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An Empirical Analysis of Purchasing Behavior of Commoditized Foods in Japan: Focusing on Trends in the Retort Pouch Curry Market Before and After COVID-19

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An Empirical Analysis of Purchasing Behavior of Commoditized Foods in Japan: Focusing on Trends in the Retort Pouch Curry Market Before and After COVID-19

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Abstract

With the spread of COVID-19, the situation in the world has changed completely and our lives have changed. At present, we are facing an unprecedented situation in which we have no choice but to change our lifestyles and behaviors, including our long-familiar lifestyles and ways of doing things, our outlook on life, our values, and our habits. Along with this, the purchasing behavior related to "clothing, food and housing" in our lives is, of course, undergoing major changes unlike the previous situation. Therefore, in this paper, we will focus on "food", in which purchasing behavior is performed more frequently than clothing and housing, and analysis consumers' purchasing behavior on retort foods (especially retort pouch curry) that show growth before and after COVID-19. From the results, we consider the reason why retort pouch curry become a standard product. At the same time, the retort pouch curry market is currently becoming commoditization. We propose the direction of de-commoditization in the future.

Keywords: purchasing behavior, commoditization, retort pouch curry market, COVID-19

1. Introduction

The spread of COVID-19 discovered in December 2019 has changed our lives. We are currently facing a situation where we have no choice but to change our lifestyles and behaviors, including our long-familiar lifestyles, ways of doing things, outlooks on life, values, and habits.

Along with this, the purchasing behavior related to "clothing, food and housing", which has a particularly direct impact on our lives, is, of course, getting different from the previous situation, and the reality is that major changes have occurred. Against this

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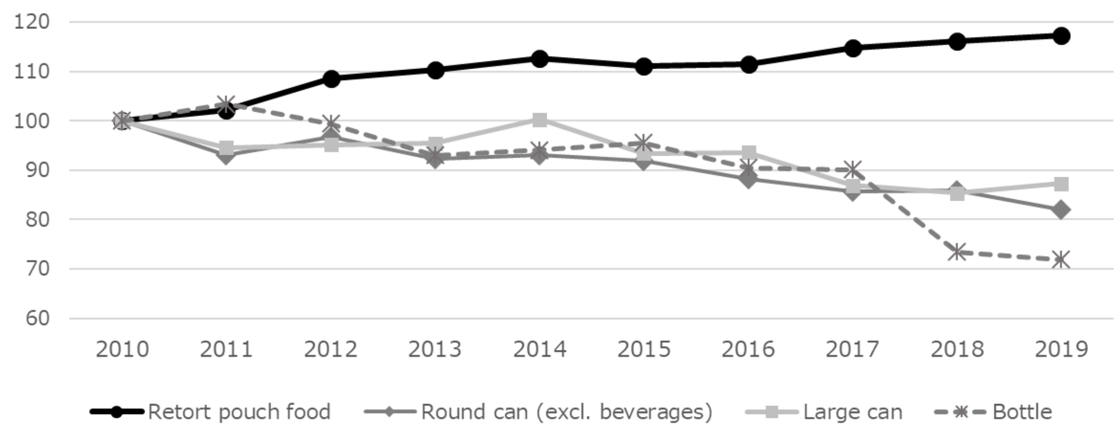
background, in order to take some measures against this situation in the future, it is first necessary to clearly grasp the current situation.

Therefore, in this paper, based on the above background and awareness of the problems, we would like to focus on the actual purchasing situation mainly on "food", where purchasing behavior is performed more frequently on a daily basis than in clothing and housing.

However, there are many categories of food. As mentioned above, changes are also appearing in food purchasing behavior. It is said that the influence of COVID-19 on the food industry is relatively low compared to other industries, but it is not a little affected. Against this background, the overall market size of retort pouch foods tends to continue to increase (Figure 1).

Figure 1. Changes in canned/bottled foods production quantity
(The index of production volume; year 2010 = 100 in each category)



Source：The authors calculated from the materials of the Japan Canners Association.
(https://www.jca-can.or.jp/data/pdf/total.pdf)

Next, we will look at the trend of retort pouch foods and roux curry by item. Macromill Inc., the largest online marketing research firm in Japan, has a database of fixed-point observations of purchasing conditions of daily consumer goods called “QPR ”. According to QPR data, there is a fact that roux curry is on a gradual downtrend, but according to media reports, roux curry is also growing after COVID-19. In addition, the purchase rate of retort stew and processed cooked rice can be confirmed to be on the rise. Looking at this trend, it seems that retort foods as a whole are on an upward trend.

In terms of the purchase rate of retort pouch foods, the purchase rate of "retort pouch curry" is the highest, and the annual purchase rate is just over 55% (more than one in two people purchases). Demand continues to grow in time-series comparisons. Such information is widely reported in other materials[1](Table 1).

Table 1. Changes in the purchase rate of retort foods and Instant curry (2012-2019)

Year	2012	2013	2014	2015	2016	2017	2018	2019
N=	(25,936)	(25,918)	(25,487)	(26,351)	(25,549)	(26,291)	(26,591)	(26,636)
Retort pouch curry	50.3%	51.4%	53.5%	52.8%	53.2%	53.5%	54.7%	55.0%
Retort pouch stew	4.2%	4.4%	4.5%	3.7%	3.7%	4.3%	5.9%	7.6%
Processed cooked rice	29.8%	29.3%	29.0%	29.3%	31.3%	34.1%	35.6%	36.3%
Instant curry (roux)	57.3%	56.9%	57.5%	57.5%	57.3%	56.5%	55.9%	55.5%

*Data source: Macromill's QPR

*Each year indicates the period of January 1 to December 31 of the year.

Table 2 shown below is data on the purchase rate (actual measurement value) of retort pouch curry in Japan. Macromill Inc., the largest online research firm in Japan, has a database of fixed-point observations of purchasing conditions in domestic industries.

Table 2. Comparison of purchase rate of retort pouch curry
(compared to the same period of the previous year in 2020)

	2019 (Jan. - Aug.)	2020 (Jan. - Aug.)	2020 - 2019
N=	(27,690)	(27,868)	
Total	47.6%	50.6%	**+2.9**
Male 15 - 19	5.3%	6.1%	**+0.8**
Male 20s	23.5%	28.2%	**+4.7**
Male 30s	40.7%	43.5%	**+2.8**
Male 40s	43.8%	47.8%	**+4.0**
Male 50s	48.1%	51.3%	**+3.2**
Male 60 +	54.0%	55.4%	**+1.4**
Female 15 - 19	4.7%	6.7%	**+2.0**
Female 20s	25.8%	26.6%	**+0.8**
Female 30s	55.7%	58.7%	**+3.0**
Female 40s	59.3%	63.6%	**+4.3**
Female 50s	61.4%	65.0%	**+3.6**
Female 60 +	60.6%	63.7%	**+3.1**

*Data source: Macromill's QPR

[1] Japan Food Newspaper "Curry Special: Impact of COVID-19: Rapid Expansion of Retort Demand: Responding to New Changes" (July 1, 2020) (https://news.nissyoku.co.jp/news/takagiy20200623093657928)
DIAMOND Chain Store "Category Focus: Increased demand for curry, ruu curry, and retort pouch curry under the influence of COVID-19" (August 12, 2020) (https://diamond-rm.net/sales-promotion/61177/)

Based on the results of QPR[2] in the comparison of the same period of 2019 and 2020 (January to August), it was found that the purchase rate increased by about 3 points in almost all sex and age groups. Looking at the purchase rate in chronological order, it can be confirmed that the retort pouch curry tends to increase even after COVID-19.

In this way, in addition to the high purchase rate of retort pouch curry in Japan, it has also increased after COVID-19, indicating that it has established a solid position as a standard national food. Also, it is confirmed that the purchase rate does not fluctuate much even when viewed by gender, etc., and that it is preferred overall. From this phenomenon, it can be said that retort pouch curry has become a standard item. Based on the above background, the main purpose of this paper is to understand the actual purchasing behavior of retort pouch curry products from the perspective of how consumers position and purchase and consume retort pouch curry in Japan. In addition, we will consider why retort pouch curry has become a standard item, and propose future directions for de-commoditization in this commoditized market.

By the way, Commoditization has been defined by many previous studies. According to Nobeoka, Ito, and Morita (2006), the definition of commoditization that products become commodities is that the number of companies entering the market will increase, it will be difficult to differentiate products, and as a result of price competition, companies will be able to make profits. It states that the price will drop to the extent that there is no such thing. commoditization means that the number of companies entering the market will increase, it will be difficult to differentiate products, and as a result of price competition, prices will fall to the point where companies cannot make profits.

Kusunoki and Akutsu (2006) point out that customers think that there is no difference in products and services other than price due to the feeling of competitors in a certain product category. Onzo (2007) defines that the level of technology among companies is gradually becoming homogenous, making it difficult to differentiate in the essential part of products and services, and making almost no difference from the customer side. Aoki (2011) states that as a result of imitation and homogenization between companies, discrimination between products is lost and the situation becomes similar to commodities.

In this paper, based on the above previous research, commoditization is defined as the difficulty in differentiating products and the decrease in price due to price competition.

