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SURVIVAL OF FIRMS IN CRISIS: EVIDENCE FROM ANTALYA TOURISM CITY

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ABSTRACT

Firm survival in tourism cities has long been a topic of discussion, due to particularly the fragile nature of the tourism industry. Crises make tourism cities even more fragile, which makes them an ideal case for studying the effects of crises on firm survival. Antalya, Turkey's leading tourist destination, has suffered from economic and political crises in recent years. This study investigates the factors influencing firm survival in a crisis-ridden tourism city. The results of a time-discrete survival analysis show that firm survival depends on firm-, industry-, and location-specific factors. Business survival declines in times of downturns. The survival rate is higher for smaller and younger firms and lower for corporate firms. There are no differences between foreign owned and domestic firms.

INTRODUCTION

Tourism cities are fragile because their economies are heavily dependent on tourism. Specialized regions use the advantages of localization economies but are more fragile to crisis than diversified regions that are based on urbanization economies. Because tourism cities are very sensitive

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to external shocks, they are good cases for exploring the factors that affect firm survival before, during, after economic and political crises.

The impact of (economic and political) crises on firm survival in tourism cities, however, is not well documented and understood. Literature on the impact of crises on firm survival has to date been limited, and those that exist rarely pay attention to the crises themselves. Previous literature on firm survival discusses firm entries and exits (Lay, 2003; Ozturk & Kilic, 2012; Cala et al., 2015), and focuses on the role of firm level indicators such as firm size, business structure, firm age, performance, skilled manpower and ownership structure (e.g., Ericson & Pakes, 1995; Littunen, 2000; Disney et al., 2003; Varum & Rocha, 2012). Only a few studies discuss the impact of crises on firm survival (Varum & Rocha, 2012; Bruni et al., 2014; Kovac et al., 2015) and only few have (Kaniovski et al., 2008; Falk, 2013; Brouder & Ericcson, 2013; Gemar et al., 2016) specifically studied their impact on tourism. Moreover, empirical work on both the entry and exit of companies in all sectors that include geographical and industry specific variables has yet to be done for a tourism city that is hit by a crisis.

The Antalya mass-tourism city and its sub-regions provide an ideal setting for observing the impact of the crisis on firm survival. The economic shocks of 2008 and 2009 and the political shocks of 2015 and 2016 had a negative impact on tourism cities in Turkey. Antalya, Turkey's leading tourism city, attracting around 10 million tourists a year until 2015, has been declined by Russian tourist ban, as well as by terrorist attacks in the country. The aim of this paper is to explore how firm-, geography-, industry- and crisis-specific determinants have affected firm survival in a tourism dominated city.

In this research, we use unique annual firm-level data on entry and exits compiled from the Antalya Chamber of Commerce and Industry (ATSO) between 2000 and 2016. We estimate the effects of both crises on firm survival in the Antalya region by using a complementary log-log model that controls for unobserved heterogeneity among firms, following the works of Fernandes and Paunov (2015), Basile et al. (2017) and Esteve-Perez et al. (2018). We try to show that firm survival declines in downturn periods.

The following sections are organized as follows. Firstly, the data and the descriptive analysis are introduced. In section 3 the empirical methodology and explanatory variables are described on the basis of a

review of related empirical literature. The final section discusses the results of the econometric analysis followed by concluding remarks.

DATA AND DESCRIPTIVE ANALYSIS

To evaluate the effects of crisis on the survival of firms in Antalya, we use firm-level data garnered from the Antalya Chamber of Commerce and Industry (ATSO), NACE Rev. 2 on a 6-digit level. The firm-level data relate to all companies located in the 15 different districts of Antalya, which number over 62,000 for the years 2000-2016[i]. The database contains extensive information on a wide range of topics, including location (district-level), registration date (i.e. firm entry) or deregistration (i.e. firm exit), date of liquidation, current status, legal form, values of paid-in capital, occupation and ownership status of the firm (Turkish or foreign).

We see a particular decline in annual entry rates after 2008, indicating that it became more difficult or less worthwhile to enter the market after the 2008 global financial crisis, and this drop was even more pronounced when Turkey faced a series of political crises in 2015 and 2016, which led to declining tourist arrivals and foreign investments into Antalya region. On the other hand, a sharp rise can be observed in the annual exit rate after 2012 as the economic and political crisis took its toll. It can thus be concluded that both entry and exit rates in the Antalya region depend heavily on not only macroeconomic conditions, but also the political conditions in which the firms operate.

Before investigating the impacts of crisis on firm survival, we present some descriptive statistics related to firm survival for the entire sample, as well as for the various sub-samples, using non-parametric methods. The central issue here is how to calculate the duration or lifespan of firms. Following Fernandes and Paunov (2015) and Basile et al. (2017), firm duration is defined as the length in years that a firm is active. The maximum lifespan possible for each firm for the 2000-2016 period is 17, and Table 2 shows that the average lifespan or duration of firms is 6.62 years, while the median lifespan is 6 years for the entire sample. These findings suggest that firms in the Antalya region have shorter lifespan. Moreover, Table 2 also displays survival rates for selected industries (defined in terms of 2-digit level of Broad Structure of NACE Rev.2). It would appear that manufacturing firms have a higher survival rate, while those in the accommodation and food services sector exhibit lower

survival rates, confirming that the tourism and hospitality industry is more sensitive to economic cycles and political turmoil.

The survival rates of firms are also diversified by geographical location. As Table 1 shows, firms located in the district of Korkuteli and city of Antalya exhibit lower survival rates than other districts. Findings for Kemer and Serik, which are important tourism destinations in the Antalya region, showed longer lifespan than other districts. Of course, this does not necessarily suggest that firms located in touristic places are much less sensitive to crisis, since the sample period under consideration covers periods of both expansion and recession. For the geographical variables, what we can clearly say is that the findings for the city of Antalya, and for Korkuteli, Kemer and Serik, show that firm survival and geography is location and sector specific, even within the same region.

As for the legal form[ii], cooperatives have the longest lifespan, followed by corporations and limited liability companies. Sole proprietorship firms, on the other hand, have the lowest average lifespan, indicating that they are more sensitive to economic and political crisis than any other type of firm. Next, we compare the lifespan of firms across sizes. For our sampling design, we use paid-in capital value data to divide firms into four categories: micro, small, medium and large[iii]. The results reported in Table 2 indicate that the average lifespan of large and medium firms is longer than that of small and micro firms, and this result is quite consistent with previous studies, demonstrating that small firms have a lower survival rate than larger firms (Varum & Rocha, 2012; Kovac et al., 2015). Finally, our comparison of the duration of domestic and foreign-owned firms reveals that domestic establishments, on average, have slightly longer durations than foreign establishments. This finding partially supports Mata and Freitas' (2012) argument that foreign firms are more footloose than domestic firms. They seem to exit during economic downturns, having looser attachments to a particular location than domestic firms.

Table 1. *Summary statistics of firms' lifespan (in years) in Antalya region, 2000-2016*

	# firms	Observed life span in years	
		Mean	Median
Full sample	48,628	6.62	6
By industry			
Manufacturing	4,244	6.96	6
Construction	6,741	6.40	6
Wholesale and retail trade	19,163	6.71	6
Accommodation and food	4,209	6.04	5
By district			
Antalya (city)	41,538	6.60	6
Kemer	3,000	7.33	7
Korkuteli	655	5.96	5
Serik	2,068	7.16	7
By legal form			
Sole proprietorship	15,544	5.84	5
Limited liability company	27,089	7.31	7
Corporation	5,951	5.41	4
Cooperative	310	8.40	9
By size			
Micro	12,518	7.40	7
Small	28,243	5.99	5
Medium	6,706	7.41	7
Large	1,161	9.05	9
By ownership			
Domestic	44,888	6.65	6
Foreign	3,740	6.22	6

Source: Authors' own calculations based on ATSO's database.
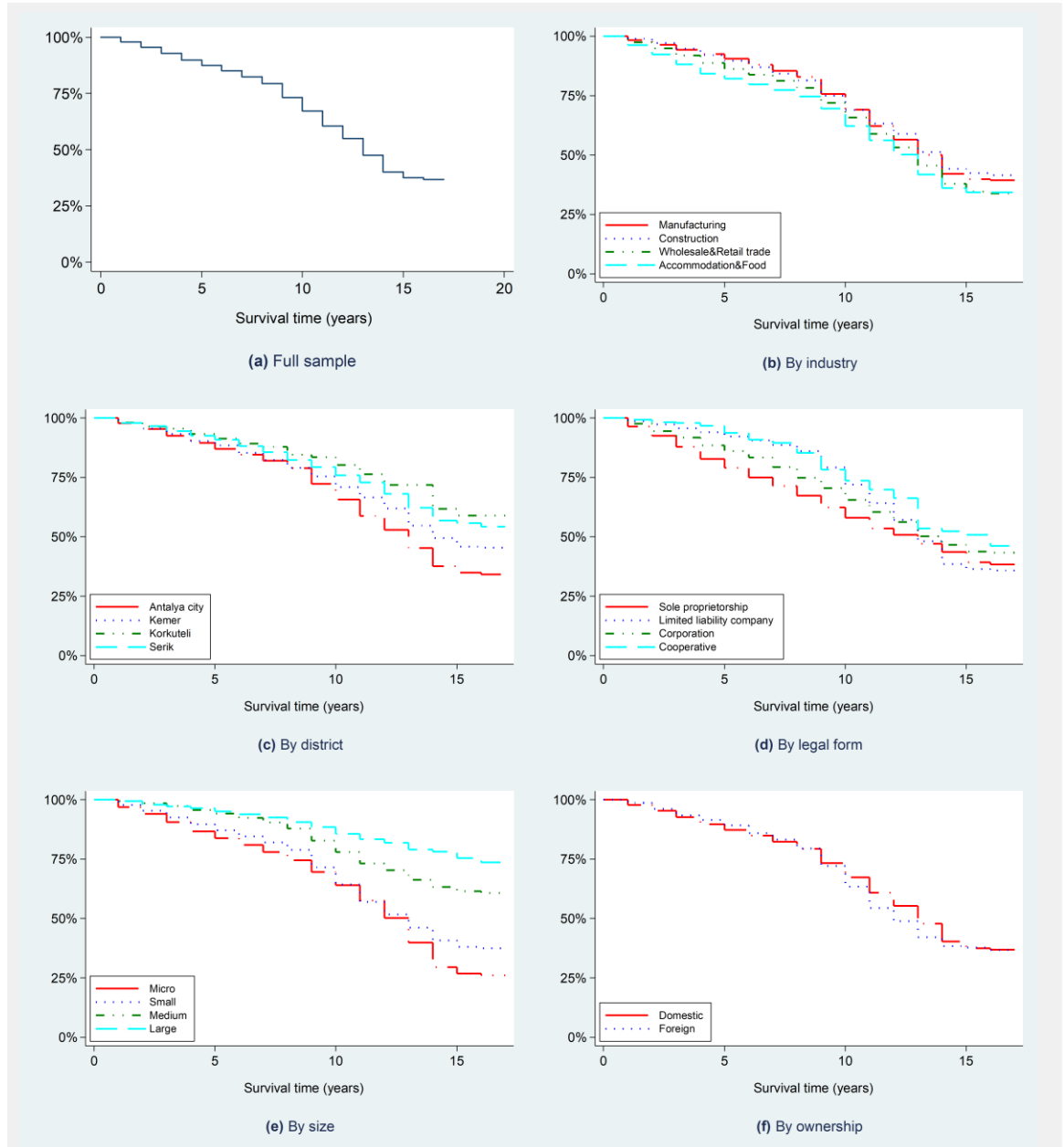
Figure 1. *Kaplan-Meier estimates of survival functions of firms in Antalya region*

To analyse the survival of firms in the Antalya region, we estimate the survival functions of firms using the Kaplan-Meier method for the full sample and sub-samples. The survival function, depicted as a solid line in Figure 1 (a), is downward sloping with a decreasing slope, implying that the probability of firm survival increases as firms in Antalya region stay in business for longer periods. Notably, the figure shows that the probability of surviving the first five years is approximately 85 percent, and existence for more than 10 years is around 65 percent. The probability of firm survival throughout the entire period is only 40 percent, suggesting that

firms in the Antalya region are short-lived. In addition, the results also show that the survival rates vary according to firm characteristics, as can be understood from Figure 1 (b-d). In particular, the firms in the manufacturing and construction sectors locating in the districts of Korkuteli (rural region) and Serik (tourism region), cooperatives and corporations, large- and medium-sized firms, and domestic firms demonstrate higher probabilities of survival than their counterparts. On the contrary, accommodation and food industry seem to exhibit the lower survival rates compare to other industries, confirming that tourism-related firms are more sensitive to economic cycles and political turmoil.

EMPIRICAL METHODOLOGY AND EXPLANATORY VARIABLES

Empirical methodology

Impact of economic and political crises on firm survival in Antalya region is scrutinized using a discrete-time duration models, following the works of Fernandes and Paunov (2015), Basile et al. (2017) and Esteve-Perez et al. (2018). In this study, our interest is in the impact of crises on the hazard rate of a firm, referring to the probability that a firm will exist for a given period, conditional on survival up to that period. Using the same notations as Esteve-Perez et al. (2018), we define T_i as a continuous, non-negative random variable measuring the survival time of a particular firm. The hazard probability is then defined as the probability of firm survival i within the specified time interval $[t-1, t]$, given that failure had not occurred prior to the starting time of the interval. This conditional probability can be expressed as a discrete-time hazard rate:

$$h_i(t,X) = Pr(t-1 < t | T_i \geq t-1) = 1 - exp[-exp(\beta' X_{it} + \gamma_t)] \qquad (1)$$

where X_{it} is a vector of the time-varying covariates of firm, industry and macro-specific covariates that are assumed to effect the hazard rate; β is a vector of the coefficients to be estimated; and γ_t is the baseline hazard rate for the t th interval that allows the hazard rate to vary across periods. A positive (negative) sign of coefficients means higher (lower) likelihood of firm exit, and consequently a lower (higher) probability of firm survival.

