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# Measuring the Economic Impact of Rural Tourism Membership on Local Economy: A Korean Case Study

**Hio-Jung Shin [1], Hyun No Kim [2,\*] and Jae-Young Son [3]**

[1]   Department of Agricultural and Resource Economics, Kangwon National University, Chuncheon 24341, Korea; hiojung@kangwon.ac.kr
[2]   Environmental Policy Research Group, Korea Environment Institute, Sejong 30147, Korea
[3]   Department of Tourism, Kangwon National University, Samcheok 25913, Korea; sonbal@kangwon.ac.kr
\*   Correspondence: hnkim@kei.re.kr; Tel.: +82-44-415-7985

**Abstract:** The implementation of rural tourism membership can aid in boosting economic growth in rural areas. This study examines households' preferences for rural tourism experience in association with sales of local agricultural products. Using a choice experiment method developed by experimental designs, this paper examines households' preferences to trade off purchasing costs of local agricultural products against various benefits provided by the rural tourism membership. The methods utilized in this paper represent an effective approach to evaluate the value of local tourism resources and the influence of these resources on the local economy. In empirical estimation we applied econometric approaches that allow for different preferences by incorporating income and residence effects into the models. Findings reveal that respondents place a premium on tourism attributes such as invitation seats and outdoor adventure tickets when choosing a tourism membership. We also find that the economic impacts associated with inducing higher-level tourism membership are substantial. This paper illustrates the potential for the development of a strategy associated with rural tourism management to enhance the local economy.

**Keywords:** rural tourism membership; economic growth; choice experiment; tourism resources; rural tourism management

## 1. Introduction

Rural tourism is one of the most important and valuable factors which can contribute to maintaining economic growth in rural areas and is a vital element which can provide local residents with many direct benefits. A few of these benefits, for example, would be associated with boosting the local economy attributed and lead to an increase in leisure demand from urban residents and increase in farm incomes by means of increase in sales of agricultural products.

Recently, rural areas have been experiencing major economic challenges which are mainly attributed to an increase in imported agricultural products due to international trade liberalization. Under these circumstances, rural tourism has been recognized as an important tool to promote the sustainability of the local economy. In particular, the linkage between tourism and agricultural sectors has generated significant synergies for the local development during the economic growth and crisis periods. A few previous studies have identified the significant impact of rural tourism on improvement of rural economy. For example, applying principal component analysis, Muresan et al. [1] identified that rural residents perceive the tourism as a sustainable development tool in the Romania's rural area. Giannakis [2] examined the economic role of rural tourism on the rural development in Cyrus and found that tourism was significant for improving economic activities in a rural area.

Since the importance of rural tourism to revitalize the economy in rural areas has been recognized, the Korean government has sought policies and/or strategies to promote the sales of agricultural products via rural tourism, which can lead to enhancing or sustaining the rural economy (Act on fostering and supporting rural convergence industry, Ministry of Agriculture, Food, and Rural Affairs). Consequently, since 2002, the Korean government has provided a systematic support system to the rural areas where valuable tourism resources are abundant and thus revitalization of the local economy via rural tourism is feasible.

Given this context, this paper focuses on estimating the economic impact of rural tourism membership on an increase in sales of agricultural products. Rural tourism membership can be thought as being in some way analogous to other types of membership such as golf club and hotel membership. These memberships provide various benefits such as exclusive offers and additional discounts to the members. To enjoy these benefits, however, the members have to pay membership fees. Since rural tourism not only involves a stay in the countryside but also it comprises a wide range of activities such as special events and festivals and outdoor adventures that the tourists can enjoy in the rural areas, we define rural tourism membership as an economic incentive useful for the revitalization of the rural economy. Joining the membership provides its members with a variety of cost-effective support services to maximize their tourism experience in rural areas. For instance, it offers accommodations at discounted rate, exclusive seats for a show/festival, and free tickets to enjoy outdoor adventure. In exchange for these beneficial services provided by the membership, however, the members are required to purchase agricultural products produced in local areas instead of paying membership fees.

This study applies attribute-based stated choice methods to understand tourists' preferences for rural tourism membership in association with sales of agricultural products produced in local areas. The primary objective of this study is to understand households' preferences to trade off purchasing costs of local agricultural products against various benefits provided by the rural tourism membership.

To identify households' preferences with respect to changes in quality of rural tourism services, we administered a stated preference questionnaire to the respondents who have had tourism experience in Jeongseon_gun. In developing choice experiments, we employed an orthogonal fractional factorial design to present attribute levels of the alternatives in the choice tasks. To the best of our knowledge, few if any studies have empirically explored the influence of rural tourism membership and its magnitude on sales of agricultural products in rural areas based on stated choice methods. Besides, this study also contributes to limited rural tourism literature on the choice experiment approach in South Korea.