[2] A database of daily consumer goods purchases by QPR monitors of about 30,000 people owned by Macromill, Inc. It is constructed as single-source data that can be used for analysis by attribute of purchasers, analysis of products purchased together, and questionnaire surveys.

2. Method

2.1 Research Method

Based on the current status of the retort pouch curry market outlined in the previous chapter, how do consumers display purchase and eating behavior for retort pouch curry, and how do they perceive and evaluate the product category and individual products of retort pouch curry? In order to clarify these points, we conducted a quantitative questionnaire survey by extracting those who purchased and ate a retort pouch curry product from general consumers.

2.2 Survey Outline:

The outline of the survey is as follows.

(1) Respondents: Extracted from Macromill monitors who meet all of the following conditions in the screening questions.
- Men and women aged 18-79
- Those who purchased and ate a retort pouch curry product by themselves in the past year
- Those who are not engaged in the following occupations or industries: Manufacturing (food, beverage), wholesale / retail (food, beverage), restaurants, media / publishing-related industry, research / advertising agency

(2) Survey area: Japan nationwide (Random distribution without stratification by region)

(3) Survey method: Self-answering online quantitative survey via the Internet (using Macromill's online survey system "QuickMill")

(4) Survey period: July 2nd (Thursday) to July 4th (Saturday), 2020

(5) Allocation and effective number of respondents: Valid responses were obtained from 3,708 people. As shown in the Table 3, the collection was evenly distributed by gender and age, and weighted at the time of analysis (detailed in Section 3.1).

(6) Survey conducted by: Macromill Inc.

Table 3. Respondents allocation

	Male						Female						Total
Age	18～29	30～39	40～49	50～59	60～69	70～79	18～29	30～39	40～49	50～59	60～69	70～79	
n=	309	309	309	309	309	309	309	309	309	309	309	309	**3,708**

3. Result

From this chapter, we will analyze survey results. First, Section 3.1 describes the aggregation method. Section 3.2 examines the purchasing behavior of retort pouch curry, Section 3.3 examines the eating behavior of retort pouch curry, and Section 3.4 examines the evaluation and future needs of retort pouch curry.

3.1 Aggregation Method:

As described in Section 2.2, respondents who met the target conditions were collected evenly by gender and age group in this survey. But since the purchase rate and eating rate of retort pouch curry differ by the gender and age group, the total value is not a microcosm of the retort pouch curry users with the data of equal allocation.

Therefore, as shown in Table 4, the weighting was performed by taking into account the population composition of Japan and the incident rate of retort pouch curry users by gender and age group calculated from the results of screening questions[3].

Table 4. Weighting method for the survey data

	(A) RPC purchase rate (P1Y)	(B) RPC eating rate (P1Y)	(C) RPC purchase & eating rate (P1Y) **[(A)&(B)]**	(D) Poplation (thousand persons)	(E) Estimated RPC market population (thousand persons) **[(D)×(C)]**	(F) Population composition of estimated RPC market	(G) Number of respondents in the survey	(H) Weighted number of respondents **[3,708×(F)]**	(I) Weighting coefficient **[(H)/(G)]**
Total				96,010	50,540	100%	3,708	**3,708**	
Male 18～29 y.o.	45.2%	59.8%	**42.2%**	7,717	3,253	6.4%	309	**239**	0.772
Male 30～39 y.o.	50.9%	63.3%	**47.1%**	7,219	3,399	6.7%	309	**249**	0.807
Male 40～49 y.o.	50.9%	65.1%	**49.5%**	9,325	4,613	9.1%	309	**338**	1.095
Male 50～59 y.o.	60.8%	71.7%	**59.2%**	8,202	4,853	9.6%	309	**356**	1.152
Male 60～69 y.o.	59.7%	66.8%	**57.2%**	7,808	4,468	8.8%	309	**328**	1.061
Male 70～79 y.o.	51.5%	62.6%	**48.9%**	7,415	3,629	7.2%	309	**266**	0.862
Female 18～29 y.o.	48.3%	60.8%	**44.4%**	7,251	3,219	6.4%	309	**236**	0.764
Female 30～39 y.o.	66.6%	71.3%	**61.1%**	6,966	4,258	8.4%	309	**312**	1.011
Female 40～49 y.o.	61.3%	66.6%	**57.3%**	9,101	5,214	10.3%	309	**383**	1.238
Female 50～59 y.o.	62.1%	65.9%	**57.4%**	8,155	4,680	9.3%	309	**343**	1.111
Female 60～69 y.o.	63.0%	63.4%	**57.7%**	8,170	4,712	9.3%	309	**346**	1.119
Female 70～79 y.o.	53.4%	56.3%	**48.9%**	8,681	4,243	8.4%	309	**311**	1.007

* RPC: retort pouch curry

* Data source: Calculated from the database "Summary of results of population estimation I. Population as of 1st of each month '2020 February final estimates'", Statistics Bureau of Japan, Ministry of Internal Affairs and Communications. (https://www.e-stat.go.jp/stat-search/file-download?statInfId=000031963355&fileKind=0)

3.2 Purchase behavior of retort pouch curry

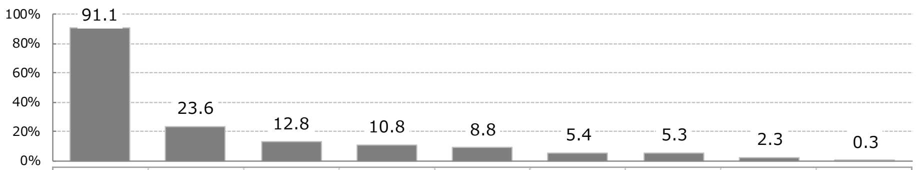
First, we will look at the basic indicators of purchasing behavior (Figure 2). As to the purchase channels for retort pouch curry over the last year (multiple answers), around 90% of all genders and age groups purchased at "supermarkets." This was followed by "drug stores" at 24%, particularly among women in their 30s and 40s, which exceeded 30%. In addition, more than 20% of men in their 30s or younger

[3] The questionnaire data analysis of this paper was carried out by the aggregate analysis software "Quick-CROSS" (Ver.3.32) of Macromill, Inc.

purchased at "convenience stores." For both men and women, the rate of purchases made at the "Co-op" was slightly higher among seniors.

Purchase frequency is generally higher for men, with around 60% of purchasers "once a month" or more in all age groups. The purchase rate itself is higher for women, but male retort pouch curry purchasers outnumber women in terms of purchase frequency (Figure 3).

Figure 2. Purchase channel of retort pouch curry



	n=	Super-market	Drug store	Conveni-ence store	Discount store / 100 yen shop	Co-op	EC Site	Hardware store / General goods store	Other	I don't remember
Total	(3,708)	91.1	23.6	12.8	10.8	8.8	5.4	5.3	2.3	0.3
Male 18 - 29	(239)	93.5	24.6	23.6	11.0	5.8	6.5	9.7	0.6	0.6
Male 30s	(249)	91.3	29.8	23.9	13.3	4.9	5.8	5.5	2.3	0.6
Male 40s	(338)	91.3	27.5	19.7	13.9	3.9	6.8	2.9	0.6	-
Male 50s	(356)	90.3	23.9	15.9	15.9	6.5	6.8	3.9	1.9	-
Male 60s	(328)	91.9	19.4	9.1	13.6	9.4	5.2	3.2	2.3	0.3
Male 70s	(266)	93.5	15.2	6.1	8.1	11.7	3.9	5.2	1.6	0.3
Female 18 - 29	(236)	90.3	19.7	11.3	7.8	3.2	2.6	7.4	2.6	0.6
Female 30s	(312)	90.0	33.0	12.0	9.7	7.8	2.6	7.4	2.9	0.3
Female 40s	(383)	92.9	33.3	12.6	8.1	7.8	4.2	4.2	1.9	0.3
Female 50s	(343)	88.3	23.6	9.4	12.9	9.7	7.1	6.1	2.9	0.3
Female 60s	(346)	91.9	16.5	7.4	7.4	12.9	5.5	4.9	3.2	-
Female 70s	(311)	88.3	14.2	6.5	6.8	20.4	7.4	4.9	4.2	-

* Sorted by total score

Figure 3. Purchase frequency of retort pouch curry

	n=	Once a week or more	About 2 -3 times a month	About once a month	About once every 2 -3 months	About once or twice a year
Total	(3,708)	3.8	17.8	29.3	32.7	16.3
Male 18 - 29	(239)	10.0	26.9	27.5	22.3	13.3
Male 30s	(249)	6.5	23.0	30.7	27.5	12.3
Male 40s	(338)	6.5	22.0	30.7	29.4	11.3
Male 50s	(356)	6.1	24.3	33.0	26.9	9.7
Male 60s	(328)	3.6	20.4	32.7	32.0	11.3
Male 70s	(266)	3.6	23.0	37.5	25.2	10.7
Female 18 - 29	(236)	1.6	11.7	25.2	39.2	22.3
Female 30s	(312)	1.9	14.6	27.8	37.2	18.4
Female 40s	(383)	1.9	12.3	25.9	38.5	21.4
Female 50s	(343)	2.3	13.9	22.7	42.1	19.1
Female 60s	(346)	1.6	12.6	25.6	34.0	26.2
Female 70s	(311)	1.9	12.6	33.7	34.3	17.5

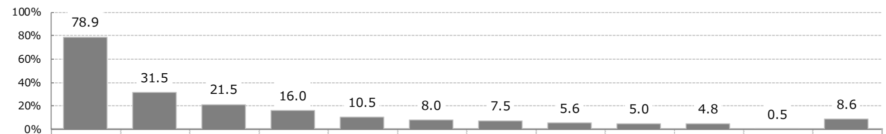
As for the manufacturers of the actual purchased products (multiple answers), "HOUSE FOODS" led by "Curry-Ya Curry" was the largest at 64%, followed by "Otsuka Foods", "Meiji", "Ezaki Glico" and "S&B Foods" with around 30% respectively. The manufacturers of the products that purchased the most in a year (single answer) was almost the same order, with "HOUSE FOODS" being the most popular at 33%, "Otsuka Foods" (10%) being second, followed by "Meiji," "Ezaki Glico," "S&B Foods," "AEON TOPVALU," and "NH Foods (Nipponham)" accounted for about 6-8%(Table 5).