In order to estimate the parameters of Equation (1), it is necessary to determine the functional form of the hazard rate, $h_i(t,X)$. Following Prentice and Gloeckler (1978) and Jenkins (2005), the hazard rate, $h_i(t,X)$ is assumed to follow complementary log-log distribution or cloglog (Prentice

& Gloeckler, 1978). Accordingly, the discrete-time hazard function takes the following form:

$$cloglog[1 - h_t(X_{it})] \equiv log(-log[1 - h_t(X_{it})]) = \beta'X_{it} + \gamma_t \qquad (2)$$

The cloglog model (2) fails to account for potential unobserved heterogeneity among firms, in that the baseline hazard in Equation (2) is assumed to be constant and the same across firms over duration time. Ignoring unobserved heterogeneity may produce a severe bias in the nature of duration dependence and the estimates of the covariate effects. The most common way of dealing with unobserved heterogeneity is to include random effects in the hazard function. In the cloglog model in (2), unobserved heterogeneity v_i is introduced as follows:

$$cloglog[1 - h_t(X_{it}|v_i)] \equiv log(-log[1 - h_t(X_{it}|v_i)]) = \beta'X_{it} + \gamma_t + u_i \qquad (3)$$

where v_i is the firm-level random effects that are included through the error term $u_i = ln(v_i)$, where the error term is assumed to be normally distributed with zero mean and variance σ^2.

In this regard, in order to estimate the effects of economic and political crisis on firm survival, we first proceed with the discrete-time cloglog model without frailty (unobserved heterogeneity), after which, we consider the discrete-time cloglog model with frailty, which incorporates firm-level random effects to account for firm-specific variations as a robustness check. These specifications of the cloglog model require the underlying firm database to be expanded into firm-period format, and then for the firm duration to be transformed into a binary variable. Specifically, if the spell of the i th subject (firm i) is completed, then the binary dependent variable assumes the unit value for the last time point (T_i), and zero for the rest of the time points ($1, 2, ... T_i - 1$) in the time interval.

Explanatory variables

To examine the durations of firms in the Antalya region, this paper considers several of the firm, industry and macroeconomic variables suggested in literature part. The choice of the explanatory variables (covariates) included in Equation (3) is dictated entirely by existing studies on firm survival and the information contained in our data set. The explanatory variables analysed in this study are: (i) firm-specific variables,

(ii) industry-specific variables, (iii) macroeconomic variables and (iv) other control variables (see Table 2).

Firm-specific variables

Firstly, we analyse the effects of firm age on firm survival. Several previous empirical studies have shown that firm survival increases with firm age (see, for example Dunne & Hughes, 1994; Neffke et al., 2012), which can be attributed to the fact that younger firms face a higher risk of failure due to shortcomings in managerial knowledge, financial management and accumulated experience (Kaniovski & Peneder, 2008; Esteve-Perez et al., 2018). In addition, the risk of failure is more likely to be lower among older firms given their access to more resources and their greater accumulated experience. Moreover, older firms are more diversified which makes them less vulnerable to the business cycles (Kaniovski & Peneder, 2008). That said, there are recent studies that challenge this view, suggesting instead that older firms can be inflexible, slow to change, and less likely to adopt new technologies, and so their survival rates decline steadily with age (Sorensen & Stuart, 2000; Kaniovski & Peneder, 2008). Taken together, these theoretical and empirical studies present a rather ambiguous picture of the relationship between firm age and survival. Firm age is measured as the number of years from the date of establishment. Following Cefis and Marsili (2005), we also include the squared term of age (Age2) based on the recent evidence of a U-shaped relationship between age and survival rate. This allows us to account for non-linear effects of firm age on the probability of firm survival.

Recent research has also shown that firm size can influence firm survival. According to Basile et al. (2017), firm size accounts for scale effects. In comparison to larger firms, small firms face greater difficulty in accessing capital and skilled labour, as well as tougher tax conditions. As a result, they have lower survival rate (i.e. higher hazard rate) as they find it difficult to reach the minimum efficient scale. We therefore include the size variable in our analysis to investigate whether or not a firm's size improves the survival probability of a firm. Size is a dummy variable that takes on a value of one for firms that are classified as medium and large according to the values of capital-in-paid, and zero otherwise.

Table 2. *Definition of explanatory variables, data sources, expected signs, and summary statistics*

Variable	Definition	Source	Mean	SD	Min.	Max.
Firm-level						
Age	No. of years since the firm entry.	ATSO	4.95	3.35	1.00	16.00
Age²	Squared no. of years since the firm entry.	ATSO	35.69	43.79	1.00	256.00
Size	Takes value one if the firm is medium or large firm, zero otherwise.	ATSO	0.19	0.39	0.00	1.00
Corporation	Takes one if the company is organized as a limited liability company, corporation cooperative, limited partnership and some other legal form, and zero otherwise if the firm is organized as a sole proprietorship and unlimited liability company.	ATSO	0.72	0.45	0.00	1.00
Foreign	Takes value one if the firm is owned by a foreign entity, zero otherwise.	ATSO	0.08	0.26	0.00	1.00
Industry-level						
Industry agglomeration	Natural log of number of firms at 2-digit Broad Structure of NACE Rev.2.	ATSO	8.01	1.25	0.00	9.53
Industry agglomeration²	Squared value of log of no. of firms at 2-digit level of Broad Structure of NACE Rev.2.	ATSO	65.77	19.14	0.00	90.80
Herfindahl index	Reciprocal of number of firms, constructed at 2-digit level of Broad Structure of NACE Rev.2.	ATSO	0.00	0.01	0.00	1.00
Entry rate	The proportion of new firms in a given year relative to the total stock of the previous year, constructed at 2-digit level of Broad Structure of NACE Rev.2.	ATSO	0.17	0.11	0.04	2.50
Macro-level						
Downturn	Takes value one if the year is 2008, 2009, 2015 and 2016, zero otherwise.					
Industry dummies	Takes value one if the firm belongs to NACE 2-digit industry, zero otherwise.					
District dummies	Takes value one if the firm is located in a specific district, zero otherwise.					
Year dummies	Dummy for years (2001-2016).					

Source: Authors' own calculations based on ATSO's database.

The legal structure of the firm may also affect its survival. Mata and Portugal (2002) hypothesized that "firms operating under limited liability face lower probabilities of exit than those of unlimited liability". The general argument put forward is that limited liability firms will exit later due to the fact that the owner is not personally responsible for the debts of the firm. Unlike limited liability firms, sole proprietorships, unlimited liability companies or limited partnership companies, on the other hand, remain personally liable for many obligations to business creditors, lenders and landlords. As a result, the risk of such firms exiting the

business increases. Consistent with expectations, Mata and Portugal (2002) found that unlimited liability firms are more likely to exit than limited liability ones, and Esteve-Perez and Manez-Castillejo (2008) found that limited liability companies survive longer. Accordingly, a particular measure is introduced to take into account the effects of the legal form of the firm. In our analysis, the legal structure of a firm is captured through the dummy variable corporation, that takes the value of one if the company is organized as a limited liability company, corporation cooperative, limited partnership or some other legal form, and zero otherwise if the firm is organized as a sole proprietorship or unlimited liability company. We can expect this variable to show a positive effect on firm survival.

The last firm-specific variable included in the cloglog model regressions is foreign company dummy variable. Wagner and Gelübcke (2012) claim there are two main theoretical viewpoints on the impact of foreign ownership on firm survival. On the one hand, it is commonly argued that foreign-owned firms have a higher chance of survival than their domestic counterparts in that they have better access to such resources as capital, brands, knowledge and superior technologies from the parent firm. In addition, foreign firms may also incur a substantial amount of fixed or sunk costs, which are likely to be higher than for establishing a purely domestic firm in the local economy. In this regard, they are more likely to continue operating if the shock is only temporary (Godart et al., 2012). That said, one could also argue that foreign firms are likely to be less rooted (i.e. more footloose) in the local economy and may be quicker to close down production when the local economy shrinks. This may be due to the fact that foreign-owned firms may be part of a global production network in which production can be easily shifted between locations, meaning that they can respond swiftly to changes in local conditions by switching production location to another country (Varum et al., 2014). Hence, this argument implies a negative relationship between foreign ownership and firm survival. Empirical evidence has so far provided mixed results with regard to the impact of foreign ownership on firm survival (Wagner & Gelübcke, 2012). Based on the reviewed literature, a complex and ambiguous relationship between the variable foreign and firm survival can be expected.

Industry-specific variables

The survival of a firm may not depend solely on firm-specific characteristics but also industry-level conditions. To account for such conditions, we include a number of industry-specific variables that are commonly used in firm survival studies, all of which are computed at the two-digit level of NACE, Revision 2. The first variable, industry agglomeration, is included to assess the impact of agglomeration on a firm's survival. Basile et al. (2017) suggest that firms within a cluster benefit from positive externalities, including the availability of a specialized labour market pooling, easy access to intermediate inputs, higher chances of knowledge spill over, supply of local public services, etc. All of these factors can result in lower costs or higher productivity, which in turn facilitate a higher survival rate, although a larger number of firms also means tougher competition and firm selection, and therefore an increase in the propensity to exit can be expected. In this study, we use the logarithm of the number of firms in the sector as a proxy for agglomeration economies in our regressions, following the study of Randelli and Ricchiuti (2015) and Resende et al. (2016), and one would expect an ambiguous effect of that variable on firm survival. The quadratic term for industry agglomeration is also included to check for the presence of a non-linear influence on firm survival.

Moreover, we also use another industry-specific variable, the Herfindahl index, to test the effects of lack of diversification on firm survival, which is computed as the reciprocal number of firms in a given sector. The index falls as the number of firms rises (as the industry becomes more competitive). Varum et al. (2014) states that the presence of strong competition may have a negative impact on the survival of incumbents, although it may also raise the probability of survival, since incumbent firms may have sufficient power to prevent new firms from entering a sector. Cala et al. (2015) also point out that the Hirschman-Herfindahl index, which indicates a lack of diversity in a region, may have a negative effect on firm survival due to getting more vulnerable to crisis. Previous empirical research reports offered mixed conclusions regarding the impact of industrial concentration.

Another industry-level variable relating to the intensity of competition is the entry rate in a given sector. A relatively high entry rate reflects tougher competition and may reduce the likelihood of survival for firms (Mata & Portugal, 2002; Taymaz & Özler, 2007; Resende et al., 2016), and the negative impact of this variable on firm survival is confirmed by a

large number of studies (e.g. Varum & Rocha, 2012; Varum et al., 2014). Entry rate is computed as the number of new firms in a given sector and year divided by the total number of firms operating in that sector in the previous year. This variable entry rate is thus expected to have a negative impact on firm survival.

Macro-level variables

Macroeconomic conditions can also impact upon a firm's survival prospects (Varum et al., 2014). Favourable economic conditions can be expected to result in higher demand and price-cost margins, and may possibly improve the survival of firms, as incumbents do not have to act aggressively against new entrants (Basile et al., 2017). On other hand, during economic downturns the survival chances of firms could be adversely affected, resulting in a negative relationship. There are a large number of studies (e.g. Kaniovski & Peneder, 2008; Varum et al., 2014; Resende et al., 2016) investigating and supporting the positive effects of industry or market growth on the likelihood of firm survival. In addition, several recent studies show that economic downturns have had a detrimental impact on the survival of firms (Varum & Rocha, 2012; Varum et al., 2014).

To properly assess the effects of economic and political crisis on firm survival, we employ a downturn dummy that takes into account whether or not the economy is facing a period of economic and political crisis. Our use of the word "downturn" in this case refers to all forms of crisis in the Turkish economy, of which at least two types are included in the analysis. One is an economic crisis period, referring to a year in which the economy experiences a severe decline in GDP; and the other is a political crisis, referring to a year in which the country suffers political crisis, which may take the form of war, coup or terrorism. Turkey's GDP declined by almost 5 percent between 2008 and 2009 following the 2008–2009 global financial crisis, and Turkey's economy, particularly the tourism sector, experienced major losses in the wake of repeated terror attacks and coup attempts in 2015 and 2016. Consequently, we consider downturn periods to have occurred in the Turkish economy in 2008, 2009, 2015 and 2016, and measure the impact of these downturns through the addition of a dummy variable to the discrete-time analysis, which take the value of one when Turkey was in downturn, and zero otherwise. In line with previous studies, the downturn variable is expected to have a

negative effect on the probability of survival, or equivalently, a positive effect on the hazard.

In the second part of the analysis, we combine the interactions of this dummy variable with several firm-specific variables to differentiate between their effects in periods of downturn. The first interaction term entered into the model is size x downturn, which is included to investigate whether the effect of firm size varies during downturns, following the strategy of Varum and Rocha (2012). Small firms may face a higher probability of failure during a crisis than out-of-the crisis due to their lack of access to financial resources, to human resources, to technology, and most importantly, to their declining profitability. Unexpectedly, Varum and Rocha (2012) found that during downturns, even though small firms generally have a higher risk of exiting, larger firms affects from firm exit than smaller ones. Similarly, Ferreira and Saridakis (2017) show that micro-sized firms experience a higher risk of exiting during the pre-crisis period than in periods of crisis. At the same time, their results also suggest that the hazard rates of larger firms are found to increase during periods of crisis. The sign and significance of the interacted term will thus reveal whether the impact of firm size on survival differs during downturn periods.

Using our second interaction variable, corporation x downturn, we explore whether or not the legal form of the firm plays a significant role in firm survival during periods of downturn. Non-corporate firms, such as sole proprietorship companies or unlimited liability companies are typically smaller than corporate firms, and so may suffer more during an economic downturn due to the likely limited access to financial resources. Moreover, non-corporate firms are heavily reliant upon bank borrowing, and during downturns, they are less likely to be approved for loans. We would therefore expect corporate firms to be more prone to credit constraints during crisis periods than non-corporate firms. Taking these facts into account, it is expected that corporate-type firms face lower probabilities of exit than non-corporate firms during downturns.

Finally, following Varum et al. (2014), we utilize a foreign x downturn variable to investigate whether or not foreign-owned firms are more resilient during the downturn periods. There are presently two conflicting arguments on the role of foreign ownership on firm survival during downturns (Godart et al., 2012, Varum et al., 2014), one which argues that multinationals are more footloose than domestic firms, and thus more likely to exit in times of crisis; and the other that claims that

multinationals typically have larger sunk costs than domestic firms, and have better access to resources and capabilities. This implies that they will be less reluctant to exit the market during a downturn, and may prefer to operate at a loss for a while, hoping that the economy will get back on track. The behaviour of foreign firms during downturns has been investigated in several previous researches, and the empirical evidence on this matter confirms the mix of theoretical predictions. Given this diversity of previous studies, the issue of the behaviours of foreign-owned firms during downturns warrants further investigation.

