

Duty-free shopping & expenditure behavior of Japanese travelers

Akira Saito

*Faculty of Humanities and Social Sciences, Jissen Women's University, Tokyo, Japan
Japan Society of Industry and Economy*

E-mail: saito-akira@jissen.ac.jp

Abstract:

This study examines the shopping behavior of Japanese tourists at international airports, in particular, the correlation between attitudes toward shopping at airports and expenditure behavior. Based on quantitative research, three dimensions—hedonic, utilitarian, and luxury are observed as consumer attitudes. Using these three dimensions, this study undertakes multiple regression analysis of spending on the entire shopping and luxury brand products at airports, revealing correlations between, on one hand, the hedonic and luxury dimensions, and on the other, overall spending on shopping, as well as between luxury dimensions and expenditure on luxury brands. Since this study focusses on shopping behavior among Japanese travelers visiting foreign countries, the findings can provide strategic suggestions for international airport management that targets Japanese travelers in the future.

Keywords

Airport shopping behavior, hedonic shopping behavior, luxury shopping behavior, expenditure behavior, duty free

(1) Introduction

Shopping is considered the oldest and most important element of tourism. For many travelers, tourism is not complete without spending some time at shops, commercial areas, and local markets (Hudman and Hawkins, 1989; Keown, 1989).

Therefore, as Chung (2015) is mentioned, the shopping behavior at the airport, shopping behavior in the street and shopping malls are not necessarily the same,

to understand the shopping behavior at the airport while traveling, extremely important for the retail strategy. However, as noted by Freathy and O'Connell (1999) and Geuensa et al. (2004), there are not enough studies on travelers' shopping behavior at airports.

Nevertheless, the travel retail sector of the luxury brand market (Boston Consulting Group (BCG), 2014) has been growing rapidly and drawing attention—the market size of the global luxury market in 2012 was

1.8 trillion dollars and between 2012 and 2014, the market grew 13% per year on average (Reuters, 2012). In terms of purchases made in luxury brand travel retail, if we take Louis Vuitton as an example, the amount of money Japanese travelers spend overseas is said to account for more than 10% of worldwide sales (Saito, 2008). Therefore, it is quite plausible that the impact of Japanese travelers who purchase luxury brand products overseas is behind the growth of the travel retail sector of luxury brands.

Given this context, this study focuses on shopping behavior in the commercial areas at international airport terminals, which is a major travel retail distribution channel.

In particular, the study aims to explain the effect of Japanese travelers' attitudes toward shopping behavior in duty-free shop areas at international airport terminals (hereafter "duty-free shop area") at the time of traveling overseas on overall shopping in the duty-free shop area as well as the expenditure behavior in shopping for luxury brand products.

In addition to academic contributions, this study has practical business implications for the further growth of luxury brands under the travel retail sector and for managing the commercial areas at airports in the future (Graham, 2010). Currently, airport management is faced with the need to focus on commercial facilities—or non-aviation facilities—as much as aviation facilities owing to such reasons as airport privatization, pressure to reduce the aviation system usage fee due to intensified competition, the introduction of regulations on airport usage fees, and intensified competition between hub airports.

There are three major academic

contributions of this study, as follows. First, this study contributes to the limited research on shopping behavior in airport commercial areas. Second, this study contributes to research on the shopping behavior of Japanese travelers; previous studies on the shopping behavior of Japanese travelers have been limited to particular travel destinations. Third, this study proposes a new construct, known as the luxury dimension, as an attitude toward shopping behavior in airport duty-free shop areas and examines its usefulness through a quantitative survey.

The rest of this paper is structured as follows. First, in Section 2, to review previous studies on travelers' shopping behavior and consumption experience as well as studies on the construct of luxury brands. Section 3 provides an overview of a quantitative survey conducted among Japanese people who have traveled overseas and Section 4 develops hypotheses and the verification procedure. Based on the survey results, in Section 5, to examine the correlation between the attitude toward shopping behavior in airport duty-free shopping areas when traveling overseas and expenditure behavior for overall shopping and for luxury brand products. Finally, to discuss implications for business in Section 6, the conclusion.

(2) Literature review

1. Studies on travelers' shopping behavior

Studies on the shopping behavior of travelers can be divided into three major categories: shopping behavior in the commercial areas at airports (Crawford and Melewar, 2003; Geuensa et al., 2004), shopping behavior during in-flight sales (Huang and Kuai, 2006; Doong et al., 2012), and shopping behavior in travel destinations

(Lundberg, 1976; Hudman and Hawkins, 1989; Keown, 1989; Heung and Qu, 1998; Freathy and O'Connell, 1999; Mak et al., 1999; Rosenbaum and Spears, 2005, 2006a, 2006b; Rosenbaum, 2007; Kim and Agrusa, 2008). This section reviews previous studies on shopping behavior in the commercial areas at airports and the shopping behavior of Japanese people in travel destinations.

Geuensa et al. (2004) conducted a quantitative survey among Belgian travelers on shopping behavior in airport commercial areas and showed that there are two types of shopping motives—functional shopping motive related to airport facilities and experiential shopping motive related to airport atmosphere—and classified shoppers at airports into three types. Crawford and Melewar (2003) showed that there is impulsive shopping behavior related to situations of psychological stress and relaxation during the departure process in the commercial areas of international airports, and discussed its importance and the business implications thereof for airport commercial areas.

Studies on shopping behavior in travel destinations indicate that the shopping behavior of Japanese travelers differs from that of Westerners and other Asians (Mak et al., 1999; Rosenbaum and Spears, 2005, 2006a, 2006b; Rosenbaum, 2007). Rosenbaum and Spears (2005) revealed that Japanese travelers' per capita budget to travel to Hawaii was 1,416 US dollars while North American travelers' per capita budget was 644 US dollars. Likewise, Kim and Agrusa (2008) showed that the entertainment and shopping expenditure of Japanese people traveling to Hawaii doubled compared to that of US travelers. In addition,

Keown (1989) demonstrated that, in terms of shopping, Japanese travelers spent 30% on themselves, and 70% on others, of which 25% was on family, 20% on friends, 15% on co-workers, and 10% on others. Furthermore, Rosenbaum (2007) presented the demographic differences in Japanese travelers' shopping behavior, revealing that Japanese women primarily purchase luxury fashion items, such as bags, leather goods, shoes, and clothing. He further showed that the majority of female Japanese travelers purchase luxury brand products for themselves while purchasing less expensive brand products and local mementos as souvenirs for other people.