Table 5. Manufacturers of purchased products

All products purchased within a year (multilple answer) (n=3,708)		**Product purchased most within a year (single answer)** (n=3,622)	
HOUSE FOODS	64.2%	HOUSE FOODS	33.4%
Otsuka Foods	31.2%	Otsuka Foods	10.1%
Meiji	30.7%	Meiji	7.7%
Ezaki Glico	27.8%	Ezaki Glico	6.9%
S&B Foods	27.6%	S&B Foods	6.8%
NH Foods (Nipponham)	16.5%	NH Foods (Nipponham)	5.6%
AEON TOPVALU	15.3%	AEON TOPVALU	6.6%
Ryohin Keikaku (MUJI)	8.7%	Ryohin Keikaku (MUJI)	4.1%
Miyagiseifun	7.8%	Miyagiseifun	2.8%
hachi-shokuhin	7.2%	hachi-shokuhin	2.1%
NAGATANIEN	6.4%	NAGATANIEN	1.4%
Seven & i Holdings	5.3%	Seven & i Holdings	0.9%
Marumiya	4.9%	Marumiya	0.7%
INABA FOODS	3.3%	INABA FOODS	0.7%
Other	15.7%	Other	10.2%
I don't remember	2.3%		

Next, focusing on the purchasing scene, we will search for how consumers select and purchase products, and what are the criteria (important factors) at that time (Figure 4).

Figure 4. Sources of information on retort pouch curry products



		n=	Product shelves in a store	TV / radio commer-cials	Shop leaflets / advertise-ments	Heard from family members / friends	Online shopping site (Amazon, Rakuten, manufactur er's direct site, etc.)	Word-of-mouth on the Internet / blog / roundup site, etc.	manufac-turer's website (product informa-tion)	Advertise-ment on newspa-per / magazine	Internet advertise-ment (banner ad, etc.)	Manufac-turer's SNS account (Twitter, Facebook, Instagram, LINE, etc.)	Other	Nothing in particular
Total		(3,708)	78.9	31.5	21.5	16.0	10.5	8.0	7.5	5.6	5.0	4.8	0.5	8.6
Gender * age group	Male 18 - 29	(239)	65.0	27.2	22.3	12.0	17.2	11.0	13.6	5.8	8.1	11.0	-	15.2
	Male 30s	(249)	74.8	28.8	19.1	11.3	13.6	11.7	12.9	7.1	6.5	8.4	1.0	11.0
	Male 40s	(338)	77.0	29.8	23.6	12.9	13.6	9.4	9.1	3.9	6.1	6.8	0.6	7.8
	Male 50s	(356)	79.0	29.1	16.5	7.8	10.7	7.1	6.5	4.2	2.6	3.9	0.3	10.7
	Male 60s	(328)	77.0	27.8	21.0	11.7	10.0	5.5	3.9	6.8	7.8	1.6	0.3	8.7
	Male 70s	(266)	73.8	27.5	26.5	14.6	7.1	3.9	5.5	8.7	6.5	0.3	1.0	11.3
	Female 18 - 29	(236)	78.3	27.2	14.2	15.2	5.5	7.4	3.9	1.9	2.3	6.5	-	10.7
	Female 30s	(312)	87.1	37.9	19.1	15.2	9.7	12.3	8.1	3.6	4.5	7.1	1.0	5.2
	Female 40s	(383)	82.8	36.6	21.0	16.8	7.1	9.4	6.1	2.9	2.6	5.8	0.3	6.8
	Female 50s	(343)	86.7	42.1	23.9	20.7	10.0	7.4	9.4	5.8	4.2	4.5	0.6	3.9
	Female 60s	(346)	80.6	31.4	22.3	21.4	11.0	5.8	5.2	6.8	4.9	1.9	0.3	8.1
	Female 70s	(311)	78.3	27.8	26.9	31.1	11.7	5.5	7.8	10.4	5.8	2.3	1.0	8.1
Eating frequency of retort pouch curry	Once a week or more	(307)	76.3	31.2	30.8	17.5	25.2	16.2	19.3	8.1	12.6	14.1	0.3	6.1
	About 2 -3 times a month	(935)	78.7	32.8	25.7	17.2	13.5	9.2	9.8	7.4	7.4	6.0	0.4	7.9
	About once a month	(1,008)	79.6	33.1	21.4	17.5	9.1	6.9	6.0	5.1	4.4	3.5	0.4	7.8
	About once every 2 -3 months	(952)	80.0	29.5	16.8	14.6	7.0	6.4	5.3	4.3	2.3	2.9	0.4	9.8
	About once or twice a year	(505)	77.6	29.8	16.7	12.9	5.5	5.7	3.3	4.3	2.5	3.4	1.3	11.1

* Sorted by total score

As for the sources of information about retort pouch curry products, "product shelves in a store" stands out at around 80% for most genders and age groups. This was followed by traditional media such as "TV commercials / radio commercials" (32%) and "shop leaflets / advertisements" (22%), and word-of-mouth elements such as "Heard from family members / friends" (16%). Among those who purchase frequently, the percentage of product information contacts from Web media (“Online shopping site”, “manufacturer's website”, “word-of-mouth on the Internet / blog / roundup site, etc.”) is also slightly high.

As for the number of items purchased per purchase (Figure 5), "2" was the highest at 35%, but nearly half of the respondents purchased "3 or more". Since the number of purchased products is considered to be affected by the number of eaters at home, a cross tabulation was performed for each eater-pattern of the retort pouch curry that one purchased, about 60% of the "only me" eaters purchase “1 or 2” while eaters whose family members also eat, more than 50% purchased "3 or more" per purchase. The product combination pattern of the respondents who answered that they would purchase two or more products in the above question was that "often buy the same (one type) product together" (57%) exceeded "often buy a combination of different (two or more types) products" (34%) (Figure 6).

Figure 5. Number of items purchased per purchase

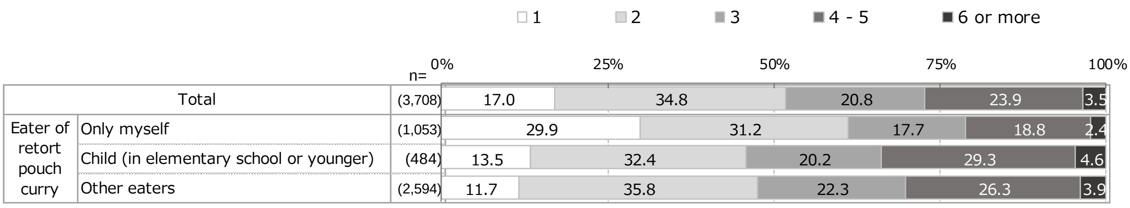
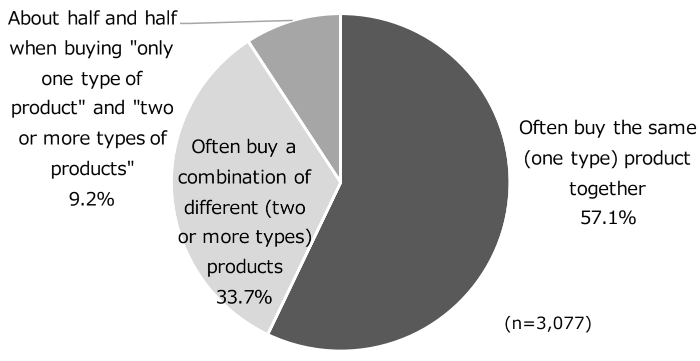


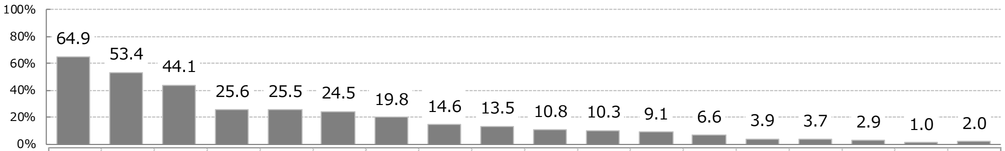
Figure 6. The product combination pattern
(Those who purchase multiple products per purchase)



Then what are the criteria by which consumers choose retort pouch curry products? We will analyze the results of a multiple-answer question asked about purchase-focused points (Figure 7).

