Drug Safety.

### 4.2. Major Company Trends

The main products of cabbage kimchi were divided into pogi kimchi, mak kimchi (flavored kimchi), kimchi wraps with pork, white kimchi, ripened kimchi, and fresh kimchi, which correspond to cabbage kimchi according to the classification of traditional food standards of the National Agricultural Products Quality Management Service. Korean kimchi is mainly focused on the production of cabbage kimchi. The production amount is about 330,000 tons, accounting for 76.4% of the total production, and the production amount is about 700 billion won, accounting for 70% of the total (Kim et al., 2016).

In addition, Cheongwon Organic Co., Ltd., Dam Chae-Won Co., Daesang Co., Ltd., Domisol Foods, Dongwon

F&B Jincheon Plant, Cham Foods Co., Migang Foods Co., Ltd., and Lively Evening Farming Association sell kimchi.

**Table 1:** Main Products of Cabbage Kimchi

Classification of traditional food standards	Product name (Manufacturer/seller)
Pogi Kimchi	Jonggajip pogi Kimchi (Daesang FNF) (CJ CheilJedang, Gyeonggi National Agricultural Cooperative Federation/CJ CheilJedang) Our Home Crunchy Kimchi Pogi Kimchi (Our Home)
Mak Kimchi (Flavor Kimchi)	Jonggajip Flavor Kimchi (Daesang FNF) Pickoque Chosun Hotel Flavor Kimchi (Shinsegae Chosun Hotel Kimchi/E-Mart) Ha Seonjeong Flavor Kimchi (CJ CheilJedang, Gyeonggi National Agricultural Cooperative Federation/CJ CheilJedang)
Kimchi Wraps with Pork	Hansung Mini Roll Kimchi Wraps with Pork (Hansung Foods) Heart-hearted Giving Kimchi Wraps with Pork (Cheongwon Organic) Kimchi Wraps with Pork (Kimchi Factory)
White Kimchi	Bibigo White Kimchi (CJ CheilJedang, Gyeonggi National Agricultural Cooperative Federation/CJ CheilJedang) Jonggajip White Kimchi (Destination FNF) Hansung White Kimchi (Hansung Foods)
Ripened Kimchi	Jonggajip Ripened Kimchi (Daesang) Bibigo Ripened Kimchi (Gyeonggi National Agricultural Cooperative Federation/CJ CheilJedang) Peacock Haenam Ripened Kimchi (Hwawon National Agricultural Cooperative Federation Kimchi Processing Plant/E-Mart)
Fresh Kimchi	Original Myeongdong Kalguksu Fresh Kimchi (Myeongdong Kimchi) Crispy Fresh Kimchi Falling in Love with a Bite (Chilsung F&B) Accompanying Agency(Co) People who share happiness Happy companion project group)

**Table 2:** Certified Organic Kimchi Food Producer

Certification classification	Representative Items	Certification Numbers	Producers
Organic processed food	Kimchi	13-8-111	CheongwonOrganic
		2-8-177	DamChaewon Co., Ltd.
		2-8-235	Daesang Co., Ltd.
		2-8-393	Domisol Food
		50-8-117	Dongwon F&B Jincheon Factory
		60-8-19	CharmFood Co., Ltd.
		9-8-219	MigangFood Co., Ltd.
		93-8-40	Lively Evening Farming Association Corporation

### 4.3. Patent Trend

The main technologies of Kimchi's patent for food and related materials in the SME-suitable industry are as follows.

**Table 3:** Kimchi Patent Technology

Element technology	Code	Contents
Functional kimchi development technology to prevent metabolic diseases	C	Functional kimchi development technology using new fermented microorganisms, Functional kimchi development technology containing functional fermented products or natural extracts

#### 4.3.1. Patent Trend by Nationality of Major Applicant

The chart below compares and analyzes patent data for the last 10 years

**Table 4:** Kimchi Patent Trends by Nationality

Element technology	S. Korea	America	Japan	Europe	Total
Functional kimchi development technology to prevent metabolic diseases	408	6	16	7	437

In the field of technology for developing functional kimchi to prevent metabolic diseases, Korean applicants occupy the largest proportion. Applicants from the US, Japan and Europe have a relatively small number of applications.