As mentioned in the introduction, there is no previous study on shopping behavior in the commercial areas at international airport terminals at the time of traveling overseas focusing on the characteristics of Japanese travelers. Therefore, this study focuses on the shopping behavior of Japanese travelers in airport duty-free shop areas at the time of traveling overseas.

2. Studies on consumption experience

In contrast to consumer behavior studies with an information-processing approach that views consumers as taking rational actions to optimally meet their goals and objectives, since around 1980, there have been increasing discussions on consumer behavior studies based on the experiment-based or interpretation-based approach, which is centered on hedonic consumption studies premised on purchase decisions accompanied by consumption experience, such as usage and emotions, like joy.

Holbrook and Hirschman (1982)

proposed the 3Fs (fantasy, feeling, and fun) in consumption experience and conducted a consumer behavior study that emphasized hedonic consumption and consumption experience. Hedonic attitudes are based more on affective gratification derived from sensory attributes. Utilitarian attitude are more instrumental and concerned with the expectations of consequences, are based on assessment of functional attributes, are more concerned with practical usefulness or benefits. The premise that consumer attitudes are inherently bidimensional is the basis for the hedonic and utilitarian conceptualization used by Batra and Ahtola (1991). These two dimensions are related, yet distinct.

Since then, studies have evolved on attitude, shopping motives, and shopping value to fulfil such a hedonic and utilitarian nature for consumers and, along the way, measurement scales have been developed (Batra and Ahtola, 1991; Babin et al., 1994; Spangenberg et al., 1997; Arnold and Reynolds, 2003; Voss et al., 2003).

Based on Babin et al. (1994), Arnold and Reynolds (2003) considered only hedonic motives behind shopping and categorized them into six dimensions in an exploratory manner. Inoue (2007) empirically compared hedonic motives by retail format (e.g., shopping districts at train stations, convenience stores, supermarkets, and department stores) and explored the correlation by using the dimensions of hedonic motives behind shopping in each type of retailer as explanatory variables with expenditure behavior as the dependent variable.

Meanwhile, as items in a consumer attitude measurement scale, Spangenberg et al. (1997) presented 24 items, including 12

for hedonic value and 12 for utilitarian value. Subsequently, Voss et al. (2003) aggregated the scale items by Spangenberg et al. (1997), presented 10 items consisting of 5 items for hedonic scale and 5 items for utilitarian scale, and examined their validity.

In this study, we expand the discussion by using Spangenberg et al. (1997) and Voss et al. (2003) as previous studies in this field, adopting their attitude measurement scale and referring to the research framework of Babin et al. (1994), Arnold and Reynolds (2003), and Inoue (2007).

3. Construct studies on luxury brands

There is no consistent and clear definition in academia of the term “luxury brand” (Vickers and Renand, 2003). Phau and Prendergast (2000) defined a luxury brand as that which has exclusivity and established identity along with name recognition, quality, and strong customer loyalty. Dubois et al. (2001) regarded luxury brand items as that which is more than necessary, beautiful and expensive extravagant goods with historical background and uniqueness. Jackson and Haid (2002) defined a luxury brand as a status symbol or subject for longing, and something that people believe provides perceived status when owned, making them want to purchase it even at a premium to the functional utility value of the product itself. Doyle and Stern (2006) and Sicard (2006) positioned luxury brands as the ultimate version of product lines under all general criteria, such as rarity, high price, functionality, creativity, attention to detail, trend, quality, and imagination.

In this study, we explain the attitude toward shopping behavior in airport

duty-free shopping areas by referring to previous studies in this field and adding the sense of high quality (High), sense of exclusivity (Exclusivity), sense of luxury (Luxury), latest trend (Latest trends), status (Status), sense of superiority (Superiority) and extraordinariness (Unusual) to the attitude measurement scale items by Spangenberg et al. (1997) and Voss et al. (2003).

(3) Survey overview

1. Objective of the survey

we examine the correlation between the attitude toward shopping behavior in airport duty-free shop areas at the time of traveling abroad and the amount of money spent on shopping (overall) as well as the amount of money spent on purchasing luxury brand products compared to street-front stores and

Table 1. Luxury brands included in the survey (37 Brands)

Armani	Céline
Yves Saint-Laurent	Christian Dior
Valentino	Tiffany & Co.
Van Cleef & Arpels	Tod's
Etro	Tom Ford
Emanuel Ungaro	Dolce & Gabbana
Emilio Pucci	Burberry
Hermès	Bally
Cartier	Harry Winston
Gucci	Hugo Boss
Christian Louboutin	FENDI
Chloé	Prada
Salvatore Ferragamo	Bvlgari
Givenchy	Bottega Veneta
Chanel	Missoni
Chopard	Moncler
Giorgio Armani	Louis Vuitton
Jil Sander	Loewe
Stella McCartney	

department stores.

The luxury brands included in this survey are the 37 brands¹ shown in Table 1.

¹ The 37 brands included are those mentioned at the time of a preliminary survey, which was conducted for the purpose of extracting respondents for this study, and are luxury brands respondents purchased in a duty-free shop area at an international airport. The response results are as shown in Appendix Table 1.

They are designated in four categories, namely, “clothing and accessories,” “jewelry and watches,” “leather products,” and “cosmetics and perfumes,” based on the categorization by Okonkwo (2009)

2. Overview of the survey method

The survey took place in the field from June 5–9, 2014. It was conducted by the method of two-phase online survey. As a preliminary survey, individuals who had

boarded an international flight ² and purchased a luxury brand product in an airport duty-free shop area in the past 3 years were extracted from a sample of 6,925 consumer panel members registered at the survey company. Ultimately, 442 samples were obtained as survey subjects after excluding the samples that answered the same answer to all the questions or the samples with extremely short response time. The sample configuration is as follows: male = 57.7%, female = 42.3%; those in their teens = 0.2%, 20s = 8.4%, 30s = 19.7%, 40s = 25.3%, 50s = 23.3%, 60s or older = 23.1%; reason for travel being business = 18%, sightseeing = 77%, and private = 5% (e.g., visiting relatives and acquaintances).

From these samples, we used a 7-point measurement scale to obtain responses to questions on attitude toward shopping behavior in airport duty-free shop areas, shopping expenditure in the same areas, and shopping expenditure on luxury brand products.

(4) Hypotheses and verification procedure

1. Establishing hypotheses

Next, considering the analyses of previous studies, we propose survey hypotheses. It seems that a correlation between hedonic motives behind shopping and shopping expenditure, as shown by Inoue (2007) based on Arnold and Reynolds (2003) and Babin et al. (1994), has a similar effect on shopping expenditure behavior in the commercial areas at international airports' international terminals. Therefore, I establish the following hypothesis.