Control Variables

In addition to the explanatory variables, we covered several control variables that have been shown in previous studies to be significant in explaining company survival (Holmes et al., 2010; Varum & Rocha, 2012; Esteve-Perez et al., 2018). First, 18 industry dummies are added to the analysis to control for any industry-specific effects that may affect survival rates. Second, 14 district dummies are included to identify the effect on firm survival of being located in a particular district. Finally, 13 annual time dummies are incorporated into the analysis to account for the effects of business cycles on firm survival.

EMPIRICAL RESULTS

The results of the discrete-time proportional hazard model shown in Table 3 obtained from a discrete-time proportional hazard model with a complementary log-log hazard function (cloglog). The dependent variable for the cloglog models is binary or dichotomous, the value of which is equal to one if the firm is exited, and zero otherwise, and is regressed on a set of firm, industry and macroeconomic variables along with other control variables. The results reported in Table 3 correspond to the four different specifications of the cloglog models. In Column 1 of Table 3, the results for the basic model are presented, with no consideration of any potential unobserved heterogeneity (Model 1). The second column of Table 3 presents the cloglog estimates when the unobserved heterogeneity is taken into account through firm-specific random effects (Model 2). The third column in the table corresponds to Model 1, but includes also several interaction variables between the downturn variable and firm-specific variables, namely size, corporation and foreign variable (Model 3). The

fourth column reports the results of Model 2 with the aforementioned interaction terms (Model 4).

To check whether the model controlling for unobserved firm heterogeneity should be preferred to the basic model, we need to look at the estimate of the likelihood ratio test of rho (ρ), which is the fraction of error variance explained by variations in the unobserved individual factors. When the rho parameter is zero, we should reject the null hypothesis that unobserved individual heterogeneity is not relevant. As shown in the third and fourth columns of Table 3, the likelihood-ratio tests (the rho parameter) clearly reject the null hypothesis of unobserved heterogeneity, suggesting that models with unobserved heterogeneity are appropriate for estimations. For the remainder of the analysis, we will therefore focus primarily on the results of Models 2 and 4.

It is important to note that the reported coefficients in Table 3 represent hazard ratios. A positive coefficient for an explanatory variable means that the hazard rate is increasing, and equivalently, that the survival rate is declining. Conversely, a negative regression coefficient implies a decreased hazard and increased survival rates.

First of all, starting with firm-specific variables, the results of Model 2 show that firm age and its squared counterpart have a positive and significant effect on the probability of exit. Contrary to our expectations, this finding indicates a lack of a non-linear relationship between firm age and survival. This is a rather surprising result, given the fact that younger firms have liabilities of newness, and so one may expect to see a higher hazard rate among them (Mata & Portugal, 2002). However, our results seem to suggest that the hazard rate increases in the years immediately after entry, and continues to increase as the firm age increases (monotonically). This finding contradicts the "liability of newness" or "liability of adolescence" hypothesis which suggests respectively that inverted U-shaped relationships and U-shaped between firm age and survival (Mata & Portugal, 2002). This may be attributed to the fact that new firms exhaust their available financial resources, which may not be readily available in developing countries, before building strong linkages with their customers and suppliers, and therefore are forced to exit the market.

In line with the hypothesis, we find that the firm size variable exerts a negative and significance influence on the hazard rate, suggesting that larger firms are more likely to survive. This finding is consistent with

the findings of Basile et al. (2017), who identify a positive relationship between firm size and firm survival. The findings for Antalya confirm also the arguments related to small firms suggesting that they may face cost disadvantages and greater difficulties in gaining access to capital and labor markets than large firms (Esteve-Perez et al., 2004; Varum & Rocha, 2012). Moreover, the results also support the hypothesis that corporate types of business structure (proxied by the corporation variable) strongly increase the probability of survival, suggesting that being liable for the debts of the company and having limited assets or resources leads to higher hazard rates. Meanwhile, our analysis shows that foreign ownership has a statistically significant negative impact on firm survival, and this is consistent with the results of Varum and Rocha (2012). The available data on Antalya firms provides evidence for the hypothesis, indicating that foreign firms are more footloose than their domestic counterparts.

Turning now to the results for industry-specific variables, we find that the agglomeration variable has an inverted U-shaped relationship with firm survival, as indicated by the positive coefficient on the variable and the negative coefficient of its square, which concurs with the results of previous studies (Cala et al., 2015; Cainelli et al., 2014; Varum et al., 2014). The results show that specialization diminishes firm exit, which supports the findings of the descriptive analysis of firm survival in specialized districts, such as those seen in the Kemer and Belek tourism districts. Our findings related to the decline of survival with increasing agglomeration, such as that seen in the central Antalya case, supports this argument related to the service-sector dominated tourism city case, and the evidence also supports the view that the intensity of competition or diseconomies of agglomeration lower the chances of survival of firms.

Regarding the influence of industrial concentration, the Herfindahl index is found to point to a reduction in the likelihood of survival in the Antalya region. This suggests that in more concentrated markets, the probability of survival is lower. In other words, firms operating in highly competitive markets are more likely to survive than those in poorly competitive markets, and this concurs with the results of Kaniovski and Peneder (2008) and Resende et al. (2016). Moreover, the entry variable exerts a negative influence on the survival rates of firms, and so there is evidence that the entry of new firms increases competition, and consequently, reduces the chance of survival, which is in line with the evidence provided in Varum et al. (2014).

Table 3. *Estimates of the complementary log-log model*

	Model 1	**Model 2**	**Model 3**	**Model 4**
Age	0.066***	0.074***	0.068***	0.076***
	(0.000)	(0.000)	(0.000)	(0.000)
Age^2	0.001***	0.002***	0.001**	0.002***
	(0.005)	(0.001)	(0.010)	(0.001)
Size	-0.714***	-0.781***	-0.750***	-0.803***
	(0.000)	(0.000)	(0.000)	(0.000)
Corporation	-0.222***	-0.271***	-0.278***	-0.327***
	(0.000)	(0.000)	(0.000)	(0.000)
Foreign	0.056	0.068*	0.060	0.073*
	(0.124)	(0.094)	(0.137)	(0.099)
Industry agglomeration	11.530***	11.414***	11.469***	11.357***
	(0.000)	(0.000)	(0.000)	(0.000)
Industry agglomeration^2	-1.291***	-1.300***	-1.296***	-1.304***
	(0.000)	(0.000)	(0.000)	(0.000)
Herfindahl index	63.119***	61.580***	63.587***	62.093***
	(0.000)	(0.003)	(0.000)	(0.002)
Entry rate	8.579***	8.733***	8.535***	8.679***
	(0.000)	(0.000)	(0.000)	(0.000)
Downturn	34.753***	35.714***	35.109***	35.991***
	(0.000)	(0.000)	(0.000)	(0.000)
Size x downturn			0.175**	0.124
			(0.021)	(0.106)
Corporation x downturn			0.340***	0.341***
			(0.000)	(0.000)
Foreign x downturn			-0.017	-0.025
			(0.855)	(0.787)
Industry dummies	Yes[a]	Yes	Yes	Yes
District dummies	Yes[a]	Yes	Yes	Yes
Year dummies	Yes[a]	Yes	Yes	Yes
ρ		0.273		0.261
		(0.000)		(0.000)
Observations	303,903	303,903	303,903	303,903
Log likelihood	-40,135	-40,118	-40,108	-40,094

Notes: The table reports estimated coefficients and the corresponding p-values (in parentheses). *,**, and *** indicate significance at 10%, 5%, and 1% confidence levels, respectively. The dependent variable is a binary variable that takes the value of one in the year of exit for firms and 0 otherwise. The covariates are defined in Table 3. Models 2 and 4 correspond to models 1 and 3, respectively, but include an unobserved heterogeneity that is accounted for through the use of firm random effects. ρ is the fraction of error variance that is explained by variation in the unobserved individual factors. All models include also industry dummies, district dummies as well as year dummies. All left-censored observations are excluded from the data used in the estimations. [a] Estimates are not reported but can be provided upon request.

The key explanatory variable in this paper is the downturn variable, which has been incorporated into the estimation models to estimate the effects of economic and political crisis on firm survival in the Antalya region. The results show that downturns lower the survival prospects of firms, in line with the findings of Varum and Rocha (2012) and Varum et

al. (2014), and so the result is generally consistent with the hypothesis that firm exists are more common during unfavourable macroeconomic conditions.

Model 4 adds several interaction terms to Model 2 to investigate whether firm survival rates vary by size of firm, type of the legal structure and type of ownership (foreign/domestic) during periods of economic downturn. The signs and statistical significance of the coefficients are generally the same for the results of both Model 2 and Model 4. First, the size x downturn variable is added to test whether firms of different size are affected differently by downturns. The coefficient of the interaction term is found to be statistically insignificant, in contrast with the findings of Varum and Rocha (2012). That is, we are unable to support the claim that large-sized firms suffer less during downturn periods. In addition, we incorporate the corporation variable into the downturn variable to test whether these firms are better able to weather crisis, and this interaction of corporation x downturn returns a positive coefficient, indicating that the periods of downturns weaken the higher survival rates of corporate firms. Finally, when the downturn dummy is incorporated into the foreign ownership variable, the cloglog model does not return a statistically significant effect. This evidence suggests that during times of crisis, the survival probabilities of foreign-owned firms are no different to their domestic counterparts. That is, when the economy is shrinking, foreign-owned firms are just as likely to exit as domestic firms. This tendency can be seen especially in cities that are dominated by one sector, especially those dominated by the fragile tourism sector.

CONCLUSIONS

This paper employs survival analysis to examine the impact of crises on firm survival in Antalya. Preliminary results show that both entry and exit rates in the Antalya region heavily depend on not only macroeconomic conditions, but also the political conditions in which the firms operate. In addition, we show that cooperatives and corporations, large and medium-sized firms, and domestic firms seem to enjoy higher probabilities of survival. For the industry- and location-specific variables, descriptive studies indicate that firms in the manufacturing and construction sectors, and those located in the districts of Kemer and Serik (tourism regions), exhibit higher probabilities of survival. The lower survival rates for companies operating in the accommodation and food services sectors confirms that the tourism and hospitality sectors are more crisis sensitive

than others, although the findings incorporating geographical variables show some contrasting results for the tourism sector. This contrasting result can be explained by the positive externalities of localization economies created in specialized tourism regions such as Kemer and Serik, which makes firms located in those regions less fragile to crises.

Using a sample of 48,628 firms spanning from the period 2000-2017, we also attempt to assess the effect of the economic crisis on firm survival by employing a complementary log-log model with firm-specific random effects. Our results suggest that firm survival declines in periods of economic and political crisis. In addition, we find that large-sized firms and foreign-owned firms are no different to their domestic counterparts in terms of their survival probabilities during downturn periods. Moreover, only in the issue of business structure did the findings indicate that corporate-type firms have lower survival rates during periods of downturn.

According to findings, a number of regional policy implications can be suggested. In order to increase the probability of survival, urban developers, planners and policy makers should pay more attention to active policies towards attracting more foreign capital and large investments through spatial planning, as was done in the tourism centers like Belek and Kemer, corporate business structures, and large-sized investments, as these can lead to cities and regions becoming more resilient and sustainable.

Limitations and further research

The major limitation of this paper is the lack of data on the exit behaviour of firms. The results would be more interesting if the relevant data concerning whether firms have closed their doors for good in a crisis period or not, whether they merged with another business or created an entirely new companies, are obtained. When available, the exit behaviour of firms could be analysed and the effects of crises on firm survival in different periods could be investigated more carefully. In addition, an extensive research is needed on how firm survival is related to innovation during downturn periods.

In future research, comparative empirical studies from different tourism cities of different countries should be stimulated to get more comprehensive information on firm survival in crisis-ridden tourism

cities. In addition, firm survival could be elaborated in a more detailed way for different crisis periods with richer data (if available) such as data on the role of innovation, global and local networks, R&D, mobility in tourism labour to different companies and smart strategies of companies.

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REFERENCES

Basile, R., Pittiglio, R., & Reganati, F. (2017). Do agglomeration externalities affect firm survival? *Regional Studies*, *51*(4), 548-562.

Brouder, P., & Eriksson, R. (2013). Staying power: What influences micro-firm survival in tourism? *Tourism Geographies*, *15*(1), 125–144.

Bruni, S., Pittiglio, R., & Reganati, F. (2014). Heterogeneity in firm performance during economic crisis. *Business, Management and Education*, *12*(1), 1-14.

Cainelli, G., Montresor, S., & Marzetti, G. V. (2014). Spatial agglomeration and firm exit: A spatial dynamic analysis for Italian provinces. *Small Business Economics*, *43*(1), 213-228.

Cala, C. D., Arauzo-Carod, J. M., & Manjón-Antolín, M. (2015). The determinants of exit in a developing country: Core and peripheral regions. *The Annals of Regional Science*, *54*(3), 927–944.

Cefis, E., & Marsili, O. (2005). A matter of life and death: Innovation and firm survival. *Industrial and Corporate Change*, *14*(6), 1167-1192.

Disney, R., Haskel, J., & Heden, Y. (2003). Entry, exit and establishment survival in UK manufacturing. *Journal of Industrial Economics*, *51*(1), 91–112.

Dunne, P., & Hughes, A. (1994). Age, size, growth and survival: UK companies in the 1980s'. *Journal of Industrial Economics*, *42*(2), 115–140.

Ericson, R., & Pakes, A. (1995). Markov-perfect industry dynamics: A framework for empirical work. *The Review of Economic Studies*, *62*(1), 53–82.

Esteve-Perez, S., & Manez-Castillejo, J. A. (2008). The resource-based theory of the firm and firm survival. *Small Business Economics*, *30*(3),231-249.

Esteve-Pérez, S., Pieri, F., & Rodriguez, D. (2018). Age and productivity as determinants of firm survival over the industry life cycle. *Industry and Innovation*, *25*(2), 167-198.

Esteve-Perez, S., Sanchis-Llopis, A., & Sanchis-Llopis, J. A. (2004) The determinants of survival of Spanish manufacturing firms. *Review of Industrial Organization*, *25*(3), 251– 273.

