

# A NATION-LEVEL SURVEY OF USE OF MICHI-NO-EKI OF ORDINARY ROAD AND SERVICE AREAS OF EXPRESSWAYS AT DISADVANTAGED AREAS OF JAPAN

*Visitor Engagement and Preference for the Rurality of Products and Recreational Services  
Provided in Roadside Rest Areas in Depopulated Regions of Japan\**

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## Abstract

To understand and promote the role of Michi-no-eki (ME) (i.e., roadside rest areas) of ordinary roads and service areas (SA) of expressways in the development of depopulated areas in Japan, this study implemented a web-based questionnaire survey with respect to residents living in depopulated areas across the whole Japan in November and December 2017. Question items include, (1) activity-travel behavior (a recent trip using a Michi-no-eki of ordinary roads and a service area of expressways: origin and destination, travel party and mode, visiting motivations, time use and expenditure behavior (goods purchasing and activity experience) within the ME/SA as well as their evaluations, and visiting frequency; (2) subjective evaluations of the ME/SA: evaluations as a place (12 items), image evaluation in terms of its design, facilities, services, location, rurality, attachment, and recommendation to others (21 items), and customer satisfaction (9 items); (3) willingness to pay (WTP): WTP for natural environment, local culture and history; WTP for the development of disadvantaged areas: via good purchasing; agreement/disagreement to use of more tax, and pay more tax (hometown tax); (4) SP questions related to goods purchase and activity experience under several scenarios defined by rurality and social interactions: three SP profiles for goods purchase and activity experience, respectively; (5) changes in driving, visiting and purchasing behaviors after visiting the ME/SA; and (6) individual and

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household attributes. As a result, 1,002 residents provided valid answers, where distributions of age and gender of these respondents are the same as those of the whole population in depopulated areas of Japan, for guaranteeing the population representativeness. The current contents focus on analysis of the rurality of products and recreational services provided in ME/SA and analyses of other major survey items will be reported at the time of the conference.

**Key Words:** *Michi-no-eki (roadside rest areas), Service area, Rurality, Depopulated area, Willingness to pay (WTP), Stated preference (SP), Experience, Japan*

## 1. Introduction

Due to the depopulation and a continuing trend of aging and low-birth rate, Japan is now facing an unprecedented challenge of social problems, especially at depopulated regions. It is predicted that almost half of the municipalities in the whole Japan, mostly in depopulated regions, will face a sharp population decline, and as a result, are highly likely to disappear in the future (Masuda, 2014). Both the central government and local municipalities have made various efforts to tackle such problems, under the scheme of the so-called “regional revitalization” with the leadership of the central government. Among various regional revitalization policies, the development of roadside rest areas has been getting in the limelight. There are two main types of roadside rest areas: Michi-no-eki (ME) (a Japanese term: meaning road station in English) along ordinary roads (free of charge), and service area (SA) along expressways (toll roads). Both of these two types have three functions: rest facilities (parking places and toilets), information provision (traffic information, regional information, emergent medical information, etc.), and functions for connecting with neighboring regions (cultural and education facilities, tourism and recreational facilities). There are 831 MEs and 62 SAs in the depopulated regions<sup>1</sup> of Japan, which are targeted in this study. However, most of MEs/SAs cannot maintain profitable operation and have to rely on subsidies from both the central and local governments. Such problematic situations have become serious at the national level.

ME/SA can be a useful policy instrument to solve the social problems at the depopulation regions in Japan (Murakami and Oyabu, 2016). The concept of ME/SA matches with the concept of rurality in many aspects, such as located in rural areas, functionally rural-built upon the rural features of open space, contacted with nature, growing slowly and organically, and connected with local community (Lane, 1994; Garrod et al., 2006). However, whether a ME/SA can be successfully operated (i.e., sustainable in economic, social and cultural aspects) or not may depend heavily on how the products/services provided at the ME/SA can be differentiated from similar products/services provided at other places and how visitors engaged in the business operation process. In this regard, rurality of ME/SA may represent the brand conspicuousness of ME/SA to attract visitors to rural areas. In this study, rurality of an ME/SA