² The routes used by the respondents of this study are as shown in Appendix Table 2. Note that when there is more than one route, the response is based on the last route used.

Hypothesis 1: The hedonic nature of the attitude toward shopping behavior in airport duty-free shop areas has a positive effect on overall shopping expenditure behavior in airport duty-free shop areas.

Consumers tend to prefer brands that are akin to their own self-concept and the same can be said about the attitude toward shopping behavior, which is part of own self-concept. Therefore, based on studies of the luxury brand construct (Phau and Prendergast, 2000; Dubois et al., 2001; Jackson and Haid, 2002; Vickers and Renand, 2003; Doyle and Stern, 2006; Sicard, 2006), I assume there is a correlation between luxury and shopping expenditure and establish the following two hypotheses.

Hypothesis 2: The luxury nature of the attitude toward shopping behavior in airport duty-free shop areas has a positive effect on the overall shopping expenditure behavior in airport duty-free shop areas.

Hypothesis 3: The luxury nature of the attitude toward shopping behavior in airport duty-free shop areas has a positive effect on expenditure behavior for luxury brand products in airport duty-free shop areas.

I create models to test the hypotheses, as shown in Figure 1. Test Model A is used to test Hypotheses 1 and 2 and Test Model B is used to test Hypothesis 3.

2. Procedure to test hypotheses

As a preparation for testing these hypotheses, I first take into account previous studies on the construct of luxury brands based on Voss et al. (2003). Then, we specify items to measure attitude toward shopping behavior in airport duty-free shop areas (a total of 21 items, including 7 items each for the hedonic nature and utilitarian nature based on Spangenberg et al. (1997) and Voss

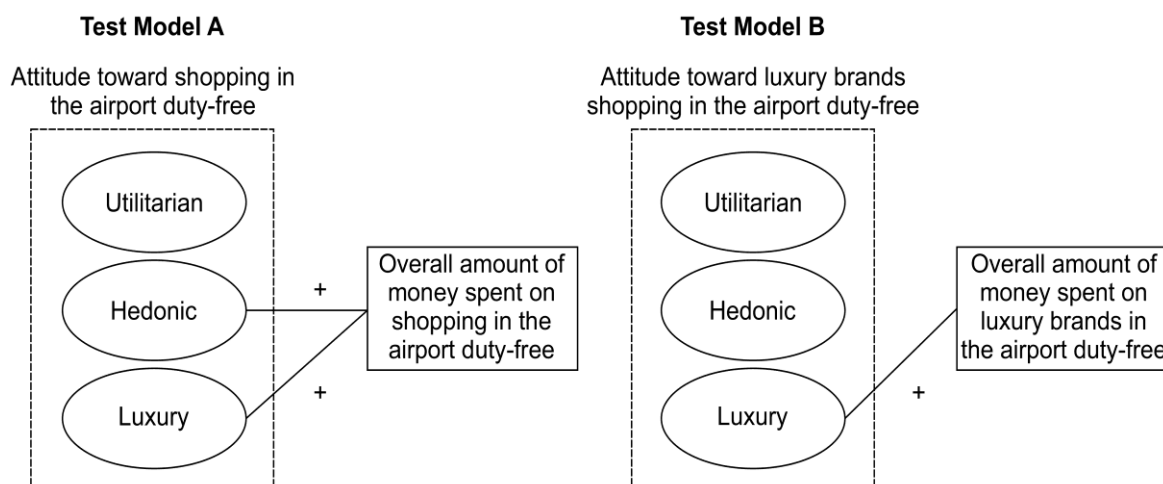


Figure 1. Models to test the hypotheses

Source: Compiled by author.

et al. (2003) and 7 items related to the luxury nature newly presented in this study).

Next, we conduct a quantitative survey by using a 7-point scale in which 1 = “Not at all applicable,” 2 = “Not applicable,” 3 = “Somewhat not applicable,” 4 = “Neither,” 5 = “Somewhat applicable,” 6 = “Applicable,” and 7 = “Quite applicable.” Then, we perform an exploratory factor analysis on the survey results.

Thereafter, in order to use the extracted factors as explanatory variables and examine their correlation with shopping expenditure behavior, we take two types of shopping expenditure behavior in airport duty-free shop areas as dependent variables and conduct multiple regression analysis to explain each correlation. The two types of shopping expenditure behavior are from responses obtained on the 7-point scale for (1) overall shopping expenditure behavior, that is, “the amount of money spent on shopping in airport duty-free shop areas (after going through the departure or arrival process) is higher than usual shopping at the tourist destination,” and (2) the shopping

expenditure on luxury brand products, that is, “the amount of money spent on purchasing luxury brand products per shopping trip is higher in airport duty-free shop areas (after going through the departure or arrival process) than at a department store or street-front store of the tourist destination.”.

(5) Analysis results

1. Factor analysis on attitude toward shopping behavior in airport duty-free

First, we performed a factor analysis with promax rotation by using the maximum likelihood method to extract factors from the 7-point scale responses to the 21 items on the attitude toward shopping behavior in the airport duty-free-shop area, which yielded the pattern matrix shown in Table 2. After excluding two items³with insufficient factor loading, we ultimately extracted a 19-item 3-

³ “Amusing” (0.179) and “Unusual” (0.393) were excluded as items with insufficient factor loading.

Table 2. Factor analysis on the attitude toward shopping behavior in the airport duty-free shop area

Variable	Factor 1 (Utilitarian)	Factor 2 (Luxury)	Factor 3 (Hedonic)
Useful	0.7190	0.0205	0.0528
Practical	0.7752	-0.0959	0.0820
Necessary	0.7380	0.0040	0.0755
Functional	0.8367	0.1398	-0.1260
Helpful	0.8833	-0.0072	0.0218
Efficient	0.7591	0.0105	0.0804
Effective	0.6685	0.1097	0.1506
Exciting	-0.0182	0.2065	0.7069
Delightful	0.1789	0.1241	0.6781
Fun	0.1981	0.0966	0.6196
Thrilling	0.0787	0.2660	0.4540
Enjoyable	0.1245	0.0427	0.7271
Cheerful	0.0221	0.1777	0.7083
High	-0.0101	0.6661	0.2645
Exclusivity	-0.0168	0.7838	0.1829
Luxury	-0.0248	0.8300	0.1399
Latest trends	0.2689	0.6487	-0.0181
Status	0.0482	0.9126	-0.0702
Superiority	-0.0229	0.8082	0.0148
Factor Correlation			
Factor 1 (Utilitarian)	—	0.5219	0.6162
Factor 2 (Luxury)	0.5219	—	0.6479
Factor 3 (Hedonic)	0.6162	0.6479	—
Internal Consistency			
Cronbach's α coefficient	0.9306	0.9412	0.9078
Contribution			
Contribution (%)	52.65	8.99	3.46
Cumulative contribution (%)	52.65	61.64	65.10

factor structure⁴, as shown in Table 2 based on the interpretability of decaying eigenvalues (11.4070, 2.2054, 1.2754, 0.9932, 0.5435, 0.4823, etc.) and factors.