Falk, M., (2013). A survival analysis of ski lift companies. *Tourism Management*, *36*(1), 377–390.

Fernandes, A. M., & Paunov, C. (2015). The risks of innovation: Are innovating firms less likely to die? *Review of Economics and Statistics*, *97*(3), 638-653.

Ferreira, P., & Saridakis, G. (2017). Firm shutdown during the financial and the sovereign debt crises: Empirical evidence from Portugal. *International Journal of the Economics of Business*, *24*(2), 153-179.

Gémar, G., Moniche, L., & Morales, A. (2016). Survival analysis of the Spanish hotel industry. *Tourism Management*, *54*(6), 428–438.

Godart, O., Görg, H., & Hanley, A. (2012). Surviving the crisis: Foreign multinationals versus domestic firms. *The World Economy*, *35*(10), 1305-1321.

Holmes, P., Hunt, A., & Stone, I. (2010). An analysis of new firm survival using hazard function. *Applied Economics*, *42*(2), 185-195.

Jenkins, S. (2005). Survival analysis, unpublished Lecture Notes manuscript, Institute for Social and Economic Research, University of Essex. Retrieved from http://www.iser.essex.ac.uk/resources/survival-analysis-with-stata-moduleec968

Kaniovski, S., & Peneder, M. (2008) Determinants of firm survival: A duration analysis using the generalized gamma distribution. *Empirica*, *35*(1), 41-58.

Kaniovski, S., Peneder, M., & Smeral, E. (2008. Determinants of firm survival in the Austrian accommodation sector. *Tourism Economics, 14*(3), 527-543.

Kovac, D., Vukovic, C., & Kleut, N. (2015). How do firms respond to anticipated shocks? Duration analysis of Croatian companies throughout the crisis, DOI: 10.13140/RG.2.1.3265.0326.

Lay, T. J. (2003). The determinants of and interaction between entry and exit in Taiwan's manufacturing. *Small Business Economics*, *20*(4), 319–334.

Littunen, H. (2000). Networks and local environmental characteristics in the survival of new firms. *Small Business Economics*, *15*(1), 59–71.

Mata, J., & Freitas, E. (2012). Foreignness and exit over the life cycle of firms. *Journal of International Business Studies*, *43*(7), 615–630.

Mata, J., & Portugal, P. (2002). The survival of new domestic and foreign-owned firms'. *Strategic Management Journal*, *23*(4), 323–343.

Neffke, F., Henning M., & Boschma R. (2012). The impact of aging and technological relatedness on agglomeration externalities: a survival analysis. *Journal of Economic Geography*, *12*(2), 485-517.

Ozturk, S., & Kilic, C. (2012). Patterns and determinants of entry and exit in Turkish manufacturing industries. *International Journal of Arts and Commerce*, *1*(5), 107–118.

Prentice, R. L, & Gloeckler, L. A. (1978). Regression analysis of grouped survival data with application to breast cancer data. *Biometrics*, *34*(1), 57-67.

Randelli, F., & Ricchiuti, G. (2015). The Survival of Tuscan Firms, Working Papers - Economicswp2015_02.rdf, Universita' degli Studi di Firenze, Dipartimento di Scienze per l'Economia e l'Impresa.

Resende, M., Cardoso, V., & Façanha, L. O. (2016). Determinants of survival of newly created SMEs in the Brazilian manufacturing industry: An econometric study. *Empirical Economics*, *50*(4), 1255-1274.

Sorensen, J. B., & Stuart, T. E. (2000). Aging, obsolescence, and organizational innovation. *Administrative Science Quarterly*, *45*(1), 81–112.

Taymaz, E., & Özler, Ç. S. (2007). Foreign ownership, competition, and survival dynamics. *Review of Industrial Organization*, *31*(1), 23-42.

Varum, C. A., & Rocha, V. C. (2012). The effect of crises on firm exit and the moderating effect of firm size. *Economics Letters*, *114*(1), 94-97.

Varum, C., Rocha, V. C., & da Silva, H. V. (2014). Economic slowdowns, hazard rates and foreign ownership. *International Business Review*, *23*(4), 761-773.

Wagner, J., & Gelübcke, J. P. W (2012). Foreign ownership and firm survival: First evidence for enterprises in Germany. *International Economics*, *132*(4), 117-139.

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[i] There are 19 districts in the city of Antalya but 15 of them are included in Antalya's Chamber of Commerce database

[ii] The legal forms of firms in the ATSO database are classified in the following way: 1-Sole proprietorship, 2-Limited liability company, 3-Corporation, 4-Unlimited liability company, 5-Limited partnership, 6-Cooperative, 7-Foundation company, 8-Association management, 9-Other.

[iii] Size in this study is defined in the following way: Micro-paid-in capital<=5,000 TL, Small - 5,000 TL<paid-in capital<=100,000 TL, Medium - 100,000 TL<paid-in capital<=1,000,000 TL, Large-1,000,000 Tl <paid-in capital.

DETERMINING TURKISH HOUSEHOLDS' TOURISM CONSUMPTION EXPENDITURES IN ECONOMIC CRISIS[1]

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ABSTRACT

Crises may influence the most economies differently in the world and cause to diminish their national wealth and rise in unemployment rates. As a developing country, Turkey has been impressed by some economic slumps in the world in different periods. This study aims to investigate the tourism participation of households and estimate the most sensitive household groups after the 2008 financial crisis by employing Heckman two-stage model. It also reveals which household groups change their tourism consumption expenditures more in Turkey. The results show that variations in income elasticity during the crisis are different to household groups. In other words, households with high income level were not significantly affected by the world economic crisis, while households with low income reduced tourism consumption expenditures both in domestic and outbound tourism.

INTRODUCTION

Every year, millions of people travel for different purposes, which leads to rapid development and diversification of tourism sector in the world. Tourism has been a beneficial sector for the Turkish economy since 1980s and Turkey continually has been ranked as the top tourism destination

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country in the world for almost three decades. 1980 was a highly important year for the Turkish tourism due to switching economic policy of Turkey. At that year, import substitution policy was abandoned and export oriented growth strategy started to implement (Gül & Çağatay, 2015). New economic policy flourished the tourism sector rapidly and the tourism sector's share of GDP rose to 4.1% around 2000s (was about 2.1% in 1990). For all favorable conditions, international tourism receipts of Turkey decreased to nearly 20 billion USD due to diplomatic crisis with Russia, some regional uncertainties and failed 15 July coup attempt in 2016 (Gül & Özer, 2018). Turkey's international tourism receipts increased by 18.9 % in 2017 and reached to $26.2 billion. Turkey climbed up from 10th to 8th place in arrivals but did not hold top ten position in receipts in 2017.

Tourism expenditures represent direct income for the destination countries and are seen an important tool for their economic growth. Economic crises may cause a sharp decrease of Gross Domestic Product (GDP), production, total demand and affect the households' income. It is known that economic crises mostly affect low income households in developing countries and make them more vulnerable.

Table 1. *GDP and per capita GDP in Turkey (2000-2017)*

Years	GDP (Billion $)	GDP per capita ($)
2000	273,085	4,219
2001	200,305	3,053
2002	238,342	3,589
2003	311,944	4,643
2004	404,853	5,953
2005	501,163	7,278
2006	550,796	7,899
2007	675,010	9,563
2008	764,643	10,692
2009	644,470	8,882
2010	772,290	10,476
2011	832,497	11,141
2012	873,696	11,553
2013	950,328	12,395
2014	934,075	12,022
2015	859,449	10,915
2016	863,390	10,817
2017	851,102	10,532

Source: World Bank (2018)

As displayed in Table 1, both GDP and per capita GDP in Turkey were severely affected by economic crises especially in 2001, 2008 and partly after 2014. For instance, in 2008 (the financial crisis in the world) the GDP of Turkey was $764 billion and per capita GDP was around $10,692. After this year, GDP diminished to $644 billion and per capita GDP to $8,882. In Turkey, from 2008 to 2009, GDP and real per capita income fell by 15% and 17% respectively. Decreasing GDP means negative growth in the economy. Therefore, a decrease in production, an increase in budget deficit and unemployment with poverty in 2009 was witnessed. The deterioration of households' income led to a decrease in household consumption and indicators show that the crisis affected consumer households heterogeneously.

We know that income is an important factor of household consumption. Therefore, decreasing per capita income might heterogeneously change many goods' and services' consumptions. That is to say, while households might keep on consuming some goods and services, and diminishing the others. For instance, clothing, transportation, housing and other goods showed the highest reduction (nearly 10%); whereas food and energy registered a lower increase (more than 1%). These examples show that households' consumption behavior can be changed depending on households' budget constraints and their tastes (Nicolau & Masiero, 2013).

Tourism sector is very dependent on demand side of the economies. For this reason, it is inevitably influenced by economic slumps in the world. Bernini & Cracolici (2015) suggested that tourism consumption expenditures in crises times vary by households' socio-economic status such as occupation, age, income, regions, education and employment.

This study intends to investigate how 2008 financial crisis affected tourism consumptions of households in Turkey by employing a Heckman model (Heckman, 1979). Tourism consumption expenditures in this paper are analyzed with two dimensions. While the first dimension estimates domestic tourism consumptions, the second one investigates outbound tourism consumptions of residents' tourism expenditures when they are abroad. To the best of author's knowledge, there is no study to till the date to model tourism consumption expenditures both theoretically and empirically in Turkey. This study aims to reveal the effects of economic crisis on tourism consumption expenditures. It is expected that results of this study will be a guide to public and private agents in the sector to use the best tourism policy tools in the crises times.

This paper is organized as follows: second section summarizes the literature review. Third section presents the theoretical setting of the Heckman model. In this study data covers from 2007 to 2010 and fourth section defines data which was employed in the model. Fifth section displays the results and the last section concludes the paper in light of the results.

LITERATURE REVIEW

Literature review suggests that there are plenty of empirical studies on tourism impact analysis (Song & Li, 2008). However, the effects of economic crisis on tourism expenditures have received no attention in Turkey. In other words, searching this nexus will be an original contribution to the existing literature since there isn't any previous attempt to the best of our knowledge.

The analysis of the Heckman model is an important tool that some papers studied this model for different topics for Turkey in the literature such as Pazarlioğlu et al. (2007), Taşçı and Darıcı (2009), Sayin et al. (2010), Zhang (2011), Caner and Ökten (2013), Brown et al. (2014), Sahin et al. (2014), Ceritoğlu (2017), Williams and Kedir (2017), Sacli and Ozer (2017) are heterogeneous in their scope.

Pazarlioğlu et al. (2007) used Heckman model and investigated the milk demand in the city of İzmir in Turkey by using a household survey. Results showed that own price elasticities for farm milk and fluid milk were found as -0.16 and -0.18 respectively. Taşçı and Darıcı (2009) used Household Labor Force Survey data of 2006 and examined the determinants of unemployment in Turkey by employing Heckman's two step approach. They confirmed that if the labor force participation was taken into account, the likelihood of being unemployed was larger for women than that for men. Their findings suggested that settlement was also important. Living in urban areas seemed to decrease the probability of being unemployed than in rural ones. Finally, being head of household decreased the likelihood of being unemployed. Sayin et al. (2010) aimed to define the key factors of fish consumption by using Heckman model for 498 households which reside in Antalya in 2007. Results showed that some socio-economic determinants, such as income, educational level and households with pension salary, tended to buy or consume more fish. Zhang (2011) employed a Heckman model to calculate a more than 50 percent increase in residential electricity tariff in 2008 in Turkey. An 18,671

households' sample is used to estimate household price sensitivities. Results showed that poor households are three times less responsive to price changes than the rich households. Caner and Ökten (2013) examined the socioeconomic factors to define students' university choices in Turkey by employing Heckman model. According to results, more educated and rich families' children tend to be more successful at university entrance exam and enroll the publicly financed higher education universities. Surprisingly, students which tend to enroll private universities also come from more educated and rich families. Brown et al. (2014) analyzed the factors which effective on health expenditures of Turkey by applying Heckman model. They found a causal negative link between poverty and health expenditures. Findings show that rich households are more likely to reach to healthcare when compared to poor households. Sahin et al. (2014) aims to reveal 180 households' meat consumption preferences in Hakkâri, Turkey between the dates of November 2007 and May 2008 by using Heckman model. Results show that mostly mutton meat is consumed in Hakkâri, but the per capita mutton meat consumption amounts are varied among the income groups. Ceritoğlu (2017) estimated a two-step Heckman model and analysed the factors of home-ownership and housing financing in Turkey by using household budget surveys between 2003 and 2014. Results of this paper suggest that young aged people are more unlikely to own their houses, but they tend to have debts for housing. Williams and Kedir (2017) evaluated the causal linkage from business registration to future firm performance on some formal enterprises in Turkey by employing two step Heckman model. Findings of this study showed that formal enterprises which registered from the outset significantly lower productivity growth rates and annual sales and compared to started-up unregistered. Sacli and Ozer (2017) applied a two-step Heckman model to investigate the socioeconomic factors which affecting red meat, chicken meat, and egg expenditures in some provincial centers of Turkey. By using 2,690 households, paper concluded that, income, education level, gender and birthplace of consumers were significant in determining veal and beef demand in these regions. Moreover, chicken meat had the highest expenditure elasticity in these provincial centers.

Even if there is no Heckman model to analysis tourism consumption decisions in Turkey, some scholars try to investigate household tourism expenditures in different countries such as Italy (Zanin & Marra, 2012; Brida & Tokarchuk, 2017), Netherlands (Van Soest & Kooreman, 1987; Melenberg & Van Soest, 1996; Bronner & de Hoog, 2012),

Spain (Alegre & Pou, 2004; Alegre et al., 2009; 2013; Rodríguez et al., 2018), United Kingdom (Davies & Mangan, 1992), United States (Hagemann, 1981; Cai, 1998; 1999; Weagley & Huh, 2004; Jang & Ham, 2009), and Vietnam (Huynh, 2018).

Inspired by some studies above, this study aims to investigate the sensitivity of Turkish households' tourism consumption in economic crises times and seek for the answer to how economic crisis affected tourism consumption behavior of Turkish households and how different household groups react to this crisis at the consumption levels. The originality of the paper is in its in-depth examination of domestic and abroad tourism consumption expenditures of Turkish households in the pre- and post-crisis periods (2007-2010).

