



Advertising Effectiveness in an Area with Restricted Food Distribution: A Case Study of Aogashima Island

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Abstract

This study considers the influence of TV commercials of food products on the purchase intention of inhabitants who live in an environment where the products are not easily available, even though information about them is transmitted. From the interviews and questionnaire surveys of inhabitants of Aogashima Island conducted from 2011 to 2012, it was surmised that the influence of commercials of food products on purchase intention of the inhabitants can be categorized into three types depending on the prospective supply of the products.

Keywords: food TV commercial, purchase intention, advertising effectiveness, remote island

1. Introduction

Studies on advertising effectiveness have been conducted by considering mainly

those situations where consumers could choose and purchase from a variety of products or services available in the market. However, there are important exceptions; remote islands are the typical cases where, although the information about the products is accessible as easily through television advertisements or the Internet as in urban areas, the products or services are not actually available to the inhabitants because of limited distribution. Studies on advertising effectiveness could become more comprehensive by taking into consideration such exceptional but important situations.

Asakawa, Karube, and Osawa (1994) categorized all 63 areas of Tokyo Prefecture into five regions based on the criteria of market development. The most developed areas were Chiyoda Ward and its surrounding wards; the least developed were the island areas. Furthermore, Asakawa and Osawa (1997, 1998), Asakawa (1999) and Asakawa

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(2000) conducted field studies in a remote island in the far-off Pacific Ocean, Aogashima Island, where the consumer market was extremely undeveloped compared to central areas in Tokyo Prefecture. They examined the inhabitants' goods (food and clothes) selection and the influence of advertisements on their purchase behaviors. They reported a unique influence of TV commercials on purchase behavior; after the inhabitants realized the futility of wishing to obtain the food they become aware of through TV commercials, they ceased to want anything that was advertised through commercials.

At present, the options for choosing and purchasing are expanding even in remote islands because of the development of transportation networks (e.g., helicopter service), and the expansion of the service areas of Internet shopping websites. However, the options for choosing and purchasing are still considerably limited; for example, frozen food cannot be purchased on the Internet.

In this paper, I would like to consider the influence of commercials of food products on purchase intention of the inhabitants living in an environment where the products are not easily available even if the information about them is accessible.

2. Outline of the study area

2.1. Geography of Aogashima Island

Aogashima is located 357.7 km south of Tokyo, and about 67 km south of Hachijojima. Its area is 5.98 square kilometers. Since the island is surrounded by cliffs and does not have a good wharf, cargo ships are often canceled on windy days, disrupting the

supply of daily commodities.

2.2. Population and households

The population at the time of the investigation (February 2012) was 178 (101 men, 77 women), and they constituted 111 households. This is the smallest population in a municipality in Japan.

2.3. Means of transportations

2.3.1. Marine traffic to Aogashima

A small ship, "Kanjyumaru," carries daily commodities and passengers between Hachijojima and Aogashima every day except on Sunday (i.e., six times a week). The yearly service rate is about 50%. The ship might be canceled for a whole week or more during a typhoon or in winter. In addition, a cargo ship, "Kuroshiomaru," carries consumer durables, building lumber, etc., once a week.

2.3.2. Air traffic to Aogashima

A daily helicopter service began in 1997. Passengers board an airplane at 7:35 am from Haneda airport for Hachijojima, and then board a helicopter to Aogashima, and arrive at Aogashima at 9:40 am. The yearly service rate of the helicopter service is about 90%, which is quite high compared to ship transportation. Until this service started, Hachijojima and Aogashima were connected only by a small ship. As mentioned before, the ship's service would be canceled even when the weather is less than severe. Therefore, the inhabitants of Aogashima had to often wait for many days for normal weather to return and for the ship to arrive. Compared to those days, the

psychological distance between Aogashima and Haneda is very short now.

2.4. Sources of food supply

2.4.1. Fishing and agriculture

The island is surrounded by the sea and has a rich fishing ground. In 2012, there were no full-time fishermen, but eight people dealt with fishery as a subsidiary business. They shipped tunas, bonitos, etc., to the Central Wholesale Market in Tsukiji, but they consumed other fish by themselves or distributed it among other inhabitants.

