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Determinants of tourism demand in Japan: A comparative analysis of day trips, domestic, overseas, and homecoming tourism

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ABSTRACT

This paper aims to examine the determinants of tourism demand as a leisure activity in Japan. For the analysis, data on tourism participation rates from the "Survey on Time Use and Leisure Activities" are used as a proxy for tourism demand. The dependent variable is divided into four types of tourism: day trips, domestic trips, homecoming trips, and overseas trips. A fractional logit model is employed for estimation, as the dependent variable is expressed as a ratio. The explanatory variables are constructed from the perspectives of economic conditions, work–life balance, transportation, and environmental factors. The results show that daily travel time is a common significant factor across all types of tourism demand. Income is also significant for all types except homecoming trips. In addition, the number of private cars per household is negatively associated with homecoming trips, while regions with airports show a positive relationship, although this is not significant for other types of tourism demand. These findings suggest that the determinants of homecoming trips differ somewhat from those of other tourism types. Furthermore, day trips and overseas trips exhibit different patterns with respect to working hours and environmental factors. Overall, the results highlight the importance of considering different forms of tourism when analyzing tourism demand.

Contribution/Originality: This study uses open survey data to capture tourism demand through observed participation behavior, providing a complementary perspective to previous studies that have tended to focus on tourist inflows and outflows while giving less attention to differences in participation behavior across regions and tourism types.

1. INTRODUCTION

While there are several leisure activities available, tourism remains one of the most prominent options. From an economic perspective, tourism is often categorized as a luxury good. Therefore, it is generally considered an activity that people with sufficient financial resources can afford. Income, one of the key determinants of tourism demand, is also closely related to participation in tourism activities. However, this relationship mainly applies to leisure-oriented travel, whereas forms of tourism have become increasingly diverse. Moreover, the determinants of tourism demand may vary depending on the type of tourism. For example, people who work hard often have little time to stay longer at holiday destinations, even though they want to relax there. In this case, they are likely to visit destinations closer to where they live. In Japan, anime tourism, in which tourists visit destinations themed around cartoons, might be one example. According to the Anime Tourism Association's website, 88 destinations across the country are voted for and nominated each year by people who love Japanese cartoons. These destinations include ordinary areas that are not known as holiday destinations and may be closer for some tourists.

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On the other hand, homecoming trips could also be considered a distinct form of tourism. Although they serve a different purpose from general travel to destinations, some visitors may experience unfamiliar feelings, such as nostalgia. This style of tourism might resemble Visiting Friends and Relatives (VFR) tourism. Most research on VFR tends to focus on relationships with international migrants (Dwyer, Seetaram, Forsyth, & King, 2014; Huang, King, & Suntikul, 2017). However, the motivations of visitors may be similar to those of VFR travelers, even though this study focuses on domestic travel within Japan. This perspective could be significant for regions that have suffered from depopulation.

This paper aims to examine the factors influencing different types of tourism demand in Japan and to identify the determinants of various forms of tourism, such as day trips, domestic trips, overseas trips, and homecoming trips. Although tourism demand has been widely studied, previous research has tended to focus on tourist inflows and outflows using gravity models from an econometric perspective. This perspective can reveal interactions between regions, such as urban and rural areas. Meanwhile, preferences for tourism styles across regions and the relationships between social or environmental factors and tourism demand in each region have received less attention.

This paper uses open survey data that include a range of leisure and tourism activities. Using tourism participation rates, the study captures tourism demand from the perspective of observed participation behavior, providing a complementary viewpoint to previous studies. As noted above, tourism types in Japan are diverse. This paper examines several tourism purposes, including day trips, homecoming trips, and holiday trips, and analyzes the determinants of each tourism style. Recently, some regions have needed to discuss regional development through tourism because of population aging and depopulation. The results of this study may contribute to understanding the tourism characteristics best suited to these regions. For example, homecoming tourism may contribute to sustainable interactions among regions.

2. LITERATURE REVIEW

Many papers have discussed the factors influencing tourism activity and motivation from several perspectives. In economics, such activities and motivations are regarded as tourism demand, defined as the willingness and ability of consumers to purchase different amounts of tourism products at different prices during a given period (Dwyer, Forsyth, & Dwyer, 2010). From this perspective, understanding tourism demand is related to tourism markets and planning, and some researchers have attempted to identify the determinants of tourism demand using econometric approaches.