DATA AND METHODOLOGY

Data

The methodology of this study is founded on composing the Tourism Satellite Accounts (TSA) tables, Input-Output tables and the Heckman model. In line with the framework of this study, 23 different expenditure items and prepared 10 TSA tables were determined. As a result of composing an expenditure vector to show tourism consumptions, we obtain one (unique) tourism sector in the input-output tables. In this modelling scope, deriving from the same year of input-output matrix, we modify to set a separate tourism industry using collected information from the TSAs of the same year. With the help of these 10 tables, we aim to estimate tourism consumption expenditures each year for the period between 2007 and 2010. This study takes the year 2007 as a reference, which was before one of the most severe crises of world economy in 2008. We utilize the Household Budget Survey (HBS) from 2007 to 2010, published by Turkish Statistical Institute (TurkStat). The research used a national sample of 15,552 Turkish households (both rural and urban). HBS covers rich information on household socioeconomic factors such as gender, income, age, education, occupation and consumption expenditures. Data used in this study provides rich information about Turkish households' tourism consumption and simplifies to investigate the tourism consumption expenditures in economic crisis times.

Methodology

In this study, the two stage Heckman model, recommended by Alegre et al. (2013), was followed. At the first stage, we investigated the probability of tourism participation which is the choice of households whether to go on holiday or not. Equation (1) shows the households tourism participation model.

$$P_{ht} = \alpha_1 X_{ht} + \varepsilon_{it} \qquad (1)$$

In this equation, the participation is affected by variables in X_{ht} with coefficient α_1. The dependent variable is a dummy variable, which is if households participate in tourism, dependent variable (P_h) takes the value of 1. In this model, X_{ht} represents the independent variables vector and ε_{it} shows error term.

The findings offer statistical support of households' tourism participation at 1% significance level. The economic theory of income/leisure trade-off posits that work and leisure time operate in connected markets. The workers choose more or less work depending on their own desires and needs and earn more or less money (income) depending on giving up an hour of leisure time (Haworth & Lewis, 2005). It is believed that there is a trade-off between the working hours and leisure. The more work means more income. However, this causes less leisure for the households. Although many households have different amount of incomes, they tend to make tourism consumption expenditures in accordance with their income. Therefore, we infer that all households are willing to participate in tourism both domestically and abroad.

At second stage, the effects of economic crisis on tourism consumption for five different household groups were estimated. Equation (2) shows the tourism consumption expenditure model as a function of the variables with a natural logarithmic form.

$$\ln Tour_{ht} = \beta_0 + \ln \beta_1 Yht + \beta_2 \ln TotExp_{ht} + \beta_3 \ln Zht + \delta i\text{IMR}ht + \varepsilon_{ht} \quad (2)$$

where $Tour_{ht}$ is used as a dependent variable and defines the tourism consumption of households, Yht is the household income, $TotExp_{ht}$ is the total household expenditure with coefficients β_i and ε_{ht} is disturbance. Z_{ht} represents the vector of explanatory variables at each t, and household h, IMR_{ht} shows the inverse mill ratio. Z vector includes the variables of settlement, household size, seasonality, occupation and crisis used in the

analysis. Settlement (SET) is a dummy variable that takes the value of 1 if households live in urban areas. It is coded as 0 if the households live in rural ones. Household size (SIZE) defines the type of household in the family. There are five dummy variables in the model such as couple without children (2 households), couple with one child (3 households), couple with two children (4 households), couple with three or more children. Occupation (OCC) is defined as a dummy variable and takes the value of 1 if the households have wages or salaries. Seasonality (SEASON) is another dummy variable which has a value of 1 if households go on holiday in high season and takes the value of 0 if they go on holiday in off-season. The last dummy variable is to control the effects of 2008 crisis (CR), which takes the value of 1 if there was a crisis between the dates of 2008-2009, otherwise 0.

RESULTS

This study employs the Heckman model to investigate the causal link between socio-economic variables and tourism consumption expenditures of five group households in crisis times. All estimations were carried out in Stata 11 to estimate the effects of change in income level on tourism consumption between the dates of 2007 and 2010 and Table 2 presents the results of distribution of households' tourism consumption expenditure by quintiles ordered by income. Figures in parentheses show marginal effects and *, ** and *** defines the significance level at 10%, 5% and 1% respectively.

Which type of income group in the households reacts more to economic crises and which type changes the tourism consumption expenditures more are displayed in Table 2. The figures show that economic crisis has affected household tourism expenditures heterogeneously in Turkey. Since the model is logarithmic, the coefficients are also defined as elasticity in this study. The first income group (the poorest one) showed the highest reduction (more than 50%); whereas group 4 and 5 (the richest ones) registered a lower but remarkable increase (more than 8%).

Regarding tourism, the expenditure of domestic tourism reduced less than tourism consumption of abroad. This study reveals that economic crisis of the 2008 increased the level of uncertainty and showed a significant relationship between consumption reduction and the crisis which mostly affected low income households. We found evidence that

the poorest households cut consumption due to negative expectations of the crisis because of the reductions in consumption on leisure. The crisis had a relevant impact on tourism because reductions in spending on leisure especially for 1st and 2nd group are noteworthy.

Table 2. *Heckman two-stage model*

Heckman Model Results	Quintiles ordered by expenditure				
	1. 20%	2. 20%	3. 20%	4. 20%	5. 20%
Variables	First quintile	Second quintile	Third quintile	Fourth quintile	Fifth quintile
	Coefficients	Coefficients	Coefficients	Coefficients	Coefficients
Constant	1.168***	1.614***	1.846***	2.011***	2.196***
ln (Income)	-0.591(-0.523)	-0.349(-0.456)	0.006(0.041)	0.284(0.42)	0.486(0.57)
ln (Total expenditure)	-0.324***	-0.134***	0.109***	0.202***	0.359***
ln (Household size)	-0.512*(-0.256)	-0.33*(-0.129)	-0.05*(-0.087)	0.06*(0.145)	0.13*(0.242)
Tourism	-0.61***	-0.44***	-0.16***	0.08***	0.24***
Domestic	-0.53***	-0.36***	-0.04***	0.18***	0.34***
Abroad	-0.88***	-0.55***	-0.27***	0.03***	0.10***
Urban	-0.032***(0.022)	-0.023***(0.023)	0.08***(0.035)	0.09***(0.24)	0.1***(0.46)
Occupation	-0.083**(-0.024)	-0.17**(-0.27)	-0.13*(-0.97)	-0.05**(-0.13)	-0.06**(-0.18)
Season	-0.74 (-0.76)	-0.086 (-0.076)	-0.078 (-0.073)	-0.07 (-0.071)	-0.068(-0.062)
Crisis	-0.708***(-0.232)	-0.673***(-0.113)	-0.112***(0.013)	0.086***(0.88)	0.184***(0.168)
Inverse Mills ratio	-0.136(0.224)	-0.046 (0.123)	0.78 (0.206)	0.124 (0.264)	0.302 (0.462)
R²	0.393	0.402	0.387	0.312	0.456
Wald Chi Square	412.32***	408.23***	406.12***	396.12***	394.02***

Source: Author's calculations.

ln (Income) is the natural logarithm of the household income. Income sensitivity is an important tool and the aim of this study is to analyze the effects of economic crisis on tourists' expenditures. By means of Heckman model, marginal effects of income variables on tourism consumption are estimated. As Heckman model revealed that households' income is the major factor on consumption, the size of cutbacks depends on economic characteristics of households. The income elasticity of 1st income group was calculated as 0.52, which was a considerably high value and this statistic revealed that decrease in households' income would result in huge decrease in tourism consumption. Taking into account the effects of economic crisis on households' tourism consumption, it was noticed that income is the most important factor. The findings partly support that "households' income is affected by economic crisis". The crisis mostly affected low and middle income households. It was found that households with high level incomes do not decrease their tourism

consumption while households with low level incomes cut their consumption sharply. ln (Total Expenditure) is the natural logarithm of the households' total expenditure. This study also investigates how households change their total expenditure subject to economic crisis. Results of the paper infer that households' total expenditure patterns change depends mainly on their budget constraint and not uniformly across goods and services.

As expected, the households' size has negative effects on low and middle income groups, but has positive relationship with the upper level (4th and 5th) income groups. The findings suggest that couples without children and couples with one child are more likely to go on holiday. On the other hand, the larger the household size is, the less tourism consumption occurs for the all household groups. The elasticity coefficient showed that increase in household's size decreased the probability of tourism consumption by nearly 25% for the 1st group.

The findings suggest that settlement has a negative relationship with tourism consumption especially for rural households, when the probability of making tourism expenditures for urban households is higher compared to rural ones. The urban households are more crisis-resistant than the rural ones, because former have many opportunities to find a job and have sustainable income due to strong labor market. When we examine the effects of economic crisis on tourism consumption, another explanation is needed as if households have salaries or wages they have a high probability for tourism consumption expenditures. Households which have salaries and wages tend to sustain tourism consumption and seem not to be affected as much.

Seasonality is an important factor for all household groups which affects the probability of tourism participation. It is known that tourism generally occurs in summer season due to annual leaves of employees and activities of tourism have become more popular at this high season. Expectedly, there is a pressure on tourism demand and therefore cost of holiday could be high.

Furthermore, the findings reveal a statistical difference in the influence of economic crisis on tourism consumption. The economic crisis has heterogeneously affected the tourism expenditure of five group households. A notable drop in consumption for the low income group has been detected. The poorest households strongly cut tourism consumption, due to the decrease in income and negative expectations.

DISCUSSION AND CONCLUSION

This study investigates the tourism participation decisions of Turkish households and then estimates the impact of economic crisis on their tourism consumption expenditures both domestic and outbound in Turkey by employing Heckman's two step approach to examine the "economic crisis" in 2008 at national level. Tourism consumption expenditures are the first and probably the most important economic effects of tourism with a vital role in economic development. Although many studies have examined the tourism demand modelling, none of the studies has investigated how households allocate their income to tourism consumption in the economic crisis times in Turkey. The research topic is very interesting and author wanted to estimate the model by using some detailed tourism data. This paper also extends literature on tourism demand by analyzing the effect of economic crisis in Turkey.

Within the framework of the model, this study attempts to examine how economic crisis affected tourism consumption behavior of Turkish households and how different household groups reacted to this crisis in the consumption levels. While answering these questions, we deal with the estimating marginal effects (income elasticity etc.) in the context of domestic and outbound tourism. Main contribution of this study is to obtain microdata from household budget surveys and tourism satellite accounts, and an analysis can be made of the behavior of households engaging in tourism expenditure and those that do not. Unlike the other studies in the literature, this study benefits from tourism satellite accounts to obtain most robust results.

Heckman model was employed and it is proved to be a reliable tool for yielding better estimations for all parameters. Current study reveals that the effects of crisis seem to be consistent with the results. Expectedly, tourism spending decreases in crisis time, but not uniformly across household groups. In other words, households with low incomes postpone their tourism participation and cut their tourism expenditures sharply. The underlying reason is that households with low levels of incomes might have limited incentives to take the time or money to go on holiday when the tourism participation is taken into account. On the other hand, due to having higher income, upper class households are more likely to continue their tourism participation when compared to households with a lower income.

Along with the income, some other variables also affect households' tourism participation decisions and tourism expenditures in

the crisis times. Results show that household income is the most important variable in tourism consumption, while seasonality is ranked at the second position. Most households prefer generally to go on holiday in high season. Another important finding is that households with salaries and wages are more likely to reduce tourism expenditure in the crisis times. We also found that urban households' tourism consumptions are higher than that of rural ones due to income differences among these two groups. Moreover, it was also found that the probability of going on holiday abroad is larger for households who live in urban areas than in rural ones. The household size is also a decisive variable for the model in this study. Results reveal that if household size increased, the probability of tourism consumption became higher.

This paper also aims to contribute to all stakeholders in the tourism sector. Firstly, it can be inferred from the paper that diversification in tourism is definitely necessary to minimize seasonality and supports tourism facilities' low occupancy rates in off-seasons with the promotion of tourist packages. In other words, there is a need to enhance international tourism mostly in the time of economic crisis. For instance, planning of some alternative tourism patterns in rural and urban places will boost tourism consumption expenditures in Turkey. Secondly, political tools of tourism such as promotion, advertising, incentives and some tax and tariff reductions or tax exemptions are necessary especially in the crisis times. If private stakeholders such as hotels and travel agencies can be well supported, they can sustain their operations without increasing their prices. Lastly, it is believed that this study will also be a guide to public sector. The mission of public sector is to encourage supply side of the tourism. It is expected that policy makers offer the price and promotion strategies taking the low and middle income level of households into consideration. They can help private firms via financial and tax instruments to set optimum pricing for their services.

REFERENCES

Alegre, J., Mateo, S., & Pou, L. (2009). Participation in tourism consumption and the intensity of participation: An analysis of their socio-demographic and economic determinants. *Tourism Economics*, *15*(3), 531-546.

Alegre, J., Mateo, S., & Pou, L. (2013). Tourism participation and expenditure by Spanish households: The effects of the economic crisis and unemployment. *Tourism Management*, *39*, 37-49.

Alegre, J., & Pou, L. (2004). Micro-economic determinants of the probability of tourism consumption. *Tourism Economics*, *10*(2), 125-144.

Bernini, C., & Cracolici, M. F. (2015). Demographic change, tourism expenditure and life cycle behaviour. *Tourism Management*, *47*, 191-205.

Brida, J. G., & Tokarchuk, O. (2017). Tourists' spending and adherence to shopping plans: The case of the christmas market in Merano, Italy. *Tourism Management*, *61*, 55-62.

Bronner, F., & de Hoog, R. (2012). Economizing strategies during an economic crisis. *Annals of Tourism Research*, *39*(2), 1048-1069.

Brown, S., Hole, A. R., & Kilic, D. (2014). Out-of-pocket health care expenditure in Turkey: Analysis of the 2003–2008 Household Budget Surveys. *Economic Modelling*, *41*, 211-218.

Cai, L. A. (1998). Analyzing household food expenditure patterns on trips and vacations: A Tobit model. *Journal of Hospitality & Tourism Research*, *22*(4), 338-358.

Cai, L. A. (1999). Relationship of household characteristics and lodging expenditure on leisure trips. *Journal of Hospitality & Leisure Marketing*, *6*(2), 5-18.

Caner, A., & Ökten, C. (2013). Higher education in Turkey: Subsidizing the rich or the poor? *Economics of Education Review*, *35*, 75-92.