In addition, the warm climate of the island is suitable for cultivation of many agricultural products; thus, various vegetables and fruits are harvested. However, they are mostly cultivated for consumption. The excess produce is distributed among other inhabitants. Rice is not produced and there are no paddy fields.

2.4.2. Daily needs store

There is a store that sells food and daily commodities. It opens throughout the year, and business hours are from 8:00 a.m. to 8:00 p.m. Drinks (including alcoholic beverages), confectionery, instant food, packed food, frozen food, canned food, seasonings, vegetables, fruits, dairy products, soybean foodstuffs (tofu, fermented soybeans), meat (ham, sausages, frozen meat), eggs, bread, etc. are sold there. Unlike the convenience stores in the center of Tokyo, many goods currently advertised on TV are not available here.

2.4.3. Ways to purchase food

The ways of purchasing food differ among the following four types of inhabitants:

- (a) Households of native inhabitants
- (b) Households of inhabitants who immigrated to the island
- (c) Households of inhabitants who run the guest houses for tourists
- (d) Households of construction workers (usually single-person households)

As described by Asakawa (2013) in detail, among the four types, type (b) and (c) bought food the most at the store on the island.

2.5. Situation of electric media communication

Television and radio content is broadcasted exactly in the same way as in the 23 wards in Tokyo. Internet access through an ADSL connection became widespread in 2006.

2.6. Conclusion

Aogashima is a peculiar place where consumers cannot get food easily, but the information about food is accessible just the way it is in urban areas, through electronic communication using the Internet, television, or radio. There is a huge access gap between the information about food and its actual availability.

3. Method

Interviews and questionnaire surveys were conducted by the author during two stays totaling 12 days at Aogashima, from August 15 to 20, 2011, and from February 22 to 27, 2012.

Twenty-four individuals, who belonged

to the two major groups that purchase food on the island the most, that is, the households of the inhabitants who were not born on the island and the households of the inhabitants who run the guest houses for the tourists, were chosen as the subjects of the interview. The outline of the informants is shown in Table 1.

4. Result

4.1. Television viewing time and Internet usage time

The average television viewing time of the 24 people is 3.34 hours on weekdays and 4.10 hours on holidays. This duration is almost the same as the national average.

According to the survey carried out by Japan’s NHK in 2010 to determine how Japanese people use their time, the average television viewing time of the whole Japan was 3.28 hours on weekdays and 4.09 hours on holidays (NHK Broadcasting Culture Research Institute, 2011).

Internet usage time for 24 people is shown in Table 2.

Eleven persons (about 46%) used the Internet for one hour or more. This usage time is longer than the average Internet usage time of Japanese citizens as a whole, which is 23 minutes on weekdays and 31 minutes on holidays (NHK Broadcasting Culture Research Institute, 2011).

Table 1 Outline of the 24 informants

Gender: 8 men, 16 women

Age: 4 in their 20s, 7 in their 30s, 9 in their 40s, and 4 in their 50s

Birthplace: Outside of Aogashima 22 Born in Aogashima 2

(Note) The published details of the profiles are limited to the aspects that do not make the individuals identifiable; identity disclosure is a critical issue in the small population of the island.

Table 2. Internet usage time

Usage time	Number of people	Rate
3 hours or more	2	8.3
≥2 hours but <3 hours	3	12.5
≥1 hour but <2 hours	6	25.0
less than 1 hour	5	20.8
not every day but more than once a week	6	25.0
once a week or less	2	8.3
no use	0	0.0

4.2. Ways to obtain food

The ways of obtaining food on the island are shown in Table 3. The informants obtained food without using cash, even though, as mentioned earlier, the informants of this study were the ones who purchased food at a shop the most on the island. In addition, 21 people (about 88%) used online supermarkets, purchasing in bulk to get free shipping.

4.3. Influence of Commercials on food purchase

The influence of commercials on food purchase can be categorized into two patterns: “Commercials influence the inhabitants to want to buy” and

“Commercials do not have such influence.”