The statistical model of tourism demand comprises several variables, with the gravity model likely serving as the fundamental theoretical framework. The gravity model originally derives from Newton's law of universal gravitation (Rosselló Nadal & Santana Gallego, 2022). The equations were then applied to international trade flows in the 1960s (Shahriar, Qian, Kea, & Abdullahi, 2019). Building on this idea, the gravity model has also been applied to tourism flows to examine the determinants of tourist flows (Pyers, 1966; Wilson, 1967).In the tourism field, this mathematical model is also used as a tourism demand model to predict or demonstrate the relationships between tourism demand and economic, social, and other factors (Dwyer et al., 2010).

From a mathematical perspective, many studies have examined tourism demand, particularly inbound tourism. Akter, Akhtar, and Ali (2017) analyzed international tourism demand in Bangladesh and found that economic factors and geographical distance were significant. Furthermore, Vietze (2012) investigated cultural effects and found that linguistic or religious similarities affected tourism demand in the US. Moreover, Takahashi (2020) compared the economic impact of tourism across two islands and demonstrated differences attributable to regional industrial structures. In those studies, tourism demand is generated by tourists from other countries or regions, and their preferences as tourists are analyzed.

Meanwhile, the outbound tourism perspective can also be examined using a tourism demand model. From this perspective, tourism demand refers to tourists from target regions or countries, and their preferences are analyzed.

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For example, Song, Romilly, and Liu (2000) demonstrated the economic impact of outbound tourism in the UK using a time-series model and found that income elasticity was high, whereas the price factor was inelastic. In addition, Park (2016) examined the determinants of outbound tourism demand in Korea using panel data and found that Korean tourists are less price-sensitive when traveling to OECD countries than when traveling to other countries. Moreover, Takahashi (2021) compared outbound tourism demand in Japan between the 1970s and 1980s and found that tourist characteristics, such as gender and destination preferences, changed with economic development.

Tourism studies in Japan that focus on the regional level tend to discuss tourist inflows or tourist consumption. Shioya (2013) reveals, through regression analysis, that tourism budgets at the local government level are related to tourism demand and depend on subsidies. In addition, Yabe (2013) used origin-destination data on overnight travelers among Japan's prefectures to identify patterns in traveler flows for zoning plans. Although these studies provide significant insights into regional tourism, understanding tourism preferences at the regional level is also important for tourism studies. Therefore, this paper uses the Survey on Time Use and Leisure Activities to identify the determinants of tourism activity during leisure time.

In those studies, the number of tourists is generally used as a variable to represent tourism demand because market size is one of the most significant perspectives for analyzing interactions among regions. Meanwhile, this study uses data on the proportion of people who engage in tourism activities during their leisure time, focusing on the prefectural level in Japan. The ratio data are considered more useful for understanding preferences in tourism demand than the number of tourists, which indicates the size of tourist flows.

In addition, the explanatory variables refer to findings from previous studies, such as economic factors. However, this paper also includes variables that demonstrate the motivations behind tourism preferences, including work-life balance and residential environment factors. For example, the statistical models in this study may show that day trips or homecoming trips are more strongly influenced by labor-related conditions, such as commuting time or working hours, than by economic factors.

3. METHODOLOGY

3.1. Data

This paper uses the Survey on Time Use and Leisure Activities as an indicator of tourism activity. The dataset is collected by the Statistics Bureau of Japan under the Ministry of Internal Affairs and Communications (Statistics Bureau of Japan, 1996a). The survey is conducted every five years and aims to examine patterns of daily activities and the allocation of time between work and leisure.

The survey covers various categories of leisure activities, such as travel and excursions. Tourism activity is measured based on respondents' experiences over the past year. Travel is classified into four categories: day trips, domestic trips, homecoming trips, and overseas trips (see Table 1). The data are aggregated at the prefectural level.