Overall, "price" (65%), "taste of my choice" (53%), and "degree of spiciness" (44%) are particularly high in the top three factors. This was followed by "total quantity (net weight)", "manufacturer" (26% each), and "quantity of ingredients" (25%). By gender, women are more likely to consider family preferences, "family’s preference other than children" scores higher than men in all age groups. In addition, "child's preference" is particularly high at around 25% among women in their 30s and 40s. By age group, older people tend to place more importance on "manufacturer", with around 30% of men in their 60s or older and women in their 50s or older choose "manufacturer".

Figure 7. Points of emphasis when purchasing retort pouch curry products



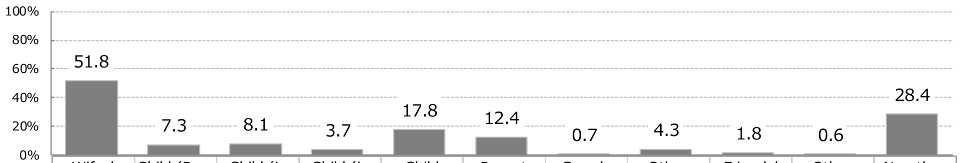
	n=	Price	Taste of my choice	Degree of spiciness	Total quantity (net weight)	Manufacturer	quantity of ingredients	Staple product	family's preference other than child (such as spouse, parent, etc.)	Cooking method (how to heat, easiness to transfer to a plate, etc.)	Child's preference	Food materials, additives	Words or pictures on a package	Unique taste or product series	Word of mouth, reputation among others	Packages or characters that my child likes	Advertisement, commercials	Other	Nothing in particular / I don't know
Total	(3,708)	64.9	53.4	44.1	25.6	25.5	24.5	19.8	14.6	13.5	10.8	10.3	9.1	6.6	3.9	3.7	2.9	1.0	2.0
Male 18 - 29	(239)	58.9	41.1	30.4	25.9	20.1	23.3	23.0	5.2	15.5	3.2	7.1	12.6	10.7	8.4	3.2	5.8	0.6	4.9
Male 30s	(249)	63.8	49.5	29.8	28.2	25.6	25.2	21.7	11.0	9.1	11.7	9.4	8.4	7.8	3.9	6.1	4.9	-	1.6
Male 40s	(338)	66.0	50.2	39.8	28.2	19.7	20.4	19.1	7.8	10.7	10.4	4.9	10.4	8.4	2.9	3.2	3.2	1.0	2.3
Male 50s	(356)	71.5	54.0	44.0	28.8	17.2	21.7	13.6	4.5	11.0	4.9	4.2	6.5	5.2	2.3	1.0	2.3	0.6	1.9
Male 60s	(328)	64.1	55.0	47.6	22.7	28.5	27.2	17.5	7.1	11.0	1.9	10.7	7.1	4.9	2.3	-	2.6	1.9	2.6
Male 70s	(266)	66.7	53.4	43.4	28.8	33.7	28.2	24.6	8.4	14.9	3.9	11.0	4.5	4.5	0.3	0.3	2.9	0.6	1.9
Female 18 - 29	(236)	70.2	52.8	41.1	20.1	16.5	20.1	19.4	12.3	17.8	6.8	4.9	10.0	4.9	5.5	6.1	1.6	0.6	1.0
Female 30s	(312)	69.6	55.0	45.6	26.9	20.7	23.3	21.7	24.3	17.8	23.6	8.4	12.3	12.3	8.4	15.9	3.6	1.0	1.0
Female 40s	(383)	68.0	53.1	48.9	24.3	23.3	18.8	16.8	24.9	15.5	25.2	11.0	7.8	4.9	3.6	7.4	1.9	1.3	1.3
Female 50s	(343)	68.3	62.8	56.6	24.3	29.8	27.2	19.1	18.8	13.6	16.2	14.9	8.7	6.5	5.8	0.6	2.6	2.3	1.6
Female 60s	(346)	53.1	55.0	45.0	23.6	30.4	27.8	17.5	20.4	11.3	9.7	17.2	11.3	5.8	2.9	1.3	1.3	0.3	2.3
Female 70s	(311)	57.6	54.4	47.9	25.2	39.5	31.1	27.8	24.6	15.2	5.8	17.5	9.7	4.9	1.6	0.3	3.2	1.0	2.3

* Sorted by total score

3.3 Retort pouch curry eating behavior

In this section, we will examine the results of the eating situation of retort pouch curry. First, we will check the retort pouch curry eaters one purchased. In this survey, since eating by oneself is a condition for the target person in the first place, we asked who are eating the products other than themselves (Figure 8).

Figure 8. Eaters of retort pouch curry products which a respondent purchased



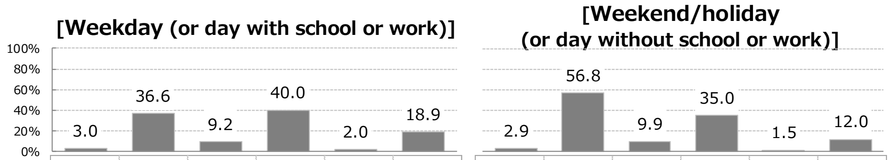
	n=	Wife / Husband	Child (Pre-schooler)	Child (in elementary school)	Child (in junior high school)	Child (finished junior high school)	Parent	Grand-parent	Other family member or relative	Friend / partner	Other	No other person eats them (only myself)
Total	(3,708)	51.8	7.3	8.1	3.7	17.8	12.4	0.7	4.3	1.8	0.6	28.4
Male 18 - 29	(239)	18.4	5.8	1.9	0.3	0.3	29.4	3.2	11.3	4.2	0.3	49.2
Male 30s	(249)	46.6	21.0	15.9	2.3	0.6	18.4	1.6	4.2	3.6	0.6	31.7
Male 40s	(338)	44.7	9.4	16.5	10.4	12.9	14.9	0.3	3.6	1.0	0.6	36.6
Male 50s	(356)	42.7	1.0	5.2	3.6	22.0	10.7	-	2.6	1.3	0.3	42.4
Male 60s	(328)	53.7	0.3	-	-	18.4	7.8	-	1.3	-	0.3	38.2
Male 70s	(266)	65.0	0.3	1.6	1.0	18.4	1.3	-	2.6	0.3	0.6	30.1
Female 18 - 29	(236)	31.1	11.0	1.6	0.3	0.6	28.8	3.2	11.7	7.4	0.3	31.4
Female 30s	(312)	65.7	33.3	22.3	4.5	1.0	13.9	1.6	3.9	1.9	0.3	14.2
Female 40s	(383)	57.0	8.4	24.6	14.2	25.2	12.3	0.3	2.9	2.9	-	15.5
Female 50s	(343)	56.6	0.6	2.6	3.6	44.0	10.0	-	2.3	-	1.0	18.8
Female 60s	(346)	66.7	1.0	-	-	26.2	7.4	-	3.9	0.3	1.3	18.8
Female 70s	(311)	59.5	-	0.6	-	27.2	2.9	-	5.5	0.6	1.6	22.3

A little less than 30% of the total was that "only myself" would eat the purchased retort pouch curry. However, there was a big difference between men and women, and it was 30% or more for men in all age groups, while it was in the 10% range for women except for "18-29 years old" and "70s".Approximately 70% of the respondents other than the above have other eaters such as family members, including "spouse", "parent" in younger age groups, and young "child(ren)" such as preschoolers or elementary school children. The percentage of junior high school students and older "child(ren)" increases in their 40s and 50s or older.

Next, we will grasp the eating scene of the retort pouch curry. First, looking at the eating time zone by weekday or weekend/holiday (Figure 9). On weekdays, "night (18:00 to 21:00)" and "around noon (10:00 to 15:00)" compete at around 40%. However, especially for men in their 50s or younger, the percentage of "around noon" is lower, and for both men and women, "around noon" is higher when they are in their 60s or older. On the other hand, 19% of the respondents said they would not eat on weekdays, and the score exceeded 20% among employees (public servants, office workers, part-time employees).

On holidays, "around noon" was high at 57%, followed by "night" at 35%. Compared to weekdays, the difference between age groups and occupations is smaller, but the rate of eating at "night" is higher for both men and women in their 50s or younger than in their 60s or older.

