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The Association between Searching for and Purchasing Tourism Services Online

The study, conducted over twenty years after online tourism services were first implemented, examines whether behavioral models regarding technology acceptance and technology adoption are still appropriate. The results reveal that today theoretical model constructs such as trust, perceived utility, perceived risk and ease of use have a negligible effect on the frequency with which individuals purchase online tourism services while searching for such services has a major impact. Technological developments and the ease of searching and purchasing via omni-channel strategies have made these two activities almost inseparable. Therefore, technology adoption models need to be adjusted to suit the needs of tech-savvy consumers.

Key words: SIDS, tourism development, Indian-Ocean, Google Scholar

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Introduction

In recent decades, technological advances in information technology have brought about major changes in the tourism industry. During 2016, online purchases of tourist services totalled 548.5 billion US dollars, and predictions show these purchases will continue to grow at an average rate of 9.3% per annum, reaching billion US dollars by 2021 (eMarketer, 2017; Dudek, Jaremen, & Michalska-Dudek, 2019). More than 55 per cent of global respondents to the Nielsen Global Connected Commerce Survey (2017) indicated they purchased travel products and services online in 2016.

The omni-channel strategy that is prevalent today refers to the use of a diverse combination of online and physical channels to search for information and make purchases (Flavián, Gurrea, & Orús, 2016). Online customers use search engines, social media and blogs. They access these channels through computers or smartphones and can switch seamlessly between them. This capability provides customers with real interaction and offers them the opportunity to use different channels at any time and any place (Juaneda-Ayensa, Mosquera, & Murillo, 2016). The omni-channel strategy provides opportunities for tourists while at the same time presenting tourism service suppliers with both opportunities and challenges (Park & Park, 2016; Yurova, Rippé, Weisfeld-Spolter, Sussan, & Arndt, 2017). The ROPO (research online, purchase offline) trend accounts for 42 percent of travelers in Germany (Touristik Aktuell, 2016) and 21 percent in Poland (Szopiński, 2017), while the reverse ROPO (research offline purchase online) effect accounts for only 7.7 percent of travelers in Poland (Szopiński, 2017).

Technology plays an important role in the distribution of travel products (Law et al., 2015). Technological changes offer customers a wider variety of options and better prices so that the improved competition in the industry significantly increases customer well-being. These changes have raised several questions, which are the focus of the current study: (i)

What influences the frequency with which customers search for and purchase tourism services online? (ii) How do searching and purchasing affect each other? (iii) From a sociological perspective, do sociodemographic characteristics affect customers' search and purchase behavior and their perceived attitudes?

According to Eurostat (2016), internet usage of tourism services differs from country to country. For example, the report indicates that more than two-thirds of the accommodations booked by residents of France, the Netherlands and Luxembourg were booked online, compared to less than ten percent of the accommodations booked by residents of Bulgaria and Romania. The current research represents the first attempt to understand these issues in Israel, a country characterized by a high percentage of internet usage for tourism services. According to the Israel Central Bureau of Statistics (2018), 42.9 percent of the population traveled abroad during 2017. The percentages describing internet use among individuals who traveled abroad show that 56.9 percent made online purchases, while 85.7 percent used communications and social media and 89 percent searched online. These rates are similar to the current average internet penetration rate in Europe of 86.6 percent (internetworldstats, 2019).

Understanding the driving forces that determine the frequency with which Israelis search for and purchase travel products online is vital for successful implementation of online marketing strategies in Israel.

Literature Review

Many studies have examined online shopping for travel services (Amaro & Duarte, 2013; Kamarulzaman, 2007, 2010; Madlberger, 2017; Monga & Kaplash, 2016; Morosan & Bowen, 2018; Peng, Xu, & Chen, 2013). Likewise, many studies have investigated the factors influencing online information searching (Chang & Caneday, 2011; Coromina &

Camprubí, 2016; Grigolon, Kemperman, & Timmermans, 2012; Herrero, San Martín, & Hernández, 2015; Ukpabi & Karjaluoto, 2017). Technology adoption models introduced the factors of perceived trust, ease of use, perceived risk and perceived utility as the primary determinants of internet usage.

Trust is defined as "an attitude of confident expectation in an online situation of risk that one's vulnerabilities will not be exploited" (Corritore, Kracher, & Wiedenbeck, 2003, p.740). Research shows that individuals are more likely to make purchases online if their perceived trust in purchasing online tourism services is higher (Amaro & Duarte, 2015; Chen, 2006; Nunkoo, Ramkissoon, & Juwaheer, 2016; Ponte, Carvajal-Trujillo, & Escobar-Rodríguez, 2015; Sahli & Legohérel, 2015; Wen, 2010). On the other hand, Kamarulzaman (2007) did not find any direct effect of trust on online tourism shopping. Instead, she found that trust has an impact on perceived risk. Park and Park (2016) determined that trust affects individuals' motivation to search for tourism information online. Therefore, the following hypotheses are proposed:

H1a. Trust will have a positive impact on searching for tourism services online.

H1b. Trust will have a positive impact on purchasing tourism services online.