In this study, tourism participation rates serve as indicators of tourism activity. The participation rate is defined as the percentage of respondents who engaged in a specific travel activity in the past year. Because the survey uses stratified sampling by prefectural population, the number of respondents varies with population size. Therefore, participation rates are more appropriate than raw counts for analyzing tourism demand.

This study focuses on the 2016 survey. Although the most recent available statistics are from 2021, they are likely to reflect the impact of the COVID-19 pandemic. Similarly, the 2011 survey was conducted shortly after the Great East Japan Earthquake, which significantly affected tourism behavior. To avoid such extraordinary influences, the 2016 data are used because they represent a relatively stable period.

In addition, some explanatory variables were obtained from other sources. Variables related to commuting time and working hours, which reflect labor conditions, were also taken from the Survey on Time Use and Leisure Activities. Economic factors, such as GDP per capita as an income variable, and environmental factors, such as temperature, sunshine duration, and the proportion of habitable areas, were obtained from the "System of Social and

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Demographic Statistics," issued by the Statistics Bureau of the Ministry of Internal Affairs and Communications (Statistics Bureau of Japan, 1996b). On the other hand, transportation variables, such as the number of private cars per household, were obtained from the Automobile Inspection & Registration Information Association (2016). Moreover, airport dummy variables, also used as transportation variables, were obtained from the Ministry of Land Infrastructure Transport and Tourism (2008).

Table 1. The definition of variables.

Variables	Name of Variable	Explanation	Resource
Response variable	DAYTRIP_RATE	The day-trip rate is estimated as the proportion of people in the sample who reported taking the journey within the past year. Unit: %	Survey on Time Use and Leisure Activities
	DOMESTIC_RATE	The domestic trip rate. The value is estimated as the percentage of people who reported having taken a trip within the past year, based on the sample population. Unit: %	Survey on Time Use and Leisure Activities
	OVERSEAS_RATE	Rate of overseas travel. The value is estimated as the number of people who answered that they had taken a trip within the past year, divided by the estimated population based on the sample. Unit: %	Survey on Time Use and Leisure Activities
	HOMECOMING_RATE	Homecoming trip rate. The value is estimated by dividing the number of people who answered that they had taken the journey within the past year by the population estimate from the sample. Unit: %	Survey on Time Use and Leisure Activities
Explanatory variable	GDPCAP	Variable: 'GDP per capita.' This factor shows the income effect. Unit: Thousand Yen	System of Social and Demographic Statistics
	COMMUTING	Commuting time variable. This factor represents one aspect of work-life balance. Unit: Minutes.	Survey on Time Use and Leisure Activities
	JOB	Working-hours variable. A factor indicating work-life balance. Unit: Minutes.	Survey on Time Use and Leisure Activities
	CAR_OWN	Variable: Number of private cars per household. This variable captures the transportation effect for short trips. Unit: Number of cars.	Airia automobile inspection & registration information association
	AIRPORT	Airport variable. To show the transportation effect, a dummy variable indicates whether the base airport is located in the prefecture (Yes=1, no=0)	Ministry of Land, Infrastructure, Transport and Tourism
	TEMP	Temperature variation. This shows the factors affecting the environment in residential areas. Unit: °C	System of Social and Demographic Statistics
	SUNSHINE	Sunshine duration variable. This shows the factors affecting the environment in residential areas. Unit: Hours	System of Social and Demographic Statistics
	INHABIT	Ratio of habitable areas. Shows the factors affecting the environment of residential areas. Unit: %	System of Social and Demographic Statistics

3.2. Equation Model

Table 1 presents the definitions of the variables used in the estimation model. In this study, these variables are used to identify factors affecting the tourism participation rate, which is the dependent variable. In this case, linear

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models such as ordinary least squares (OLS) are unsuitable because ratio data range from 0 to 100 or from 0 to 1. Therefore, this paper employs a fractional logit model to estimate the percentage variable. The equation is as follows:

$$E(y_i \mid X_i) = exp(X_i\beta)/1 + exp(X_i\beta) \quad (1)$$

Where y_i is the dependent variable representing the tourism participation rate, X_i denotes the vector of explanatory variables, and β is the vector of parameters to be estimated.