#### 4.3.2. Major Applicant Trend

The Korea Food Research Institute holds the most patents in the field of functional kimchi development technology for metabolic disease prevention. After that, it holds a number of patents, followed by Kevigen Co., Ltd. and Chosun University School Industry Cooperation Foundation.

**Table 5:** Kimchi Patent Application Trend

Element technology	Technology concentration	Major Patent Applicants	Domestic Patent Application Trend
Functional kimchi development technology to prevent metabolic diseases	300~499	<ul style="list-style-type: none"> <li>• Korea Food Research Institute</li> <li>• Kevigen Co., Ltd.</li> <li>• Chosun University Industry-Academic Cooperation Foundation</li> </ul>	<ul style="list-style-type: none"> <li>• Focused on public research institutes and large companies</li> <li>• Korea Food Research Institute, Kevigen, Chosun University Industry-Academic Cooperation Foundation</li> </ul>

#### 4.3.3. Latest Korean Patent Technology Trend

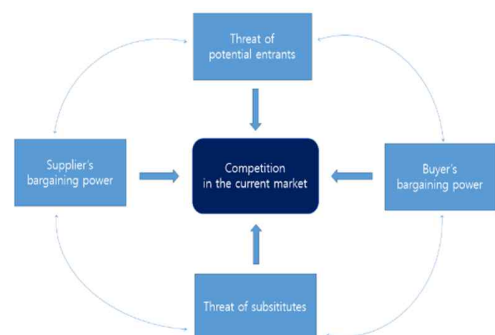
The chart below is a trend of the latest Korean patented technology.

**Table 6:** Latest Korean Patent Application Technology

Element technology	Recent Core Technology Trends
Functional kimchi development technology to prevent metabolic diseases	<ul style="list-style-type: none"> <li>• A kimchi sauce composition containing fermented pepper lactic acid bacteria and fermented soybeans, and its manufacturing method</li> <li>• Kimchi sauce composition containing onion-containing lactobacillus fermentation and the same manufacturing method</li> </ul>

## 5. Structural Analysis of the Kimchi Industry

In order to understand the distribution structure of the kimchi market, it is necessary to analyze various interests affecting the kimchi industry.



**Figure 1:** The Structure of Kimchi Industry



## 5.1. Competition Structure

According to the “2015 Kimchi Industry Trend” published by the World Kimchi Research Institute in Korea, the number of kimchi manufacturers in Korea is about 900. Due to the nature of the kimchi industry, the barrier to entry into the market is low, so many companies are advancing into the kimchi market. As a result, competition in the kimchi market intensified. The entry barrier is low in the kimchi industry. Due to the high risk of entry by potential entrants, existing companies face many threats in terms of profitability and market share (Kim, 2010).

The kimchi market is divided into the B2C market and the B2B market. In the B2C market, large corporations, which account for about 1% of all kimchi manufacturers, occupy 90% of the general consumer market. In the case of the B2B market, domestic kimchi and Chinese imported kimchi are competing. For small and medium-sized kimchi companies in Korea, in the B2C market, it is difficult to enter and expand the market as large companies dominate the market. The B2B market is in a very difficult environment as imported kimchi from China is expanding its influence in the kimchi market with its strength in price competitiveness. Kimchi has been imported entirely from China since 2004, primarily because of its geographical proximity and the low cost of kimchi (Kim, 2010).

## 5.2. Potential Market Entrants

The barrier to entry into the kimchi market is low. Because kimchi is a popular food, the method of making kimchi is widely known. Also, as kimchi is a labor-intensive industry, it does not require high-tech facilities, and it is easy to manufacture kimchi with labor. Currently, the hygiene standards have been strengthened, and the barrier to entry into the market has increased somewhat compared to the past, as cabbage kimchi can only be manufactured with HACCP certification. This is on the side. As the product kimchi market grew from 2001, many companies actively entered the market. But in the future The number of companies entering the market is expected to decrease compared to the past. The rationale is as follows.

### ① Slowing growth rate of commodity kimchi market

The growth rate of the commodity kimchi market is gradually slowing, and some experts believe that the product kimchi market has already entered maturity.