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<sup>1</sup> The depopulated areas were selected by referring to the information provided by the Ministry of Internal Affairs and Communications: [http://www.soumu.go.jp/main\\_content/000491490.pdf](http://www.soumu.go.jp/main_content/000491490.pdf) (Accessed January 13, 2018)

at a depopulated region refers to local values generated from the products/services provided in the ME/SA and perceived by visitors. Such values may be observed with respect to any regional resources: agricultural products, local food, souvenir, and local culture, etc., which is expected to be a major pull factor to attract visitors. Customer engagement is a concept that has emerged recently to capture customers' total set of behavioral activities toward a firm (Kumar et al., 2010). Customer engagement behavior can be defined as “customer’s behavioral manifestations that have a brand or firm focus, beyond purchase, resulting from motivational drivers” (Van Doorn et al., 2010). Thus, visitor engagement (VE) at the ME/SA refers to their behavioral manifestations towards rurality. In this study, visitor engagement behavior (VEB) may include visiting motives, experience and consumption of the rurality at ME/SA.

Research from such a perspective of rurality and visitor has its general value to other countries. Potential findings may provide a guidance, especially to small-sized enterprises in rural areas, about how to reflect local characteristics and meet the needs of visitors. Consequently, such a guidance may be helpful to ensuring profitability (Verhoef et al., 2010). Even though the rurality and visitor engagement of ME/SA is important for the development of disadvantaged regions, little is known from this perspective. In other words, visitors’ behavioral manifestation towards the rurality of ME/SA has remained largely under-researched.

This research attempts to fill the above research gap by answering the following research questions.

- (Q.1) Whether do visitors have congruity between motives and actual experience of rurality, and what kinds of rurality do visitors experience at ME/SA?
- (Q.2) What types of visitors are engaged in experiencing the rurality?
- (Q.3) What kinds of attributes of products and recreational services matter to ME/SA visitors’ decisions, after controlling for visitor engagement behavior (VEB)?

## **2. Methodology**

### **2.1 Survey**

To achieve the objectives of this research, an online survey was designed. Question items contain both RP and SP information, subjective evaluation, and visitors’ individual attributes.

As for experience of rurality, both revealed experience and stated preference were investigated. Items for capturing revealed experience include motivations visiting ME/SA (experience of rurality: to buy local product, to eat local food, to collect local information, and to experience local culture; other motivations: just to take a rest, to have a meal, to do shopping, just to spend spare time, etc.), and actual experience of rurality (to buy/experience something that are only available at ME/SA: food, drink/sweet, agriculture goods, souvenir). Other RP information includes items of actual behavior (travel behavior to ME/SA: origin and destination, travel time and cost, visiting frequency, travel mode, travel party; time use and expenditure at ME/SA).

Items of subjective evaluation include satisfaction with ME/SA, willingness to pay for

natural/cultural protection at the ME/SA region, image/expectation of ME/SA, and future visit intentions.

The SP part investigates how rurality affects visitors' preference for products and recreational services provided at ME/SA under different business operation scenarios. As for products, four SP attributes are selected: (1) production area (two levels: at the ME/SA region, or other regions), (2) product type (three levels: agricultural goods, food, or souvenir), (3) sale availability (two levels: only at the ME/SA under study, or others), and (4) social influence (three levels: 10%, 20%, or 50% of visitors purchase the product). Respondents were asked to report how they would like to purchase: 1. "absolutely to buy", 2. "probably to buy", 3. "neutral", 4. "probably not to buy", and 5. "absolutely not to buy". Concerning recreational services, three SP attributes are targeted: place to provide the services (two levels: inside ME/SA, or outside ME/SA), type of experience (three levels: experiential activities of cooking and handicraft making and so on; exhibition of and performance related to local culture; education activities for children), and social influence (three levels: 10%, 20%, or 50% of visitors experience the services). Respondents were asked to report whether they would like to experience or not. By employing an orthogonal fractional factorial design, nine SP profiles were derived for the above two SP experiment, respectively. In the survey, each respondent was assigned three SP profiles that were randomly selected from the nine profiles of each of the two SP experiment, respectively.

The survey was implemented in November and December 2017, where 1,002 residents living in depopulated regions of Japan provided valid answers (in the case of SP part, 3,006 SP responses). In the survey, distributions of age and gender of the 1,002 respondents are the same as those of the whole population in depopulated regions of Japan, for guaranteeing the population representativeness. To the best knowledge of the authors, this study is the first attempt in literature from the above perspectives.

