

THAI CONSUMERS ACCEPTABILITY OF JAPONICA RICE FROM NORTHERN THAILAND

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Abstract: Japonica rice in the domestic market is mainly produced through the contract farming system in northern Thailand. Thai consumers have misunderstood that Thailand cannot cultivate Japonica rice with good quality. This study aimed to analyze the acceptability of Thailand's Japonica rice from the perspectives of Thai consumers. Its specific objectives were to investigate the consumers' consumption behaviors for Japanese cuisine and to evaluate consumer preferences of different Japonica rice choices and attitudes towards Japonica rice consumption. Data were collected from 385 respondents in Bangkok using the purposive sampling method. The results indicated that respondents' consumption behavior of Japanese cuisine in Bangkok was increasing. Analyzing the preference of different Japonica rice choices found that the respondents preferred JR1 (from Japan), JR3 (Thailand) and JR2 (from Vietnam), in descending order. JR2 attributes especially smell and soft sticky texture were like JR3. However, JR3 shared similar qualities to JR1 in terms of smell, flavor and soft sticky texture. JR3 can be a good alternative choice for Japanese restaurant owners and consumers. In addition, the higher market price of JR1 creates a competitive opportunity for JR3 in the domestic market. Moreover, their attitudes towards domestically grown Japonica rice consumption was also positive.

Keywords: consumer acceptability, preference, domestic Japonica rice, behavior.

I. INTRODUCTION

Currently, most Japonica rice in the domestic market originated from northern Thailand, which comprises DOA1 (from Sasanishiki strain) and DOA2 (from Akitakomachi strain) Japonica rice varieties. They were developed from seeds of original Japanese rice from Japan by the Chiang Rai Rice Research Center (CRI). Such Japonica rice were produced through the contract farming (CF) system with rice mill to control the quality of products. Currently, the private sector or rice mills promote the cultivation of Japonica rice in the area such as Chiang Rai Province, Chiang Mai Province and Lamphun Province about 30,000 rai (1 rai = 0.16 ha) (Chiang Rai Rice Research Center, 2018).

Thailand imported Japanese rice from Japan, Australia, and Vietnam. In 2018, the import values were 26.57, 107.46 and 20.53 million THB, respectively. There are an increasing proportion of imports every year (The Customs Department, 2019). Such an increasing volume of Japanese rice from Japan, Australia, and Vietnam indicated that the trend of Japanese rice consumption in the domestic market has continuously increased.

At present, the Japonica rice market in Thailand is found that Japonica rice from Australia is also imported for flour or other non-consumption purposes. Japonica rice from Vietnam is widely consumed in the mass market due to its cheaper price. In fact, the value of Japanese cuisine business depends on the mass-produced type of Japanese restaurants that set the selling price at low to medium levels. As for Thailand's Japonica rice (THJR), it is consumed in the high-end market

because of the quality of rice. This implies that Thailand has a great potential to produce Japonica rice for domestic consumption. However, the owners of deluxe Japanese restaurants in Thailand tend to cook Japanese cuisine with food ingredients from Japan, including imported Japanese rice to maintain an authentic Japanese cuisine style and high quality of Japanese dishes.

Japanese cuisine consumers in Thailand can be categorized into three groups based on spending preferences. The first group is comprised of the high-end consumers which spend more than 400 THB/dish. The second group is the middle-class consumers who preferred dishes between 100-400 THB, and the last group is the mass consumers who paid less than 100 THB/dish (Positioningmag, 2011). As such, any consumer could easily access Japanese cuisine according to their price preferences.

Indeed, the perceptions of Thai consumers were still incorrect on Japonica rice. Most people did not know that Thailand can cultivate Japonica rice with good quality for nearly 60 years. They still mistake domestic Japonica rice as imported Japonica rice from foreign countries. Therefore, the main purpose of this study was to evaluate the perspectives of Thai consumers towards THJR consumption. To approach the purpose, this research has three objectives. The first one was to explore the consumer behaviors for Japanese cuisine consumption. The result will help estimate the trend of Japanese cuisine consumption in the future, which such behaviors should influence the Japonica rice consumption. In domestic market, except THJR, original Japanese rice imported from Japan and Japonica rice imported from Vietnam were also distributed. Therefore, the second aspect was to evaluate the consumer's preferences for different Japonica rice choices. The result will determine whether the THJR is comparable attributes to Japanese rice from Japan, and if it is comparable to Japonica rice from Vietnam. The last aspect was to evaluate their attitudes toward THJR consumption.