### ② Reinforcement of hygiene standards

As the government's sanitary standards have been strengthened, the cost to enter the market has increased.

### ③ Fixation of the kimchi market

As the growth rate of kimchi is slowing, the kimchi

market is stagnating. If there were so many players competing freely in the kimchi market in the past, currently, companies with more than 10 years of surviving the competition are strengthening their dominance in the market based on business know-how, capital, and mass production facilities. The stronger their market dominance is, the more difficult it is for new companies to enter the market.

## 5.3. Replacement

In general, kimchi is rarely eaten by itself, and is consumed with rice or instant noodle. Therefore, the demand for kimchi is closely related to changes in rice consumption. With the formation of a Western-style food culture trend, the consumption of rice, a staple food of the Korean people, is decreasing every year, and accordingly, the demand for kimchi is gradually decreasing. In fact, it was found that the consumption of rice per person per day decreased by 2.7% on an annual average from 199.6g in 2010 to 169.6g in 2016 (Jung & Kang, 2018).

In addition, trends that can replace the consumption of kimchi include simplification of dietary habits due to an increase in single-person households, and preference for low-salt diets due to increased involvement in health. The threat of substitute products is judged to be very high, and the consumption of kimchi per person is gradually decreasing. Despite the decline in demand for kimchi, the reason for the growth of the product kimchi market is due to the active transition from the domestic kimchi market to the product kimchi market. According to the National Health and Nutrition Survey, the amount of kimchi intake per person decreased statistically (Park, 2020).

## 5.4. Producers

Since the quality of kimchi products varies depending on the origin and condition of agricultural products, raw and subsidiary materials are an important factor in the kimchi business. As in the case of buyers, suppliers affect the profitability of a company according to the number of suppliers and the importance of raw materials (Kim, 2010). Raw materials for kimchi are highly volatile. Most of the ingredients for kimchi are agricultural products that are affected by the weather. Therefore, the price fluctuates from time to time depending on the crop conditions. In addition, the difference in raw material price fluctuations is large compared to that of industrial products. If the crop is not good, the price of cabbage may be more than twice as high as the average price.

While cabbage price rises, small and medium-sized kimchi companies will be hit hard. Product kimchi is difficult to reflect the existing price. In the meantime, when the price of cabbage, the raw material of kimchi, surges,

companies may experience a significant decrease in profits or losses. For small businesses, the “purchasing ability” of purchasing raw materials as needed at a constant price is a very important factor. In the case of small and medium-sized companies, if the price of cabbage surges, they are often unable to handle the high price or purchase the necessary raw materials, and therefore they are often closed.

## 5.5. Buyers

One of the representative characteristics of the kimchi industry is that buyers know the cost structure of kimchi. Because kimchi is a traditional Korean food, many homes make kimchi directly, so consumers understand the cost structure of kimchi in detail. Therefore, buyers have higher price sensitivity compared to other foods. When the price of raw materials rises, consumer demand for product kimchi increases. When the price of cabbage rises, consumers buy product kimchi rather than making kimchi according to economic principles. On the other hand, when the price of cabbage is low, people prefer to purchase cheap cabbage and make kimchi rather than buying product kimchi. In other words, when the manufacturer's profit structure is bad, the demand for product kimchi increases, and when relatively good profits can be made, the demand tends to decrease.

The choice of buyers is very wide. Buyers can easily purchase kimchi through various distribution channels. Also buyers choose various kimchi brands that can be made. This means that manufacturers have to differentiate their products or invest a lot of resources into marketing expenses in order to advertise their products to consumers. As a result of analyzing the structure of the kimchi industry, kimchi companies are at a disadvantage in all items except the threat of potential entrants. The kimchi industry is very competitive in the market. In this market, the influence of suppliers and buyers is great, and the threat of substitutes is high, so the operating margin is expected to be lower than that of other food industries. Despite the unfavorable industrial structure in the past, there were many companies entering the kimchi market because the growth rate of the product kimchi market was higher than that of other food industries, and market opportunities existed. Also, because the threshold for market entry was low, many companies entered the kimchi market. However, the outlook for kimchi manufacturers in the future is uncertain and getting dark due to the slow growth of the product kimchi market, a gradual decline in kimchi demand, and the stagnating kimchi market.