Figure 9. Eating time zone of retort pouch curry products



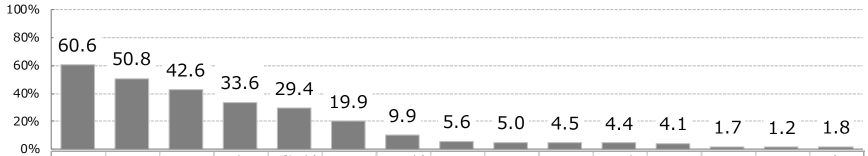
		n=	Weekday: Morning (5 ~ 10 a.m.)	Weekday: Around noon (10 a.m. ~ 3 p.m.)	Weekday: Evening (3 ~ 6 p.m.)	Weekday: Night (6 ~ 10 p.m.)	Weekday: Midnight (10 p.m. ~ 5 a.m.)	Weekday: Don't eat on week-days	Weekend/holiday: Morning (5 ~ 10 a.m.)	Weekend/holiday: Around noon (10 a.m. ~ 3 p.m.)	Weekend/holiday: Evening (3 ~ 6 p.m.)	Weekend/holiday: Night (6 ~ 10 p.m.)	Weekend/holiday: Midnight (10 p.m. ~ 5 a.m.)	Weekend/holiday: Don't eat on week-ends / holidays
Total		(3,708)	3.0	36.6	9.2	40.0	2.0	18.9	2.9	56.8	9.9	35.0	1.5	12.0
Gender * age group	Male 18 - 29	(239)	6.1	26.2	8.7	55.7	5.5	17.8	6.1	51.8	13.9	50.2	5.2	7.8
	Male 30s	(249)	4.5	19.7	8.4	56.0	3.9	21.0	4.9	56.6	10.7	47.2	2.9	8.7
	Male 40s	(338)	4.2	16.5	7.4	51.8	3.6	25.2	4.5	55.7	11.3	43.7	2.6	9.4
	Male 50s	(356)	3.2	20.4	8.4	50.8	4.5	21.4	2.3	52.1	10.0	46.3	2.9	8.1
	Male 60s	(328)	4.2	36.9	12.0	31.1	1.3	21.4	4.9	55.0	11.0	33.7	1.0	10.0
	Male 70s	(266)	3.2	52.8	17.2	29.1	-	4.2	1.9	53.4	14.6	25.6	0.3	9.4
	Female 18 - 29	(236)	1.6	27.8	6.1	52.1	1.6	20.4	1.6	54.4	8.7	37.9	1.3	14.9
	Female 30s	(312)	3.2	43.7	5.5	40.8	1.0	16.8	2.6	62.1	7.4	34.3	0.6	13.3
	Female 40s	(383)	2.3	33.3	8.1	33.7	1.3	30.4	3.2	63.4	8.4	31.4	1.0	12.3
	Female 50s	(343)	2.6	42.4	4.9	35.9	1.6	21.4	2.6	55.3	6.1	32.4	1.0	16.2
	Female 60s	(346)	1.6	55.7	9.4	28.2	-	14.6	1.0	62.5	8.1	21.0	-	16.8
	Female 70s	(311)	-	59.9	14.9	23.9	-	7.1	0.3	56.3	11.0	22.7	-	15.5
Occupation	Civil Servant	(119)	3.4	16.0	7.5	53.5	0.7	26.7	1.6	56.2	8.6	42.3	0.6	12.5
	Company employee/ manager/officer	(1,325)	4.5	19.1	6.7	49.4	3.6	25.9	4.9	55.1	9.9	40.4	2.6	11.1
	Self-employed / freelance	(245)	2.5	44.2	12.9	38.2	2.7	10.1	2.0	52.7	12.4	35.0	2.7	13.4
	Housemaker	(832)	1.3	58.9	9.3	24.6	0.1	14.7	0.7	62.9	7.5	24.7	0.2	15.3
	Part time employee	(449)	2.5	36.2	7.0	36.8	1.6	23.7	2.8	60.2	7.5	34.5	0.6	10.7
	Student	(105)	2.2	28.7	9.1	61.8	3.7	13.2	2.9	44.4	12.8	50.8	3.7	14.7
	Other occupation	(127)	3.4	39.7	13.2	37.4	1.8	17.6	3.4	57.7	13.1	32.2	1.8	11.3
	Unemployed / Retired	(507)	2.5	47.8	14.7	37.0	0.6	7.3	2.3	52.8	13.7	34.2	0.6	8.9

Secondly, the following results were obtained when examined from the viewpoint of eating scenes and situations rather than the eating time zone (Figure 10). Overall, "when I want to finish with a simple meal" was the highest at 61%, indicating that retort pouch curry is a good match when you want to make the meal itself simple. Next was "when cooking is tiresome" (51%), which can be the result that retort pouch curry is a good match when there is a need to save the trouble of cooking. This is equal to or higher than "when I want to finish with a simple meal", especially for women in their 40s or younger. The fourth highest item, "when I'm busy," is considered to have a similar background factor.

On the other hand, the 3rd place was "when I wanted to eat curry at home immediately". This can be a case that when there is a need to eat curry, you fulfill your need by choosing retort pouch curry instead of cooking from curry roux or purchasing a curry and rice bento, etc.

In any case, it can be interpreted that the retort pouch curry provides convenience when a respondent wants to save time and labor of cooking and procurement.

Figure 10. Eating time zone of retort pouch curry products



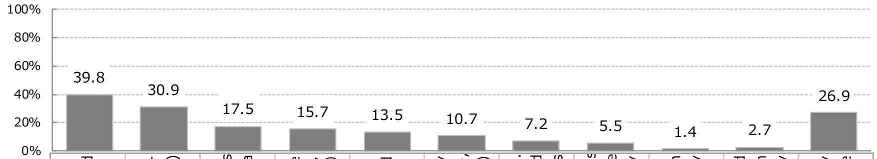
		n=	When I want to finish with a simple meal	When cooking is tiresome	when I wanted to eat curry at home immediately	when I'm busy	When I'm alone / when my family is absent	When there were no ingredients to cook	when I want to eat curry with a different taste and flavor from I usually eat	When the family eats different things	when I want to eat something that gives me energy	When a normal meal is not enough / When I want to increase side dishes	when I want to eat something that warms my body	When I don't have much appetite	When I want to eat nutritious food	When I don't want or can't eat hard food	Other
Total		(3,708)	60.6	50.8	42.6	33.6	29.4	19.9	9.9	5.6	5.0	4.5	4.4	4.1	1.7	1.2	1.8
Gender * age group	Male 18 - 29	(239)	49.8	48.5	37.9	33.7	23.3	19.4	9.1	5.2	11.3	9.1	10.4	6.8	6.5	4.2	0.6
	Male 30s	(249)	54.7	44.7	34.3	33.7	23.6	18.1	12.6	4.9	9.1	7.8	6.5	3.6	4.5	1.0	1.0
	Male 40s	(338)	56.6	44.0	43.7	31.7	25.6	19.7	7.8	4.2	6.5	2.9	5.2	3.9	2.6	1.6	1.6
	Male 50s	(356)	58.9	42.4	45.0	27.5	27.2	13.9	6.5	2.6	3.2	7.4	3.9	2.6	1.3	1.3	1.0
	Male 60s	(328)	56.0	37.5	45.6	23.0	26.2	14.2	9.4	3.2	2.9	3.9	3.6	6.5	1.0	1.3	2.3
	Male 70s	(266)	63.4	35.6	51.8	19.4	32.4	15.5	8.4	4.9	1.3	1.9	3.2	8.1	-	0.3	2.3
	Female 18 - 29	(236)	63.4	64.7	39.8	39.5	28.8	20.7	7.4	3.9	4.9	4.2	2.9	2.3	0.6	1.0	0.3
	Female 30s	(312)	66.3	70.2	37.2	42.1	35.9	30.7	13.3	9.1	6.5	4.9	5.2	1.9	2.3	1.6	1.3
	Female 40s	(383)	66.7	63.4	40.5	44.7	30.7	25.9	12.0	6.8	3.9	4.9	2.9	2.6	0.6	-	1.0
	Female 50s	(343)	67.0	60.2	42.7	38.2	35.0	25.2	12.0	9.4	3.6	4.9	3.9	3.9	0.6	1.6	3.2
	Female 60s	(346)	57.6	50.2	42.7	36.2	34.0	17.2	11.7	7.1	4.9	2.9	2.9	2.9	1.0	0.6	2.9
	Female 70s	(311)	62.8	46.6	47.6	31.7	27.2	17.2	8.1	4.9	4.9	1.0	4.2	5.8	0.6	1.0	3.6
Eating frequency of retort pouch curry	Once a week or more	(307)	58.0	45.3	49.7	35.1	26.5	24.2	14.1	10.9	16.6	13.1	13.2	10.4	6.2	5.1	1.9
	About 2 -3 times a month	(935)	62.6	49.0	49.1	33.7	28.4	22.0	10.2	5.9	6.3	5.2	5.9	5.6	1.9	1.7	2.1
	About once a month	(1,008)	61.9	51.8	44.6	36.5	27.6	21.5	9.4	4.4	4.2	3.0	3.4	3.8	1.6	1.1	1.7
	About once every 2 -3 months	(952)	60.5	54.3	38.0	33.9	32.9	16.1	9.4	5.2	2.5	3.1	2.6	2.5	1.0	0.2	1.3
	About once or twice a year	(505)	55.8	49.0	30.8	26.4	29.9	17.6	8.7	4.7	1.9	4.0	1.8	1.3	-	0.4	2.6

* Sorted by total score

Analyzing the tendency by eating frequency, respondents with high eating frequency tend to consider retort pouch curry as more various aspects. For instance, functional aspects such as "when I want to eat something that gives me energy" and "when I want to eat something that warms my body", or from the perspective of increasing the lineup in the curry category such as "when I want to eat curry with a different taste and flavor from I usually eat."