## ***2.2 Modeling approaches***

This study focuses on the visitors' behavioral manifestation toward rurality of ME/SA at depopulated regions of Japan, where both actual experience and stated preference for the experience of rurality are targeted. First, a binary probit model is applied to capture the influence of visitors' attributes on two types of revealed experience of rurality: realized experience and occasional experience. Second, as for the SP part, multi-level modeling approaches are applied for incorporating potential correlations between the three SP responses reported from each respondent: a multi-level ordered probit model for representing stated purchasing behavior for products, and a multi-level binary probit model for representing stated experience for recreational services. Concretely speaking, an error component related to each respondent is introduced in the above multi-level models. All the aforementioned models are estimated using the software STATA Version 14.

## **3. Findings from an aggregate analysis: To answer the research question Q.1**

Here, we first summarize key attributes of visitors. The average age was 50.9 years old, 57.8% were male, and 73.5% of visitors already got married. About half (51.4%) of the visitors were employed,

which is lower than that at other types of regions in Japan. The average number of family members is 2.78 for each respondent. As for occupation, 16.6% of visitors are retired, among which elderly visitors take the majority, which is the 11.8% of the total number. As for education level, 47.6% of visitors had a degree of bachelor or above, 31.9% were educated in high school or below, and 20.5% studied at a vocational school. More than half (51.3%) of them traveled with their spouses, 11.1% with their parents, and 22.1% traveled alone.

Among 1,002 respondents who visited an ME/SA, it is found that 388 visitors (38.7%) were motivated by the rurality in terms of purchasing local products (31.6%), eating local food (6.0%), collecting local information (2.9%), and experiencing local culture (2.1%). On the other hand, 547 visitors (54.6%) actually experienced rurality in the products in term of finding special local food (29.3%), local drink/sweet (17.9%), rural agricultural products (29.5%), and local souvenirs (29.7%) that were sold only at the ME/SA under study: i.e., *revealed experience of rurality*. Among the 547 visitors, 279 (27.8% in the whole sample) were motivated by the rurality (i.e., *realized experience of rurality*) and the remaining 268 visitors were not. This means that the latter 268 visitors (i.e., 26.7% in the whole sample) just experienced the rurality in an occasional way (i.e., *occasional experience of rurality*). Thus, the revealed experience of rurality (54.6%) consists of the realized (27.8%) and occasional experience of rurality (26.7%). The above results indicate that the rurality experienced was mainly observed with respect to agricultural products and local food as well as local souvenirs. For all the visitors who experienced rurality, only half of them reached congruity between motives and actual experience of rurality, which means the other half of visitors experience the rurality of ME/SA just by chance. Comparing the realized rurality sample with the occasional rurality sample, it is found that the former is mainly featured by purchasing agricultural products (63.4% in the 279 visitors) and the latter mainly by eating local food (58.1% in the 268 visitors), and local souvenirs represent the rurality perceived by 50.7% of the realized rurality sample and 50.7% of the occasional rurality sample.

#### 4. Findings from modeling analyses

Here, the attributes of visitors examined in the first paragraph of Section 3 are used as a set of common factors that may feature RP-based preference for the rurality. With this, we attempt to answer the research question Q.2, by estimating a multi-level binary probit model. As for the research question Q.3, we estimate a multi-level ordered probit and a multi-level binary probit model, where SP attributes and actual visiting behavior are introduced as explanatory variables.

##### 4.1 Findings related to the research question Q.2 (Table 1)

The realized experience of the rurality (dependent variable: 1=yes, 0=no) and occasional experience (dependent variable: 1=yes, 0=no) are commonly affected by employment, travel party with spouse, and whether a visitor is a retired elderly person (retired and age above 65) or not, but in an opposite way. If a visitor is employed, he/she is an elderly retired person and travels with spouse, he/she is more likely

to experience the rurality in a planned manner; however, he/she is less likely to experience the rurality by chance. Meanwhile, the effects of travel party with spouse (it can explain 19.33% of the total variance of the realized experience variable and 23.83% in the occasional experience variable) and whether a visitor is a retired elderly person or not (the explained variance ratios are 15.82% in realized experience and 11.21% in occasional experience) are significant in both experience of rurality. Furthermore, different profiles of visitors are observed with respect to the two types of experiences. In realized experience of rurality: (1) women are more likely to realize their experience of rurality (variance ratio: 26.71, the biggest among all explanatory variables); and (2) visitors with a bigger number of family members are less likely to realize their preference for rurality (variance ratio: 17.86%). In the case of the occasional experience of rurality, young visitors happen to more experience the rurality occasionally (variance ratio: 16.47%) and visitors traveling alone or with parent experience the rurality by chance, less frequently. However, the interval estimation of parameters suggests that the above findings may not be always true. For example, in the influence of marital status, married visitors are more likely to experience occasional rurality. Looking at the interval estimation for the “employed” variable (the mean parameter: 0.119) in the realized experience model, the interval parameter is located between -0.007 and 0.406. This implies that there are some possibilities that visitors with a job are less likely to experience occasional rurality, because some negative values are included in the interval.