The remaining sections are organized as follows. In the second section, the methodology including study area description, methods used, description of the survey, and empirical analysis is outlined. The third section includes the presentation of descriptive analysis, model results, application of the model, and discussion. Then, the study closes with a brief conclusion.

## 2. Methodology

### 2.1. Study area Description

Jeongseon_gun, Gangwon_do, South Korea is an example of an area that is suitable for invigorating rural tourism. Jeongseon_gun is a county located in the eastern part of the Gangwon_do, South Korea. Jeongseon_gun is famous for Jeongseon Arirang Festival which is hosted in early October every year. In terms of administrative areas in this region, forests cover the greatest areas (85.9%), followed by farm lands. Since 66% of the farming land in this region is located in a mountainous region, it has the optimum farming conditions for environmentally-friendly agricultural and forestry products. With respect to tourism attractions, there are 35 scenic sports, 29 cultural heritage sites, natural 4-season resorts, and 22 famous mountains standing over 1000 m.

　　　While the proportions of agriculture, forestry, and fishery industry to gross regional domestic products (GRDP) in Jeongseon_gun are greater than those of national and provincial average levels, various tourism resources such as natural resources, cultural resources, and social resources exist in this area [3]. In addition, according to the Ministry of Agriculture, Food, and Rural Affairs, Korea, Gangwon_do is the second most popular province that metropolitan residents have visited in 2012 and Jeongseon_gun in this province is rural tourists' favorite area to visit. This fact motivates researchers to examine the impact of rural tourism membership on the rural economy using a case study and to provide a valuable guideline to establish future strategies associated with vitalizing rural economy through the implementation of rural tourism membership. A map showing the location of potential tourists (metropolitan areas) and the study area is presented in Figure 1.
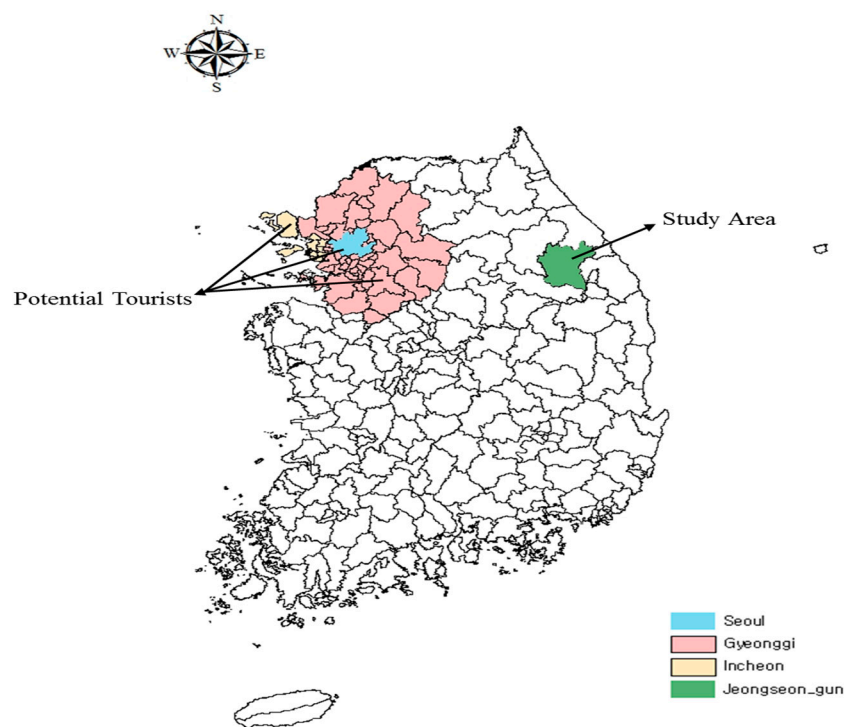


**Figure 1.** The location of potential tourists and study area.

## 2.2. Methods

　　　Stated preference approaches are known to be particularly suited to the following valuation problems. First, they are useful methods to examine the consumer's decision problems based on attributes and to evaluate one or more of the attributes. Second, the actual attributes are of insufficient range to allow for policy analysis relevant to the problem. Third, the actual attributes or alternatives do not currently exist and/or new attributes are being considered that do not currently exist in actual markets, in which case it is not suitable to apply the revealed preference methods.