## 6. Main Implications

### 6.1. Opportunity Elements of the Kimchi Market

Despite the difficult market environment, the market opportunities are as follows.

#### ① Market size

The size of the domestic product kimchi market is between about 1.5 trillion won and 2 trillion won, which is a fairly large market for a single food category. If it can occupy 1% of the market in the product kimchi market, it can generate nearly 20 billion won in sales.

#### ② Changes in the competitive landscape

As the product kimchi market enters a maturity period, it is highly likely that the market will reorganize. In a growing market, the overall size of the market continues to grow, so companies can grow every year simply by maintaining their existing market share. However, when market growth is stagnant, companies must create new demands or compete for market share for continued growth. Recently, as the growth of the product kimchi market has slowed, kimchi companies have entered fierce competition for survival. When companies that are not competitive in the market are eliminated in the future, it is expected that the surviving companies will be able to fill the void and create opportunities for growth. Consumption of functional foods is increasing due to the spread of social awareness of “well-being”, and in the case of functional foods, the competitiveness of products lies in the nutrients or functionality of the food (Kim & Kim, 2005).

### 6.2. Key Success Factors in the Kimchi Market

As the product kimchi market enters a maturity period, the competitive advantage for success in the product kimchi market is also changing. We analyzed which factors have been important for success so far, and which factors will become important in the future.

#### ① Product quality (taste)

Kimchi is a fermented food, so it is not easy to maintain a certain taste. Even if kimchi is prepared in the same way, the taste changes depending on the weather and time. Also, unlike kimchi produced in small quantities at home, product kimchi has to be mass-produced. Therefore, if staff training and production management are not properly performed, the quality of kimchi may deteriorate. For the above reasons, the manufacturing capacity to make 'Kimchi with good taste and consistent quality' can be a competitive advantage. Among the small and medium-sized companies that grew in the early 2000s, sales increased through word of mouth because of the good taste (quality) of kimchi products. However, currently, the quality of kimchi is difficult to become a competitive advantage. This is because the quality of kimchi



of small and medium-sized companies has been leveled upward. Kimchi manufacturers also use kimchi to satisfy the tastes of various consumers. In some cases, consumers select and sell the insides, or pickled only cabbage and sold separately (Kim et al., 2012).

#### ② Procurement capability

Procurement of raw materials is a very important factor in the kimchi industry. Due to the nature of agricultural products, the range of price fluctuations is larger than that of other industries, and the amount of supply varies depending on the weather. When cabbage prices skyrocket, you can have a competitive advantage if you can reasonably buy as much cabbage as you need.

Purchasing capacity is still important to the kimchi industry. Currently, many companies have contracted cultivation, use of local distributors, and large low-temperature storage warehouses to reinforce their purchasing (procurement) capabilities. It is carrying out various activities, such as securing the quantity required for production early by constructing the building.

#### ③ Production capacity

The B2C market is centered on large companies, so it is not easy to enter the market except for some small and medium-sized companies. And the B2C market is about 1/3 smaller than the B2B market. SMEs continue It is common to prioritize targeting the B2B market for successful growth.

Important factors in the B2B market are product quality (taste and safety), price and stable supply (production) capability. Product quality has been leveled upward. It is difficult to differentiate quality anymore, and production capability, which is the ability to stably supply products, is expected to become more important in the future.

Small and medium-sized companies often lose the opportunity, even though they have market opportunities, due to lack of production capacity. Such missed market opportunities are monopolized by companies with production capacity. In order for small and medium-sized companies to have competitiveness and continue to grow in the future, they must equip production facilities over a certain scale.

#### ④ Logistics (distribution) capability

Until now, many small and medium-sized companies have grown based in the region where the plant is located. This is because if the production plant and sales area are the same, logistics costs are low, business activities are easy, and various benefits can be enjoyed. However, there is a limit to growing only in the area where the factory is located. Focusing on regions with high demand for kimchi in the future, if a logistics system is established, there will be a greater market opportunity.