Next are the results of the question asking how they eat retort pouch curry (garnish, topping, etc.) (Figure 11). As a side dish or garnish, "salad" is 40% and "garnish (such as fukujin-zuke, scallions, etc.)" is 31%, so there are many cases where some kind of vegetables are prepared. As for additional ingredients and toppings for the curry itself, cases such as "add other ingredients" (16%) and "cheese or butter" toppings (11%) can be seen as customizing to their likings. The higher the frequency of eating retort pouch curry, the higher the implementation rate for each item, which illustrates that they are devising their own way of eating.

Figure 11. The way of eating retort pouch curry (garnish, topping, etc.)



		n=	Eat with salad	Serve with garnish (fukujin-zuke, scallions, etc.)	Eat with noodles such as udon, soba, pasta	Add other ingredients to the retort pouch curry (vegetables, meat, fried food, eggs, etc.)	Eat with naan or bread	Top the curry with dairy products such as cheese, butter (excluding milk)	Use like curry sauce e.g. sprinkling on fried foods and stir-fried foods	Add seasonings such as sauce and soy sauce to the retort pouch curry	Add milk to the retort pouch curry	Add other ingredients and toppings to the retort pouch curry	Do not eat the way mentioned above
Total		(3,708)	39.8	30.9	17.5	15.7	13.5	10.7	7.2	5.5	1.4	2.7	26.9
Gender * age group	Male 18 - 29	(239)	27.2	21.0	19.1	18.4	20.1	12.9	12.6	8.4	3.2	3.6	30.7
	Male 30s	(249)	37.9	25.6	16.2	11.7	13.3	14.2	11.3	10.0	3.2	1.9	30.4
	Male 40s	(338)	27.8	21.7	12.9	13.6	8.4	9.4	8.7	6.1	1.0	-	40.1
	Male 50s	(356)	36.6	29.1	19.1	16.8	9.4	5.5	8.1	8.7	0.3	2.6	34.0
	Male 60s	(328)	32.4	31.7	23.0	18.4	12.9	5.2	7.8	7.8	0.3	2.6	27.5
	Male 70s	(266)	41.4	45.0	15.9	18.8	9.4	2.6	3.6	4.2	1.3	2.3	22.3
	Female 18 - 29	(236)	31.1	18.8	15.2	12.6	11.7	13.6	5.5	1.6	2.3	2.3	34.6
	Female 30s	(312)	38.8	21.0	12.9	16.2	16.2	17.8	5.5	3.2	1.0	1.0	31.1
	Female 40s	(383)	41.1	27.2	16.2	15.5	15.2	16.5	6.8	2.3	1.0	2.3	26.2
	Female 50s	(343)	46.9	32.0	22.3	15.9	15.9	12.9	6.1	4.5	1.9	4.2	22.7
	Female 60s	(346)	56.6	42.4	18.1	14.6	15.5	9.7	5.2	5.5	1.3	4.9	13.6
	Female 70s	(311)	53.4	51.8	17.8	15.2	15.2	8.7	6.1	4.2	1.0	5.2	12.0
Eating frequency of retort pouch curry	Once a week or more	(307)	42.1	30.3	28.8	24.8	20.6	17.8	18.9	13.7	4.8	3.1	17.8
	About 2 -3 times a month	(935)	43.5	35.5	18.9	20.3	14.3	13.0	10.1	6.5	1.5	2.7	21.7
	About once a month	(1,008)	41.0	31.7	16.8	14.4	13.4	9.8	5.8	4.6	1.3	2.7	25.3
	About once every 2 -3 months	(952)	38.4	28.3	16.0	12.4	12.2	9.2	4.4	4.2	0.7	2.9	31.0
	About once or twice a year	(505)	31.5	26.3	12.0	10.2	10.7	6.9	2.6	2.7	0.4	2.2	37.4

* Sorted by total score

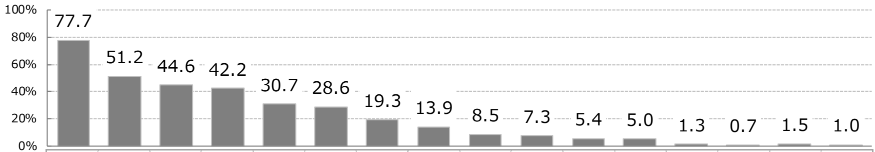
3.4 Evaluation and needs of retort pouch curry

We have outlined consumers' perception and behavior regarding the purchase and eating of retort pouch curry up to the previous section. In this section, we will consider how consumers evaluate retort pouch curry products. As a premise, what kind of image do users have toward the overall product category of retort pouch curry?

As shown in Figure 12, the highest score among the image items presented was “easy to cook” (78%), the majority of respondents agreed on convenience of cooking. The next is "easy to obtain (sold everywhere)" (51%), which demonstrates many consumers have an image of market penetration. "Reasonable price" scores 45%, which shows about half of the respondents except for female seniors answered that the cost was applicable. The followings are also positive image items regarding the taste, quantity, and lineup of products, such as "taste is good," "just the right amount," and "have many types of products," etc.

On the other hand, the score for negative image items was low overall. This result implies that the current products are highly satisfying, but the relatively high rate of negative items was "Amount of ingredients is small" (19%), which was the highest, and "Total quantity is small" was also mentioned at 9%. In particular, the less the purchase frequency, the higher the percentage of "Amount of ingredients is small".

Figure 12. Product category image of retort pouch curry



		n=	Easy to cook	Easy to obtain (sold everywhere)	Reasonable price	Taste is good	Just the right amount	Have many types of products	Amount of ingredients is small	Never get bored	Total quantity is small	Amount of ingredients is large	Taste is strong	Poor cost performance (expensive)	Have few types of products	Taste is weak	Other	Nothing in particular
Total		(3,708)	77.7	51.2	44.6	42.2	30.7	28.6	19.3	13.9	8.5	7.3	5.4	5.0	1.3	0.7	1.5	1.0
Gender * age group	Male 18 - 29	(239)	61.2	47.2	53.4	46.6	32.7	22.0	16.2	22.3	7.8	12.6	5.8	5.2	2.6	2.9	1.3	1.6
	Male 30s	(249)	65.4	42.7	44.7	49.5	27.2	26.5	13.6	24.3	8.4	13.6	5.2	5.8	1.9	2.3	1.0	2.3
	Male 40s	(338)	71.2	46.3	52.1	45.6	26.9	24.3	15.2	17.8	11.7	10.4	3.9	5.5	1.0	0.3	0.6	1.0
	Male 50s	(356)	78.6	46.3	49.2	40.8	27.2	27.5	16.2	13.3	11.7	4.5	2.3	5.5	0.6	1.0	2.3	1.0
	Male 60s	(328)	78.3	48.5	46.9	37.5	29.1	29.8	19.4	14.2	11.7	9.1	3.6	5.2	1.0	-	1.9	1.6
	Male 70s	(266)	84.8	52.8	52.1	36.9	37.2	35.9	16.5	12.6	7.4	4.9	5.8	2.9	0.3	1.3	0.3	0.3
	Female 18 - 29	(236)	82.8	56.3	53.1	53.4	24.6	25.9	16.2	10.7	4.2	6.5	5.2	3.6	0.6	-	1.6	0.3
	Female 30s	(312)	85.1	57.9	46.3	47.9	31.4	33.0	20.7	12.0	7.1	4.5	7.1	5.2	1.0	0.3	1.0	0.6
	Female 40s	(383)	81.9	50.5	43.7	39.2	23.3	24.6	21.7	11.3	10.4	5.2	5.2	4.5	1.0	0.6	0.6	0.3
	Female 50s	(343)	81.6	58.3	39.5	42.4	34.0	28.2	24.3	12.3	7.1	7.1	8.7	5.5	1.6	0.3	2.9	0.3
	Female 60s	(346)	77.3	50.2	29.4	37.9	35.3	31.4	20.7	11.0	8.1	7.4	5.2	5.8	1.6	0.3	2.3	1.3
	Female 70s	(311)	79.3	56.6	30.7	34.3	40.8	34.0	27.2	9.1	4.5	4.2	7.8	5.2	2.3	0.3	1.9	1.3
Purchase frequency of retort pouch curry	Once a week or more	(142)	72.1	54.0	46.2	64.0	39.9	35.8	9.1	44.0	6.2	20.7	3.5	4.3	2.2	1.6	0.8	-
	About 2 -3 times a month	(661)	74.3	55.0	50.9	53.2	41.6	33.8	15.5	23.5	9.0	13.7	7.0	4.7	1.3	0.8	0.9	0.6
	About once a month	(1,088)	77.5	49.4	46.8	45.1	32.3	30.8	18.0	14.1	7.0	6.9	4.7	3.9	1.6	0.9	1.2	1.1
	About once every 2 -3 months	(1,214)	80.3	51.8	44.6	38.6	26.6	26.4	21.4	9.4	9.0	4.6	5.0	4.6	1.0	0.7	1.8	0.9
	About once or twice a year	(603)	78.1	48.2	33.2	27.1	22.1	22.0	23.8	5.2	10.6	3.3	6.2	8.4	0.9	0.3	2.3	1.5

