LATENT PATTERN IN THE CONSUMPTION OF JAPANESE LOCAL CULTURAL THINGS

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Abstract - It is often argued that modern consumer society is becoming more uniform with globalization. On the other hand, it has been reported that the consumption of local cultural things has become one of the basic trends in Japan in recent years. Furthermore, it has been argued that the consumption of local cultural things may be related to exclusionary nationalism.
In this paper, the latent class analysis estimates the patterns of acceptance of local cultural objects in Japan. Furthermore, a multinomial logistic regression analysis was conducted to examine the determinants of the individual's alienation from foreigners as a determinant of the acceptance pattern. As a result, the effect of exclusionary nationalism on the preference for local cultural objects was found to be very limited.

Keywords - Consumer culture, Consumer society, Latent Class, Local culture

I. INTRODUCTION

The purpose of this paper is to analyze the patterns of acceptance of Japanese local culture in today's globalized consumer society, and what factors determine these patterns of acceptance.
One of the consequences of the globalization of consumer culture is the Ritzer's (1993) "McDonaldization" theory, in which he argues that an American-based rationality-based consumer culture is increasingly leading to uniformity and destroying local consumer culture. In the first place, the globalization of consumer culture itself presupposes a cultural system that transcends spatial and linguistic differences to communicate and share information globally, and the tendency toward uniformity, such as the "McDonaldization" that is a consequence of the efficiency and computability demanded by today's economy and society, can be further enhanced by information technology.

On the other hand, a long-term trend in Japanese consumption since the 2000s has been a preference for *wa-fuu* (Japanese-style) products. This can be reinterpreted as a research question as to why, in a globalized consumer society, Japanese local culture's preference for "Japanese style" has become a trend in consumption. In this study, this question is further analyzed and reinterpreted as a question of "how and by what factors is Japanese culture, as a local culture, being accepted in the globalized consumer society. In other words, by positioning the consumption of Japanese things as "acceptance of local culture," the patterns of acceptance are categorized using a latent class model, and the determinants of these patterns of acceptance are analyzed.
Since the 2010s, journalism has reported on the growth of exclusionary nationalism, such as hate speech. Some argue that the acceptance of Japan's indigenous culture is in danger of converging with exclusionary nationalism (Kayama 2002). This paper focuses on exclusionary attitudes as a manifestation of exclusionary nationalism and develops a working hypothesis that "exclusionary attitudes toward foreign residents has a significant effect on the acceptance of local culture" and statistically tests this hypothesis.

II. METHODOLOGY

A. Overview of the Survey
This study is based on data from the survey research conducted in the Tokyo metropolitan area in 2016. An overview of the survey is given below.

Survey title: *Survey on Consumption and Lifestyles in the 21st Century*
Population: male and female individuals between the ages of 15 and 69 (as of the end of August 2016) living in a 40 km radius around Shinjuku Station.
Sampling method: stratified two-stage random sampling (probability proportional sampling)
Survey mode: mail survey
Survey period: September-October 2016
Sample size: 4,000
Number of valid responses: 1,609 (41.3%)

Details of the survey and sample design, as well as the results of the sampling and the age distribution of the validated ballots are shown in Hatayama and Hirose (2017).

B. Variables
The concept of "acceptance of local culture in Japan" was operationalized as follows.
First, the concept of "local culture in Japan" is operationalized as "Japanese things" that are the objects of Japanese consumption of goods and services. The questionnaire lists the following items: *washoku* (Japanese food), *yukata and kimono* (Japanese clothes) , Japanese house, *ryokan* (Japanese inn), mingei-hin (Japanese folk crafts), old Kyoto townscape, *onsen* (hot springs), and *enka* (traditional

Japanese music), *sumo* (sumo wrestling), temples, and shrines.

Next, the concept of "acceptance" of local culture was measured using a four-item scale, with respondents' preferences for these 11 items being "like", "somewhat like", "somewhat dislike" and "dislike".