#### ⑤ Sales/Marketing Competency

It is believed to be the most necessary capability for small and medium-sized companies along with production capability in the future. For many small and medium-sized companies, the biggest advantage of their products is their quality (taste). It's not wrong, but it's a product-centric thinking.

Product-centric thinking is to indicate that if you make a product with great functionality, the consumer will buy it. If we emphasize that our product quality is the best, consumers will not feel a big difference. In addition, it is also important for companies that produce kimchi products to secure product excellence, but it is determined that service aspects such as the kindness of the staff who sell kimchi products, delivery service of kimchi products, and consumer evaluation of the products should be strengthened. Becomes (Cho, 2008).

Reinforcing marketing competencies means 'changing the organization's constitution through consumer-centered thinking'. Identify the unsatisfied needs of consumers, and if they are satisfied, they will be discriminated against competitors. For example, a company in Damyang, Jeollanam-Do sells pickled cabbage to general consumers. Pickled cabbage is usually packaged and sold in units of 20kg, and the customers who purchase it are mainly women. The company's representative launched a neatly packaged pickled cabbage in 10kg increments, focusing on the fact that it is difficult for women to move with pickled cabbage weighing 20kg and that the amount of kimchi gradually decreases.

As a result, pickled cabbages packaged in units of 10kg became the most popular pickled cabbages in the distribution channel. Now, even small and medium-sized kimchi makers go beyond making the best products and how do they differentiate themselves from customers? The time has come when we have to think about whether we can create. It is necessary to segment the market centered on customers and to create customer value that is different from competitors by setting a target market where the company's capabilities can be maximized. It doesn't always require professional skills or a lot of money. This is because changing packaging units can provide completely different value to customers.

## 7. Analysis of the Distribution Structure of the Kimchi Market

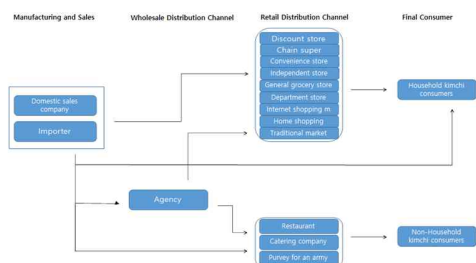


Figure 2: The Structure of Kimchi Distribution

## 7.1. Overview of the Distribution Structure of the Kimchi Market

The distribution channel of kimchi begins with domestic manufacturers based on domestic production and importers that import kimchi from China. It is sold to end consumers through wholesale and retail distribution channels. Distribution channels can be divided into B2C distribution channels where general consumers (household kimchi) are customers and B2B distribution channels where industries are customers. Domestic kimchi industry shows a continuous increasing trend, focusing on commercialization of commercially available kimchi. Due to the consumption of imported kimchi in the restaurant and food service industry, the import volume of kimchi is also steadily increasing (Lee et al., 2019). B2C distribution channels are divided into offline channels such as large discount stores, chain supermarkets, convenience stores, and department stores, and online channels such as online shopping malls and home shopping. B2B distribution channels include distribution channels such as catering companies, group catering companies, military payments, and general companies.

## 7.2. Features of Each Distribution Channel

### 7.2.1. Off Line Channel

Offline channels have limitations in that they are restricted by time and place. However, for some consumers who are not familiar with online use, they are more accessible than online channels.

This user has the advantage of being able to purchase after seeing and touching the product.

#### ① Large discount store

In the B2C market, about 45% of all kimchi products are distributed through large discount stores, so the influence of large discount stores on product kimchi is enormous. One of the important reasons for the rapid growth of product kimchi in the early 2000s is the growth of large discount stores.

However, in recent years, the proportion of kimchi sales has gradually decreased due to changes in the demographic structure, such as an increase in single-person households, and the strengthening of the influence of online distribution channels. Large discount stores mainly include kimchi brands and distribution stores of large corporations. There is a new brand (Private Brand).

The reason is that in the B2C market, a brand is an important factor in deciding what consumers buy. Therefore, large discount stores prefer large-scale brands with high recognition. Second, it is difficult for small and medium-sized companies to cover logistics and promotion costs. In order to enter a large discount- store nationwide, a large amount of goods must be produced, and a distribution system that can be delivered smoothly to distribution warehouses in each region must be established. In addition, large discount stores require more than a certain amount of marketing resources to promote sales. It is difficult for small and medium-sized companies to meet this point.