　　　Since stated preference approaches allow for the valuation of both a product and its attributes, it has been extensively used in market research and product development. This approach asks consumers to respond to hypothetical changes in attributes posed in a questionnaire. Thus, stated preference data obtained from a survey setting can be used to identify households' preferences with respect to various changes in attribute levels [4]. While stated preference methods (SPMs) can be classified into different categories based on elicitation methods (rating, ranking, or choice) the basic traits of SPMs are virtually similar in that these methods ask respondents whether they are willing to trade off price (or tax) against different conditions in attributes [4,5].

The choice experiments, one of the most common SPMs, consider varying several attributes including a price- or cost-related attribute simultaneously in examining choices [6]. In choice experiments, sets of alternatives consisting of different levels of attributes are provided to the respondents and the respondents select one of the alternatives that they prefer most. Unlike other SPMs, it is feasible to provide respondents with a sequence of choice scenarios in the choice experiment, which would be the main advantage [4,6,7].

Since the choice experiment has been recognized as a useful tool to examine the recreationists' preferences [8–10], its application has thereafter appeared in tourism-related literature. For example, this technique was employed to examine tourists' preferences associated with ecotourism development [11,12], tourists' preferences for biodiversity conservation and scenic beauty [13], and tourist preferences for ecotourism development in protected areas [14,15]. Furthermore, some other studies used this approach to evaluate the tourists' preferences for effective attributes associated with tourism resources [16–22].

To estimate the economic impact of rural tourism membership (Note that other modelling approaches could be also used to estimate the economic impact of rural tourism. For instance, Giannakis and Efstratoglou [23] and Giannakis et al. [24] used an input-output analysis while Muresan et al. [1] applied a principal component analysis), this paper developed 'Jeongseon Sarang Membership' choice experiments generated by the orthogonal fractional factorial design. According to Louviere et al. [7] and Rose et al. [25] this design approach allows for an independent estimation of some effects of individual attributes by ensuring no correlation between attributes (i.e., orthogonality). In developing choice experiments associated with 'Jeongseon Sarang Membership', four membership-related attributes were chosen. The set of attributes and their levels used to create the choice experiment are presented in Table 1.

**Table 1.** Attributes, levels, and definition used in choice experiment.

| Attributes | Definition | Level |
|---|---|---|
| Accommodation | Available days to use accommodations designated as Jeongseon Sarang Members at a discounted rate | 5, 15, 30 days |
| Invitation seat | Available seats for all sorts of show/events performed in Jeongseon_gun | General, VIP, VVIP |
| Outdoor adventure ticket | Free family tickets to enjoy all outdoor adventures including Rail Bike, Skywalk, and Zipline, etc. | 1 limited free family ticket 1 fee family ticket, 2 free family ticket |
| Purchasing costs of agricultural products (10,000 KRW) | Annual purchasing costs of agricultural products produced in Jeongseon_gun | 36, 72, 96 KRW |

The selection of attributes and the levels for each attribute was based upon research from similar studies [14,21,22], feedback from focus group participants who have visited Jeongseon_gun several times for tourism, and advice from the rural tourism experts to determine the important attributes associated with rural tourism experience. They expressed in general a similar opinion that while staying and enjoying all kinds of tourism resources available in Jeongseon_gun, most of the activities the households are more likely to enjoy would be the local-based festival/show/events as well as exhilarating outdoor adventure.

The local tourism attributes chosen were: (1) accommodations designated as Jeongseon Sarang Members at a discounted rate; (2) seats for all sorts of show/events performed in Jeongseon_gun; (3) free family tickets to enjoy outdoor adventures in Jeongseon_gun; (4) in return for these benefits, the respondents are required to purchase specific amounts of agricultural products produced in Jeongseon_gun. The discussions with focus group participants and rural tourism experts also aided in the specification of levels of each of these attributes such that a respondent with rural tourism

experience could understand better or worse levels of tourism membership as a result of changing attribute levels.

Given this set of attributes and levels, statistical design methods were used to construct paired comparisons, or choice sets, with three alternatives. The attributes and levels form a universe of $3^4 \times 3^4 \times 3^4$ possible combinations. Choice set construction can be viewed as sampling from this universe of Jeongseon Sarang Membership alternatives. The resulting sample produced 27 choice sets which were blocked into nine sets of three. In the survey, one of each of these nine sets was equally distributed and presented to a respondent. Thus, a respondent was presented with three pairs of alternative descriptions of Jeongseon Sarang Membership. Note that we screened out respondents who are not willing to join Jeongseon Sarang Membership before proceeding choice questions instead of presenting the option of not choosing either alternative with each pair. An example of one of the resulting choices sets is presented in Figure 2.