This study also operationalizes xenophobic attitudes that are used as explanatory factors regarding the acceptance of local culture. The questionnaire contains two items to explain the exclusion of foreigners from the local community: "Hiring foreigners as local officials under the same conditions as Japanese" (Exclusion-A) and "Allowing foreigners to vote in local elections" (Exclusion-B), and the questionnaire asks respondents whether they agree or disagree with these two items using a four-item method. The higher the value of these variables, the stronger the oppositional attitudes, and consequently express exclusionary attitudes. Basic statistics are shown in Table 1.

Item	*N*	*Mean*	*S.D.*
Age	1,529	47.29	13.99
Sex (female=1)	1,529	.54	.50
Years of education	1,518	14.45	1.98
washoku	1,517	3.73	.49
yukata and *kimono*	1,512	2.93	.87
Japanese house	1,516	3.05	.78
ryokan	1,517	3.25	.76
mingei-hin	1,514	2.89	.77
old Kyoto town	1,515	3.45	.68
onsen	1,517	3.63	.64
enka	1,516	2.10	.92
sumo	1,516	2.38	.94
Temple	1,517	3.15	.80
Shrine	1,517	3.19	.79
Exclusion-A	1,518	2.53	.90
Exclusion-B	1,518	2.51	.94

Table 1

C. Latent Class Analysis

This study applies latent class analysis to categorize the patterns of acceptance of 11 survey items related to local culture for Japan. The reasons for using latent class analysis in this study are briefly summarized as follows. Compared to cluster analysis, which is often used for pattern classification, latent class analysis allows us to calculate the probability of each individual belonging to each class and the degree of fit of the classification results to the data as a whole. Since the classification of each class is never uniquely determined, it is probabilistically determined which class each respondents belongs to, and the probability of its belonging can be calculated (Hagenaars and McCutcheon 2002).

Latent class analysis is also a method for analyzing latent structure as well as factor analysis. However, while general factor analysis assumes continuous latent variables, latent class analysis assumes categorical latent variables, and each of these categories is called a "class". Furthermore, with regard to observables, quantitative data are input into general factor analysis, but latent classes can also be input with binary data, ordinal scale variables, and nominal scale variables. This is also an advantage because many of the data measured in social surveys are categorical variables.

Latent class analysis allows for multiple classifications, such as 2-class and 3-class models and allows for comparisons between models by calculating a goodness of fit index for each model.

D. Policy of the analysis

Patterns of acceptance of local culture were extracted from the positive and negative reactions to 11 survey items that were designed to represent the local culture in Japan, and a factor analysis was conducted to determine which of these patterns people belonged to, using a number of explanatory variables. The procedure of the statistical analysis can be divided into three steps. (1) determining the number of classes through latent class analysis, (2) assigning each individual in the study to the class with the highest probability of belonging, and (3) exploring the determinants of the differentiation of patterns of local cultural acceptance through multinomial logistic regression analysis using the class of affiliation as the dependent variable.

In conducting the latent class analysis, first, teenagers were excluded from the analysis of this study because they were not yet determined to have an intention to accept local culture. Second, the eleven questions on "preference for Japanese things" that were used to categorize the patterns of acceptance of local culture were recoded into a binomial variable (merger of response categories). The reason for this recoding was that if the 11 items were used as the four responses in the questionnaire, the number of combinations would be 411, which is quite large, and it would be difficult to summarize the local cultural acceptance into a simplified pattern, and the estimation results would be somewhat unstable in some cases.

Third, the latent class model was unconstrained as much as possible, and the latent class model was simply estimated by using only the age group (age) of the respondents as a covariate, which is a basic demographic attribute. A multinomial logistic regression analysis was then conducted using social stratification and other explanatory variables to explore the factors that contribute to individual membership in each class.

III. RESULT

A. Estimation of latent class models

A latent class analysis was conducted based on the positive and negative responses of each item of local culture in Japan. Once all the items were included in

the estimation of latent classes, the response rates for washoku (Japanese food) and onsen (hot spring) were high in all classes, so these two items were excluded to make the discrimination between the classes clearer, and nine items were estimated again. In addition, the age of each case was used as a covariate in the estimation of the classes.