Ease of use refers to the degree to which a traveler expects online services to be effortless (Davis, 1989). San Martín and Herrero (2012), Kucukusta, Law, Besbes, and Legohérel (2015) and Sahli and Legohérel (2015) found that ease of use affects online purchasing of tourism services. Other researchers, in contrast, found that ease of use has no direct influence (Bigné, Sanz, Ruiz, & Aldás, 2010; Kamarulzaman, 2007; Nunkoo et al., 2016) or no influence at all (Morrison, Jing, O'Leary, & Cai, 2001). Also, ease of use has been found to affect individuals' motivation to search for tourism information online (Castaneda, Frias, Rodríguez, 2009; Luque-Martínez, Castaneda-García, Frias-Jamilena,

Munoz-Leiva, Rodriguez-Molina, 2007; Park & Park, 2016; San Martin & Herrero, 2012).

Therefore, the following hypotheses are proposed:

H2a. Ease of use will have a positive impact on searching for tourism services online.

H2b. Ease of use will have a positive impact on purchasing tourism services online.

Perceived risk is defined as the potential loss consumers perceive online compared to offline behavior. Therefore, the risk relates to the internet as a method and not to travel services themselves (Amaro & Duarte, 2015).

A negative relation was found between perceived risk and online purchasing of tourism services (Bigné et al., 2010; Coromina & Camprubi, 2016; Jensen, 2009, 2012; Kolsaker, Lee-Kelley, & Choy, 2004; Nunkoo et al., 2016; Sahli & Legohérel, 2015). Travelers' perceived risks are important determinants of their online information searching (Peng et al., 2013). Therefore, the following hypotheses are proposed:

H 3a. Perceived risk will have a negative impact on searching for tourism services online.

H 3b. Perceived risk will have a negative impact on purchasing tourism services online.

Perceived utility, a construct that combines the variables of convenience, time-saving, enjoyment, product variety and price, may also affect the intention to purchase travel services online. Several researchers found that perceived utility influences consumers' intentions to purchase travel services online (Amaro & Duarte, 2013; Jensen, 2009; Kucukusta et al., 2015; Ponte et al., 2015; Sahli & Legohérel, 2015; San Martin & Herrero, 2012). Amaro and Duarte (2015) analyzed the effect of perceived relative advantage, which is somewhat similar to perceived utility, and found that relative advantage positively affects trust but does not affect the intention to purchase travel services online. San Martin and Herrero (2012) found

that perceived utility influences searches for rural tourism information using websites.

Similar results were found by Castaneda et al. (2009) and Luque-Martinez et al (2007).

Therefore, the following hypotheses are proposed:

H 4a. Perceived utility will have a positive impact on searching for tourism services online.

H 4b. Perceived utility will have a positive impact on purchasing tourism services online.

Selection of the booking channel is directly determined during the *evaluation of alternatives* stage (the stage in which the purchase intention is formed) and indirectly influenced by the *information search* stage (Ukpabi & Karjaluoto, 2017). Jensen (2012), Susskind and Stefanone (2010) and Liu and Zhang (2014) found that the intention to search for information online positively influences intentions to purchase online. According to Kamarulzaman (2007, 2010), online information-seeking activities are moderately related to online purchasing. Li and Buhalis (2005, 2006) determined that people who visit the websites of travel suppliers are more likely to purchase tourism services online.

According to Jun, Vogt and MacKay (2007), online searching for tourism information and online purchasing of tourism services exhibit significant associations, with patterns varying by product type. Wolfe, Hsu and Kang (2005) found that individuals who purchase tourism services online are more likely to have searched for those services online. On the other hand, Powley, Cobanoglu and Cummings (2004) and Li and Buhalis (2005, 2006) found no relationship between searching for and purchasing tourism services online. Therefore, the following hypotheses are proposed:

H5a. Searching for tourism services online will have a positive influence on purchasing tourism services online.

H5b. Purchasing tourism services online will have a positive influence on searching for tourism services online.

Other studies have focused on explaining the online behavior of individuals according to variables related to internet usage and individual characteristics, among them gender, age, marital status, income level, education, number of trips abroad, and degree of fluency in English. These studies yielded mixed results (e.g., Beldona, Racherla and Mundhra, 2011; Law and Bai, 2008; Garin-Munoz and Perez-Amaral, 2011; and Li and Buhalis, 2006).

Regarding age groups, Kim and Kim (2004) found that consumers over the age of 30 are less likely to purchase tourism services online. Garin-Munoz and Perez-Amaral (2011) extended these results to people between the ages of 35 and 44 for searching for tourism services online as well. Using age as a continuous variable yielded contrasting results. Wolfe et al. (2005) found that younger consumers are more likely to purchase tourism services online, while Law and Bai (2008) found the opposite. Despite the above research, according to Morrison et al. (2001) and Moital, Vaughan and Edwards (2009) age does not affect the probability of purchasing tourism products online. Therefore, in this study these variables serve as control variables, and no hypotheses regarding them are proposed.

The current study, conducted over twenty years after online tourism services were first implemented, attempts to answer the following questions: (i) Does the psychological variable still affect online tourism behavior? (ii) Are there still sociodemographic differences with respect to search and purchase behavior? Most of the research literature focuses either on searching or on purchasing and does not evaluate them simultaneously. The current research attempts to fill this gap by simultaneously estimating online searching for and purchasing of tourism services.

Methods

Sample

The current study uses the quantitative method, in accordance with previous studies that investigate the use of online travel services (Amaro & Duarte, 2015; Park & Park, 2016) and to examine the research hypotheses. This study was conducted among Israelis aged 18 and older who use the internet and travel abroad.