| Attributes | Alternative 1 | Alternative 2 | Alternative 3 |
|---|---|---|---|
| Accommodation | 15 days | 30 days | 15 days |
| Invitation seat | VIP | VVIP | VVIP |
| Outdoor adventure ticket | 2 free family tickets | 2 free family tickets | 1 limited free family ticket |
| Purchasing costs | 72 KRW | 96 KRW | 36 KRW |
| Which alternative would you prefer to choose? | ☐ | ☐ | ☐ |

**Figure 2.** Example choice scenario.

### 2.3. Questionnaire Survey

Our study involved residents in metropolitan areas including Seoul, Gyeonggi, and Incheon, who are potential visitors to Jeongseon_gun. To increase the effectiveness of policy development which associates rural tourism membership with sales of local agricultural products in Jeongseon_gun, the survey was administered to the respondents who have visited Jeongseon_gun in the last 10 years (from May 2005 to May 2015) for the purpose of tourism such as hiking, Jeongseon_gun 5-day Market, field trip, festival, Zipline, Skywalk, and so on. To gain detailed information about rural tourists' preferences and the current rural tourism in Jeongseon_gun, we held two focus group discussions which involved 20 rural tourists and two rural tourism experts randomly recruited from the three metropolitan areas. Based on feedback from focus group participants and rural tourism experts, the survey instrument was revised to adjust question wording as well as format and flow of the questions in order to optimize responses and ensure accuracy prior to implementing the questionnaire to final survey samples.

The recruitment of potential survey respondents took place through contact by a market research survey firm, Global Research Co. We used a random sampling method to ensure each household has the same probability of being chosen [26]. The initial contact outlined the intent and purpose of the survey and then the recipient was invited to participate. Interested participants were asked to go to a web link to obtain a login for the online survey, which was programmed and hosted by Global Research Co. Using this procedure, we collected 630 completed responses which involved respondents who have experienced rural tourism in Jeongseon_gun in the last 10 years. Besides choice experiment questions, each respondent was required to complete other survey components, including their preference and awareness of tourism resources in Jeongseon_gun, a comprehensive evaluation of Jeongseon_gun area, and their demographics. Of these 630 responses, 245 respondents were not willing to join Jeongseon Sarang Membership. Therefore, choice experiment questions were only given to the respondents who agreed to participate in the membership and eventually 385 respondents (3465 choice observations) were used for analysis.

### 2.4. Empirical Analysis

A Random Utility Theory assumes a respondent is a utility maximizer choosing one alternative j which renders her the greatest utility among a finite set of alternatives J. The stochastic utility function $(U_j)$ associated with alternative j can be specified as having two components, where $V_j$ is observed utility components and $\varepsilon_j$ is the unobservable component in Equation (1).

$$U_j = V_j + \varepsilon_j \tag{1}$$

where $V_j = \sum_k \beta_k X_{jk}$ and $X_{jk}$ are a set of the attributes of alternative j which include the attributes displayed in Table 3. $\beta_k$ are the parameters to be estimated.

Besides a standard conditional logit model (CNL), we estimated two different conditional logit models; (i) CNL interacted by each income group (ICNL) and (ii) CNL interacted by each residence group (RCNL) to investigate different preferences by income levels and residence groups. In these two models which used two-way interaction between each income or residence dummy variable and attributes, $V_j$ in Equation (1) is specified as Equation (2).

$$V_j = \sum_i \beta_{i \times price}\, i \times price_j + \sum_i \beta_{i \times accom}\, i \times accom_j + \sum_i \beta_{i \times seat}\, i \times seat_j + \sum_i \beta_{i \times play}\, i \times play_j \tag{2}$$

where in Equation (2) i denotes *low*, *mid*, and *high* for income model (ICNL) and *seoul*, *gyeonggi*, and *incheon* for residence model (RCNL), respectively.

Based on the parameters estimated for each variable in each model, marginal willingness to pay (MWTP) for each attribute can be derived as follows.

$$MWTP_k^i = -\frac{\beta_{i \times k}}{\beta_{i \times price}} \tag{3}$$

where in Equation (3) i denotes *low*, *mid*, and *high* for income model and *seoul*, *gyeonggi*, and *incheon* for residence model, respectively. Equation (3) represents marginal rate of substitution (MRS) between change in income/price and each attribute.

The definition of the variables used in the analysis of Jeongseon Sarang Membership choice is provided in Table 2. Note that in empirical estimation, the *price* variable was rescaled in KRW 10,000 so that independent variables are about the same size. To incorporate an income effect, we created a categorical dummy variables denoted as *low*, *mid*, and *high* for three income groups which were generated based on the reported income percentiles in the sample (Respondents were asked to indicate household's income ranges rather than their actual incomes). These three dummy variables for each income category were interacted with the attributes (*price*, *accom*, *seat*, and *play* variables) using a two-way interaction and were used as explanatory variables to understand difference in preferences by income levels. In a similar way, to examine different preferences by residence, dummy variables denoted as *seoul*, *gyeonggi*, and *incheon* for three residence groups were generated, interacted with the attributes, and used in the different empirical models.