In conclusion, although large discount stores are the channel with the largest distribution of kimchi products in the B2C market, it is quite difficult for small and medium-sized companies to enter. This is due to the low price and convenience of shopping, which are the biggest advantages of large discount marts, and it was possible to find out the most preferred distribution channel for the kimchi product line (Kim & Song, 2013).

#### ② Department store

The characteristics of kimchi, a product distributed in department stores, are as follows. Department stores, like large-scale discount stores, are centered around large corporate brands. However, kimchi products sold in department stores are more expensive than large discount stores. Even with the same brand, products sold in department stores are sold at 10-50% higher prices than large discount stores. It is sold, mainly premium brands. Small and medium-sized companies also sell premium kimchi in collaboration with department stores.

#### ③ Convenience store

Compared to other distribution channels, the biggest feature of kimchi products sold at convenience stores is the small-volume packaging. Consumers who buy kimchi at convenience stores often want to eat immediately along with ramen. Kimchi is packaged and sold in small quantities. Although there are differences by location of each store, the proportion of kimchi products in the total sales of convenience stores is about 1 to 3%, which is less than that of other distribution channels.

Convenience stores have a narrow space compared to other distribution channels, so they only handle two to three brands. The criteria for selecting a brand to enter are margin comparison/rebate structure/consumer awareness/production and logistics capabilities. Compared to large discount stores,

brand involvement is relatively small, so margins and rebate structures are the main factors to consider.

#### ④ B2B distribution channel

B2B distribution channels are divided into catering companies, group catering companies (food material companies), cafeterias of general companies, and military payments. Mainly through intermediate distributors such as intermediate wholesalers and agencies that connect kimchi manufacturers and sellers. As the size of kimchi manufacturers grows, systematic customer management becomes more important. The key to customer management is 'defining important customers and focusing on those customers'.

### 7.2.2. Online Channel

The increasing influence of online as a distribution channel can be a new opportunity for small and medium-sized businesses as well. The virtual space of the internet allows two-way communication between customers and companies. Online can be seen as a strong distribution channel with different advantages compared to existing distribution channels in that it is hardly limited in time and space.

#### ① Open market

It is the most easily accessible distribution channel for small and medium-sized companies as there are few restrictions on sales qualifications and small initial investment capital. However, as the entry barrier is low, there are many kimchi companies competing in open market channels, so there is a disadvantage of falling profit due to intense price competition. Therefore, the online distribution channel what is more important than entering a store is the marketing ability to promote product sales.

#### ② Social commerce

The initial business model of social commerce had a sales method that discounted prices when a certain number of people gathered online for a set period of time. Currently, the line between social commerce and open market has become unclear. The biggest difference from the current open market is that social commerce is different from the open market in that it takes responsibility for the product. Since not everyone can register products, but only products adopted by merchandiser (MD) are presented to consumers, customer reliability is relatively high compared to open markets. The downside is that the fee is relatively high compared to the open market (about 10~15% level) high.

#### ③ TV home shopping

The biggest feature of TV home shopping is that it can generate big sales in a short time. In the case of kimchi products, it is common to generate sales of about 100 million won to 300 million won per home shopping broadcast. However, it is not easy for small and medium-sized

businesses to enter home shopping. Fresh food is one of the categories with the most product claims in home shopping. If a product claim occurs, it may have a negative effect on home shopping itself, so Home Shopping MD will prioritize products with a known reputation. Also, for home shopping sales, you need a larger quantity than usual. For small and medium-sized companies, it is not easy to suddenly increase production. Finally, compared to other distribution channels, the poor margin structure is also a factor that makes it difficult for small and medium-sized companies to enter home shopping.