Ceritoğlu, E. (2017). Disentangling age and cohorts effects on home-ownership and housing wealth in Turkey (No. 1706). The Central Bank of the Republic of Turkey.

Davies, B., & Mangan, J. (1992). Family expenditure on hotels and holidays. *Annals of Tourism Research*, *19*(4), 691-699.

Gül, H., & Çağatay, S. (2015). Impact analysis of demand-driven shocks in Turkey's tourism industry within the framework of the social accounting matrix. *Tourism Economics*, *21*(1), 33-48.

Gül, H., & Özer, M. (2018). Frequency domain causality analysis of tourism and economic activity in Turkey. *European Journal of Tourism Research*, *19*, 86-97.

Hagemann, R. P. (1981). The determinants of household vacation travel: some empirical evidence. *Applied Economics*, *13*(2), 225-234.

Haworth, J., & Lewis, S. (2005). Work, leisure and well-being. *British Journal of Guidance & Counselling*, *33*(1), 67-79.

Heckman, J. J. (1979). Sample selection bias as a specification error. *Econometrica*, *47*, 153-161.

Huynh, Q. L. (2018). A thorough assessment of the causal relationship from tourist satisfaction to destination loyalty: A study in Tra Vinh. *International Journal of Economics and Financial Issues*, *8*(2), 191-197.

Jang, S. S., & Ham, S. (2009). A double-hurdle analysis of travel expenditure: Baby boomer seniors versus older seniors. *Tourism Management*, *30*(3), 372-380.

Melenberg, B., & Van Soest, A. (1996). Parametric and semi-parametric modelling of vacation expenditures. *Journal of Applied Econometrics*, *11*(1), 59-76.

Nicolau, J. L., & Masiero, L. (2013). Relationship between price sensitivity and expenditures in the choice of tourism activities at the destination. *Tourism Economics*, *19*(1), 101-114.

Pazarlioğlu, M. V., Miran, B., Üçdoğruk, Ş., & Abay, C. (2007). Using econometric modelling to predict demand for fluid and farm milk: A case study from Turkey. *Food Quality and Preference*, *18*(2), 416-424.

Rodríguez, X. A., Martínez-Roget, F., & Gonzalez-Murias, P. (2018). Length of stay: Evidence from Santiago de Compostela. *Annals of Tourism Research*, *68*, 9-19.

Sacli, Y., & Ozer, O. O. (2017). Analysis of factors affecting red meat and chicken meat consumption in Turkey using an ideal demand system model. *Pak. J. Agri. Sci*, *54*(4), 931-940.

Sahin, A., Yıldırım, İ., & Deniz, A. (2014). A comparative study on urban and rural households' preferences of fresh mutton meat consumption (a case study in eastern region of Turkey-Heckman Model). *British Food Journal, 116*(12), 1897-1908.

Sayin, C. Emre, Y. Mencet, M. N., Karaman, S., & Tascioglu, Y. (2010). Analysis of factors affecting fish purchasing decisions of the household: Antalya district case. *Journal of Animal and Veterinary Advances*, 9(12), 1689-1695.

Song, H. & Li, G. (2008). Tourism demand modelling and forecasting- A review of recent research. *Tourism Management*, *29*(2), 203–220.

Taşçı, H. M., & Darıcı, B. (2009). Türkiye'de işsizliğin mikro veri ile farklı tanımlar altında, cinsiyet ayırımına göre analizi [An examination of unemployment by gender in Turkey using individual level data under alternative definitions of unemployment]. *Elektronik Sosyal Bilimler Dergisi*, *28*, 139-159.

Van Soest, A. & Kooreman, P. (1987). A micro-econometric analysis of vacation behaviour. *Journal of Applied Econometrics, 2*(3), 215-226.

Weagley, R. O. & Huh, E. (2004). Leisure expenditures of retired and near-retired households. *Journal of Leisure Research*, *36*(1), 101-127.

Williams, C. C. & Kedir, A. M. (2017). Starting-up unregistered and firm performance in Turkey. *International Entrepreneurship and Management Journal*, *13*(3), 797-817.

World Bank (2018). World Bank national accounts data, and OECD National Accounts data files. Retrieved 12 May, 2018, from https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=TR

Zanin, L. & Marra, G. (2012). A comparative study of the use of generalized additive models and generalized linear models in tourism research. *International Journal of Tourism Research, 14*(5), 451-468.

Zhang, F. (2011). Distributional impact analysis of the energy price reform in Turkey. The World Bank.

PREDICTORS OF SATISFACTION FOR AMERICAN AESTHETIC TOURISM AT THE MEXICAN BORDER

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ABSTRACT

The aim of this study was to find out the predictors for aesthetic tourism patients′ satisfaction of the American travelers to Tijuana. The information was obtained by applying a survey to a sample of 385 visitors - patients from clinics in the city. Four dimensions were included in the multiple regression analysis. The results obtained show that the two key factors influence satisfaction level: Medical facilities, services and price dimension, and Geographical and cultural proximity dimensions. Theoretical value of this article is in its contribution to the few body of knowledge on factors that influence the aesthetic tourism satisfaction, as well as, the identification of its main characteristics that allow for the understanding of tourist's behavior in a binational environment. In the same sense, the results allow the owners and managers of clinics in this binational region to develop strategies to attract this market segment.

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INTRODUCTION

International medical tourism can be defined as travel across international borders with the intention of receiving some form of medical treatment. These treatments may span the full range of medical services, but most commonly include dental care, cosmetic surgery, elective surgery, and fertility treatment. However, cosmetic surgery for aesthetic reasons would be considered as medical procedures outside the health boundary (OECD, 2010). All travelers visiting a foreign country for health reasons are considered international tourists (WTO, 1995).

It is necessary to explain that travelers can be classified into two categories: tourist and excursionist. The "tourist" is the person who is temporarily travelling from their place of residence and stays in the place visited for more than one day, with at least one night spend at the destination. However, if the tourist travels to the fringes or border areas of another country, and returns to the place of habitual residence without staying overnight, then the person is considered a "frontier excursionist" or an "international excursionist" (WTO, 1995).

Aesthetic medicine tourism is the latest niche in the health tourism segment, which also includes spa tourism, spa and wellness, and medical tourism (Panfiluk et al., 2017). Aesthetic medicine tourism is a product which was created through the combination of aesthetic medicine services and tourist services (Panfiluk, 2016). Aesthetic tourism consists of services associated with travel, accommodation, and sightseeing, often including entertainment and aesthetic procedures.

The most popular destinations for the low prices of aesthetic procedures are India and Mexico (Sayfullaah et al., 2013). American tourists prefer to visit Mexico, Costa Rica, or Panama for dental or cosmetic treatment. In addition to geographic proximity, Mexico offers 30% cheaper procedures that the other countries (Sayfullaah et al., 2013). The reasons for traveling to the Mexican border are the high prices of medical services, barriers to medical care for minorities, low income, and familiarity with the Mexican health system (Bustamante, 2014).

In the last decade, aesthetic medical services have become a new tourist product extending the health tourism segment (Panfiluk et al., 2017). Defining the scope of aesthetic tourism as a niche of health tourism requires the analysis of already existing approaches used in health tourism, and to determine the common characteristics of aesthetic

medicine with health tourism, as well, as distinguish the differences that recognize it as a new niche of the health tourism segment (Panfiluk, 2016).

The medical services market has expanded its offer to a new product, like any emerging market niche, aesthetic tourism should be further studied, and especially at the local level, in order to characterize the demand based on socioeconomic and sociodemographic, chosen aesthetic procedures, medical coverage plans, and travel requirements (Crooks et al., 2010). In this vein, this study aims at finding the predictors for aesthetic tourism satisfaction of the American patients going under aesthetic surgery in Tijuana, Mexico and contribute to the few body of knowledge about the factors influencing aesthetic tourism satisfaction in a border region.

LITERATURE REVIEW

Aesthetic medical tourism constitutes a new niche of health tourism due to the purpose of the journey: improvement of the aesthetic appearance of the tourist. The trigger of aesthetic medical tourism is leisure associated with the enhancement of the physical attractiveness of healthy people, as a result of the aesthetic medical procedures with a low degree of invasiveness (Panfiluk, 2016).

In this sense, the factors influencing the patient decision-making process to go under aesthetic medical procedures is the improvement of the physical appearance, health, and prestige (Newerli-Guz et al., 2014). It is recognized that the main determinants of undertaking a journey in health tourism include: lack of insurance to cover the cost of medical services in their own country and immediate medical treatment when necessary (Bolis, 2001; Gill & Singh, 2011; Panfiluk, 2016).

Regarding the factors that tourists take into account to choose a destination to perform an aesthetic procedure, most research on health tourism emphasize the procedures price, quality service and quality of facilities as determinant factors. In this sense, there are several reasons to explain the cost factor such as high cost of medical care in origin country (Bustamante, 2014), low cost treatment in the country of destination (Fetscherin & Stephano, 2016; Sayfullaah et al., 2013; Footman et al., 2014; Pollard, 2012; John & Larke, 2016), lack of insurance to cover the cost of medical services in their own country (Bolis, 2001; Gill & Singh, 2011; Panfiluk, 2016) and appropriate and fair foreign exchange rates

(Alsarayreh et al., 2017; Rao & Choudhury, 2017). Such situations entail a difference in the prices of medical services in favor of destination country (Bolis, 2001; Gill & Singh, 2011; Panfiluk, 2016).

Likewise, Park et al. (2017) argued that awareness of treatment price is a factor that significantly affects the level of satisfaction and the decision process of the medical tourist. This indicates that the customer's perception of the value of the cost affects the satisfaction level of medical tourism and its different niches (Rao & Choudhury, 2017), while Han and Hyun (2015) stated that patients with high perceptions of appropriate prices are more likely to be satisfied.

On the other hand, quality service is an important determinant in this process, which include quality of preoperative information (Lazar & Deneuve, 2013), quality of care (Fetscherin & Stephano, 2016), service swiftness (Alsarayreh et al., 2017; Footman et al., 2014, Han & Hyun, 2015; John & Larke, 2016; Rao & Choudhury, 2017); safety, guarantee and track records (Pollard, 2012).

In the same vein, doctor-patient relationship is a relevant aspect (Lazar & Deneuve, 2013), and covers aspects such as: surgeons' better understandings of patients' wishes (Footman et al., 2014), professionalism and performance of practitioners (Alsarayreh et al., 2017), medical professionalism exhibited by doctors, surgeons, medical technicians, and quality care competence (Rao & Choudhury, 2017). Additionally, the professional reputations of doctors and surgeons (Fetscherin & Stephano, 2016) and medical professional's reputation in the destination are also considered as important factors (John & Larke, 2016).

On the other hand, medical facilities factor refers to attributes such as quality of medical facilities and reputation of hospital (Fetscherin & Stephano, 2016), advanced medical facilities and technology (Pollard, 2012; Alsarayreh et al., 2017; Rao & Choudhury, 2017), accreditation of medical facilities and healthcare infrastructure (John & Larke, 2016). In the same sense, results observed by the family or friends (Lazar & Deneuve, 2013), and family/friend recommendation of doctor, hospital or facility (Fetscherin & Stephano, 2016) are important reasons for travelling abroad for cosmetics surgeries.

According to the literature, aesthetic tourism relates the quality of medical facilities and surgeons, the quality of service by the doctor and medical staff, the price and the results obtained by other patients, with the tourist's level of satisfaction. In this sense, John and Larke (2016)

concluded that the medical facilities, services (doctors and staff service qualities), and price are the factor most frequently included in the health tourism studies. Therefore, this study proposed the following hypothesis:

H1. There is a statistically significant relationship between aesthetic tourism patients' satisfaction and medical facilities, services and price.

Furthermore, destination image has been analyzed from the following aspects, country attractiveness and tourist destination popularity, country/city corruption level (Fetscherin & Stephano, 2016), the place/city myths (Pollard, 2012), and political and social stability (John & Larke, 2016).

Due to this situation, Guiry and Vequist (2014) and John and Larke (2016) affirmed that destination image is rarely considered in health tourism and attributes of the destination are factors that are poorly or not frequently analyzed. However, when someone decides to travel abroad to perform an aesthetic procedure, it will generate his/her perception of that destination, whether real or imagined.

In summary, considering that a traveler's satisfaction/dissatisfaction depends on a comparison of his expectation with destination experience, the following hypothesis was proposed:

H2. There is a statistically significant relationship between aesthetic tourism patients' satisfaction and destination image.

Destination infrastructure and environment are factors scarcely included in health tourism literature, although these factors have an important role in destination marketing in travel industry in general. These factors are potentially relevant for the health tourist satisfaction, as stated by Pollard (2012), Fetscherin and Stephano (2016) and John and Larke (2016), who maintained that tourism attractions, low cost and availability of restaurants and accommodation, destination internal travel services and support services, contribute to destination attractiveness for health tourism.

It is considered that, once they arrive at destination, the health tourists need to satisfy basic needs of food, lodging and transportation around the city in order to use some attractions allowing them to experience the environment of the destination. This experience can affect their level of satisfaction either positively or negatively. Due to its minimal inclusion in previous studies of aesthetic tourism, the following hypothesis was proposed:

H3. There is a statistically significant relationship between aesthetic tourism patients' satisfaction and destination infrastructure and environment.

Finally, it has been found that geographical and cultural proximity factor play a significant role in selecting a destination which leads to satisfaction, particularly the aspects that are related to travel time from place of residence (Bolis, 2001; Pollard, 2012; Bustamante, 2014; Lee & Kim, 2015; Livingston, 2015), ease of airport access and barriers to entry (Pollard, 2012). In this sense, Alsarayreh et al. (2017) and Rao and Choudhury (2017) found out that geographical proximity has a positive impact on aesthetic tourism patients' satisfaction, taking advantage of the regional integration that facilitates the movement of people from one country to another.

Surgeon and medical staff language proficiency to communicate with patients in their own language was a determining factor as a component of cultural proximity (Bolis, 2001; Pollard, 2012; Lee & Kim, 2015; Livingston, 2015; Fetscherin & Stefano, 2016; John and Larke, 2016). Alsarayreh et al. (2017) and Rao and Choudhury (2017) concluded that multiculturalism (including the language) has a positive impact on tourism patients´ satisfaction. Therefore, the following hypothesis was raised:

H4. There is a statistically significant relationship between aesthetic tourism patients' satisfaction and geographical and cultural proximity.