When the model in which the classes to which each case belonged were estimated under the assumption that there were two latent classes is described as a "2-class model", Table 2 shows the results of the latent class analysis in which classes were estimated under the assumption of a 2-class model to a 6-class model. As a procedure for determining the number of classes in the pattern classification, we adopted an exploratory approach by comparing the goodness of fit indices among multiple models with different numbers of classes that were not rejected at the 5% level. The results are presented in Table 2. Here, the 5-class model was adopted with the lowest value using the BIC as the goodness of fit index.

Model	*BIC*	L^2	*df*	*p*
2-class model	12442.78	2260.63	1481	.000
3-class model	12090.47	1805.89	1467	.000
4-class model	11815.43	1428.43	1453	.670
5-class model	11638.07	1148.65	1439	1.000
6-class model	11660.19	1068.34	1425	1.000

Table 2
*** L^2: log-likelihood chi-square value**

For each of the classes identified in this section, line graphs of response probabilities to the 11 items are shown in Figure 1.

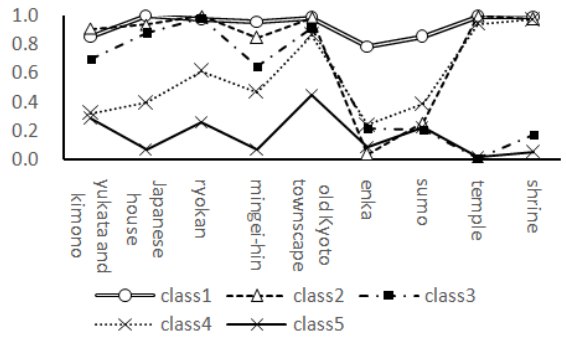


Figure 1

The following is a brief description of how the five estimated classes show the pattern of preference toward Japanese things: Class 1 can be read as a pattern in which respondents respond favorably to all items, Class 2 responded favorably to most of the items, but only the *enka* and *sumo* items showed low favorability, Class 3 as a pattern similar to Class 2, but does not respond to "places" such as visiting temples and shrines, Class 4 as a pattern in which they respond to "places" such as *ryokan*, old Kyoto townscape, and temples and shrines, and Class 5 as a pattern in which they respond less favorably to all items.

B. Determinants of Local Cultural Acceptance Patterns

Having estimated latent classes of local cultural acceptance patterns, the determinants of these latent class affiliations were explored through multinomial logistic regression analysis. Since multinomial logistic regression analysis requires a reference category for the explained variable, we designated it as class 5.

Table 3 shows the results of the multinomial logistic regression analysis using two variables that operationalized the exclusionary attitudes toward foreign residents, "exclusion-A" and "exclusion-B". The results of this analysis show that the Nagelkerke R^2 is .238, which is significant for the model. Looking at the effects of each explanatory variables, exclusion-A does not have a significant effect on either class. The parameter estimates of the effect of exclusion-B on Class 1, which has a high preference for all Japanese things, was .391, which is not very high, but is significant. The results were significant even after controlling for the age effect, as we did here. Nevertheless, there was virtually no significant effect of Exclusion-A and Exclusion-B on other class affiliations, and the analysis suggests that exclusionary attitudes in local politics had little effect on the acceptance of local culture.

	Class 1	Class 2	Class 3	Class 4
Intercept	-1.439	-0.603	1.085	-2.698*
Sex	0.334	1.014**	0.644*	0.329
Age	0.054**	-0.028**	-0.018	0.030**
Yr. of Educ.	-0.027	0.145*	-0.061	0.088
Exclusion-A	-0.189	0.024	0.028	-0.068
Exclusion-B	0.391*	0.310	0.281	0.405

Table 3
Reference category: Class 5.
***N*=1485, Nagelkerke R^2=.238 * p<0.05, ** p<.01**

IV. CONCLUSION

In this study, five patterns of local cultural acceptance were identified through latent class analysis. Next, the individuals were classified into classes with the highest probability of belonging, and a multinomial logistic regression analysis was applied to determine the mechanism of belonging to any of the classes, controlling for attributes such as gender and age, and exclusionary attitudes toward foreign residents as explanatory variables. As a result, it can be concluded that although some of the variables of exclusionary attitudes had a significant effect, they did not have a significant effect overall. It can be concluded that Kayama's (2002) nationalism hypothesis, which argues that orientation to local culture "converges with exclusionary nationalism," does not fit the data.

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