The fractional logit model is a nonlinear model for which the maximum likelihood method is used because the dependent variable is limited. In this method, model evaluation measures such as R-squared cannot be used. Although pseudo-R-squared is available, this indicator is not as accurate as R-squared in an ordinary least squares model because of differences in calculation. Therefore, this paper uses the Akaike information criterion, which is estimated based on likelihood and the number of parameters, to select significant variables and the best estimation model instead of pseudo-R-squared.

For the estimates in this study, the definitions of the explanatory variables are listed in Table 1.

This paper considered factors such as economic, social, and geographical conditions to estimate their effects on tourism participation rates. GDP per capita, a commonly used proxy for tourism demand, reflects the income effect. It is generally regarded as a significant economic factor in tourism (Nemec Rudež, 2018). Tourists' disposable income is also regarded as a significant factor in tourism demand, and GDP and GDP per capita have often been used in previous studies to estimate the relationship between income and tourism demand (Rosselló Nadal & Santana Gallego, 2022; Song, Li, Witt, & Fei, 2010).

Meanwhile, 'commuting time' and 'working hours' are identified as social factors. Work-life balance is generally considered to be influenced by tourism demand; therefore, these factors could be related to the tourism participation rate.

Furthermore, 'Number of private cars per household' and 'Airport' are presented as transportation factors. Familiarity with public transportation is a significant factor influencing tourism demand, while private cars are also related to tourism activities, such as day trips and short trips to nearby regions. Meanwhile, airplanes are considered the vehicle for long-distance travel, including foreign countries, but it is unfamiliar to the people who reside in the city located near the airport, which is only domestic or short-distance airplanes. Therefore, this variable would lead to differences in tourism participation rates, particularly for overseas journeys.

Meanwhile, geographical factors affecting the environment of residential areas may also be related to tourism demand. Environmental factors such as temperature, sunshine duration, and the proportion of habitable areas could become push factors for tourism demand, as many tourists may desire a different environment.

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Table 2. Estimation results.

	DAYTRIP_RATE				DOMESTIC_RATE				OVERSEAS_RATE				HOMECOMING_RATE			
	Model 1A		Model 1B		Model 2A		Model 2B		Model 3A		Model 3B		Model 4A		Model 4B	
	Coefficient	P>|z|	Coefficient	P>|z|	Coefficient	P>|z|	Coefficient	P>|z|	Coefficient	P>|z|	Coefficient	P>|z|	Coefficient	P>|z|	Coefficient	P>|z|
Constant	-0.439		-0.337		-1.731	***	-2.083	***	-5.380	***	-6.097	***	-1.044		-1.234	***
	0.455		0.392		0.571		0.244		0.768		0.337		0.671		0.404	
GDPCAP	1.759E-04	***	1.690E-04	***	1.905E-04	***	2.013E-04	***	2.501E-04	***	2.115E-04	***	4.260E-05			
	4.560E-05		4.400E-05		5.090E-05		7.410E-05		3.530E-05		2.480E-05		3.180E-05			
CAR_OWN	0.452	***	0.468	***	0.322	***	0.326	***	0.009				-0.288	**	-0.362	***
	0.090		0.089		0.117		0.085		0.112				0.12		0.111	
AIRPORT	-0.009				0.015				-0.065				0.12	*	0.096	*
	0.045				0.058				0.059				0.064		0.057	
COMMUTING	0.025	***	0.021	***	0.036	***	0.030	***	0.055	***	0.061	***	0.033	***	0.029	***
	0.005		0.004		0.006		0.005		0.006		0.006		0.007		0.005	
JOB	-0.005	***	-0.005	***	-0.001				-0.004				-0.002			
	0.002		0.002		0.002				0.003				0.002			
TEMP	-0.030	*	-0.033	*	-0.018				0.024				-0.027	**	-0.029	**
	0.018		0.019		0.017				0.016				0.012		0.013	
SUNSHINE	2.908E-04	*	3.164E-04	*	1.125E-04				3.353E-04	*	4.951E-04	***	6.590E-06			
	1.588E-04		1.668E-04		1.663E-04				1.745E-04		1.554E-04		1.520E-04			
INHABIT	-0.002				-0.003				-0.004	*	-0.005	**	-0.002			
	0.002				0.002				0.002		0.002		0.002			
Log pseudolikelihood	-31.830		-31.834		-32.130		-32.147		-9.586		-9.590		-24.565		-24.57	
AIC	81.660		77.668		82.259		72.293		37.173		29.179		67.13		59.14	
Pseudo R2	0.007		0.007		0.008		0.008		0.021		0.020		0.010		0.009	

Note: *** p < 0.01, ** p < 0.05, * p < 0.1, Dependent variable: Model 1= DAYTRIP_RATE, Model 2= DOMESTIC_RATE, Model 3= OVERSEAS_RATE, Model 4= HOMECOMING_RATE.