**Table 2.** Definition of the variables used in choice analysis.

| Variables | Definition |
|---|---|
| *price* | Annual purchasing costs of agricultural products (10,000 KRW) |
| *low* | 1 for low income household (less than 40 million KRW), 0 otherwise |
| *mid* | 1 for middle income household (between 40 and 70 million KRW), 0 otherwise |
| *high* | 1 for high income household(greater than 70 million KRW), 0 otherwise |
| *accom* | Number of days to use accommodation |
| *seat* | Invitation seat (3: VVIP, 2: VIP, 1: general seat) |
| *play* | Outdoor adventure ticket (3: 2 free family tickets, 2: 1 free family tickets, 1: 1 limited free family tickets) |
| *seoul* | 1 for Seoul residents, 0 otherwise |
| *gyeonggi* | 1 for Gyeonggi residents, 0 otherwise |
| *incheon* | 1 for Incheon residents, 0 otherwise |

One of the advantages of using attribute-based state choice methods over other methods lies in the ability to derive the impact of difference between situations (membership levels) which have different levels of attributes (i.e., the difference between base membership level and improved membership level). This task can be accomplished using the compensating variation (CV) which can be computed as dividing the difference of utility values between two situations by the marginal utility of income. We examine the economic impact of difference between Jeongseon Sarang Membership levels. More specifically, suppose $V^1$ is the utility associated with low- level Jeongseon Sarang Membership (base situation), $V^2$ is the utility associated with middle-level Jeongseon Sarang Membership, and $V^3$ is the utility associated with high-level Jeongseon Sarang Membership. An expression for CV in these cases is:

$$V^2 - V^1 : CV_i = \frac{1}{\lambda_i}\left[V_i^2 - V_i^1\right] = \frac{1}{-\beta_{i \times \text{ price}}}\left[V_i^2 - V_i^1\right] \tag{4}$$

$$V^3 - V^1 : CV_i = \frac{1}{\lambda_i}\left[V_i^3 - V_i^1\right] = \frac{1}{-\beta_{i \times \text{ price}}}\left[V_i^3 - V_i^1\right] \tag{5}$$

where in Equations (4) and (5) subscript i denotes *low*, *med*, and *high* based on the ICNL model, *seoul*, *gyeonggi*, and *incheon* based on the RCNL model.

## 3. Results

### 3.1. Descriptive Analysis

Table 3 summarizes the socio-demographic characteristics and trip profiles of respondents who were willing to join the Jeongseon Sarang Membership scheme. In Table 2, more males were found in the sample than females and more than 88% of the respondents resided in Seoul and Gyeonggi area. Of 385 responses, 43.1% of the samples were aged 50 and above; the second largest age group were in their 40s. In terms of household annual incomes, about 46% of respondents earned between US $31,000 and US $60,000, and the second largest group belonged to households with an annual income between US $61,000 and US $90,000. With respect to the primary factors that respondents consider when making a trip to Jeongseon_gun, 36.4% of respondents selected local tourism resources, followed by festival/show/event (25.4%) and special products (21.6%). We also questioned respondents regarding the overall satisfaction score for their trip experience and the expected days of stay for their next trip to Jeongseon_gun. Mean satisfaction score was 72.6 and respondents expect to stay on average about 3 days per trip.

**Table 3.** Socio-demographic characteristics and trip profiles of the respondents.

| Gender | Frequency (%) | Residence | Frequency (%) |
|---|---|---|---|
| Male | 202 (52.5) | Seoul | 162 (42.1) |
| Female | 183 (47.5) | Gyeonggi | 180 (46.7) |
|  |  | Incheon | 43 (11.2) |
| **Annual Income (US $)** | **Frequency (%)** | **Age** | **Frequency (%)** |
| Up to 30,000 | 47 (12.2) | 19–29 years | 58 (15.1) |
| 31,000–60,000 | 178 (46.2) | 30–39 years | 71 (18.4) |
| 61,000–90,000 | 116 (30.1) | 40–49 years | 90 (23.4) |
| More than 91,000 | 44 (11.4) | 50 and above | 166 (43.1) |
| **Primary Consideration** | **Frequency (%)** | **Satisfaction Score (0–100)** | |
| food | 34 (8.8) | Mean | 72.6 |
| tourism resource | 140 (36.4) | Std. dev. | 15.4 |
| festival/show/event | 98 (25.4) | **Expected Length of Stay per Trip (Day)** | |
| special product | 83 (21.6) | Mean | 3.1 |
| generousness | 30 (7.8) | Std. dev. | 1.7 |

Note: we converted annual income to US $ at a exchange rate of KRW 1000 equal to US $1.