Table 1. Estimation results of binary probit model for revealed and occasional experience of rurality

Explanatory variables	Realized experience of rurality				Occasional experience of rurality			
	Parameter	sig.	Variance ratio	Interval with 95% confidence	Parameter	sig.	Variance ratio	Interval with 95% confidence
Gender: 1-male, 0-female	-0.348	**	26.71%	[ -0.550 , -0.146 ]	0.121		2.89%	[ -0.082 , 0.323 ]
Age: actual age divide 10	0.046		4.30%	[ -0.026 , 0.117 ]	-0.094	**	16.47%	[ -0.165 , -0.022 ]
Marital status: 1-married, 0-others	-0.078		1.07%	[ -0.339 , 0.183 ]	0.248	+	9.81%	[ -0.007 , 0.504 ]
Employed: 1-yes, 0-no	0.199	+	8.97%	[ -0.007 , 0.406 ]	-0.215	*	9.39%	[ -0.419 , -0.011 ]
Total number of family members	-0.113	**	17.86%	[ -0.190 , -0.036 ]	0.052		3.41%	[ -0.020 , 0.124 ]
Visit alone: 1-yes, 0-no	0.113		1.98%	[ -0.158 , 0.384 ]	-0.277	*	10.75%	[ -0.539 , -0.015 ]
Visit with spouse: 1-yes, 0-no	0.293	*	19.33%	[ 0.032 , 0.554 ]	-0.342	**	23.83%	[ -0.590 , -0.094 ]
Visit with parent: 1-yes, 0-no	0.211		3.96%	[ -0.084 , 0.506 ]	-0.390	*	12.23%	[ -0.695 , -0.085 ]
Retired elderly people: 1-yes, 0-no	0.410	*	15.82%	[ 0.094 , 0.727 ]	-0.364	*	11.21%	[ -0.711 , -0.016 ]
Constant term	-0.615	**		[ -1.071 , -0.159 ]	-0.125			[ -0.562 , 0.313 ]
LL(0): Initial log-likelihood LL(1): Final log-likelihood Significance level: + 10%, * 5%, ** 1%	Sample size: 1,002 persons; LL(0)=-694.53; LL(1)=-575.17; Rho-squared=0.172				Sample size: 1,002 persons; LL(0)=-694.53; LL(1)=-565.69; Rho-squared=0.186			

#### 4.2 Findings related to the research question Q.3 (Table 2)

Currently, about half of the visitors (547 visitors: 54.6% of the whole sample) to MEs/SAs actually experienced the rurality, mainly via goods purchasing and eating. However, the other half did not, indicating that their VEB towards rurality is occasional. Considering this, marketing efforts are further needed for encouraging more people to be aware of the “rurality” products and recreational services provided at MEs/SAs. Furthermore, the preference of some visitors (e.g., those who did not have any experience of the rurality) for the rurality may not be fully revealed because of unavailability of the “rurality” products and recreational services. Here, visitors’ stated preference for products and recreational services with different rurality aspects is examined by using the SP data based on a multi-level ordered probit model for product purchase decision (the dependent variable for the choice of products has three values: 1. absolutely not to buy or probably not to buy, 2. neutral, 3. probably to buy,

or absolutely to buy) and a multi-level binary probit model for activity experience decisions (the dependent variable for the choice of recreational services has two values: 1. to experience, and 2. not to experience). In the RP data, it is found that there was not a small portion of respondents who experienced the rurality, mainly in terms of agricultural products and local foods as well as local souvenirs. Visitors with/without such actual experience may affect visitors' SP responses. To control for the influence of such actual experience, a set of VEB variables are introduced into the two SP models. Modeling estimation results are shown in Table 2. Note that there three RP variables: RP\_agri\_products, RP\_local\_food, and RP\_local\_souvenirs, which are introduced as a composite variable with a corresponding SP attribute (i.e., agricultural products, local food, or local souvenirs), respectively.