The first factor, which is composed of seven items related to utilitarian nature, was

named the “utilitarian factor.” The second factor, composed of six items related to the sense of luxury and superiority, was named the “luxury factor.” The third factor, composed of six items related to the hedonic nature, was named the “hedonic factor.”

Cronbach's α coefficient was calculated for each factor based on the results of the above factor analysis to examine internal

⁴ The correlation matrix for the items (variables) is as shown in Appendix Table 5.

consistency; each factor turned out to be sufficient, as follows: the first factor's $\alpha = 0.9306$, the second factor's 0.9412 , and the third factor's $\alpha = 0.9078$.

2. Multiple regression analysis using shopping expenditure in airport duty-free as the dependent variable (Hypotheses 1 and 2)

The dependent variable is shopping expenditure behavior in the airport duty-free shop area, which is based on the results of the responses to the question of whether the amount of money spent on shopping in the airport duty-free shop area is higher than usual shopping. We took three factors extracted from the factor analysis on the attitude toward shopping

behavior in the airport duty-free shop area as explanatory variables and performed a multiple regression analysis. The results are shown in Table 3 below. The second factor, Luxury Nature (partial regression coefficient = 0.305 , $p < 0.01$), and the third factor, Hedonic Nature (partial regression coefficient = 0.221 , $p < 0.05$), turned out to be significant (degree of freedom-adjusted coefficient of determination = 0.415).

Based on these results, we verified that shopping expenditure behavior in airport duty-free shop areas and attitude toward shopping behavior in airport duty-free shop areas have a significant correlation with both the hedonic factor and the luxury factor.

Table 3. Multiple regression analysis using shopping expenditure in the airport duty-free shop area as the dependent variable (n = 442)

Variable	Partial Regression Coefficient	Standard Error	P-Value	Significance
Factor 1 (Utilitarian)	0.1310	0.0815	0.1088	
Factor 2 (Luxury)	0.3055	0.0855	0.0004	**
Factor 3 (Hedonic)	0.2211	0.0976	0.0240	*
Constant term	4.6222	0.0577	0.0000	**

Note: Adjusted R: 0.415 ; * $p < 0.05$ ** $p < 0.01$)

The analysis results on this correlation are as shown in Figure 2. The partial regression coefficient for the path that goes from Hedonic Nature to the overall amount of money spent on shopping in airport duty-free shop areas was 0.221 and statistically significant at the 5% level in Test Model A. Likewise, the partial regression coefficient for the path that goes from Luxury Nature to the overall amount of money spent on shopping in airport duty-free shop areas was 0.305 and statistically significant at the 1% level.

Therefore, Hypotheses 1 and 2 were empirically supported.

3. Multiple regression analysis using shopping expenditure on luxury brand products in airport duty-free as the dependent variable (Hypotheses 3)

Next, we used as the dependent variable expenditure behavior on shopping for luxury brand products in airport duty-free shop areas, which is based on the results of the responses to the question of whether the amount of money spent on

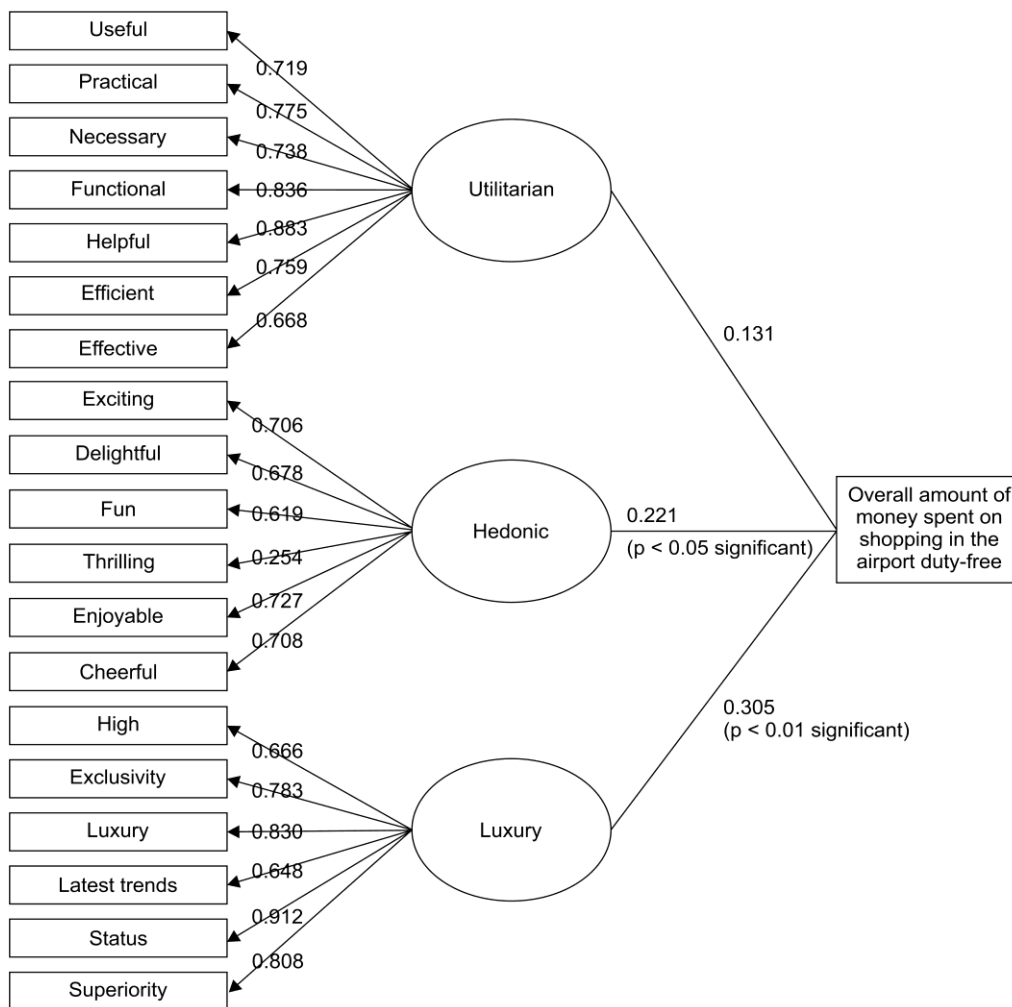


Figure 2. Analysis results on Test Model A

Source: Compiled by author.

purchasing luxury brand products per shopping trip is higher in the airport duty-free shop than when purchasing them at a department store or street-front store. Then, we performed a multiple regression analysis with three factors extracted from the factor analysis on the attitude toward shopping behavior in airport duty-free shop areas as explanatory variables.