The survey was conducted between January and July 2015 by means of questionnaires. In the first stage, questionnaires were distributed among students in various departments at academic institutions in Israel. Respondents were informed that participation in the study was voluntary. In the second stage, the students were asked to distribute the questionnaires among their families and friends. The sample was collected using the snowball method with multiple entries. Previous research determined that when attempting to study hidden populations for whom adequate lists and consequently sampling frames are not readily available, snowball sampling methodologies may be the most effective (Sadler, Lee, Lim, & Fullerton, 2010). Nevertheless, to reduce the selection bias inherent in this method, the present research uses multiple entry points into the communities and as wide a range of people as possible to provide further contacts (Christopoulos, 2009). It has been suggested that greater heterogeneity and improved representativeness in snowball samples can be achieved by increasing sample sizes, using quotas for key demographic variables, including multiple starting points for snowball initiation, and using a small number of links within each chain.

Survey Design

The present study is based on closed questionnaires designed to test internet use within the population with respect to perceived attitudes (risk, trust, ease of use, utility) toward internet searching for and online purchasing of tourism services. The

questionnaires are anonymous and confidential, and the data collected are for research purposes only. The research questionnaire is partially based on the questionnaire developed by Amaro and Duarte (2013) to improve the content validity (Straub, Boudreau, & Gefen, 2004). It was translated into Hebrew by one of the authors of the current research and translated back by an English editor.

The questionnaire includes 30 questions divided into the following sections:

1) Socio-demographic information includes gender; age; education; number of trips abroad (indicated as average per year); level of fluency in English (on a five point scale ranging from 1 – not at all fluent, to 5 – native speaker); and monthly income level compared to the average income of approximately 2,700 USD (indicated as much higher than above average, above average, average, below average, and much lower than below average).

2) Questions regarding the utility, risk, trust, and ease of using online searching and purchasing are based on existing measures adapted from similar studies. All items are measured using a 7-point Likert scale, with 7 indicating complete agreement and 1 indicating total disagreement. Scores on the utility of search, ease of search, utility of purchase, and ease of purchase are averaged to form an independent variable. The internal consistency reliability scores (Cronbach's alpha) of this scale are 0.858, 0.729, 0.861, and 0.814, respectively. The items included in each variable are detailed in Appendix 1.

3) Questions are included regarding the levels of searching for and purchasing tourism services online. The scale used to measure the usage levels of searching for tourism information online and purchasing tourism services online ranges from 1 (indicating no use at all) to 5. Common method bias is tested by Harman's signal factor score and the total variance for a single factor is 33.67 for searching and 32.85 for purchasing. The correlation matrix is given in Appendix 2.

Data Analysis

The statistical packages SPSS 22 and Eviews 9 are used for statistical analysis of the data. The analysis includes descriptive statistics, chi-square tests, ANOVA analysis and three-stage least squares (3SLS). The decision to search online influences purchasing online, and vice versa. Since these variables are associated with one another, they should be estimated using a simultaneous method such as 3SLS. The three-stage least squares (3SLS) method introduced by Zellner and Theil (1962) may be seen as a combination of the two-stage least squares (2SLS) method with seemingly unrelated regressions. Since the error terms may be correlated across the search and purchase equations, 3SLS yields more efficient estimators than 2SLS.

Results

Descriptive statistics

The descriptive statistics include the demographic variables and the differences between the groups. Table 1 shows the descriptive statistics for the data.

Table 1. Description of sample by demographic data.

| Variable | | N | % |
|----------------|--------------------|-----|------|
| Gender | Male | 208 | 52.1 |
| | Female | 191 | 47.9 |
| Marital status | Single | 211 | 52.6 |
| | Married | 174 | 43.4 |
| Income | Below Average | 187 | 47.8 |
| | Average | 98 | 24.4 |
| | Above Average | 107 | 27 |
| Education | 12 years of school | 146 | 36.6 |

| | | | |
|-----|------------------|-----|------|
| | Higher education | 253 | 63.4 |
| Age | Below 50 | 312 | 77.8 |
| | Above 50 | 89 | 22.2 |

From the entire sample of 401 respondents, 374 respondents (94%) report that they traveled abroad at least once in the preceding year, and most of the study participants (99.3%) report using the internet on their own (without the help of other people). The sample includes a similar percentage of men and women. About half of the respondents (52.6 percent) are single, and most (63.4 percent) have some degree of higher education.

Most of the respondents are under 50 years old (77.8 percent), with an average age of 52.5. Approximately half of them have an income that is below average (47.8 percent), while 27 percent have an above-average income. The remaining respondents have an average income.

Comparison between Search and Purchase Variables according to Demographic Data

The present research compares perceived attitudes (risk, trust, ease of use, utility) toward online search and purchase to actual behavior according to gender, marital status, English fluency, income, and age groupⁱ.

Table 2 describes the significant differences in the search for and purchase of tourism services online according to gender, age and marital status.