### 3.2. Model Results

All econometric model parameter estimates were estimated using maximum likelihood estimation procedures using the econometric software STATA 10 (Note that all models were estimated without including alternative specific constants (ASC) since the alternatives presented to the respondents are all generic alternatives). The results are summarized in Table 4.

**Table 4.** Estimation results for CNL, ICNL, and RCNL model.

| CNL | | ICNL | | RCNL | |
|---|---|---|---|---|---|
| Variable | Coefficient (S.E) | Variable | Coefficient (S.E) | Variable | Coefficient (S.E) |
| price | −0.0203 *** (0.0018) | low × price | −0.0192 *** (0.0038) | seoul × price | −0.0258 *** (0.003) |
| accom | 0.000002 (0.0038) | mid × price | −0.0206 *** (0.0027) | Gyeonggi × price | −0.0168 *** (0.0026) |
| seat | 0.138 *** (0.0465) | high × price | −0.0207 *** (0.0034) | incheon × price | −0.0158 *** (0.0053) |
| play | 0.2416 *** (0.0467) | low × accom | 0.0109 (0.0079) | seoul × accom | 0.001 (0.006) |
| | | mid × accom | 0.008 (0.0056) | gyeonggi × accom | −0.0052 (0.0056) |
| | | high × accom | 0.0046 (0.0072) | incheon × accom | 0.0182 * (0.0113) |
| | | low × seat | 0.222 ** (0.0971) | seoul × seat | 0.1365 * (0.0729) |
| | | mid × seat | 0.0863 (0.0667) | gyeonggi × seat | 0.1279 * (0.0675) |
| | | high × seat | 0.1653 * (0.0881) | incheon × seat | 0.2042 (0.1407) |
| | | low × play | 0.2491 ** (0.0991) | seoul × play | 0.2476 *** (0.0739) |
| | | mid × play | 0.1789 *** (0.0673) | gyeonggi × play | 0.227 *** (0.0673) |
| | | high × play | 0.3342 *** (0.0867) | incheon × play | 0.2957 ** (0.1407) |
| N | 3465 | N | 3465 | N | 3465 |
| LL | −1187.42 | LL | −1183.598 | LL | −1182.25 |
| $\rho^2$ | 0.064 | $\rho^2$ | 0.067 | $\rho^2$ | 0.068 |

Notes: Significant at the *** 0.01 level; ** 0.05 level; * 0.10 level.

CNL is the base conditional logit model without incorporating respondents' heterogeneity. ICNL and RCNL represent the conditional logit models which incorporate income and residence effects into the model, respectively.

In the base CNL model, all parameters except *accom* variable are statistically significant and follow the expected signs. The *price* variable is negative, implying that an increase in prices has a negative impact on respondents' choice. The positive sign of parameters for *seat* and *play* variables indicates that respondents are sensitive to the increase in the level of these variables. The *accom* variable is statistically insignificant, implying respondents are insensitive to the number of days of accommodation use when making a choice. This is probably due to the fact that as shown in Table 2, the sample respondents prefer to short-term trips (i.e., the length of stay per trip is only 3 days). In addition, according to Cho et al. [26] and Rural Resource Development Institute [27], Korean rural tourists do not in general intend to stay for a long duration in the rural tourism experience. This variable, however, appears to be significant for the respondents in the other model, who have a longer travel distance and time and thus longer expected length of stay.

Parameter estimates in the ICNL also follow expected signs. The interaction terms, *low* × *price*, *mid* × *price*, and *high* × *price* represent the marginal utility of income for each income level. The coefficients on these variables are negative and highly significant and the implied marginal utility of income decreases as income increases, which is consistent with the general assumption of decreasing marginal utility of income. While *mid* × *seat* is statistically insignificant, *low* × *seat* and *high* × *seat* are positive and significant implying that low and high income households are sensitive to invitation seat. The coefficients on the variables, *low* × *play*, *mid* × *play*, and *high* × *play* are all positive, implying that an increase in the level of outdoor adventure tickets has a positive impact on choice.