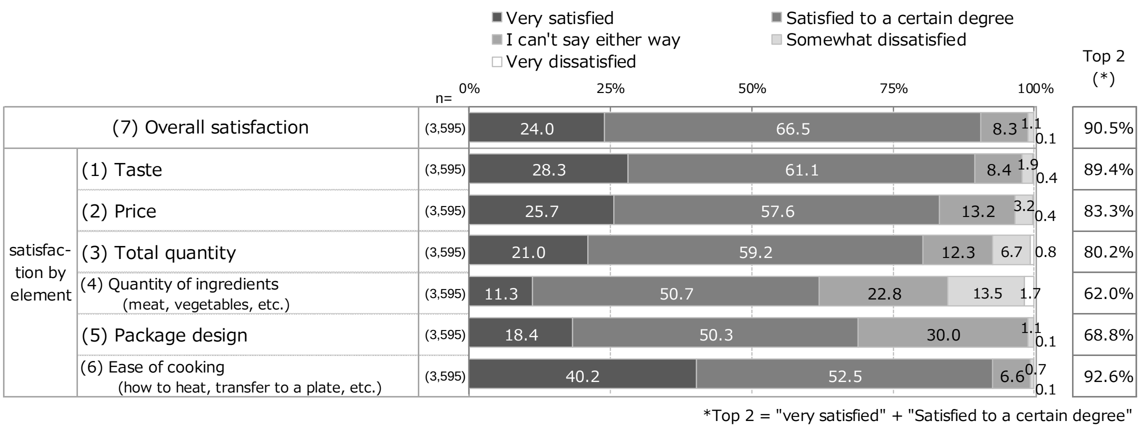
* Sorted by total score

Now we will analyze the results of the questions of satisfaction. Regarding satisfaction, we asked the following 6 factors of satisfaction by element in (1) to (6), and the overall satisfaction in (7) using the 5-level Likert scale as shown in Figure 13. Even in one respondent's answer, the evaluation differs depending on the product, so we asked the respondents to answer about the product they ate the most in the past year. Therefore, when looking at the results as a whole, it can be assumed to be an approximate microcosm of the overall situation of the retort pouch curry market.

For the degree of satisfaction by element, (1) the degree of satisfaction with "taste" is high, and the overall value is "very satisfied" with 28%, which is the highest satisfaction excluding the items related to cooking methods ((6) "ease of cooking"). The rate of "very satisfied" was higher for both men and women as they were younger, but the total score up to "satisfied to a certain degree" was around 90% regardless of age.

As to (2) "price", "very satisfied" was 26%, and when "satisfied to a certain degree" was added up, it is 83%, the overall satisfaction was also high. In terms of the quantity, the satisfaction level was slightly lower than the taste and price. In the (3) "total quantity", "very satisfied" was 21%, and total of "satisfied to a certain degree" was 80%. Furthermore, regarding (4) "quantity of ingredients", "very satisfied" was lower than other items at 11%, and the total of "satisfied to a certain degree" was also the lowest at 62%. About 15% of the respondents answered "somewhat dissatisfied" + "very dissatisfied", which is consistent with the fact that "Amount of ingredients is small" was high in the negative item in the product category image question examined earlier. (7) Overall satisfaction is very high at 24% for "very satisfied" and 91% for total of "satisfied to a certain degree".

Figure 13. Satisfaction with the retort pouch curry product eaten most in the past year

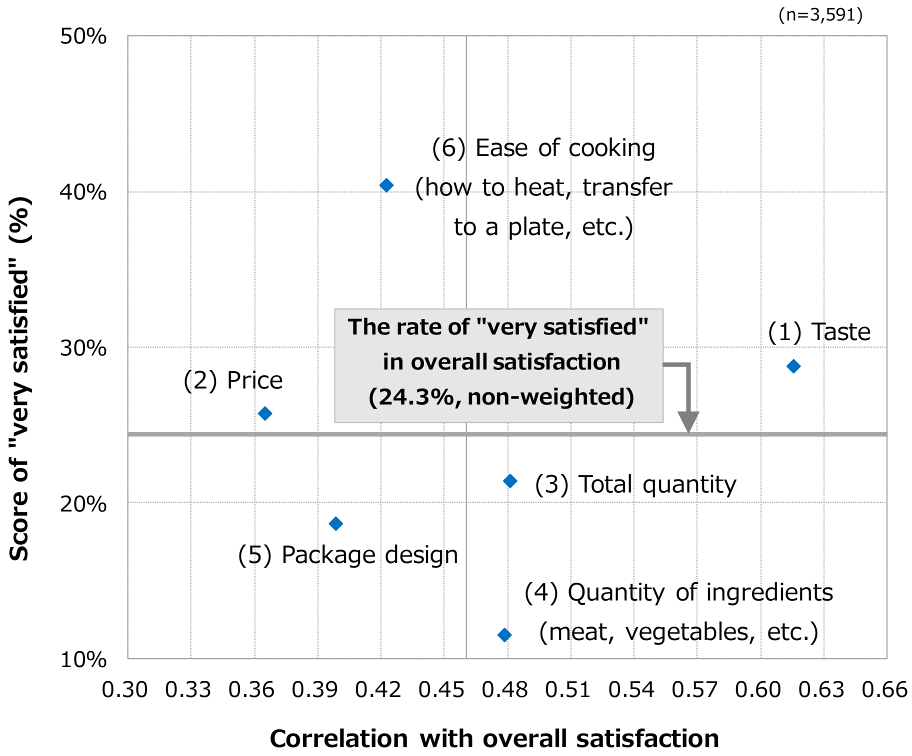


In order to confirm the relationship between elemental satisfaction (1) to (6) and overall satisfaction, we created a CS Portfolio map in Figure 14. In the figure below, the vertical axis shows the percentage of satisfaction and the horizontal axis shows the correlation coefficient between the satisfaction of each element and the total satisfaction. Here, each variable is calculated using the score of "very satisfied" (the scores on this map are not weighted).

The strongest correlation with overall satisfaction is (1) "taste" and currently a certain degree of satisfaction is obtained. Next, there is a moderate correlation between (3) "total quantity " and (4) "quantity of ingredients", but the current satisfaction level is not high, and it can be regarded as a consumer's need for improvement. (2) “Price” is emphasized by many respondents at the time of purchase, but the correlation is relatively low when viewed as an element of product evaluation.

In addition, the future intent to continue eating the most eaten products at present, 44% answered "I strongly agree" (= I want to eat it continuously), total of "Somewhat agree" was 92% (charts are omitted). The higher the frequency of eating retort pouch curry, the higher the score of "I strongly agree".

Figure 14. CS portfolio of satisfaction with a retort pouch curry product

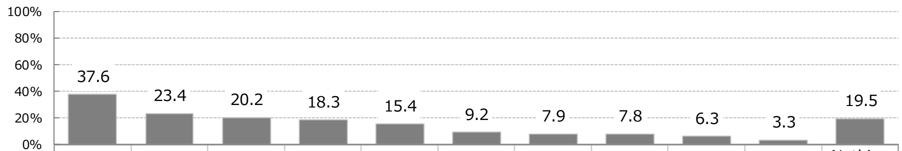


Lastly, what sort of expectations and improvements do consumers want for retort pouch curry in the future? Looking at the results of this question (Figure 15), other than "Price", "Increase in total quantity", "Further elaboration on materials/ingredients", "Increase variation in spiciness" and "increase amount of ingredients" are ranked high, which are related to important factors in purchase and the elimination of dissatisfaction points that we have examined so far.

We asked about the specifications in the next question for those who chose "Easier-to-use packages". The most common was "Easy to open the bag", followed by "A bag made of a material that is easy to transfer to a plate without leaving curry", "A bag with a shape that makes it easy to pour curry into a plate" and "It's easier to heat in the microwave (e.g. being able to heat the whole box, etc.)."

"Price" was ranked first in terms of both important points when purchase and improvement requests, but the current level of satisfaction was also quite high. What price level is acceptable among users?