II. METHODOLOGY

This study was based on the primary data from 385 Thai consumers in Bangkok, all of whom were selected using the purposive sampling method. The authors selected the respondents based on three aspects. The first aspect is the respondents have consumed Japanese cuisine for five years continuously. The second aspect is the respondents preferred to eat Japanese cuisine next to Thai food. The last aspect is the target group who have ordered Japonica rice as an ingredient of dish.

In 2019, 1,993 Japanese restaurants were in Bangkok, which increased 16% compared to 2018. About 80% of all Japanese restaurants are in the shopping malls (Japan External Trade Organization, 2019). The consumers can easily access Japanese cuisine if they intend to eat out at restaurants. The average monthly expenditure per capita in Bangkok is approximately 11,500 THB, which is higher than those in other provinces (National Statistical Office, 2015). Therefore, the consumers there were selected as the target group in this study.

Table 1 presents the socioeconomic profile of the respondents. Male respondents accounted for 33.5% of all respondents, and female respondents were 66.5%. Their average age was 28 years old. About 81.6% of them were single, and 75.3% of all respondents graduated from the bachelor level, as well as 72.7% of them became salaryman. 87.2% of them had more than three members in their household. Moreover, 66.3% of them had monthly income of over 15,000 THB. In 2015, average monthly income per capita in Bangkok was approximately 17,000 THB (National Statistical Office, 2015).

The data used in this study were gathered from a questionnaire survey, which collected the information on background of respondents, and their consumption behaviors for Japanese cuisine, as well as their attitudes towards Japonica rice consumption. Moreover, the authors evaluated the respondents' preference for different Japonica rice choices by dividing them into small groups. Evaluation of Japonica rice preference has been designed as follows: JP1 was a representative of Japanese rice from Japan, which were bought from the shopping mall. JP2 was imported Japonica rice from Vietnam purchased from the importing company. JP3 represented domestic Japonica rice, which was taken from the biggest Japonica rice mill located in Chiang Rai Province.

The evaluation would compare between Japonica rice of Thailand, Japan and Vietnam based on the shape, color and overall preferences of both milled and cooked Japonica rice, and odor, flavor, soft sticky texture of cooked Japonica rice. Moreover, the authors also evaluated the highest sale price and consumer satisfactions from answers of respondents. The respondents could select only the best choice. While the authors evaluated the respondents' preferences for such Japonica rice, we had to control heat, odor, flavor and soft sticky attributes of cooked Japonica rice. The authors need to choose the optimal places for interviewing the respondents. These conditions were the limitations of this study.

The data of this study were arranged and analyzed by using descriptive statistics. The results and discussion are divided into three sections. The first section indicates the respondents’ consumption behaviors for Japanese cuisine. The second section evaluates the respondents’ preference for different Japonica rice choices. The last section evaluates their attitudes towards domestic Japonica rice consumption in the current domestic markets.

TABLE 1: Socioeconomic profile of respondents

Contents		Respondents (n=385)	
		n	%
1. Gender	Male	129	33.5
	Female	256	66.5
2. Age (year)	Less than 21	75	19.5
	21-25	78	20.3
	26-30	99	25.7
	31-35	71	18.4
	36-40	35	9.1
	More than 40	27	7.0
3. Marital status	Single	314	81.6
	Married	62	16.1
	Widower/Widow	9	2.3
4. Education level	Less than Bachelor	12	3.1
	Bachelor	290	75.3
	Master	83	21.6
5. Occupation	Personal business	3	0.8
	Salaried person	280	72.7
	Student	102	26.5
6. Household-size (person)	Less than 3	49	12.7
	3-4	225	58.4
	More than 4	111	28.9
7. Monthly income (THB)	Less than 15,001	130	33.8
	15,001-30,000	196	50.9
	30,001-45,000	33	8.6
	More than 45,000	26	6.7

III. RESULTS AND DISCUSSION

1. Respondents’ consumption behaviors for Japanese cuisine

Table 2 presents the respondents’ consumption behavior for Japanese cuisine. They preferred more (89.9%) Japanese cuisine consumption at Japanese restaurants than their home cooking. This is mainly because they did not have time for cooking by themselves, and they wanted to change dining environment. About 73.0% of respondents visited the Japanese restaurants once a month, which showed a higher percentage than the study of Thiangtam (2012), at 42% of all samples in Bangkok. The respondents patronized the following popular restaurant chains inside the shopping malls: Fuji, Oishi, and Shabushi restaurants, being 41.0%, 13.2%, and 10.1% of respondents, respectively. The respondents were most satisfied with the Fuji restaurants because of their good food flavor. Moreover, 72.7% of them were salaried employees and 84.7% had monthly incomes of 30,000 THB or less, as shown in the Table 1. These factors could affect their restaurant choices and the frequency with which they patronized such restaurant chains. Moreover, the findings revealed that 45.2% of them showed increasing Japanese cuisine consumption during the last five years. In addition, 37.4% of them maintained the same frequency during the same period. These findings indicated that the Japanese cuisine businesses in the domestic market, including domestic Japonica rice consumption would still grow further.