Table 2. Estimation results of multilevel probit models for stated preference of rurality

Explanatory variables	Stated preference for rurality: product				Stated preference for rurality: activity			
	Parameter	sig.	variance ratio	Interval with 95% confidence	Parameter	sig.	variance ratio	Interval with 95% confidence
<b>SP attributes</b>								
Social influence: 0.1-10% , 0.2-20%, 0.5-50% of visitors	1.265 **		11.92%	[ 0.966 , 1.565 ]	0.575 **		2.79%	[ 0.165 , 0.985 ]
Local product: 1-yes, 0-no	0.221 **		2.80%	[ 0.127 , 0.315 ]				
SP_agri_products (1-yes, 0-no) * RP_agri_products (1-yes, 0-no)	0.476 **		5.36%	[ 0.279 , 0.673 ]				
SP_local_food (1-yes, 0-no) * RP_local_food (1-yes, 0-no)	0.481 **		5.34%	[ 0.291 , 0.671 ]				
SP_local_souvenirs (1-yes, 0-no) * RP_local_souvenirs (1-yes, 0-no)	0.388 **		3.47%	[ 0.212 , 0.565 ]				
Sale availability: 1-only at ME/SA, 0-others	0.888 **		45.18%	[ 0.788 , 0.989 ]				
Experience type: 1-cooking, handicraft making, 0-others					0.159 +		1.65%	[ -0.012 , 0.331 ]
Experience type: 1-exhibition/performance of local culture, 0-others					0.229 **		3.39%	[ 0.057 , 0.400 ]
Experience place: 1-inside ME/SA, 0-outside ME/SA					0.152 *		1.50%	[ 0.003 , 0.301 ]
<b>Visitor engagement behavior</b>								
Have chance to experience rural nature/culture: 1-yes, 0-no	0.282 **		3.70%	[ 0.104 , 0.459 ]	1.011 **		54.15%	[ 0.664 , 1.359 ]
Have motives to buy local food and products: 1-yes, 0-no	0.265 **		4.15%	[ 0.082 , 0.448 ]				
Purchase local food: 1-yes, 0-no	0.298 **		5.24%	[ 0.144 , 0.453 ]				
Purchase agricultural products: 1-yes, 0-no	0.206 +		1.94%	[ -0.002 , 0.414 ]				
Purchase local souvenirs: 1-yes, 0-no	0.373 **		6.32%	[ 0.186 , 0.560 ]				
Find cheaper price in local food/agricultural goods/souvenirs: 1-yes, 0-no	0.281 **		4.57%	[ 0.102 , 0.460 ]				
Have motives to search local information and know culture: 1-yes, 0-no					-0.016		0.001%	[ -0.637 , 0.605 ]
Participate in local culture events: 1-yes, 0-no					1.189 **		16.99%	[ 0.497 , 1.882 ]
Participate in local food tasting: 1-yes, 0-no					0.354 *		4.36%	[ -0.046 , 0.755 ]
Participate in local communication: 1-yes, 0-no					1.088 **		15.16%	[ 0.430 , 1.747 ]
Threshold 1	0.639 **			[ 0.470 , 0.809 ]				
Threshold 2	2.495 **			[ 2.294 , 2.696 ]				
Constant term					-2.159 **			[ -2.478 , -1.839 ]
Multi-level error component (grouped by respondents)	0.843 **			[ 0.692 , 1.027 ]	3.252 **			[ 2.441 , 4.333 ]
LL(0): Initial log-likelihood	Sample size: 3,006 SP responses (1,002 persons);				Sample size: 3,006 SP responses (1,002 persons);			
LL(c): Log-likelihood with constant terms	LL(c)=-2898.34; LL(1)=-2737.42; Rho-squared=0.056;				LL(0)=-2083.60; LL(1)=-1350.03; Rho-squared=0.352;			
LL(1): Final log-likelihood	Likelihood ratio test against the model without multi-level error component: 321.85 (significant at 1%)				Likelihood ratio test against the model without multi-level error component: 554.21 (significant at 1%)			
Significance level: + 10%, * 5%, ** 1%								

For both products and recreational services, social influence plays a significant role in determining visitors' preference: more visitors who purchase a product (experience a recreational service) at ME/SA will encourage a visitor to purchase the product (experience the recreational service). As for the three composite variables with both SP and RP information in the product purchase decision model, their parameters are estimated to be positive, suggesting that visitors who experienced the rurality in the real world are more likely to purchase a product with the corresponding rurality in the hypothetical choice situations which allow them to show their pure preference. Meanwhile, the products produced in the local region and the products that are only sold at the ME/SA are surely preferred by visitors. Sale availability shows the highest significant influence to the SP choice of products, with the variance ratio of 45.18%. As for the recreational services, visitors prefer all the rurality aspects: experiential activities of cooking and handicraft making (significant at 10% level), exhibition and performance of local culture (significant at 1% level) and experience the rurality within ME/SA (significant at 5% level). However, all the variance ratios of the activity-related SP attributes are low (1.50% – 3.39%) in activity model. Because the interval estimation for the parameter of experiential activities of cooking and handicraft

making includes some negative values, some aspects of experiential activities or ways of deploying it may discourage the experience, suggesting that careful marketing and policy implementation is required.