Pattern 1: “Commercials influence the inhabitants to want to buy”

To the question “Do you want the food advertised through commercials?” 13 people answered, “They sometimes make me want to eat the food,” and 8 people answered “They made me to want to eat before, but now they do not.” There were three people who answered “They do not make me want to eat it.”

Next, I asked 13 people, who had answered “They sometimes make me want to eat the food,” “What kind of food do commercials make you want to eat?” While 9 people answered “fast food,” 4 people answered “confectionery.” That is, the effect

Table 3. Ways to obtain food

ID	Online supermarket	Order by telephone to shops in Hachijojima	Purchase at a shop in Aogashima	Ask the family in Tokyo to send it	Fish by themselves	Get fish from islanders	Cultivate vegetables by themselves	Get vegetables from islanders	Parcel post("Furusa to Kozutsumi")	Membership system of rice
1	○		○			○		○		
2	○		○	○					○	
3			○			○		○		
4	○		○	○				○	○	○
5	○		○	○	○			○		
6	○	○	○		○		○			
7	○	○	○	○	○	○		○	○	○
8	○		○						○	
9	○		○		○			○		
10		○	○	○	○	○		○		
11	○	○	○	○		○		○		
12	○		○	○				○		
13	○	○	○	○	○	○	○	○	○	
14	○		○							
15	○		○							
16	○	○	○	○	○	○		○	○	
17	○		○	○	○	○		○	○	
18	○		○			○	○	○		
19	○		○	○		○		○	○	
20		○	○	○	○	○	○	○	○	
21	○		○		○			○	○	
22	○	○	○			○		○		
23	○		○	○		○	○	○		
24	○		○		○	○		○		
Total	21	8	24	13	11	14	5	19	10	2

of fast food commercials was found to be very high.

Further, the nine respondents who had answered “fast food” were interviewed later. The following answers were obtained.

A. Cases of people who had consumed fast food before coming to the island

“When I watch fast food commercials, they make me want to eat the food I see. I occasionally ate fast food before I came to the island. I get food from McDonald’s two or three times a year as a gift from an islander when he/she makes a trip to Tokyo and buys it at a McDonald’s outlet at Haneda Airport on the way back to the island.” (two men in their 20s)

“When I watch McDonald’s commercials, it makes me want to eat their food. I always go to MacDonald’s when I go to Tokyo, because my children also want to eat fast food from MacDonald’s. We usually go to Tokyo once or twice a year. Besides, I get food from McDonald’s or KFC as gift once or twice a year.” (two women in their 40s and one woman in her 30s)

B. Cases of people who did not want fast food before coming to the island

“I hadn’t felt that I wanted to eat fast food before coming to the island, but when I watch commercials of new products in McDonald’s commercials, they make me want to eat them. The other day, a person brought me KFC’s new product from Tokyo. We ate it happily. I get food from McDonald’s once or twice a year.” (three women in their 40s and a woman in her 30s)

In sum, the following common points were noted from the answers from nine

people: a) When they watch fast food commercials, they want to eat the fast food they see. b) They can get fast food several times a year. In the case of B, the informants usually did not want fast food when they lived in a place where they could get it anytime.

Pattern 2: “Commercials do not influence the inhabitants to want to buy

As mentioned earlier, eight out of 24 informants responded that “when I watch commercials, they made me want the products before, but now they do not make me want the products anymore.” Later, I interviewed three people out of the eight informants and got the following answers.

“When I first came to live on the island, commercials of sweets, for example roll cake, made me want to eat them, but I gave up the desire because they are not available at the shops on the island. Although I was using online shopping websites at that time, products like roll cake were not purchasable. It has been two years since I moved to the island, now when I watch food commercials, they do not make me want to eat the food anymore.” (a man in his 30s)

“After I returned to the island, all foods in commercials, ranging from confectionaries to restaurant dinner, made me want to eat them. However, I realized that I cannot buy sweets at the island shop, and there are no outlets of restaurant chains that are advertised in commercials, and I gave up the idea. About five years after returning to the island, no food commercials moved me anymore.” (a woman in her 40s)

“When I saw commercials of Mister

Donut, they made me want to eat the products. Before moving to the island, I often ate food products from Mister Donut. But after I came to the island and 8 months passed, I ceased to want it. (I asked, “Did you ever get anything bought at a Mister Donut outlet from other inhabitants?”) “I have never got anything from Mister Donut.” (a woman in her 20s)

These three informants gave similar responses that indicated a kind of learned helplessness: they gave up the idea of consuming the food seen in commercials after realizing that they cannot get it on the island no matter how much they intend to purchase it. This response was similar to the response reported by Asakawa and Osawa (1997).