Similar to the results of ICNL model, the parameters of *seoul* × *price*, *gyeonggi* × *price*, and *incheon* × *price* are all negative and significant in the RCNL model. These three significant parameters suggest that price increases have a negative influence on choices. All accommodation-related variables are statistically insignificant in the CNL and ICNL model, and *incheon* × *accom* is positive and significant at the l0% level, implying that respondents living in Incheon area are sensitive to the number of days of accommodation use in rural tourism. This is probably due to the fact that, because of longer travel distance, Incheon residents require more time to travel to Jeongseon_gun than Seoul and Gyeonggi residents. To validate this, we conducted statistical tests in which the null hypothesis is the mean difference of expected days of stay between Incheon and other two residents. The results indicated that the expected days of stay in Jeongseon_gun between two groups are statistically different. However, an increase in the level of invitation seats has no impact on choice for Incheon residents. As is in the ICNL model, an improvement in the level of outdoor adventure tickets has a positive impact on choice for all respondents.

Based on the parameter estimates presented in Table 4, we calculated that the MWTPs for each attribute were statistically significant using Equation (3). The calculated MWTPs can be interpreted as the increase in purchasing costs of agricultural products in return for increase in one level of each attribute. The results are summarized in Table 5. Based on CNL model, MWTPs for *seat* and *play* variables are about US $68 and US $119, respectively. Incheon residents are only willing to pay about US $12 for one day increase in accommodation use in RCNL model. Based on ICNL model MWTPs for *seat* variable are about US $116 and US $80 for low and high income households, respectively. Using the RCNL model they are about US $53 and US $76 for Seoul and Gyeonggi residents. With respect to MWTPs for the *play* variable, they are about US $130, US $87, and US $162 for low, middle, and high income households, respectively. Using the RCNL model they are about US $96 for Seoul residents, US $135 for Gyeonggi residents, and US $188 for Incheon residents. Given the comparison of MWTPs for each attribute calculated from all three models, the largest MWTPs are placed on outdoor adventure tickets.

**Table 5.** Estimates of marginal willingness to pay (US $) for attributes by each model.

| Model | Category | Accommodation | Seat | Play |
|-------|----------|---------------|------|------|
| CNL | - | - | 68.1 | 119.2 |
| ICNL | low | - | 115.6 | 129.7 |
| | mid | - | - | 86.9 |
| | high | - | 79.9 | 161.6 |
| RCNL | seoul | - | 52.9 | 95.9 |
| | gyeonggi | - | 76.0 | 134.8 |
| | incheon | 11.6 | - | 187.7 |

*3.3. Application of the Model*

To examine the economic impact associated with promoting higher-level membership, we calculate the utility levels for each level of membership using the parameter estimates in Table 4 and the corresponding attribute levels are presented in Table 6. Table 7 presents the results of the economic

impact associated with the difference between low- and middle-level and between low- and high-level Jeongseon Sarang Membership from each model. The total impacts presented in the 5th to 10th columns of Table 7 were calculated assuming 5%, and 10% of actual number of households (885,420 households in total) who visited Jeongseon_gun for rural tourism in 2015 provided by Jeongseon County join Jeongseon Sarang Membership. In the ICNL model, we assumed that the proportions of each income category make up 33.33% of total households each because no information regarding the number of households per income category is available. Similarly, we assumed that each residence category corresponds to 33.33% of total households in the RCNL model.

**Table 6.** Attribute levels used in the calculation of utility values by each membership level.

| Attributes | Attribute Levels | | |
|---|---|---|---|
| | $V^1$ | $V^2$ | $V^3$ |
| Days of accommodation use | 5 | 15 | 30 |
| Invitation seat | General | VIP | VVIP |
| Outdoor adventure tickets | level 1 | level 2 | level 3 |

Notes: level 1, 2, and 3 in outdoor adventure tickets represent 1 limited free family ticket, 1 free family ticket, and 2 free family tickets, respectively.

**Table 7.** Economic impact associated with the difference between Jeongseon Sarang Membership levels.

| | | Economic Impact | | Total Economic Impact for $V^2 - V^1$ | | Total Economic Impact for $V^3 - V^1$ | |
|---|---|---|---|---|---|---|---|
| | | ($/Household/Year) | | ($ Million/Year) | | ($ Million/Year) | |
| Model | Category | $V^2 - V^1$ | $V^3 - V^1$ | 5% | 10% | 5% | 10% |
| CNL | - | 187 | 374 | 8.3 | 16.6 | 16.6 | 33.1 |
| ICNL | low | 245.3 | 490.7 | 3.6 | 7.2 | 7.2 | 14.3 |
| | mid | 86.8 | 173.7 | 1.3 | 2.5 | 2.5 | 5.1 |
| | high | 241.3 | 482.6 | 3.5 | 7.1 | 7.1 | 14.1 |
| | sum | - | - | 8.4 | 16.8 | 16.8 | 33.5 |
| RCNL | seoul | 148.9 | 267.8 | 2.2 | 4.4 | 3.9 | 7.8 |
| | gyeonggi | 211.3 | 422.5 | 3.1 | 6.2 | 6.2 | 12.3 |
| | incheon | 302.3 | 662.3 | 4.4 | 8.8 | 9.7 | 19.4 |
| | sum | - | - | 9.7 | 19.4 | 19.8 | 39.5 |