## 8. Conclusions and Suggestions

As a result of a general survey of the kimchi industry, small and medium-sized companies are in a relatively very difficult situation in terms of capital, distribution warehouses, and distribution compared to large companies. Therefore, rather than targeting the B2C market, targeting the B2B market is considered safer in the situation where the industry is taking its first steps. In addition, in the case of targeting the B2C market, it is necessary to pay attention to the trend change in the modern society. Trends can be influenced by cultures and lifestyles that are unique to each region. Therefore, in order to find a countermeasure for the kimchi industry according to the trend change, it is necessary to look at the trends in Korea and overseas. It is steadily building its reputation as a globalized and standardized health food from an ethnic food that was only enjoyed by Koreans in the past, and is becoming a representative cultural product of Koreans with the Korean Wave boom (Park, 2020).

First, looking at the trend change in Korea, the key keyword is '1 person household'. The new word "eating alone", which best reflects "one-person household", is popular, and "eating alone" is one of the major causes of the decrease in the consumption of kimchi per person in Korea. New words such as 'single group', 'eating alone group', and 'drinking alone group' appear, and a food culture of eating alone has emerged, and consumption of kimchi is also showing a tendency to prefer manufactured brands such as packaged kimchi (Jang & Kim, 2019). While the entire industry is trying to change in line with the era of "single-person households", there are fewer and fewer people seeking kimchi socially. Even in a family that makes kimchi, they prefer to do it little by little rather than a lot at once.

This is due to the fact that fresh vegetables are supplied all year round and the westernized dietary trend. Food consumption trends are changing, such as the westernization of dietary life and preference for convenient food. The proportion of self-manufactured kimchi will decrease, and the purchase of product kimchi will increase in the short

term (Jung & Kang, 2018).

In response to this trend change, Kimchi must fight with “simple”. For those who want to make kimchi, there must be a variety of ways to deliver “pickled cabbage” and “seasoning” to the home in a fresh and safe way. For those who don't seek kimchi, they need to find a way to captivate their appetite with 'seasonally' or 'locally produced' small packaged kimchi. In addition, for consumers who want to eat conveniently, such as 'eating alone', a strategy is needed to develop a convenient meal that matches a variety of foods and kimchi. In this way, strategies to solve the hassle of making kimchi, rather than informing Koreans who are already familiar with the taste and nutrition of kimchi, are able to meet the tastes of various consumers and spread the consumption of kimchi. It will be an option.

Kimchi manufacturers must understand the characteristics of households that either eat kimchi from outside or purchase product kimchi. It is necessary to establish customized product value sales strategies for each consumer characteristic (Jung & Kang, 2018). The most fundamental thing to look at overseas trends related to kimchi is to look at changes in kimchi exports. As a result of the relaxation of overseas import regulatory measures, the development of overseas export markets and opportunities for Korean agricultural products have also increased.

According to a recent announcement by the Ministry of Agriculture, Food and Rural Affairs, kimchi exports in 2018 amounted to 97.5 million dollars (about 110 billion won), an increase of about 20% from the previous year. The reasons for the increase in exports of kimchi include 'increased interest in health', 'Korean Wave', and 'various public relations and support policies of the government'. For overseas markets that are not familiar with kimchi, it is necessary to pay attention to the trend of “health”. It is noteworthy that as income levels increase, preference for Korean agricultural products and kimchi, which are highly reliable in safe food and quality in China, is gradually increasing (Kim et al., 2016). According to the research conducted by the World Kimchi Research Institute, there are many cases where sliced kimchi products are actually included in Korean food bag stew sold at online shopping malls in China. Alibaba, a Chinese online retailer, shows that the sales volume of kimchi soup is much higher than that of kimchi. This is an example of the fact that when kimchi meets other foods, it has excellent taste and nutrition, so people from other countries also like kimchi-related foods very much.

Therefore, in the kimchi industry, what position your company is taking and you will have to set up a sales/marketing strategy accordingly. Small and medium-sized companies can target the B2B market first and then target department stores or convenience stores at a stable time in the future to expand sales channels and profitability

through premium or low-cost policies. Another strategy is to target overseas markets as soon as the company stabilizes through B2B. As we have seen in the case of China earlier, many efforts are being made to globalize kimchi, but in Western culture, kimchi still has a strong spicy image. Nevertheless, kimchi also has an image of a healthy diet. Therefore, it is expected that it will be able to pursue a strategy to target overseas markets with relatively low competition through a low-sodium diet and premium strategy along with the image of Western health.

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