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4. RESULTS

Table 2 presents the estimation results for participation rates by tourism purpose using a fractional logit model. Each set of models was estimated using two specifications: one included all variables, whereas the other included only selected variables to identify significant variables. The AIC was used to compare the models. Therefore, eight models were estimated, and the dependent variables were the rates of day trips, domestic trips, overseas trips, and homecoming trips.

Model 1A reports the estimation results for the day-trip participation rate. Six variables are statistically significant. Four variables, 'GDPCAP' (GDP per capita), 'CAR_OWN' (number of private cars per household), 'COMMUTING' (commuting time), and 'SUNSHINE' (sunshine minutes), have positive coefficients. Based on the estimation results, these variables are considered factors that increase the day-trip participation rate. Meanwhile, two variables, 'JOB' (work minutes) and 'TEMP' (temperature), have negative coefficients. If these variables increase, day trips decrease. Model 1B, which includes variables selected based on significance, shows the same results as Model 1A, and the AIC also declined from 81.66 to 77.67. Hence, Model 1B was selected as the best model, and the variables were found to be significant.

Model 2A presents the results for the domestic tourism participation rate. Three variables, 'GDPCAP,' 'CAR_OWN,' and 'COMMUTING', are statistically significant and have positive coefficients. Therefore, increases in these variables are estimated to increase domestic trips. Model 2B, in which variables were selected based on statistical significance, shows results consistent with those of Model 2A. In addition, the AIC declined from 82.26 to 72.29. Hence, Model 2B was selected as the best model, and the variables identified as significant are shown in the results.

Model 3A presents the results for the overseas tourism participation rate, with four variables being statistically significant. 'GDPCAP,' 'COMMUTING,' and 'SUNSHINE' have positive coefficients. These three variables are considered factors that increase overseas trips when they rise. On the other hand, 'INHABIT' as an inhabitable area rate has a negative coefficient. This variable, shown as one of the environmental factors, would influence an overseas trip. Based on the results, it is considered that people living in comparatively narrow spaces are likely to prefer an overseas trip. Based on the results, people living in comparatively narrow spaces are likely to prefer overseas trips. Model 3B, in which variables were selected based on statistical significance, shows the same results as Model 3A, while the AIC declined from 37.17 to 29.18. Therefore, Model 3B was selected as the best model, and its variables were found to be statistically significant.

Finally, Model 4A reports the results for the homecoming tourism participation rate. Four variables are statistically significant. Two variables, 'AIRPORT' and 'COMMUTING', have positive coefficients, whereas 'CAR_OWN' and 'Temperature' have negative coefficients. The two positive variables would be considered factors that increase homecoming trips when they increase. Meanwhile, the two negative variables would decrease homecoming trips when they increase. Only in this model was the income factor, 'GDPCAP', which is one of the representative factors in tourism demand, statistically insignificant compared with the other models. Model 4B, in which variables were selected based on significance, shows that the results for the variables were the same as those in Model 4A, while the AIC also declined from 67.13 to 59.14. Hence, Model 4B was selected as the best model, and the variables were shown to be significant based on these results.

5. DISCUSSION

Each estimation model produces several types of results. The income factor shows significant positive relationships in the models in which the response variables are day trips, domestic tourism, and overseas tourism. These are general types of tourism; hence, the results align with established ideas in tourism demand theory. Meanwhile, the model with homecoming trips as the dependent variable yields an insignificant result. This suggests that this type of tourism differs from the others from an economic perspective; that is, homecoming trips may not be

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affected by economic conditions. This perspective could provide a significant viewpoint for regional societies seeking to increase social interactions.