The results are shown in Table 4 below. Only the second factor, Luxury Nature (partial regression coefficient = 0.298, $p < 0.01$), turned out to be significant (degree of freedom-adjusted coefficient of determination = 0.286). Based on these

results, we verified there is a significant correlation between expenditure behavior in shopping for luxury brand products in airport duty-free shop areas and the luxury nature in the attitude toward shopping behavior in airport duty-free shop areas. The analysis results on this correlation are shown in Figure 3.

The partial regression coefficient for the path that goes from Luxury Nature to the amount of money spent on shopping for luxury brand products in airport duty-free shop areas was 0.298 and statistically significant at the 1% level in Test Model B. Therefore, Hypothesis 3 was empirically

Table 4. Multiple regression analysis using shopping expenditure on luxury brand products in the airport duty-free shop area as the dependent variable (n = 442)

Variable	Partial Regression Coefficient	Standard Error	P-Value	Significance
Factor 1 (Utilitarian)	0.1525	0.0901	0.0912	
Factor 2 (Luxury)	0.2983	0.0945	0.0017	**
Factor 3 (Hedonic)	0.0316	0.1079	0.7697	
Constant term	4.3009	0.0637	0.0000	**

Note: Adjusted R: 0.286; ** p < 0.01)

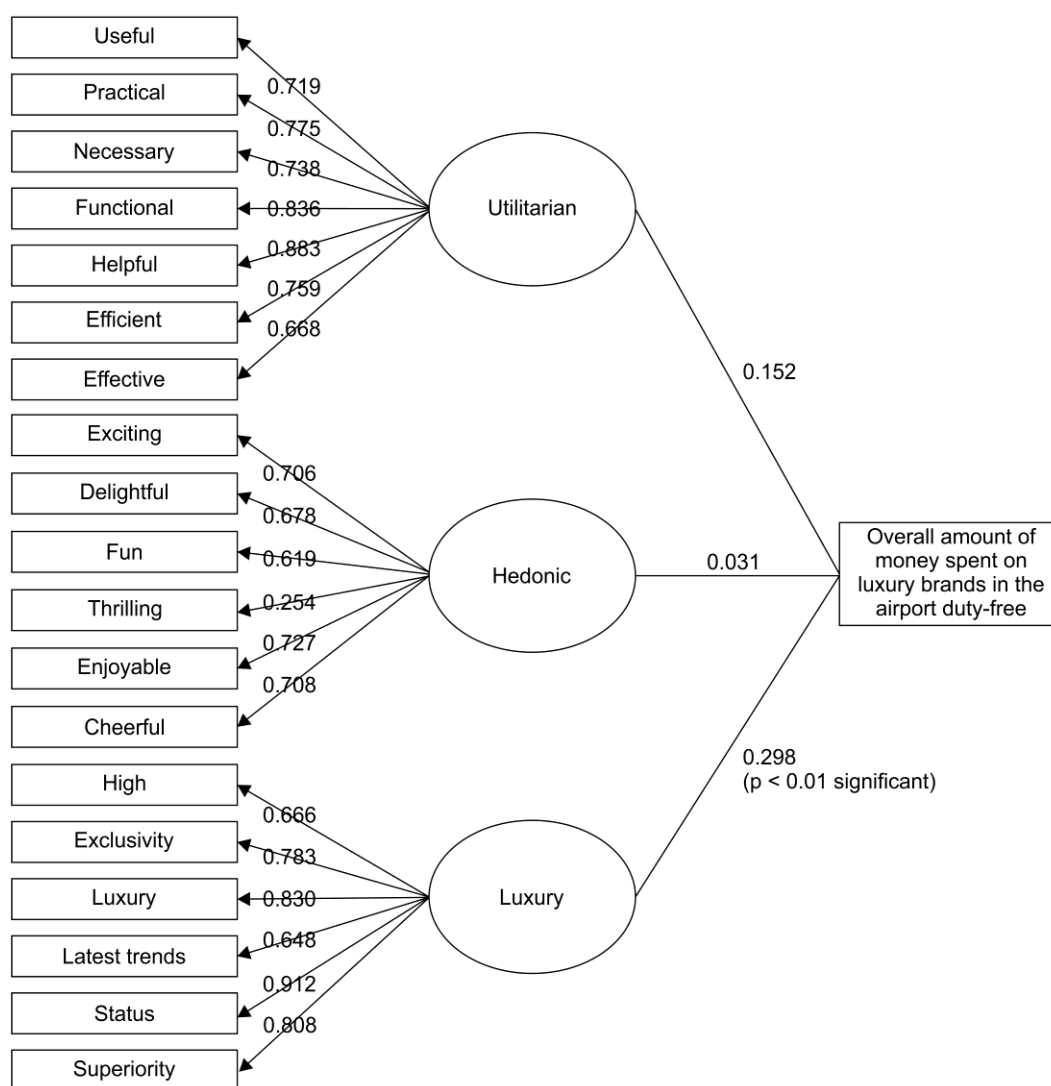


Figure 3. Analysis results on Test Model B

Source: Compiled by author.

supported.

(6) Conclusion

This study examined the correlation between Japanese travelers' attitudes toward shopping behavior in airport duty-free shop areas—the commercial areas of international airports—at the time of traveling overseas and overall shopping behavior in airport duty-free shop areas, as well as expenditure behavior for luxury brand shopping.

We were able to achieve the objective of the study and confirmed that the hedonic nature and luxury nature in attitudes toward shopping in airport duty-free shop areas have positive effects on overall expenditure behavior in these areas (Hypotheses 1 and 2); we also confirmed that the luxury nature in attitudes toward shopping in airport duty-free shop areas has a positive effect on expenditure behavior for luxury brand shopping (Hypothesis 3).

Next, we discuss the implications of these academic contributions from a business perspective. Based on the analysis results observed in this study, we present the business implications from two perspectives.

First, this study confirmed the effect of the luxury nature, composed of the sense of high quality, exclusivity, status, and superiority, on the overall amount of money spent on shopping in airport duty-free shop areas. From this, I was able to demonstrate that as airport management is faced with the need to focus on commercial facilities, or non-aviation facilities, under an increasingly difficult competitive environment, it would be effective to strengthen travelers' attitudes in relation to the luxury nature of airport commercial areas.