Table 2. Means, standard deviations and T-test results comparing demographic data (gender, age and marital status).

| Variable | Group | N | Mean | Std. Deviation | t |
|----------------|---------------|-----|------|----------------|---------|
| Search Utility | Men | 207 | 5.39 | 1.28 | -2.15** |
| | Women | 187 | 5.64 | 1.02 | |
| Search Ease | Men | 207 | 5.07 | 1.29 | -2.41* |
| | Women | 187 | 5.37 | 1.09 | |
| Purchase Risk | Men | 176 | 3.92 | 1.72 | -1.74** |
| | Women | 150 | 4.24 | 1.57 | |
| Search | Single | 91 | 2.65 | 1.35 | -8.51* |
| | Married | 91 | 4.14 | 1.01 | |
| Purchase ease | Single | 179 | 4.76 | 1.43 | -2.58* |
| | Married | 143 | 5.22 | 1.45 | |
| Purchase trust | Single | 179 | 4.77 | 1.70 | -3.106* |
| | Married | 125 | 5.30 | 1.25 | |
| Search | Age \geq 50 | 52 | 4.12 | 1.08 | 5.07* |
| | Age < 50 | 137 | 3.14 | 1.42 | |
| Purchase | Age \geq 50 | 91 | 2.95 | 1.39 | 2.87* |
| | Age < 50 | 193 | 3.47 | 1.47 | |

*p<0.1; **p<0.05

The results indicate that women find it easier than men to search online ($t_{(392)} = -2.410, p < .01$) and that the utility of their search ($t_{(392)} = -2.152, p < .05$) is higher. On the other hand, women consider purchasing online more risky than do men ($t_{(392)} = -1.740, p < .05$). In addition, married respondents search online more often ($t_{(175)} = -8.505, p < .01$) and their perceived ease of use ($t_{(306)} = -2.577, p < .01$) and trust in making online purchases are higher ($t_{(302)} = -3.106, p < .01$) than among single respondents. Level of education has no significant effect on purchasing and searching for tourism services online.

Regarding age, the present research uses a dummy variable to represent individuals under 50 who grew up using technology and individuals over 50 who had to adopt technology use when they were older. Only around 1994-95 did the internet enter domestic use in Israel. Therefore, it is reasonable to assume that people who were under the age of 30 at that time would have more easily and rapidly adopted technology use than those over the age of 30. Hence, we divided the sample into two groups: those under 50 years old in 2015 and those over 50.

The results indicate that respondents over the age of 50 search for tourism information online more often, while respondents under age 50 purchase tourism products online more often. Tables 3 and 4 describe the significant differences in levels of income and fluency in English with regard to searching for and purchasing tourism products online.

Table 3. Means, standard deviations and ANOVA test results comparing different levels of English fluency with respect to online search and purchase of tourism productsⁱⁱ.

| Variable | Level of English | N | Mean | Std. Deviation | F |
|----------|------------------|-----|------|----------------|--------|
| Purchase | Low level | 56 | 2.41 | 1.33 | 15.86* |
| | Good | 117 | 3.37 | 1.45 | |
| | High level | 111 | 3.68 | 1.32 | |
| Purchase | Low level | 61 | 4.43 | 1.60 | 6.70* |
| | Good | 132 | 4.98 | 1.51 | |
| | High level | 137 | 5.28 | 1.47 | |
| Purchase | Low level | 60 | 4.53 | 1.58 | 3.67** |
| | Good | 131 | 4.09 | 1.65 | |
| | High level | 136 | 3.85 | 1.66 | |
| Search | Low level | 78 | 5.09 | 4.53 | 6.54* |
| | Good | 155 | 5.63 | 1.06 | |
| | High level | 163 | 5.60 | 5.75 | |
| Purchase | Low level | 63 | 4.25 | 1.66 | 13.62* |
| | Good | 133 | 4.91 | 1.48 | |
| | High level | 136 | 5.36 | 1.22 | |
| Purchase | Low level | 63 | 4.76 | 1.45 | 3.69** |
| | Good | 133 | 5.18 | 1.35 | |
| | High level | 136 | 5.29 | 1.20 | |
| Search | Low level | 78 | 4.71 | 1.31 | 8.90* |
| | Good | 155 | 5.31 | 1.17 | |
| | High level | 163 | 5.37 | 1.14 | |
| Search | Low level | 77 | 4.78 | 1.57 | 3.13** |
| | Good | 153 | 5.16 | 1.46 | |
| | High level | 163 | 5.25 | 1.20 | |

*p<.01; **p<.05

The results in Table 3 reveal significant differences in all purchase variables according to the level of English fluency. Regarding the search for tourism services, only the variables of ease of use, trust, and utility of search exhibit significant differences between the groups. Moreover, Scheffe tests reveal differences between individuals with low and high levels of English fluency. These results indicate that individuals who are more proficient in English find tourism services on the internet friendlier (higher utility, trust, and ease of use; lower risk). They also purchase more services online.