Among work-life balance variables, 'movement minutes' had a significant positive effect in all models. This result suggests that time spent moving may be related to tourism behavior. Furthermore, 'working time' was significant only in the model in which the dependent variable was day-trip travel; it was insignificant for the other type of tourism. Day trips require only a short amount of time, whereas overnight trips require longer holidays. Therefore, this finding may be related to systems for obtaining paid leave rather than to daily working hours. These results suggest that workplace systems and culture may influence tourism preferences.

For transportation variables, such as the 'number of private cars per household,' differences were observed across the estimation models. Day trips and domestic tourism, which are general types of tourism, had statistically significant positive effects, whereas homecoming had a negative effect. In the models in which the dependent variables were day trips and domestic tourism, the results indicate that tourists who prefer to drive influence the outcomes. In contrast, tourists visiting their hometowns may use cars less frequently and are more likely to use public transport for longer-distance travel. In fact, the 'airport' variable had a statistically significant positive effect only in the model in which the dependent variable was the homecoming participant rate.

Among the environmental factors, temperature was significant and negatively associated with the model, in which the response variables were day trips and homecoming, respectively. This indicates that people living in low-temperature regions are likely to prefer short trips. Meanwhile, based on the estimation results, workers from outside regions, such as those transferred to a branch office, may be more likely to travel to low-temperature regions for their homecoming trips.

Furthermore, the variable 'sunshine minutes' was significant and positive in the models in which the dependent variables were day trips and overseas tourism, respectively. This variable was considered a measure of activity time and influenced motivation for day trips and overseas travel. In addition, overseas tourism was related to the spatial variable 'Inhabitant Area Rate,' and a smaller inhabited area might increase people's motivation to travel, according to the results.

6. CONCLUSION

This paper examined tourism demand in Japan from the perspective of leisure activities. The statistical models identified several determinants across trip types, including day trips, domestic tourism, overseas tourism, and homecoming trips. Income, a general determinant of tourism demand, was statistically significant for day trips, domestic trips, and overseas trips, but not for homecoming trips. This result suggests that homecoming trips differ in nature from other forms of tourism. Homecoming trips are considered less affected by economic conditions; therefore, they could represent an important perspective for discussing tourism development in certain regions.

Transportation-related factors, such as the number of private cars per household, were significant across models of the three types of tourism. This variable had a positive effect on day trips and domestic trips, indicating the importance of car use in these forms of tourism. In contrast, it was negatively associated with homecoming trips, suggesting that such trips rely less on private cars and more on public transport. Supporting this interpretation, the variable representing airport availability was positive and statistically significant, implying that long-distance travel by public transport is more common in this type of tourism.

Regarding environmental factors, both temperature and sunshine duration were significant predictors in the model for day trips. Homecoming trips also showed a significant negative relationship with temperature, while sunshine duration was significant in the model for overseas tourism. These results indicate that short-distance trips are more sensitive to weather conditions. In addition, residential conditions appear to influence overseas travel, suggesting that living in more spatially constrained areas may increase the motivation for international trips.

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Work–life balance factors, such as movement minutes in daily life, were also associated with tourism demand. The results suggest that tourism demand increases with greater daily mobility. However, working hours were significant only in the day trips model. Overall, these findings suggest that while work–life balance is an important perspective, institutional factors, such as access to paid leave, may also influence tourism demand and should be considered in future research.

This study was limited by the sample size available for the estimation model because of the unstable situation in Japan. For future research, panel data that include several time series and cross-sectional datasets should be constructed to avoid omitted-variable bias and increase the degrees of freedom for statistical models. In addition, other methods should be considered to address potential biases, such as endogeneity.

In conclusion, the analysis confirms the existence of diverse forms of tourism, each influenced by different factors. In Japan, many regions face challenges such as depopulation and an aging society. Some determinants, such as income, are common across tourism types; however, homecoming trips exhibit different characteristics. Promoting regional tourism may be important because this type of tourism is less affected by economic conditions.

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REFERENCES

Akter, H., Akhtar, S., & Ali, S. (2017). Tourism demand in Bangladesh: Gravity model analysis. *Tourism: An International Interdisciplinary Journal*, *65*(3), 346-360.