In this sense, it is necessary to determine which motivators are the most/least important to medical tourists. The analysis need to identify the important factors for aesthetic tourism and then analyze the ability (and/or willingness) of medical suppliers to meet the needs and satisfy medical tourists (John & Larke, 2016).

RESEARCH METHODOLOGY

Based on literature review, there are factors that have been scarcely included in the research of health tourism satisfaction, therefore it was decided that the indicators of the Pollard's conceptual model would be used because the Destination Attractiveness Model (Pollard, 2012) incorporates both the most studied and the least analyzed factors (see Table 1).

Table 1. *Model of Destination Attractiveness*

Dimensions	Factors
Geographical proximity	Travel time, ease of airport access, barriers to entry
Cultural proximity	Language, food, religion, customs and practice
Destination image	Place myths
Destination infrastructure	Accommodation, internal travel, support services
Destination environment	Tourism attractions, facilities, climate
Risk and reward	Safety, guarantee, track records, outcome
Price	Cost of stay, cost of treatment, cost of travel, insurance

Source: Pollard (2012)

Based on Pollard's model and considering the border area of study, it was decided that the number of items should be reduced from 22 to 16, excluding those that do not apply in the geographical-cultural context and the regulatory framework. After reduction, the factors of the Pollard's model were regrouped (Table 2). The dimensions proposed in the study were: medical facilities, service and price, destination and infrastructure environment, destination image and geographical and cultural proximity (Table 3).

Table 2. *Aesthetic Tourism Satisfaction Factors*

	Dimensions	Factors
I	Geographical proximity	1. The location of the plastic surgery clinic in the city
II	Cultural proximity	2. The recommendation of a friend or relative
		3. The care offered by the plastic surgery clinic
		4. Agreement of restaurants for their patients
		5. The staff speaking English
III	Destination image	6. The reputation of the local police
		7. Perception of the urban image of the city
		8. Urban signs, traffic volume, and street conditions
IV	Destination infrastructure	9. The hospital facilities of the plastics surgery clinic
		10. Provide transportation to their patients
V	Destination environment	11. Agreement of hotels to host their patients
		12. Provide tourist information to patients
		13. Agreement of spa for patients
VI	Risk and reward	14. The confidence generated by the surgeon
		15. The prestige of the plastic surgery clinic
VII	Price	16. The treatment price in the plastic surgery clinic
VIII	Satisfaction	17. Aesthetic tourism satisfaction

Source: Authors' own elaboration based on Pollard (2012)

Table 3. *Aesthetic Tourism Dimension Influencing Tourist Satisfaction*

	Dimensions	Factors
I	Medical facilities, service and price	1. The recommendation of a friend or relative
		2. The care offered by the plastic surgery clinic
		3. The hospital facilities of the plastic surgery clinic
		4. The confidence generated by the surgeon
		5. The prestige of the plastic surgery clinic
		6. The treatment price in the plastic surgery clinic
II	Destination image	1. Reputation of the local police
		2. Perception of the urban image of the city
		3. Urban signs, traffic volume, and street conditions
III	Destination infrastructure and environment	1. Agreement of hotels to host their patients
		2. Provide tourist information to its patients
		3. Agreement of a spa for patients
		4. Agreement of restaurants for their patients
		5. Provide transportation to their patients
IV	Geographical and cultural proximity	1. The location of the plastic surgery clinic in the city
		2. The staff speak English
	Satisfaction	1. Aesthetic tourism satisfaction

Source: Authors' own elaboration based on Pollard (2012)

When analyzing the majority of aesthetic tourists to Tijuana, Mexico, it was found that they are Mexican and U.S.A. residents from Hispanic origin and living in the cities of Los Angeles, San Diego, Chula Vista, Mexicali and Ensenada (Arriaga et al., 2013; Secretariat of Tourism of Baja California, 2013). The farthest city is located at 135 miles away and 2h drive by car, as well, there are no flights between these cities and Tijuana. Furthermore, the Secretariat of Tourism of Baja California (2013) stated that 78% of tourists arrive by car and only 25% of them spend the night in the city. Due to these facts, the factors travel time, ease of airport access, food, the cost of travelling and the cost of staying were excluded.

In addition, the Secretariat of Foreign Affairs of Mexico (SRE, 2014), states that tourist are not required a visa to enter Mexico, this particularity allowed for the exclusion of the barriers to entry factor. The religion factor was also removed, taking into account that the Mexican Federal Law to Prevent and Eliminate Discrimination states that it will not be deny health care services for religious beliefs or any other conditions (Mexico Union Congress, 2003). Lastly, the insurance factor was omitted because most of

the aesthetic procedures are not covered by insurance companies (World Trade Organization, 2014).

Then, the quantitative method was used and the survey technique was applied to carry out a multiple regression analysis to assess the influence of the four dimensions in the aesthetic tourism satisfaction.

Data Collection

In order to evaluate their most recent experience, it was decided to survey patients at the exit of aesthetics clinics. Only tourists or excursionist who had a cosmetic surgery and accepted to respond to the survey were included. To determine the sample size, a confidence level of 95% and a margin of error of ± 5% were established, which allowed for defining the sample of 385 aesthetic patients (Rea & Parker, 1991). The study took place in Tijuana, Mexico, a border city with California, USA.

With the purpose of designing the final version of the questionnaire, three pre-tests were carried out in the months of March and April of 2016. Each pre-test was piloted on a sample of 40 respondents leaving the clinics.

The final survey includes the socioeconomic and sociodemographic data and sixteen factors regarding their experience at the clinic to be evaluated with a five-point Likert scale: 1=Very Poor, 2=Below Average, 3=Average, 4=Above Average and 5=Excellent. Lastly, respondents were asked to evaluate the overall satisfaction as: 1=Totally Dissatisfied, 2= Dissatisfied, 3= Neither satisfied nor dissatisfied, 4=Satisfied and 5= Very satisfied.

Reliability and validity

In order to test the reliability of the instrument, Cronbach's Alpha analysis was performed; the results of the analysis confirmed that the instrument and items used were reliable with a coefficient Alpha value of 0.736, above the generally accepted score of Nunnally (1978) of 0.7; this result shows the reliability of the questionnaire. Then the Kaiser-Mayer-Olkin (KMO) analysis was calculated as 0.796 which is greater than 0.50 indicating that the data set of 385 is adequate for exploratory factor analysis (EFA) (Hair et al., 2006).

The EFA carried out explains the 60.33% of the total variance with four dimensions as presented in Table 4. Following EFA confirming that aesthetic tourism satisfaction has for constructs such as medical facilities, services and price, destination infrastructure and environment, destination image and geographical and cultural proximity.

Table 4. *EFA factor structure (n=385)*

	Medical Facilities, services and price	Destination infrastructure and environment	Destination image	Geographical and cultural proximity	Total
Recommendation of a friend or relative	0.944				
Confidence generated by the surgeon	0.897				
Care offered by the clinic	0.855				
Hospital facilities of the clinic	0.829				
Prestige of the clinic	0.602				
Treatment price	0.600				
Agreements with restaurants		0.812			
Agreements with hotels		0.795			
Tourist information		0.734			
Agreements with a Spa		0.724			
Transportation provided to their patients		0.677			
Local police reputation			0.766		
Urban image			0.748		
Urban signs, traffic volume and street conditions			0.585		
The staff speaks English				0.827	
The location of the clinic in the city				0.655	
Eigenvalue	4.219	2.953	1.439	1.042	
Variance %	26.37	18.45	8.99	6.51	60.334

Measurement scale constructed with EFA was confirmed with convergent and divergent validity. The convergent validity of each dimension is assured with average variance explained (AVE) above 0.50 and composite reliability higher than 0.6 (Fornell & Larcker, 1981) as presented in Table 5.

Table 5. *Measurement Properties for Aesthetic Tourism Satisfaction*

	λ	CR	AVE
Medical facilities, service and price		0.91175	0.63951
The treatment price in the plastic surgery clinic	0.600		
The prestige of the plastic surgery clinic	0.602		
The hospital facilities of the plastic surgery clinic	0.829		
The confidence generated by the surgeon	0.855		
The care offered by the plastic surgery clinic	0.897		
The recommendation of a friend or relative	0.944		
Destination infrastructure and environment		0.86512	0.56301
Provide transportation to their patients	0.677		
Agreement of a spa for patients	0.724		
Provide tourist information to its patients	0.734		
Agreement of restaurants for their patients	0.795		
Agreement of hotels to host their patients	0.812		
Destination image		0.74486	0.51638
Urban signs, traffic volume, and street conditions	0.585		
Perception of the urban image of the city	0.748		
Reputation of the local police	0.766		
Geographical and cultural proximity		0.71225	0.55643
The location of the plastic surgery clinic in the city	0.655		
The staff speaking English	0.827		

Discriminant validity of aesthetic tourism satisfaction measurement scale was examined by comparing AVE values vs. squared correlations between pairs of dimensions. The squared correlations were smaller than AVE (0.50) assuring sufficient discriminant validity of measurement scale. Correlation matrix in Table 6 confirms that each dimension is distinctly different from each other, as the squared correlations are smaller than AVE values presented in Table 5, which is evidence for discriminant validity.

Table 6. *Descriptive Statistics and Correlations (N=385)*

	M	SD	MFSP	DI	DIAE	GCP
Medical facilities, service and price (MFSP)	4.95	.248	1.000			
Destination image (DI)	2.85	.725	.056	1.000		
Destination infrastructure and environment (DIAE)	3.41	1.01	.072	.134	1.000	
Geographical and cultural proximity (GCP)	4.85	.373	.282	.218	.115	1.000

FINDINGS

The sociodemographic profile of the respondents (Table 7) shows that, aesthetic tourists are female (95.6%) and between the age of 20 and 40 years old (66.74%). They are excursionist (71.9%) and their ethnic profile is mainly Hispanic (89.20 %), also, they are residents of Southern California with a monthly income between $ 2,401 and $ 3,201, and above (49.6%). Lastly, the majority of respondents paid in cash for the aesthetic procedures (86.80%).

Table 7. *Sociodemographic Characteristics of Participants*

Variable	Characteristics	Frequency	%
Age	20–30	119	30.90
	31–40	138	35.84
	41–50	81	21.03
	51–60	38	9.87
	61 and above	9	2.33
Gender	Male	17	4.40
	Female	368	95.60
Type of visitor	Tourist	108	28.10
	Excursionist	277	71.90
Ethnic profile	Hispanic emigrated to the US	216	56.10
	Hispanic born in the US	127	33.10
	Asian	1	0.30
	Caucasian	38	9.90
	African American	3	0.80
Method of payment	Cash	334	86.80
	Credit or debit card	50	13.0
	Medical insurance	1	0.30
Occupation	Self-employed	31	8.10
	Employee	227	53.00
	Student	23	6.00
	Home	98	25.50
	Retired	6	0.50
Place of residence	California, US	365	94.80
	Other US states	20	5.20
Monthly income (US dollars)	$ 800 dollars and below	19	4.93
	$ 801 to $ 1600	50	12.98
	$ 1601 to $ 2400	57	14.80
	$ 2401 to $ 3200	80	20.77
	$ 3201 and above	111	28.83
	Did not declare income	68	17.66

Results of Descriptive Analysis

For the medical facilities, service and price, the means of six items were: The care offered by the clinic (Mean=4.98; SD=0.249), confidence generated

by the surgeon (Mean=4.96; SD=0.312), hospital facilities of the clinic (Mean=4.96; SD=0.276), recommendation of a friend or relative (Mean=4.95; SD=0.399), the treatment price (Mean=4.94; SD=0.291) and prestige of the clinic (Mean=4.94; SD=0.336) were evaluated as very important.

With respect to destination infrastructure and environment, four items were assessed as important: transportation provided to patients (Mean=3.87; SD=1.354), agreements with hotels (Mean=3.79; SD=1.281), agreements with a spa (Mean=3.27; SD=1.358), and tourist information (Mean=3.06; SD=0.809). The only item evaluated as less important is agreements with restaurants (Mean=2.52; SD=1.416).

In the destination image dimension, the two items assessed as important were: urban image (Mean=3.62; SD=1.360), and urban signs, traffic volume and street conditions (Mean=3.12; SD=0.857). The lowest rated item is local police reputation (Mean=2.52; SD=1.348) graded as less important (Table 8).

Table 8. *Means and Std. Deviation by Dimensions*

Items	Mean	Std. Deviation
Medical facilities, service and price	**4.95**	**.248**
Care offered by the clinic	4.98	.249
Recommendation of a friend or relative	4.95	.399
Treatment price	4.94	.291
Confidence generated by the surgeon	4.96	.312
Prestige of the clinic	4.94	.336
Hospital facilities of the clinic	4.96	.276
Destination image	**2.85**	**.725**
Urban image	3.62	1.360
Urban signs, traffic volume and street conditions	3.12	.857
Local police reputation	2.39	1.348
Destination infrastructure and environment	**3.41**	**1.01**
Agreements with restaurants	2.52	1.416
Transportation provided to their patients	3.87	1.354
Agreements with hotels	3.79	1.281
Agreements with a Spa	3.27	1.358
Tourist information	3.06	.809
Geographical and cultural proximity	**4.85**	**.373**
The location of the clinic in the city	4.89	.442
The staff speaking English	4.83	.497

Regarding the descriptive analysis of research variables, in the geographical and cultural proximity, the location of the clinic had a mean

of 4.89 (SD=0.442) and staff speaking English (Mean=4.83; SD=0.497) were evaluated as very important.

Regression Analysis

Multiple regression analysis was used to assess the relationship between the four dimensions, and the aesthetic tourism patients' satisfaction. The significance of each indicator from the multiple linear regression (Table 9), indicates that two out of the four dimensions have a statistically significant relationship with aesthetic tourism patients' satisfaction.

Table 9. *Results of Regression Analysis*

Input factors	R²	Adjusted R²	F	β	t	p
Medical facilities, service, and price	.253	.245	32.163	.380*	8.129	.000
Destination infrastructure and environment				.078*	1.661	.097
Destination image				.022	.487	.626
Geographical and cultural proximity				.196	4.019	.000

*p<0.001

Taking into account the R² (0.253) result, it is affirmed that 25.3% of the aesthetic tourism patients' satisfaction is explained by the dimensions used in this study. According to the beta and significance coefficients, the medical facilities, service and price dimension (β=0.380) (p=0.000), had a positive statistical relationship with the aesthetic tourism satisfaction, and it is the most important dimension influencing this variable. Similarly, the cultural and geographical proximity dimension (β=0.196) (p= 0.000), is the second dimension that had a significant statistical relationship with satisfaction.