Table 4. Means, standard deviations and ANOVA test results comparing different levels of income regarding online search and purchase of tourism products.

| Variable | Income Group | N | Mean | Std. Deviation | F |
|----------|--------------------|-----|------|----------------|--------|
| Purchase | Well below average | 159 | 4.82 | 1.62 | 3.09** |
| Trust | Average | 71 | 5.06 | 1.55 | |
| | Above average | 94 | 5.31 | 1.33 | |
| Search | Well below average | 185 | 5.44 | 1.23 | 3.77** |
| Utility | Average | 95 | 5.34 | 1.13 | |
| | Above average | 107 | 5.76 | 1.08 | |
| Purchase | Well below average | 113 | 3.23 | 1.45 | 4.49** |
| | Average | 76 | 3.05 | 1.40 | |
| | Above average | 88 | 3.33 | 1.46 | |

*p<.01; **p<.05

The results shown in Table 4 indicate that in the case of purchases, search utility and trust differ significantly according to level of income. Moreover, the results of Scheffe tests show that as income rises, the frequency of online purchasing increases. Concerning trust in online purchasing, the only significant difference is between individuals with lower than average income and those with higher than average income. Individuals who have higher than

average income place more trust in online purchases. Moreover, individuals with higher than average income find the utility of online tourism searches to be higher than do those with average income.

Table 5. Means, standard deviations and t-test comparisons between respondents that travelled abroad more than once a year and those that travelled once a year or less frequently.

| Variable | Average Number of Trips abroad | N | Mean | Std. Deviation | T |
|----------------|--------------------------------|-----|------|----------------|--------|
| Search | Once or less frequently | 120 | 3.13 | 1.37 | -3.78* |
| | More than once | 69 | 3.90 | 1.33 | |
| Purchase | Once or less frequently | 178 | 3.12 | 1.51 | -2.80* |
| | More than once | 106 | 3.60 | 1.33 | |
| Purchase Ease | Once or less frequently | 217 | 4.81 | 1.46 | -2.78* |
| | More than once | 115 | 5.27 | 1.39 | |
| Search Risk | Once or less frequently | 260 | 3.91 | 1.74 | 2.70* |
| | More than once | 134 | 3.42 | 1.69 | |
| Purchase Trust | Once or less frequently | 217 | 4.85 | 1.57 | -2.56* |
| | More than once | 113 | 5.30 | 1.44 | |
| Purchase Risk | Once or less frequently | 215 | 4.22 | 1.56 | 2.23* |
| | More than once | 112 | 3.78 | 1.79 | |

*p<.01; **p<.05

The results in Table 5 indicate that individuals who travel more than once a year search for and purchase more tourism services online than those who travel only once a year or not at all. These frequent travelers trust online purchases, find it easier to make purchases online, and perceive less risk in searching for and purchasing tourism services online.

Factors Effecting Internet Usage for Tourism Services

The model includes two dependent variables: usage level in searching for tourism information online and usage level in purchasing tourism services online.

The two dependent variables affect each other and therefore, should not be estimated separately. Instead, the present research introduces a simultaneous equations model that consists of two equations – one for each variableⁱⁱⁱ. The common independent variables are age and number of trips abroad (an annual average). Also, for each dependent variable the research examines four perceived attitudes: trust, risk, ease of use, and utility.

The endogenous dependent variables explain each other: search explains purchase and purchase explains search.

Therefore, the simultaneous equations model is:

$$\text{SEARCH} = f_1 (\text{AGE}, \text{TRIPSABROAD}, \text{SEARCHUTILITY}, \text{EASYSEARCH}, \text{SEARCHTRUST}, \text{SEARCHRISK}, \text{PURCHASE})$$

$$\text{PURCHASE} = f_2 (\text{AGE}, \text{TRIPSABROAD}, \text{PURCHASEUTILITY}, \text{EASYPURCHASE}, \text{PURCHASETRUST}, \text{PURCHASERISKE}, \text{SEARCH})$$

To estimate the model, the present research also uses the following travel characteristics as instrumental variables: level of income, gender (base=male), average number of days abroad on each trip, number of hours of internet use per week, and level of fluency in English.

Table 6 shows the results using the 3SLS estimation method:

Determinant residual covariance: 0.006994

Table 6a. Search equation.

$R^2=0.241118$

| | Coefficient | Std. Error | t-Statistic | Prob. |
|----------------|-------------|------------|-------------|-------|
| Constant | -0.47 | 0.84 | -0.56 | 0.58 |
| Age | 0.02 | 0.01 | 3.57 | 0.00 |
| Trip abroad | -0.20 | 0.09 | -2.13 | 0.04 |
| Search utility | 0.08 | 0.09 | 0.87 | 0.39 |
| Search ease | -0.02 | 0.06 | -0.37 | 0.71 |
| Search trust | 0.03 | 0.07 | 0.45 | 0.65 |
| Search risk | 0.08 | 0.05 | 1.60 | 0.11 |
| Purchase | 0.93 | 0.15 | 6.35 | 0.00 |

Table 6b. Purchase equation.

$R^2=0.553317$

| | Coefficient | Std. Error | t-Statistic | Prob. |
|------------------|-------------|------------|-------------|-------|
| Constant | 0.15 | 0.82 | 0.18 | 0.86 |
| Age | -0.02 | 0.01 | -4.22 | 0.00 |
| Trip abroad | 0.23 | 0.11 | 2.08 | 0.04 |
| Purchase utility | -0.01 | 0.09 | -0.09 | 0.93 |
| Purchase ease | 0.02 | 0.08 | 0.30 | 0.77 |
| Purchase trust | -0.01 | 0.07 | -0.12 | 0.90 |

| | | | | |
|---------------|-------|------|-------|------|
| Purchase risk | -0.03 | 0.04 | -0.69 | 0.49 |
| Search | 0.99 | 0.23 | 4.23 | 0.00 |

The results shown in Table 6 indicate that for searching for information, age has a significant positive effect and number of trips abroad has a significant negative effect. Concerning purchasing tourism services, the effects are in the opposite direction. Age has a significant negative effect and number of trips abroad has a significant positive effect on online purchasing. Both searching for information and purchasing of services have significant positive effects on one another.