Second, the study confirmed that

commercial areas at international airport terminals are effective distribution channels for luxury brand companies. This result suggests it would be effective for luxury brand companies (Nagasawa and Fukunaga, 2012) whose distribution policies are limited to stores, such as corporate stores and department stores where it is traditionally easy to manage brand image, to utilize commercial areas at international airport terminals as well.

Finally, we briefly describe the limitations and challenges of this study. First, the discussion is based on the results of a survey among Japanese travelers. As shown in previous studies, the shopping behavior of Japanese travelers differs from that of western and other Asian travelers. Therefore, it is probably necessary to undertake an international comparison with western and Asian travelers before generalizing the results. In addition to the above, also with respect to considerations of gender and age, these are left for the future research.

Second, it is necessary to consider the effect of variables, such as international routes and use of discount airlines (i.e., low-cost carriers) on the relationship between variables reviewed in this study, including the utilitarian, hedonic, and luxury dimensions, and the price variable for duty-free purchases, differences by the airport being used as a purchase location, as well as the impact of duty-free shops in a city. We leave these as future research tasks.

Third, in this study, the subjects are only samples who purchased a luxury brand product in an international airport duty-free shop area. Therefore, the subjects who have not bought the luxury brand

products at an international airport duty-free shop area but bought them at street-front stores or department stores are excluded. This leads to some bias. In this regard, it must be considered as a limitation of this study.

Fourth, this study examined the relationship with perceived expenditure. So verification has not been performed with respect to the relationship with the actual spending, it will be research challenges of the future.

Furthermore, since this study is limited to the shopping behavior of Japanese travelers in duty-free shop areas at international airport terminals when traveling, another limitation is that this study does not consider the relationship of shopping in duty-free shop areas at international airport terminals in Japan, such as those at Haneda, Narita, Kansai, and Chubu, to the attitude that foreigners visiting Japan have toward shopping. We believe that discussing the relationship between attitude toward shopping at international airport terminals in Japan and shopping behavior among foreigners visiting Japan would provide suggestions about the source of competitive advantage for Japan's international airport management in the future.

At the end, with respect to statistical analysis, there is a limitation to this study. In this study, first, exploratory factor analysis (EFA) was performed, after which, multiple regression analysis was performed. As the results of EFA, factor correlations are high as shown in Table 2. From these perspectives, it may be appropriate to SEM is performed. Such statistical analysis limits are also challenges left in the future.

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References

- Arnold, Mark J. and Kristy E. Reynolds (2003). Hedonic Shopping Motivations. *Journal of Retailing*, 79(2), pp.77-95.
- Babin, Barry J., William R. Darden and Mitch Griffin (1994). Work and/or Fun: Measuring Hedonic and Utilitarian Shopping Value. *Journal of Consumer Research*, 20(4), pp.644-656.
- Batra, Rajeev and Olli T. Ahtola (1991). Measuring the Hedonic and Utilitarian Sources of Consumer Attitudes. *Marketing Letters*, 2(2), pp.159-170.
- BCG (Boston Consulting Group) (2014). Shock of the New Chic: Dealing with New Complexity in the Business of Luxury. https://www.bcgperspectives.com/content/articles/consumer_products_retail_shock_new_chic_dealing_with_new_complexity_business_luxury/
- Chung, Y. S. (2015). Hedonic and utilitarian shopping values in airport shopping behavior. *Journal of Air Transport Management*, 49, pp.28-34.
- Crawford, Gerry and T. Melewar (2003). The Importance of Impulse Purchasing Behaviour in the International Airport Atmosphere.

- Journal of Consumer Behaviour*, 3(1), pp.85-98.
- Doong, Her-Sen, Hui-Chih Wang and Rob Law (2012). An Examination of the Determinants of In-Flight Duty-Free Shopping: Hedonic and Utilitarian Motivations. *International Journal of Tourism Research*, 14(3), pp.303-306.
- Doyle, Peter and Philip Stern (2006). *Marketing Management and Strategy*. 4th ed. United Kingdom: Prentice Hall.
- Dubois, Bernard, Gilles Laurent and Sandor Czellar (2001). Consumer Rapport to Luxury: Analyzing Complex and Ambivalent Attitudes. Working Paper no. 736. Paris: HEC School of Management.
- Freathy, Paul and Franl O'Connell (1999). A Typology of European Airport Retailing. *The Service Industries Journal*, 19(3), pp.119-134.
- Geuensa, Maggie, Delphine Vantomme and Malaika Brengman (2004). Developing a Typology of Airport Shoppers. *Tourism Management*, 25(5), pp.615-622.
- Graham, Anne (2010). *Managing Airports: An International Perspective*, 3rd ed., Routledge. (中条潮/塩谷さやか訳『空港経営—民営化と国際化』中央経済社、2010)
- Heung, Vincent C. S. and Hailin Qu (1998). Tourism Shopping and its Contributions to Hong Kong. *Tourism Management*, 19(4), pp.383-386.
- Holbrook, Morris B. and Elizabeth C. Hirschman (1982). The Experimental Aspects of Consumption: Consumer Fantasies, Feeling, and Fun. *Journal of Consumer Research*, 9(2), pp.132-140.
- Huang, Wen-Hsien and Liang Kuai (2006). The In-flight Shopper. *Journal of Air Transport Management*, 12(4), pp.207-211.
- Hudman, Lloyd E. and Donal E Hawkins (1989). *Tourism in Contemporary Society*, 1st ed. Englewood Cliffs, NJ: Prentice-Hall.
- Inoue, A (2007). Hedonic Shopping Motivations and Expenditure Behavior. *The Journal of Management*, 5, pp.63-74.
- Jackson, Tim and Carmen Haid (2002). Gucci Group: The New Family of Luxury Brands, A Case Study. *International Journal of New Product Development and Innovation Management*, 4(2), pp.161-172.
- Keown, Charles F (1989). A Model of Tourist Propensity to Buy: Case of Japanese Visitors to Hawaii. *Journal of Travel Research*, 27(3), pp.31-34.
- Kim, Samuel Seongseop and Jerome Agrusa (2008). Segmenting Japanese Tourists to Hawaii According to Tour Purpose. *Journal of Travel and Tourism Marketing*, 24(1), pp.63-80.
- Lundberg, Donald E (1976). *The Tourist Business*, 1st ed. Oxfordshire: CBI Publishing Company.
- Mak, Barry L. M., Nelson K. F. Tsang and Irene C. Y. Cheung (1999). Taiwanese Tourists' Shipping Preferences. *Journal of Vacation Marketing*, 5(2), pp.190-198.
- Nagasawa, Shin'ya and Fukunaga,