Concerning the influence of the common set of VEB variables, it is found that if the visitors find they have chance to experience rural nature and culture near ME/SA, their choices of products and recreational activities will be more active, especially in the model of recreational services with the highest variance ratio of 54.15%. As for the product choice model, if a visitor is motivated by purchasing local food and local souvenirs, if a visitor purchased local food, agricultural products, and local souvenirs, and if a visitor finds that the price of local food/agricultural products/souvenirs, he/she is more likely to purchase the SP product. Similar stated responses are further found with respect to the variable “find cheaper price in local food, agricultural products, and local souvenirs”. In the case of recreational activities, visitors who participated in local culture events, local food tasting, and local communication are more willingly to choose to participate in corresponding recreational activities in the SP settings. The effects of participating in local cultural events (variance ratio: 16.99%) and communication (variance ratio: 15.16%) is higher than those of local food tasting activities (variance ratio: 4.36%). Unfortunately, the multi-level binary probit model suggests that visitors’ motives related to searching for local information and culture are not influential to visitors’ stated choices. This may be due to small proportion of visitors who were motivated by local information and culture.

## 5. Conclusions

### *Promoting region-specific products and activities at ME/SA*

The SP modeling results suggest that visitors prefer the locally produced products and the products that are only sold at ME/SA as well as the products they considered different from other MEs/SAs. Having chance to experience to contact with nature and culture could be an influential factor for both product and activity choice at ME/SA, especially for recreational services. This indicates that even bland rural scenery could be an important aspect of attractiveness to visitors. How to harmonize ME/SA with its surrounding natural environment and local culture can be a precondition to encourage more visitor engagement. Meanwhile, participating in local cultural events or communication will help to increase their demand of similar activities, implying that visitors prefer the activities related to rurality. Thus, it is important to provide products/services with rurality for enhancing the competitiveness of ME/SA. ME/SA should make use of local resources, provide chances to contact local culture and increase local communication to attract more visitors and consequently to promote regional development; however, how to make use of local resources and culture is not straightforward. Reflecting the needs of visitors and encouraging their participation is important. Unfortunately, visitor engagement behavior with sufficient knowledge of marketing mechanisms are lacking at disadvantaged regions. Considering such reality, it may also be important how to promote products/services provided by local people without professional marketing knowledge. From such a viewpoint, it is necessary to encourage more people to experience products/services with rurality at ME/SA.

*Awareness marketing for promoting the rurality*

The number of visitors who experienced rurality at ME/SA is bigger than the one with motives related to rurality. Thus, the market of occasional experience of rurality is not small and if marketers and policy makers can arouse people's awareness of rurality, occasional experiencers' passive choices may be transformed into active ones. Better marketing of the awareness of rurality may elicit a better image suitable for visiting promotion, which is important to generate people's intention to visit ME/SA. The image of rurality appears to be ideally positive and market-oriented (Zhou, 2014). Such marketing is essential for the long-term operation of ME/SA. First, young people can be a major marketing target, because they experience the rurality occasionally. Such marketing idea is supported by the findings that social influence has a significant influence on choices of products and recreational services. In line with such consideration, social media should be better utilized to promote rurality of ME/SA products and services. To young people, smartphone-based marketing may be a more powerful way.

*Market segmentation of ME/SA: Profiling visitors*

The modeling analysis results indicate that the presence of family members influences visitor's preference and behavior. For instance, traveling with spouse and parents is associated with experience of the rurality in a planned manner. Thus, visitors with family members are an important part of the ME/SA market and as a result, marketing efforts in the future should focus on how to meet the needs of both visitors and their family members. As the average age of visitors is 50.9 years old, the retired elderly are the majority of visitors. With more discretionary time and income, the retired elderly persons are the main source of visitors who seek for the rurality at ME/SA. The design of goods and activities should consider the demand of this type of visitors, especially the recreational activities, which may also help to enhance the quality of life of the elderly in depopulated areas.

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