Automobile Inspection & Registration Information Association. (2016). *Number of private passenger cars per household.* Retrieved from https://www.airia.or.jp/publish/statistics/mycar.html

Dwyer, L., Forsyth, P., & Dwyer, W. (2010). *Tourism economics and policy.* Bristol, United Kingdom: Channel View Publications.

Dwyer, L. M., Seetaram, N., Forsyth, P. J., & King, B. (2014). Is the migration-tourism relationship only about VFR? *Annals of Tourism Research*, *46*, 130-143. https://doi.org/10.1016/j.annals.2014.03.009

Huang, W.-J., King, B., & Suntikul, W. (2017). VFR tourism and the tourist gaze: Overseas migrant perceptions of home. *International Journal of Tourism Research*, *19*(4), 421-434. https://doi.org/10.1002/jtr.2104

Ministry of Land Infrastructure Transport and Tourism. (2008). *About "Airport location dummy.* Retrieved from https://www.mlit.go.jp/koku/15_bf_000185.html

Nemec Rudež, H. (2018). The relationship between income and tourism demand: Old findings and new research. *Academica Turistica-Tourism and Innovation Journal*, *11*(1), 67-73. https://doi.org/10.26493/2335-4194.11.67-73

Park, Y. S. (2016). Determinants of Korean outbound tourism. *Journal of Economics, Business and Management*, *4*(2), 92-98. https://doi.org/10.7763/JOEBM.2016.V4.373

Pyers, C. E. (1966). Evaluation of intervening opportunities trip distribution model. *Highway Research Record*, *114*, 71–98.

Rosselló Nadal, J., & Santana Gallego, M. (2022). Gravity models for tourism demand modeling: Empirical review and outlook. *Journal of Economic Surveys*, *36*(5), 1358-1409. https://doi.org/10.1111/joes.12502

Shahriar, S., Qian, L., Kea, S., & Abdullahi, N. M. (2019). The gravity model of trade: A theoretical perspective. *Review of Innovation and Competitiveness: A Journal of Economic and Social Research*, *5*(1), 21-42. https://doi.org/10.32728/ric.2019.51/2

Shioya, H. (2013). Determinants of tourism budget in local governments of Japan. *Journal of Tourism Studies*, *24*(2), 9–14.

Song, H., Li, G., Witt, S. F., & Fei, B. (2010). Tourism demand modelling and forecasting: How should demand be measured? *Tourism Economics*, *16*(1), 63-81. https://doi.org/10.5367/000000010790872213

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Song, H., Romilly, P., & Liu, X. (2000). An empirical study of outbound tourism demand in the UK. *Applied Economics*, *32*(5), 611-624. https://doi.org/10.1080/000368400322516

Statistics Bureau of Japan. (1996a). *Survey on time use and leisure activities*. Retrieved from https://www.stat.go.jp/english/data/shakai/index.html

Statistics Bureau of Japan. (1996b). *Outline of the system of social and demographic statistics of Japan*. Retrieved from https://www.stat.go.jp/english/data/ssds/outline.html

Takahashi, K. (2020). Comparing the determinants of tourism demand in Singapore and French Polynesia: Applying the tourism demand model to panel data analysis. *Tourism Analysis*, *25*(1), 175-181. https://doi.org/10.3727/108354220X15758301241585

Takahashi, K. (2021). An empirical study of outbound tourism in Japan during the international tourism transformation period. *Journal of Global Tourism Research*, *6*(2), 157-162. https://doi.org/10.37020/jgtr.6.2_157

Vietze, C. (2012). Cultural effects on inbound tourism into the USA: A gravity approach. *Tourism Economics*, *18*(1), 121-138. https://doi.org/10.5367/te.2012.0100

Wilson, A. G. (1967). A statistical theory of spatial distribution models. *Transportation Research*, *1*(3), 253-269. https://doi.org/10.1016/0041-1647(67)90035-4

Yabe, N. (2013). An evaluation of the zoning effects for the regional holiday schedule on travel demand equalization: Finding functional regions by network analysis. *Japanese Journal of Human Geography*, *65*(3), 264–278.

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