- Teruhiko (2012). Strategic Management and Brand Management on the Luxury Brand GUCCI. *Waseda Bulletin of International Management*, 43, pp.97-108.
- Okonkwo, Uché (2009). The Luxury Strategy Challenge. *Journal of Brand Management*, 16, pp.287-289.
- Phau, Ian and G. Prendergast (2000). Consuming Luxury Brands: The Relevance of the Rarity Principle. *Journal of Brand Management*, 8(2), pp.122-138.
- Reuters (2012). Teisei: Anguru: Kōkyū Burando no Ryokō Kyaku Sōdatsu-sen, Chūgokujin no Shōhi Kyūzō de Gekika (Correction: Angle: Competition for Tourists Intensified among Luxury Brands due to Rapid Increase in Consumption by the Chinese). <http://jp.reuters.com/article/l3n0jz0iz-angle-luxury-brand-china-trave-idJPTYE9BT03G20131230?sp=true,2014.03.12>.
- Rosenbaum, Mark Scott (2007). The Hedonic Repeat Visit: Exploring Consumption Differences among First-time and Repeat Japanese Visitors in Hawaii. *Tourism Analysis*, 11(5), pp.289-295.
- Rosenbaum, Mark S. and Daniel L. Spears (2005). Who Buys That? Who Does What? Analysis of Cross-cultural Consumption Behaviours among Tourists in Hawaii. *Journal of Vacation Marketing*, 11(3), pp.235-247.
- (2006a). An Exploration of Spending Behaviors among Japanese Tourists. *Journal of Travel Research*, 44(4), pp.467-473.
- (2006b). Who Buys What? Who Does That? The Case of Golden Week in Hawaii. *Journal of Vacation Marketing*, 12(3), pp.246-255.
- Saito, M (2008). A Model of Consumer Buying Behavior of Luxury Brands. *Mita Business Review*, 51, pp.93-106.
- Sicard, M. C. (2006). *Luxe, Mesonges et Marketing (Luxury, Lies and Marketing)*, 2nd ed. Paris: Village Mondial.
- Spangenberg, Eric R., Kevin E. Voss and Crowley, Ayn E. (1997). Measuring the Hedonic and Utilitarian Dimensions of Attitude: A Generally Applicable Scale., *Advances in Consumer Research*, 24, pp.235-241.
- Vickers, Jonathan S. and Franck Renand (2003). The Marketing of Luxury Goods: An Exploratory Study—Three Conceptual Dimensions. *The Marketing Review*, 3(4), pp.459-478.
- Voss, Kevin E., Eric R. Spangenberg and Bianca Grohmann (2003). Measuring the Hedonic and Utilitarian Dimensions of Consumer Attitude. *Journal of Marketing Research*, 40(3), pp.310-320.

Appendix

Appendix Table 1. Brands Purchased in the Airport Duty-Free Shop Area (n = 442, MA)

Brand names	Count	%	Brand names	Count	%
Armani	33	7.5	Céline	32	7.2
Yves Saint-Laurent	54	12.2	Christian Dior	99	22.4
Valentino	23	5.2	Tiffany & Co.	39	8.8
Van Cleef & Arpels	10	2.3	Tod's	14	3.2
Etro	18	4.1	Tom Ford	5	1.1
Emanuel Ungaro	8	1.8	Dolce & Gabbana	19	4.3
Emilio Pucci	9	2.0	Burberry	65	14.7
Hermès	85	19.2	Bally	21	4.8
Cartier	41	9.3	Harry Winston	3	0.7
Gucci	78	17.6	Hugo Boss	14	3.2
Christian Louboutin	5	1.1	FENDI	25	5.7
Chloé	24	5.4	Prada	47	10.6
Salvatore Ferragamo	29	6.6	Bvlgari	55	12.4
Givenchy	25	5.7	Bottega Veneta	9	2.0
Chanel	129	29.2	Missoni	5	1.1
Chopard	8	1.8	Moncler	7	1.6
Giorgio Armani	11	2.5	Louis Vuitton	65	14.7
Jil Sander	7	1.6	Loewe	23	5.2
Stella McCartney	5	1.1			

Appendix Table 2. Routes Used (n = 442, SA)

		Count	%
1	Asia	220	49.8
2	Middle East	5	1.1
3	Russia	0	0.0
4	Europe	95	21.5
5	Africa	3	0.7
6	North America	74	16.7
7	South America	9	2.0
8	Other Region	36	8.1

Appendix Table 3. Simple Tabulation (n = 442)

Question	When you consider shopping in the airport duty-free shop area, please choose one of the following items.		Over all	Not at all applicable	Not applicable	Somewhat not applicable	Neither	Somewhat applicable	Applicable	Quite Applicable
1	Useful	%	100	0.7	2.5	3.8	19.7	42.5	26.2	4.5
		count	442	3	11	17	87	188	116	20
2	Practical	%	100	0.7	2.5	8.1	37.6	33.9	15.4	1.8
		count	442	3	11	36	166	150	68	8
3	Necessary	%	100	1.1	2.9	9	30.3	31.9	18.1	6.6
		count	442	5	13	40	134	141	80	29
4	Functional	%	100	0.9	1.1	9	42.8	30.3	12.9	2.9
		count	442	4	5	40	189	134	57	13
5	Helpful	%	100	0.7	2.3	4.1	31.2	40.3	17.4	4.1
		count	442	3	10	18	138	178	77	18
6	Efficient	%	100	0.7	2.5	5	35.1	33.5	19.5	3.8
		count	442	3	11	22	155	148	86	17
7	Effective	%	100	0.9	2.3	7.7	41.9	29	15.2	3.2
		count	442	4	10	34	185	128	67	14
8	Exciting	%	100	1.8	4.8	11.8	35.7	26.5	15.6	3.8
		count	442	8	21	52	158	117	69	17
9	Delightful	%	100	0.7	2.5	7	35.1	33.9	16.7	4.1
		count	442	3	11	31	155	150	74	18
10	Fun	%	100	0.7	3.2	8.8	35.5	31.7	17	3.2
		count	442	3	14	39	157	140	75	14
11	Thrilling	%	100	4.1	6.6	20.1	46.4	14.9	6.3	1.6
		count	442	18	29	89	205	66	28	7
12	Enjoyable	%	100	0.5	2.7	7.5	25.1	38.9	19.2	6.1
		count	442	2	12	33	111	172	85	27
13	Amusing	%	100	6.1	11.1	19.7	46.6	10.4	4.8	1.4
		count	442	27	49	87	206	46	21	6
14	Cheerful	%	100	1.6	3.8	10.4	33.3	30.8	14.9	5.2
		count	442	7	17	46	147	136	66	23
15	High	%	100	0.5	3.2	7.5	28.5	33.7	21.5	5.2
		count	442	2	14	33	126	149	95	23
16	exclusivity	%	100	1.1	3.4	9.3	32.6	30.1	17.2	6.3
		count	442	5	15	41	144	133	76	28
17	Luxury	%	100	0.9	2.9	8.8	31.4	32.4	19	4.5
		count	442	4	13	39	139	143	84	20
18	Latest trends	%	100	0.9	3.6	8.8	39.1	30.3	14	3.2
		count	442	4	16	39	173	134	62	14
19	Status	%	100	2	4.3	9.3	41.2	25.3	14.3	3.6
		count	442	9	19	41	182	112	63	16
20	superiority	%	100	2.9	5.2	9.5	48	18.8	12	3.6
		count	442	13	23	42	212	83	53	16
21	unusual	%	100	1.8	2.9	6.3	29.6	34.4	17.6	7.2
		count	442	8	13	28	131	152	78	32
Question	A	%	100	1.6	7	9.5	21.7	36.4	17.2	6.6
		count	442	7	31	42	96	161	76	29
Question	B	%	100	3.2	9.7	11.8	28.1	27.4	16.3	3.6
		count	442	14	43	52	124	121	72	16