Figure 15. Expectations and improvements for retort pouch curry products



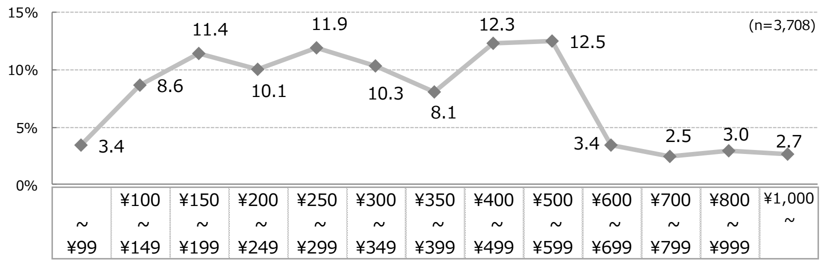
		n=	More reason-able price	Increase in total quantity	Further elabora-tion on materials, ingredi-ents	Increase variation in spiciness	Increase amount of ingredi-ents	Easier-to-use packages	Reduc-tion of garbage	Can eat delicious-ly without heating	Available at more stores and sites	Other	Nothing in particular / I don't know
Total		(3,595)	37.6	23.4	20.2	18.3	15.4	9.2	7.9	7.8	6.3	3.3	19.5
Gender * age group	Male 18 - 29	(225)	49.8	33.7	15.8	17.5	10.0	16.8	12.0	10.7	9.3	2.1	13.4
	Male 30s	(241)	42.1	33.8	18.4	18.7	13.4	7.7	7.7	11.4	8.7	1.0	12.0
	Male 40s	(330)	36.9	36.2	15.0	17.3	12.0	8.0	8.0	7.6	4.3	3.3	20.6
	Male 50s	(347)	44.2	26.9	19.6	22.6	10.6	5.6	6.6	4.0	4.3	5.0	17.6
	Male 60s	(315)	37.4	27.6	20.2	22.2	17.5	4.7	5.7	7.1	4.0	3.0	20.2
	Male 70s	(258)	32.8	21.7	25.1	19.4	16.4	8.4	6.7	8.0	4.0	3.3	21.7
	Female 18 - 29	(226)	43.2	21.3	12.2	16.9	17.2	8.8	8.1	4.7	7.4	1.7	18.2
	Female 30s	(305)	40.7	17.2	18.2	22.8	14.9	9.3	9.3	7.3	8.9	4.3	17.2
	Female 40s	(374)	39.1	17.2	15.9	13.2	19.5	9.9	11.3	7.9	5.6	3.6	18.2
	Female 50s	(337)	35.3	21.5	21.8	17.8	18.5	11.6	8.6	10.2	6.9	3.3	20.1
	Female 60s	(336)	30.7	17.0	30.7	13.7	14.0	11.7	5.0	7.0	9.7	4.7	22.7
	Female 70s	(302)	24.0	11.0	27.7	18.3	19.0	9.7	6.0	8.7	3.3	2.3	29.0
Eating frequency of retort pouch curry	Once a week or more	(304)	43.3	32.4	23.1	23.1	13.4	14.2	11.0	13.8	9.2	4.0	11.0
	About 2 -3 times a month	(925)	39.5	26.1	22.0	21.2	17.4	9.1	8.9	7.8	6.7	2.6	15.6
	About once a month	(991)	34.3	19.7	20.9	16.7	14.8	9.9	6.7	7.7	6.4	3.1	20.6
	About once every 2 -3 months	(915)	38.5	23.0	19.0	17.5	15.7	6.4	7.9	7.0	5.3	3.5	22.9
	About once or twice a year	(461)	35.6	20.7	15.9	14.5	13.1	10.3	6.3	5.6	5.1	4.0	23.9

* Sorted by total score

The answers were dispersed, as in Figure 16, but the median (50th percentile) was "300-349 yen". The price for the 25th percentile was "200-249 yen" and the price for the 75th percentile was "400-499 yen". If you look at the median (300-349 yen), as the current average purchase price is 165 yen[4], you can see that it is acceptable up to a level considerably higher than the current level.

Since this question asks about an acceptable maximum price, it cannot be said that all retort pouch curry products purchased by users are willing to go up to this price, but it can be said that there is some room for higher value-added products.

Figure 16. Maximum acceptable price of a retort pouch product



25th percentile	¥200 ~ ¥249
50th percentile (median)	¥300 ~ ¥349
75th percentile	¥400 ~ ¥499

4 According to the purchase data of retort pouch curry products by QPR, from January 1 to December 31, 2019 (price including tax).

4. Discussion

In this paper, we have grasped the actual purchasing behavior mainly focusing on retort pouch curry products from the viewpoint of how consumers position retort pouch curry in Japan to purchase and consume it. From this result, we will consider why retort pouch curry has become a standard, and propose the direction of strategies that commoditized retort pouch curry products should take when trying to de-commoditize in the future.

In this survey, we grasped the actual state of the purchasing behavior focusing on what kind of purchasing behavior and eating behavior consumers had for retort pouch curry, and what kind of perception and evaluation they had for the product category of retort pouch curry and individual products. Focusing on the points, I grasped the actual state of the purchasing behavior.

The most important point when purchasing retort pouch curry is "price", and the preference factors such as "taste of my choice" and "degree of spiciness" are also high rate. Next are brand elements and quantitative elements such as "total quantity (net weight)", "manufacturer", and "quantity of ingredients". By gender, women are more likely than men to consider family preferences (family factors). By age group, the higher the age group, the more important the "manufacturer" tends to be. This means focusing on the corporate brand. And regarding the eating scene of retort pouch curry, that is, when to eat retort pouch curry, it is interpreted that retort pouch curry provides convenience when you want to save time and labor of cooking and procurement. it can.

Looking at the results by frequency of eating, it was found that those who ate frequently positioned retort pouch curry in terms of functionality and means of increasing the lineup in the cooking category of curry. As for how to eat, it was found that in many cases they ate with vegetables as a side dish, and that they customized the additional ingredients and toppings to their liking. This means that the more frequently people eat, the higher the rate of implementation, and they devise their own way of eating.

In terms of consumers' evaluation and needs for retort pouch curry, in terms of what kind of image users have of the current retort pouch curry, there are many answers regarding cooking convenience, and at the same time, many consumers have an image that it is sold everywhere. About half of the people have an image of "reasonable" cost performance. In addition, although the taste, quantity, lineup, etc. of the product are relatively positive images, it was found that many consumers refer to the small amount of ingredients and quantity as a negative image.

However, in terms of satisfaction by element in retort pouch curry, satisfaction such as "taste", "price", "total quantity" and "quantity of ingredients" are high. The intent to continue eating the most eaten product at present is also high, and the higher the frequency of retort pouch curry eating, the higher the percentage of "I strongly agree". From this, it can be seen that the satisfaction level of the current retort products is generally high, but if there are any dissatisfaction points, they are "price", "total quantity" and "quantity of ingredients".

As a consideration of why retort pouch curry has become a standard product, it can be approached from the "relationship between overall satisfaction and elemental satisfaction" that was grasped above. As previously mentioned, in addition to the fact that many consumers are basically purchasing the current retort pouch curry products, the fact that they are satisfied to some extent (discussed in Section 3.4) seems to be a factor. As mentioned above, the overall and elemental satisfaction of the retort pouch curry itself is very high. Regarding dissatisfaction points and improvement points, it is at the level of "if you dare to mention it." It is considered that such stable purchasing behavior and eating behavior are proof that retort pouch curry could become a standard product.

Finally, we would like to mention the direction of the strategy that retort pouch curry products should take in the future in the mature market that is currently becoming a commodity. The direction of the product can be solved by paying attention to the dissatisfaction points that consumers think. As mentioned above, in addition to the fact that many consumers are basically purchasing the current retort pouch curry products, the fact that they are satisfied to some extent (above) seems to be a factor. As mentioned above, the overall and elemental satisfaction of the retort pouch curry itself is very high.

At present, the main dissatisfaction points that consumers have regarding retort pouch curry products are "price", "increase in content / ingredients", "quality of materials", and "increasing variation of spiciness" and so on. In addition, convenience from the viewpoint of packaging and cooking (ease of use of the package, ease of cooking) is also required. For this reason, as a direction for further growth of retort pouch curry in the future, basically, customers will tolerate relatively expensive price ranges as long as they meet the needs that solve the above dissatisfaction points. In particular, by developing new products that pursue a full range of high-quality and large-quantity ingredients and offering them in a price range that is commensurate with this value, it is believed that de-commoditization can be achieved.

However, there are some limitations to the presentation of this direction. The recommendations from the results of this survey are still in the development stage and cannot always be generalized. In addition to the findings from this survey result, further in-depth survey analysis should be conducted. In spite of limitations, it is recommended by this result, and we believe that further research will generalize the direction proposed this time.

References

[1] Aoki, Y. (2011). *kati kyousou zidai no burando senryaku datu komodhithi ka he no tyousen.* [Brand Strategy in the Age of Value Co-creation]. Tokyo, Japan: Minerva Shobo (in Japanese).

[2] DIAMOND Chain Store (2020). *Category Focus: Increased demand for curry, ruu curry, and retort pouch curry under the influence of COVID-19*". Retrieved from https://diamond-rm.net/sales-promotion/61177/

[3] Japan Food Newspaper (2020). *Curry Special: Impact of COVID-19: Rapid Expansion of Retort Demand: Responding to New Changes*. Retrieved from https://news.nissyoku.co.jp/news/takagiy20200623093657928

[4] Kusunoki, K. & Akutsu, S. (2006). *kategori-inobesyon : datu komodhithi ka no ronri*, [Category Innovation: The Logic of De-commoditization]. organizational science. Vol.39(3), pp.4-11. Tokyo, Japan: Hakuto shobou (in Japanese).

[5] Nobeoka, K., Ito, M. & Morita, K. (2006). *komodhithi ka ni yoru kati kakutoku no sippai-dezitaru kaden no zirei*. [Failure to acquire value due to commoditization: Examples of digital home appliances]. In Sakakibara, K. & Koyama, S. (Eds.), [Innovation and competitive advantage]. Tokyo, Japan: NTT Publising Co., Ltd. (in Japanese).

[6] Onzo, N. (2007). *komodhithi ka sizyou no ma-kethingu ronri.* [Commoditized market marketing logic]. Tokyo, Japan: Yuhikaku (in Japanese).