4.4. Conclusion

Even now, most of the foods advertised through commercials are hard to obtain in Aogashima. The reactions of people living in such an area to commercials can be categorized into the following two patterns.

- A. “Watching a food commercial → they want it → they get it although it is not frequent → they want the food very much when they watch the food commercial”
- B. “Watching a food commercial → they want it → they cannot get it → Whatever food they watch in food commercials, they do not want that food anymore.”

5. Discussion

Before the development of the transportation network and the expansion of the Internet on the island, even when the inhabitants of Aogashima wanted to buy the

food they had seen in a commercial, they had no choice but to give up their desire to eat it if the food was not available at the shop on the island, as reported in Asakawa and Osawa (1997). Before the helicopter transportation service began, even if the inhabitants of Aogashima bought fast food at Haneda, they could not take it back home the same day when the ship between Hachijojima and Aogashima did not operate. In that era, there was no one who answered, “When I watch fast food commercials, they make me to want to eat the food,” as reported in a 1995 survey.

Observing this peculiar situation of paucity of food in the market and the reactions of inhabitants, an expansion of the model of advertising effectiveness should be considered. Therefore, based on the above results, I propose the following hypothesis.

Hypothesis: The influence of TV commercials on food varies (Type A, B, C) depending on the prospective supply of products.

Type A: When it is impossible for the consumer to obtain the product seen in a commercial, he/she will not want it.

Type B: When the consumer can occasionally (several times a year) obtain the product seen in a commercial, he/she will have a strong desire to obtain it. The desire is stronger compared to that of consumers living in urban areas where the same product is always available.

Type C: When consumers can obtain the products seen in a commercial whenever necessary (cases where they live in urban

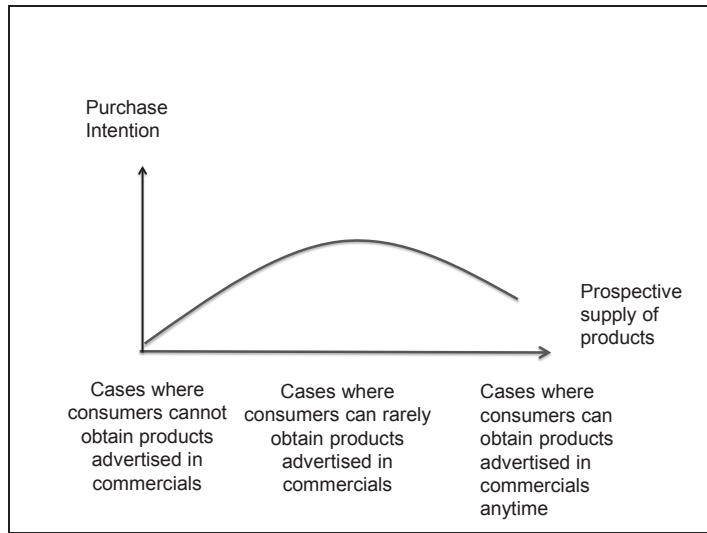


Figure 1. Hypothetical relationship between purchase intention triggered by TV commercials and the prospective supply of products

areas), commercials sometimes make the consumer want the products, depending mainly on other conditions than paucity. In fact, the major theories of advertising effectiveness deal only with this case.

Concerning the strength of purchase intention, this hypothesis has been illustrated in Figure 1.

As a next step, I need to verify this hypothesis by further investigation in other islands under similar conditions. It is also necessary to verify whether this hypothesis can be generalized to other areas where the market is undeveloped and the supply of products is quite limited. Specifically, it is necessary to get quantitative data through

questionnaire surveys from such areas to examine the relationship between purchase intentions and the prospective supply of products, and the effects of advertising in such environments.

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