These results indicate that older people search for tourism information online more often than do younger people, but they make fewer purchases online. Moreover, the more individuals travel, the less they search for information online, while they also make online purchases more often. Indeed, tourists who have begun using the internet for tourism services are likely to use it more and more.

Summary and Discussion

The importance of understanding how travelers use the internet is discussed in the literature (Xiang, Wang, O’Leary, & Fesenmaier, 2015), with many studies attempting to assess this importance. The literature review suggests that this type of research should be based on behavioral models regarding technology acceptance. Models of technology adoption introduced the variables of perceived trust, ease of use, perceived risk, and perceived utility as the primary determinants of internet usage. The empirical studies present contradictory results concerning the effect of the main variables on searching for and purchasing tourism services online. Amaro and Duarte (2013) suggest that these contradictory results can be explained by different stages of technology adoption.

The results of the present study are meaningful and contribute to the existing body of knowledge about omni-channels in three ways. The first contribution relates to the theoretical perspective. The current study, conducted more than twenty years after online tourism services were first implemented, examines whether the behavioral models regarding technology acceptance and technology adoption are still appropriate. The results reveal that today theoretical model constructs such as trust, perceived utility, perceived risk and ease of use have a negligible effect on the frequency with which individuals purchase online tourism services, while searching for such services online has a major impact. The conclusion, therefore, is that technology adoption models need to be adjusted to the new realities of tech-savvy consumers. Second, from the methodological perspective, the present research is one of the first attempts that simultaneously tests online searching for and purchasing of tourism services at a time when many people have adopted internet technology and use it daily. Technological developments and the ease of searching and purchasing using omni-channel strategies have turned searching and purchasing into almost inseparable processes. Third, the findings of the current study may have some important implications for industry practitioners, as further detailed below.

Contrary to Hypotheses 1 to 4, the results of the present simultaneous model indicate that in Israel the variables of ease of use, trust, risk and utility have no significant effect on online searching for and purchasing of tourism services.

Today most travelers use online services, including tourism services, regularly. Therefore, these results may be explained by the fact that individuals who have adopted the technology and made it a part of their lives no longer question the technology. Hence, they do not pay attention to attitudes such as risk, trust, and ease of use. Once individuals become familiar with the technology, they begin using it with increasing frequency and for different purposes, such as searching for and purchasing services. Moreover, the results

indicate that different groups within the population treat online services differently. For example, women find it easier to search online and gain more utility from the search. These differences are not reflected in behavior, such that women do not purchase online more frequently than men.

The results indicate that online searching influences online purchasing and vice versa. This finding supports Hypothesis 5 and is consistent with the results of Jun et al. (2007) indicating that online searching for tourism services information and online purchasing are significantly associated. When estimated simultaneously, both equations yield different results than when each equation is estimated separately. This may be another reason that the attitude variables and the demographic variables have no effect.

According to the self-efficacy-based value adoption model introduced by Zhu, So and Hudson (2017), self-efficacy is a fundamental factor that has a direct effect on customer perception and behavior at the acceptance stage. After technology adoption, customer behavior and perceptions have an effect on self-efficacy. These relationships may explain the results of the present research. When customers search online, their self-efficacy may increase, thus changing their perceptions and behavior concerning online purchasing and vice versa

Concerning traveler characteristics, the present research finds that age and past travel experience affect online searching and purchasing. The results show that older people search for tourism information online more often than do younger people, but they make fewer purchases online.

Moreover, the present research expands the findings of Jun et al. (2007) regarding the effect of past travel experience on travel behavior. The present findings show that individuals who have more travel experience search online less frequently, but purchase online more frequently. This may be explained by the omni-channel strategy, which is used

by individuals with more experience who are looking for niche information. Omni-channel strategy involves the use of new technology, including smart phones and multi-source integration.

The findings of this study can help online suppliers of tourism services better understand the online behavior of travelers. Knowledge of the driving forces that determine the level of purchasing travel services online is of paramount importance for the successful implementation of online marketing strategies (Lee, Qu, & Kim, 2007).

To increase the purchase of online tourism services (especially for ROPO travelers), the focus should be placed on increasing their motivation to search online rather than on changing their perceived attitudes toward online purchases. Promotions that encourage searching and discount coupons that connect searching to purchasing may achieve this goal. Also, the suppliers of online tourism services can use the results of this study to target specific groups. For example, since older people search more but buy less than younger people, promotional efforts should focus on encouraging them to purchase online as well. Promotional efforts need to be directed toward individuals with more travel experience since they tend to purchase more than those without travel experience.

The research results indicate that individuals with higher incomes make more online purchases, so marketing efforts should be directed toward them. Also, the motivation among older people to purchase online should be increased, while younger people's motivation to search online should be increased. Furthermore, the results indicate that although respondents can use Google Translate, lack of fluency in English is still a barrier. Therefore, Israeli internet sites should develop help and support services in Hebrew.

The current research has some limitations. One of them is that the data were collected four years ago and much has changed since then. Nevertheless, the main conclusion of this study is that people have already adopted the technology and trust it.