Question A: The amount of money spent in the airport duty-free shop area is higher than that spent in usual shopping at the tourist destination.

Question B: In terms of purchasing luxury brand products, the amount of money spent per shopping trip is higher when purchasing in the airport duty-free shop area than when purchasing at a department store or street-front store of the tourist destination.

Appendix Table 4. Descriptive Statistics (n = 442)

Question	When you consider shopping in the airport duty-free shop area, please choose one of the following items.	Measurement Scale	1 = Not at all applicable, 2 = Not applicable, 3 = Somewhat not applicable, 4 = Neither, 5 = Somewhat applicable, 6 = Applicable, 7 = Quite applicable					
			n	Mean	Unbiased variance	Standard Deviation	Minimum	Maximum
1	Useful		442	4.977	1.129	1.062	1	7
2	Practical		442	4.55	1.06	1.03	1	7
3	Necessary		442	4.695	1.464	1.21	1	7
4	Functional		442	4.509	1.044	1.022	1	7
5	Helpful		442	4.767	1.073	1.036	1	7
6	Efficient		442	4.719	1.155	1.075	1	7
7	Effective		442	4.538	1.143	1.069	1	7
8	Exciting		442	4.425	1.528	1.236	1	7
9	Delightful		442	4.656	1.179	1.086	1	7
10	Fun		442	4.579	1.224	1.106	1	7
11	Thrilling		442	3.869	1.361	1.167	1	7
12	Enjoyable		442	4.814	1.272	1.128	1	7
13	Amusing		442	3.638	1.479	1.216	1	7
14	Cheerful		442	4.534	1.492	1.221	1	7
15	High		442	4.771	1.315	1.147	1	7
16	Exclusivity		442	4.64	1.483	1.218	1	7
17	Luxury		442	4.665	1.339	1.157	1	7
18	Latest trends		442	4.491	1.226	1.107	1	7
19	Status		442	4.407	1.435	1.198	1	7
20	Superiority		442	4.249	1.503	1.226	1	7
21	Unusual		442	4.738	1.505	1.227	1	7
Measurement of the dependent variables								
Question A			442	4.622	1.778	1.333	1	7
Question B			442	4.301	1.957	1.399	1	7

Question A: The amount of money spent in the airport duty-free shop area is higher than that spent in usual shopping at the tourist destination.

Question B: In terms of purchasing luxury brand products, the amount of money spent per shopping trip is higher when purchasing in the airport duty-free shop area than when purchasing at a department store or street-front store of the tourist destination.

Appendix Table 5: Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1 Useful	-																				
2 Practical	0.627	-																			
3 Necessary	0.577	0.639	-																		
4 Functional	0.606	0.611	0.713	-																	
5 Helpful	0.681	0.678	0.719	0.749	-																
6 Efficient	0.68	0.615	0.612	0.676	0.709	-															
7 Effective	0.61	0.658	0.59	0.662	0.753	0.706	-														
8 Exciting	0.385	0.416	0.467	0.417	0.496	0.447	0.559	-													
9 Delightful	0.524	0.516	0.567	0.54	0.592	0.594	0.652	0.783	-												
10 Fun	0.515	0.494	0.505	0.505	0.563	0.541	0.622	0.657	0.736	-											
11 Thrilling	0.181	0.328	0.33	0.37	0.339	0.274	0.371	0.479	0.394	0.509	-										
12 Enjoyable	0.526	0.451	0.503	0.466	0.522	0.539	0.591	0.665	0.735	0.723	0.374	-									
13 Amusing	0.048	0.226	0.154	0.223	0.147	0.118	0.232	0.335	0.258	0.276	0.521	0.199	-								
14 Cheerful	0.444	0.453	0.479	0.445	0.505	0.5	0.556	0.719	0.724	0.677	0.474	0.711	0.318	-							
15 High	0.455	0.331	0.432	0.467	0.451	0.467	0.478	0.605	0.651	0.596	0.388	0.635	0.219	0.667	-						
16 Exclusivity	0.439	0.373	0.425	0.448	0.467	0.441	0.538	0.658	0.654	0.579	0.402	0.582	0.23	0.674	0.805	-					
17 Luxury	0.444	0.33	0.421	0.448	0.459	0.422	0.533	0.629	0.655	0.588	0.376	0.576	0.194	0.642	0.812	0.874	-				
18 Latest trends	0.464	0.461	0.447	0.53	0.533	0.511	0.577	0.563	0.567	0.593	0.47	0.531	0.336	0.528	0.667	0.686	0.697	-			
19 Status	0.367	0.331	0.4	0.451	0.419	0.431	0.524	0.576	0.579	0.53	0.463	0.499	0.323	0.55	0.695	0.76	0.781	0.736	-		
20 Superiority	0.292	0.306	0.357	0.415	0.332	0.365	0.45	0.563	0.548	0.497	0.475	0.46	0.359	0.496	0.62	0.675	0.684	0.598	0.823	-	
21 Unusual	0.397	0.344	0.407	0.423	0.412	0.412	0.456	0.576	0.586	0.568	0.342	0.579	0.164	0.59	0.61	0.603	0.622	0.498	0.571	0.573	-

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