Moreover, the most concerns of respondents in selecting Japanese restaurants to consume Japanese cuisine were flavor, location of Japanese restaurant, quality of materials, and price of Japanese dish, accounting for 33.5%, 26.0%, 10.6%, and

10.4% of them, respectively. Thiangtam (2012) and Kasikorn Research Center (2014) also found that flavor of the cuisine was the most significant factor that influenced respondents’ selection of Japanese restaurant. Therefore, the quality assurance of food ingredients is essential.

TABLE 2: Respondents’ consumption behaviors for Japanese cuisine

Contents	Respondents (n=385)	
	n	%
1. Location of Japanese cuisine consumption	Eating out at Japanese restaurant (Every time)	346 89.9
	Sometime cook at my home	39 10.1
2. Meal of Japanese cuisine consumption	Dinner	216 56.1
	Lunch	169 43.9
3. Location of Japanese restaurant	Inside the shopping mall (three sequences)	352 91.4
	Fuji	158 41.0
	Oishi	51 13.2
	Shabushi	39 10.1
	Others	104 27.1
4. Frequency of Japanese cuisine consumption per month	Outside the shopping mall (stand-alone)	33 8.6
	Once	281 73.0
	Twice	52 13.5
	Thrice	52 13.5
5. People who influenced Japanese cuisine consumption	Friend	176 45.7
	Myself	117 30.4
	Family	74 19.2
	Spouse	18 4.7
6. Trend of Japanese cuisine consumption	Increased	174 45.2
	Same	144 37.4
	Decreased	67 17.4
7. Factors for selecting Japanese restaurants	Location	100 26.0
	Price	40 10.4
	Taste	129 33.5
	Brand image	20 5.3
	Quality of materials	41 10.6
	Menu	37 9.6
	Atmosphere	9 2.3
Advertisement	9 2.3	

2. Respondents’ preference for different Japonica rice choices

The preferences of respondents for the best Japonica rice were determined by asking them to choose from JP1 (Japanese rice from Japan), JP2 (Japonica rice from Vietnam) and JP3 (domestically grown Japonica rice or THJR) and are presented in Figure 1. The respondents were not informed the source of such JP choices before they were evaluated.

The results indicated that JP3 was chosen as second best in all aspects, followed by JP1. The outstanding attributes of JP3 that ranked close to JP1 included odor, flavor, soft sticky texture, which accounted for 31.4%, 32.7%, and 31.2%, respectively. Clearly, the respondents preferred all attributes of JP1 than the other choices, especially shape and color of grain. In fact, JP1 is an original Japanese rice variety from Japan which have been subjected to more “favorable” factors such as quality of seeds, climate, habits of farmers, and so on. The highest price evaluation also agreed with the real market prices, which are JP1, JP3, and JP2, in descending order. Moreover, 17.7% of all respondents indicated that the colors of all cooked Japonica rice grain types were indistinguishable. About 22% of all respondents preferred JP2 attributes, especially soft sticky texture and odor. These aspects were not more different when compared to JP3, accounted for 9.1% and 9.3% difference, respectively. Moreover, their preferences for milled JP2’s shape and color features were like those of JP3. However, they liked the shape and color of cooked JP3 better than JP2.