Therefore, our conclusions hold today, as well. Another limitation of the study is that although the sample includes more than 400 people and was distributed in several locations in Israel, it is not an accurate representation of the Israeli population. The causal link between the online search for tourism services and the actual purchase of these services requires further in-depth examination. Future research may shed light on this link by using qualitative methods to complete the present quantitative study results.

Future research can also examine omni-channel strategy based on behavioral models while estimating all the sources simultaneously. In addition, future research can focus on specific types of products such as hotels and flights, particular types of channels such as mobile phones for online search and purchase, and the timing of using online tourism services, such as before and during travel. Investigation of all these possibilities will provide a broader and more in-depth picture of the use of online tourism services.

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Appendix 1.

Items marked with * were reversed.

| Variable | |
|------------------|--|
| Search Utility | I can save time by searching for travel services online |
| | I can save money by searching for travel services online |
| | Using the internet to search for low-cost tourism services is worthwhile. |
| | Using the internet to search for high-cost tourism services is worthwhile. |
| | Searching the internet for information on tourism makes my life easier. |
| | Searching the internet expands my knowledge. |
| | Searching the internet helps me plan my trip better. |
| Search Trust | I believe the information from online travel sites is trustworthy. |
| Search Risk | Searching for travel online is risky. |
| Search Ease | Learning to use the internet for searching for travel products was easy for me. |
| | *I feel online search procedures are not clear to me. |
| | *It takes a long time to learn how to search online for tourism services. |
| | Searching online is easy. |
| Purchase Utility | I can save time by purchasing travel online. |
| | I can save money by purchasing travel online. |
| | Travel websites generally offer low-cost tourism products at cheaper prices. |
| | Travel websites generally offer high-cost tourism products at cheaper prices. |
| | Purchasing tourism services on the internet makes my life easier. |
| | There is a larger selection of travel products available when purchasing online. |
| | Purchasing on the internet increases the trip's quality. |
| Purchase Trust | I believe that purchasing from online travel sites is trustworthy. |
| Purchase Risk | Purchasing travel services online is risky. |
| Purchase Ease | Learning to use the internet for purchasing travel products was easy for me. |
| | *I feel online purchasing procedures are not clear to me. |
| | *It takes a long time to learn how to purchase tourism services |

| | |
|--|----------------------------|
| | online. |
| | Purchasing online is easy. |

Appendix 2

Correlations

| | | Purchase level | Trips | age | Search ease | Search utility | Search risk | Search trust |
|-------------------|------------------------|-------------------|--------|---------|----------------|-------------------|----------------|-----------------|
| Purchase level | Pearson Correlation | 1 | .063 | -.211** | .288** | .327** | -.159* | .110 |
| | Sig. (2- tailed) | | .343 | .001 | .000 | .000 | .017 | .098 |
| | N | 229 | 229 | 229 | 228 | 228 | 227 | 226 |
| trips | Pearson Correlation | .063 | 1 | .193** | .100* | .077 | -.148** | .046 |
| | Sig. (2- tailed) | .343 | | .000 | .046 | .126 | .003 | .364 |
| | N | 229 | 401 | 401 | 396 | 396 | 394 | 393 |
| age | Pearson Correlation | -.211** | .193** | 1 | -.069 | -.006 | -.060 | -.029 |
| | Sig. (2- tailed) | .001 | .000 | | .171 | .901 | .233 | .569 |
| | N | 229 | 401 | 401 | 396 | 396 | 394 | 393 |
| Search ease | Pearson Correlation | .288** | .100* | -.069 | 1 | .607** | -.415** | .425** |
| | Sig. (2- tailed) | .000 | .046 | .171 | | .000 | .000 | .000 |
| | N | 228 | 396 | 396 | 396 | 396 | 394 | 393 |
| Search utility | Pearson Correlation | .327** | .077 | -.006 | .607** | 1 | -.122* | .574** |
| | Sig. (2- tailed) | .000 | .126 | .901 | .000 | | .015 | .000 |

| | | | | | | | | |
|--------------|---------------------|--------|---------|-------|---------|--------|---------|---------|
| | N | 228 | 396 | 396 | 396 | 396 | 394 | 393 |
| Search risk | Pearson Correlation | -.159* | -.148** | -.060 | -.415** | -.122* | 1 | -.257** |
| | Sig. (2-tailed) | .017 | .003 | .233 | .000 | .015 | | .000 |
| | N | 227 | 394 | 394 | 394 | 394 | 394 | 391 |
| Search trust | Pearson Correlation | .110 | .046 | -.029 | .425** | .574** | -.257** | 1 |
| | Sig. (2-tailed) | .098 | .364 | .569 | .000 | .000 | .000 | |
| | N | 226 | 393 | 393 | 393 | 393 | 391 | 393 |