The economic impacts per household per year calculated from the CNL model are about US $187 for $V^2 - V^1$ and US $374 for $V^3 - V^1$. These amounts illustrate annual willingness to pay (WTP) per household, which can be interpreted as increase in the annual purchasing costs of agricultural products produced in Jeongseon_gun as a result of increase in the level of Jeongseon Sarang Membership (i.e., more benefits resulting from increase in membership levels). Assuming 5% and 10% of households join the Jeongseon Sarang Membership, total economic impacts for $V^2 - V^1$ are US $8.3 million and US $16.6 million while for $V^3 - V^1$ they are US $16.6 million and US $33.1 million, respectively. Other results using the ICNL and RCNL models can be interpreted in a similar way to that which is applied to the CNL model case. The calculated economic impacts that the promotion of higher-level Jeongseon Sarang Membership can generate are considerable and these estimates illustrate the substantial impact of revitalizing rural tourism membership on boosting the local economy.

*3.4. Discussion*

In this section, we compare the estimated economic impact of rural tourism membership on sales of agricultural products to Gross Regional Domestic Products (GRDP) in agriculture, forestry, and fishery in Jeongseon_gun in 2015 provided by Statistics Korea [28] to examine whether the

demand exceeds the supply or not. Depending on model specifications, the estimated economic impacts of the rural tourism membership cover 14.3–33.9% of the GRDP produced in Jeongseon_gun (Table 8). This illustrates that the introduction of rural tourism membership can aid in maintaining the sustainability of rural economy by ensuring the continued sales of agricultural products produced in the rural areas. In other words, a partnership between loyal tourists and tourist attractions such as rural tourism membership could be a good strategy to revitalize the rural economy via an increase in farmers' income.

**Table 8.** Comparison of the economic impacts of rural tourism membership to gross regional domestic products (GRDP) produced in Jeongseon_gun.

| Model | $V^2 - V^1$ (A) ($ Million/Year) | $V^3 - V^1$ (B) ($ Million/Year) | GRDP (C) ($ Million/Year) | (A)/(C) (%) | (B)/(C) (%) |
|---|---|---|---|---|---|
| CNL | 16.6 | 33.1 | 116.5 | 14.3% | 28.4% |
| ICNL | 16.8 | 33.5 | 116.5 | 14.4% | 28.8% |
| RCNL | 19.4 | 39.5 | 116.5 | 16.7% | 33.9% |

In an attempt to examine the consistency of our results, we compare our findings with other studies that explore the economic impact of rural tourism on rural development using different modelling approaches. Giannakis [2] found empirical evidence that rural tourism can establish strong relationships with food manufacture and agriculture and generate synergies to create sustainable development in the long run. Muresan et al. [1] found that rural tourism development has the potential to improve the wellbeing of local communities thanks to its positive effect on income generation. This implies that our findings are in line with similar studies in tourism literature.

## 4. Conclusions

This study focuses on understanding the association between rural tourism membership and sustainable economic growth in Jeongseon_gun, Gangwon_do, South Korea. To identify households' preferences with respect to rural tourism experience, we administered a survey to a sample of respondents who have visited Jeongseon_gun for the purpose of rural tourism in the last 10 years in metropolitan areas including Seoul, Gyeonggi, and Incheon. Using the choice experiment approach, this study attempted to explore the impact associated with the implementation of rural tourism membership on promoting sales of agricultural products in the local area where abundant tourism resources exist. We believe this study may be the first attempt to examine the possibility of connections between tourism membership and revitalization of rural economy using stated choice experiments.

We estimated three different conditional logit models in which two models incorporate preferences differentiated by income and residence into the models. Our model results indicate that respondents place a premium on the attributes such as invitation seats and outdoor adventure tickets when making a choice between alternatives. This implies that, when developing the future policy/strategies associated with the development of rural tourism membership, these attributes deserve consideration. The economic impacts of promoting higher-level tourism membership on the increase in sales of agricultural products appear to be substantial. Thus, it is suggested that an aggressive incentive program which is a partnership between loyal tourists in metropolitan areas and tourist attractions be necessary to accelerate rural tourism programs.

To conclude, while our results are specific to this small local area in Gangwon_do in South Korea, the results from this case study may be of interest to policy makers associated with rural development and could be used as a valuable guideline to design future strategies in similar local environments.

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