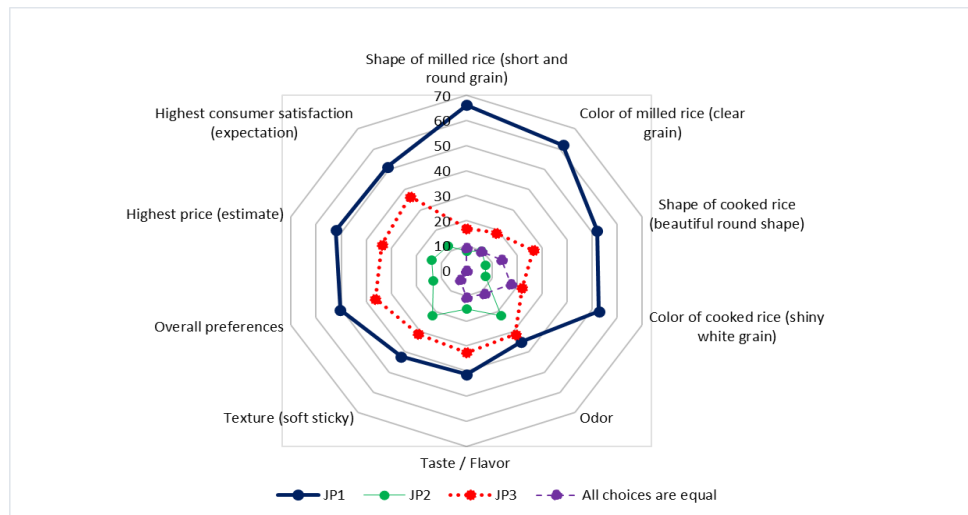


Figure 1: Respondents’ preference of different Japonica rice choices

3. Respondents’ attitudes towards Thailand’s Japonica rice consumption

Table 3 presents the respondents’ attitudes towards THJR consumption. The authors revealed the source of the different Japonica rice choices after the evaluation was finished. The 91.4% of respondents agreed that northern Thailand has a great potential to produce Japonica rice for domestic consumption, which was comparable attributes to imported Japanese rice from Japan, especially odor, taste/flavor, and soft sticky texture. Moreover, 86.8% of them agreed that the Japanese restaurants can cook and serve Japanese dishes using THJR. Its taste was comparable attribute to imported Japanese rice from Japan. Moreover, taste of food was the most important factor affecting Japanese restaurant selection of respondents. Domestically grown Japonica rice would be a good choice for them and restaurant owners. Some of them further explained that they would consume domestically grown Japonica rice to support the farmers in Thailand. In addition, 63.1% of respondents agreed that THJR had similar attributes to imported Japanese rice from Japan. Therefore, respondents’ attitude towards THJR consumption was positive.

TABLE 3: Respondents’ attitudes towards Thailand’s Japonica rice consumption

Attitude	Before preference evaluation				After preference evaluation			
	Disagree (0)	Agree (1)	Mean	Justified*	Disagree (0)	Agree (1)	Mean	Justified*
1. The northern Thailand has a great potential to produce Japonica rice for domestic consumption	302 (78.4%)	83 (21.6%)	0.22	Disagree	33 (8.6%)	352 (91.4%)	0.92	Agree
2. Japanese restaurants can cook and serve Japanese dishes using THJR	210 (54.5%)	175 (45.5%)	0.45	Not sure	51 (13.2%)	334 (86.8%)	0.87	Agree
3. The attributes of THJR are not quite different from imported Japanese rice from Japan	281 (73.0%)	104 (27.0%)	0.27	Disagree	142 (36.9%)	243 (63.1%)	0.63	Agree

Note: * It was justified into three categorized (0.00-0.33: Disagree, 0.34-0.66: not sure, and 0.67-1.00: Agree)

IV. CONCLUSION

The study found that respondents in Bangkok enjoyed Japanese cuisine and that consumption is increasing when compared to the frequency of consumption in the past. Such behavior causes a sharp increase of demand for Japonica rice as well. Friends influenced their Japanese cuisine consumption. Moreover, the Japanese restaurant chains in the shopping malls were the main places patronized by the respondents. These restaurants mostly cooked and served Japanese cuisine using domestic Japonica rice. The important factors for choosing Japanese restaurants by respondents were flavor, location, quality of materials and price, in descending order. Selecting good quality food ingredients, including Japonica rice, by Japanese restaurant owners will improve the good taste of Japanese dishes as well.

Assessing the respondents' preference of different Japonica rice choices found that their first preference was Japanese rice from Japan (JP1). However, they accepted the DOA1 and DOA2 Japonica rice varieties or JP3 that were produced through contract farming system in northern Thailand. This study confirmed that the intrinsic attributes of JP3 were comparable to the original Japanese rice from Japan in terms of odor, flavor and soft sticky texture. Moreover, according to attitude evaluation of the respondents towards domestic Japonica rice consumption was generally positive due to their reliance on its superior quality. Therefore, domestic Japonica rice can be a good alternative choice for consumption in the domestic market. In addition, the higher market price of JP1 creates an opportunity for JP3 in the domestic market. However, another Japonica rice (JP2) was a competitor product for JP3 in the domestic market because its attributes especially odor and soft sticky texture were comparable to domestic Japonica rice (JP3), and market price of JP2 is lower.

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