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Total Variance Explained

| Initial Eigenvalues ^a | | | | | Extraction Sums of Squared | | |
|----------------------------------|-------|---------------|--------------|--|----------------------------|---------------|--------------|
| | | | | | Loadings | | |
| Component | Total | % of Variance | Cumulative % | | Total | % of Variance | Cumulative % |
| Raw 1 | 3.930 | 43.515 | 43.515 | | 3.930 | 43.515 | 43.515 |
| 2 | 1.842 | 20.395 | 63.910 | | | | |
| 3 | 1.333 | 14.759 | 78.669 | | | | |
| 4 | 1.077 | 11.929 | 90.598 | | | | |
| 5 | .470 | 5.206 | 95.804 | | | | |
| 6 | .234 | 2.586 | 98.390 | | | | |
| 7 | .145 | 1.610 | 100.000 | | | | |

| | | | | | | | |
|----------|---|-------|--------|---------|-------|--------|--------|
| Rescaled | 1 | 3.930 | 43.515 | 43.515 | 2.114 | 30.200 | 30.200 |
| | 2 | 1.842 | 20.395 | 63.910 | | | |
| | 3 | 1.333 | 14.759 | 78.669 | | | |
| | 4 | 1.077 | 11.929 | 90.598 | | | |
| | 5 | .470 | 5.206 | 95.804 | | | |
| | 6 | .234 | 2.586 | 98.390 | | | |
| | 7 | .145 | 1.610 | 100.000 | | | |

Extraction Method: Principal Component Analysis.

- a. When analyzing a covariance matrix, the initial eigenvalues are the same across the raw and rescaled solution.

Component Matrix^a

| | Raw Component 1 | Rescaled Component 1 |
|----------------|-----------------------|----------------------------|
| Age | -.006 | -.014 |
| Trips | .156 | .133 |
| Search Utility | .653 | .603 |
| Search Ease | .904 | .753 |
| Search Trust | .834 | .617 |
| Search Risk | -1.396 | -.837 |
| Purchase level | .138 | .290 |

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Correlations

| | | trips | age1 | Purchase trust | Purchase Risk | Search level | Purchase Utility | Purchase Ease |
|-------------------|------------------------|---------|--------|-------------------|------------------|-----------------|---------------------|------------------|
| Trips | Pearson Correlation | 1 | .193** | .147** | -.148** | .228** | .055 | .156** |
| | Sig. (2- tailed) | | .000 | .007 | .007 | .003 | .319 | .004 |
| | N | 401 | 401 | 330 | 327 | 165 | 332 | 332 |
| Age | Pearson Correlation | .193** | 1 | .056 | .037 | .241** | -.024 | -.031 |
| | Sig. (2- tailed) | .000 | | .311 | .500 | .002 | .663 | .577 |
| | N | 401 | 401 | 330 | 327 | 165 | 332 | 332 |
| Purchase Trust | Pearson Correlation | .147** | .056 | 1 | -.203** | .132 | .690** | .565** |
| | Sig. (2- tailed) | .007 | .311 | | .000 | .147 | .000 | .000 |
| | N | 330 | 330 | 330 | 323 | 123 | 326 | 326 |
| Purchase Risk | Pearson Correlation | -.148** | .037 | -.203** | 1 | -.071 | -.099 | -.310** |
| | Sig. (2- tailed) | .007 | .500 | .000 | | .434 | .075 | .000 |
| | N | 327 | 327 | 323 | 327 | 122 | 327 | 327 |
| Search Level | Pearson Correlation | .228** | .241** | .132 | -.071 | 1 | .078 | .276** |
| | Sig. (2- tailed) | .003 | .002 | .147 | .434 | | .383 | .002 |
| | N | 165 | 165 | 123 | 122 | 165 | 127 | 127 |
| Purchase Ease | Pearson Correlation | .055 | -.024 | .690** | -.099 | .078 | 1 | .559** |

| | | | | | | | | |
|---------------|---------------------|--------|-------|--------|---------|--------|--------|------|
| Utility | Sig. (2-tailed) | .319 | .663 | .000 | .075 | .383 | | .000 |
| | N | 332 | 332 | 326 | 327 | 127 | 332 | 332 |
| Purchase Ease | Pearson Correlation | .156** | -.031 | .565** | -.310** | .276** | .559** | 1 |
| | Sig. (2-tailed) | .004 | .577 | .000 | .000 | .002 | .000 | |
| | N | 332 | 332 | 326 | 327 | 127 | 332 | 332 |

** . Correlation is significant at the 0.01 level (2-tailed).

Total Variance Explained

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
|-----------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 2.300 | 32.854 | 32.854 | 2.300 | 32.854 | 32.854 |
| 2 | 1.492 | 21.320 | 54.174 | | | |
| 3 | .969 | 13.836 | 68.011 | | | |
| 4 | .782 | 11.172 | 79.183 | | | |
| 5 | .635 | 9.076 | 88.259 | | | |
| 6 | .503 | 7.185 | 95.444 | | | |
| 7 | .319 | 4.556 | 100.000 | | | |

Extraction Method: Principal Component Analysis.

Component Matrix^a

Component
1

| | |
|------------------|-------|
| Age | .139 |
| Trips | .520 |
| Search | .443 |
| Purchase Utility | .690 |
| Purchase Ease | .731 |
| Purchase Risk | -.468 |
| Purchase Trust | .764 |

Extraction Method:
Principal Component
Analysis.

a. 1 components
extracted.

ⁱThe tables describe only the significant differences. Note that since there were missing responses, the number of respondents for each item is different.

ⁱⁱ Only significant results are presented.

ⁱⁱⁱ Different models were examined concerning the sets of independent and instrumental variables and the two- stage least squares or three-stage least squares estimation theory. All results were practically the same. We chose to present the model that covered the main significant factors discussed in the literature.