Moreover, the destination infrastructure and environment dimension (p=0.097) had no statistical relationship with aesthetic tourist satisfaction. Regarding destination image dimension (Sig. =0.626), it was corroborated that it had no statistically significant relationship with American aesthetic patients´ satisfaction.

DISCUSSION AND CONCLUSION

With the results presented above, it was observed that only two out of the four dimensions had positive statistical relationship with American patients´ satisfaction: 1) Medical facilities, service and price, and 2) Geographical and cultural proximity.

Therefore, the hypothesis H1 was approved because the medical facilities, service and price dimension was related to the aesthetic tourism satisfaction. On the other hand, H2 and H3 were rejected because destination infrastructure and environment, and destination image were not statistically related to the aesthetic tourist satisfaction. Lastly, the hypothesis H4 was approved due to the statistical relationship found between the geographical and cultural proximity and the tourist' satisfaction. The medical facilities, service and price dimension is the most important, because it has the greater effect in the American aesthetic tourism' satisfaction, while the geographical and cultural proximity dimension occupied the second place. It was established that the first and most important dimension is the medical facilities, service and price.

These findings are in accordance with the results of Lazar and Deneuve (2013) and Footman et al. (2014), who affirmed that the choice of a cosmetic surgeon is related to the doctor-patient relationship, hence the importance of the surgeon who understands their wishes and aesthetic goals. The findings also coincide with Fetscherin and Stephano (2016) who argued the importance of professional reputation of doctors, surgeons and clinics; in the same sense, the recommendation of a friend or relative correspond with the finding of Lazar and Deneuve (2013) and Fetscherin and Stephano (2016).

Furthermore, the results are consistent with the findings of Han and Hyun (2015) and Park et al. (2017) who reported that aesthetic patients are looking for appropriate prices and they are aware of the cost. For these reasons, they are willing to pay prices related to aesthetic procedure quality and results. Also, this conclusion is in accordance with Sayfullaah et al. (2013), Footman et al. (2014), Fetscherin and Stephano (2016) and John and Larke (2016) due to their statement that patients are looking for cheap or low prices.

However, the results do not support the arguments of Pollard (2012), Fetscherin and Stefano (2016) and John and Larke (2016), who affirmed that the destination infrastructure and environment, as well as

the destination image are factors that are related to the decision of going for surgery abroad and to the aesthetic tourism satisfaction.

Lee and Kim (2015), Alsarayreh et al. (2017) and Rao and Choudhury (2017) concluded that the geographical and cultural proximity, the location of the clinic in the city, combined with the aspect of the staff proficiency to speak their language became important aspects that are related to the satisfaction of the health tourism. Such evidence was found in the border region of Tijuana and San Diego, as the factor for the American aesthetic tourism' satisfaction. In these sense, tourists are willing to go under cosmetic surgery abroad but expecting to be assisted in their language by the surgeon, and medical staff.

The practical implications obtained as a result of this investigation, which could be taken into account by the owners or administrators of cosmetic surgery clinics of Southern California, refer to the possibility of evaluating the profitability of this segment that requires these aesthetic procedures. Meanwhile, in the case of Tijuana clinics, their owners, and administrator must strengthen and consolidate the actions and strategies that are currently being developed, and which are directly related to patients' satisfaction levels in this segment.

If Southern California clinics' owners and managers decide to attract and retain this segment, they should consider that the majority are women of Hispanic origin, either emigrated or born in the United States, low income, aged between 20 and 40 years, who generally pay their procedures in cash out of their pockets because aesthetic procedures are not covered by insurance companies. These findings are in accordance with Sayfullaah et al. (2013) and Bustamante (2014). There is a North American segment which is interested in the aesthetic tourism in Tijuana, however, it is not a wealthy segment and their triggers to destination choice and satisfaction are medical facilities quality, service quality and low prices.

The main actions that should be implemented by owners and administrators of US aesthetic clinics are emphasized in the reputation of hospital/clinic; the professionalism of doctors, surgeons, and medical staff; as well as, improved relationship with patients, in order to gain confidence, which implies that the surgeon, and his staff (receptionists, nurses, etc.) must communicate in the language that the patient requires (English or Spanish). Additionally, the price strategy should not be understood as a reduction in the price of aesthetic procedures, but to implement a deferred payment plan that covers the total cost before the

procedure is done, since it is the most used payment method in the clinics of Tijuana.

For their part, the owners and administrators of Tijuana aesthetic clinics, who wish to maintain and increase the volume of patients in this segment, should consolidate the actions and strategies that have been successful to inspire confidence among their patients. In addition to speaking English, they must provide information about their medical certifications, show previous surgeries results and provide truthful explanation of the pre, during and post-surgical process, as well as the time and conditions of recovery. Likewise, they must maintain the prices as one of their main competitive advantages, without reaching the price levels of the same surgical procedures of the Southern California clinics.

REFERENCES

Alsarayreh, M., Mahasneh, M., & Al Nawaiseh, K. (2017). A study of the determinants influencing customer satisfaction in the medical tourism industry in Jordan. *International Review of Management and Marketing*, *7*(3), 349-356.

Arriaga, K., Cadena, E., Girón, J., & Ortiz, R. (2013). Características y hábitos de consumo de los turistas que utilizan servicios médicos odontológicos en la ciudad de Tijuana, Baja California [Characteristics and consumption habits of tourists who use dental services in the city of Tijuana, Baja California]. Trabajo de Investigación inédito. Tijuana, México: Facultad de Turismo y Mercadotecnia, UABC.

Bolis, M. (2001). El turismo de salud en América Latina y el Caribe de habla inglesa [Health Tourism of English-speaking patients in Latin America and the Caribbean]. II Congreso Latinoamericano de Turismo y Salud. *TURSALUD* (1), 121-134.

Bustamante, A. (2014). Globalization and medical tourism: The North American experience. *International Journal of Health Policy and Management*, *3*(1), 47–49. DOI 10.15171/ijhpm.2014.57

Crooks, V., Kingsbury, P., Snyder, J., & Johnston, R. (2010). What is known about the effects of medical tourism in destination and departure countries? A scoping review. *International Journal for Equity and Health*, 9(24), 1-13.

Fetscherin, M., & Stephano, R. (2016). The medical tourism index: Scale development and validation. *Tourism Management*, *52*, 539-556.

Footman, K., Knai, C., Baeten, R., Ketevan, G., & McKee, M. (2014). *Cross Border Health Care in Europe*. Copenhagen: WHO Regional Office for Europe and European Observatory on Health Systems and Policies; policy 14.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, *18*, 39-50.

Gill, H., & Singh, N. (2011). Exploring the factors that affect the choice of destination for medical tourism. Journal of Service Science and Management, 4:315- 324, doi:10.4236/jssm.2011

Guiry, M., & Vequist, D. (2014). South Korea's medical tourism destination brand personality and the influence of personal values. *Asia Pacific Journal of Tourism Research*, 20:5, 563-584, doi: 10.1080/10941665.2014.904804

Han, H., & Hyun, S. (2015). Customer retention in the medical tourism industry: Impact of quality, satisfaction, trust, and price reasonableness. *Tourism Management*. *46*, 20-29. https://doi.org/10.1016/j.tourman.2014.06.003

Hair, J. F., Black, W. C., Babin, B. J., & Tatham, R. L. (2006). *Multivariate data analysis* (6th edition). Englewood Cliff, NJ: Prentice-Hall.

John, S. P., & Larke, R. (2016). An analysis of push and pull motivators investigated in medical tourism research published from 2000 to 2016. *Tourism Review International*, *20*(2), 73–90.

Lazar, C., & Deneuve, S. (2013). Patient's perception of cosmetic surgery at a time of globalization, medical consumerism, and mass media culture: A French experience. *Aesthetic Surgery Journal*, *33*(6), 878-885. Doi: 1177/1090820X13493637

Lee, J., & Kim, H. (2015). Success factors of health tourism: cases of Asian tourism cities. *International Journal of Tourism Cities*, *1*(3), 216-233.

Livingston, A. (2015). Plastic paradise: The trends and effects of cosmetic surgery tourism in economically growing countries. *The Cohen Journal*, *2*(1), Article Available at: http://digitalcommons.library.umaine.edu/tcj/vol2/iss1/2.

Mexico Union Congress (2003). Federal Law to Prevent and Eliminate Discrimination. Official Journal of the Federation. Retrieved 18 March, 2016, from http://www.diputados.gob.mx/LeyesBiblio/pdf/262_011216.pdf

Newerli-Guz, J., Rybowska, A., & Sroczyński, R. (2014). Luksusowe usługi kosmetyczne i medycyny estetycznej w opinii konsumentów [Luxurious cosmetic and aesthetic medicine services in consumers' opinion]. *Handel Wewnętrzny*, *4*(351), 251-262.

Nunnally, J. (1978). *Psychometric Theory*. New York: Mc Graw Hill.

OECD (2010). *Health Accounts Experts, Progress Report*. Trade in Health Care Goods and Services Under the System of Health Accounts. Paris: OECD.

Panfiluk, E. (2016). Aesthetic medicine tourism – nature and scope of the services. *Ekonomiai Zarzadzanie*, *8*(1), 71–79. doi:10.1515/emj-2016-0008

Panfiluk, E., Panasiuk, A., & Szymańska, E. (2017). Identification of the flow of innovations in tourism related to aesthetic medicine. *International Journal of Management and Economic*, *53*(3), 107–119. https://doi.org/10.1515/ijme-2017-0021

Park, J., Ahn, J., & Yoo, W. (2017). The effects of price and health consciousness and satisfaction on the medical tourism experience. *Journal of Healthcare Management*, *62*(6), 405-417.

Pollard, K. (2012). How can we measure a destination's attractiveness? *International Medical Travel Journal*. Retrieved 20 January, 2016, from https://www.imtj.com/blog/how-can-we-measure-destinations-attractiveness/

Rao, V., & Choudhury, R. (2017). A study of the factors influencing customer satisfaction in medical tourism in India. *International Journal of Business and General Management*, *6*(5), 7-22.

Rea, L., & Parker, R., (1991). *Survey Research: A practical guide*. San Diego: Collegiate Publication Service.

Sayfullaah, A., Huiyu, Z., & Shuai, C. (2013). *MTA Medical Tourism Survey Report*. Washington, DC, Medical Tourism Association and George Washington University.

Secretariat of Tourism of Baja California (2013). *Update of the medical and health tourist profile and its impact on the economy of Baja California. Government of Baja California.*

Retrieved 28 January, 2016, from https://descubrebajacalifornia.com/files/estudios/Turismo-medico-y-de-salud-y-su-Impacto-Economico-en-BC2013.pdf

SRE (2014). Información sobre visas y requisitos de entrada [Information about visas and entry requirements]. Ley Federal de Derechos, Artículo 22, Fracción III, Inciso D.

World Trade Organization (2014). *Medical and Wellness Tourism: Lessons from Asia*. Switzerland: World Trade Organization and the United Nations.

WTO (1995). *Conceptos, definiciones y clasificaciones de las estadísticas de turismo* [Concepts, definitions and classifications of tourism statistics]. Manual técnico 1st ed. Organización Mundial del Turismo, Madrid.

THE EFFECT OF DYNAMIC PRICING ON HOLIDAY PURCHASE INTENTIONS: MODERATED MEDIATION ROLE OF PERCEIVED RISK

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ABSTRACT

This study targets to measure the effect of dynamic pricing offers on the purchase intentions of consumers for a winter holiday by taking into consideration a moderated mediator role of perceived risk on this effect. The study employs an experimental design with discount level and timing of the offer (offer recency) as the manipulated conditions. The findings confirm that discount offers have positive direct effect and perceived risk has a negative direct effect on purchase intentions. The levels of discount and perceived risk, independently from each other, determine the level of purchase intentions. On the other hand, the effect of discount offers on purchase intentions is mediated by the perceived risk level of consumers. Finally, the timing of the discount offers moderates the effect of perceived risk on purchase intentions and eventually generates a moderated mediation role for perceived risk on the influence of discount offers on purchase intentions. Based on the findings of this study, some practical implications are provided.

INTRODUCTION

Today, consumers benefit from the convenience of having many alternatives in their hand to use in their evaluations of products or services offered by the companies. This is the natural result of increasing number of companies competing in the market. Thanks to the adoption of Internet as a medium of both communication and transaction, consumers

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can access the information on many alternatives at once, which in turn, helps them to increase the efficiency of their decision-making process. Ease of access to the information about all possible alternatives in this highly competitive market environment make consumers more demanding and selective in their product or service choices. The reflection of this new dynamic to the companies is twofold.

First, companies have difficulty to convince customers in this intensively competitive market. Among the alternatives they evaluate, when they have similar offers, price level becomes one of the components which consumers are generally sensitive about. In order to transform this sensitivity into their advantage, marketers try to increase the value perception of consumers by approaching them with several cues such as sales promotions in a price discount format (Taylor, 2001). Companies use this tool to generate positive consumer attitudes towards their brand and convince target consumer to try or purchase their products or services (Yi & Yoo, 2011). Thus, price discounts are one way how companies cope with the difficulty of acquiring new customers. As a member of marketing communication mix, sales promotions and especially price discounts constitute a considerable share of the marketing budgets (Teng, 2009). On the other hand, when we consider that many sales promotion strategies do not provide the desired effectiveness, due to the accountability issue, markets need to understand very well the underlying dynamics in order to make better decisions (Grewal et al., 1998). Thus, marketers need to understand whether the price discount offers will shape consumer attitudes and behavior in a desired way.

The second difficulty that the companies face is related to managing the demand in an optimum way to prevent overstock, idle capacity, unbalanced cash flows and consequently to maximize the revenue and profit. Traditional pricing strategies such as uniform, competitive and cost-plus pricing strategies, have difficulty in responding effectively to changing market demand conditions (Sahay, 2007). Under uniform prices companies fix the price for a period and do not change it till the end of the period regardless of changing market conditions (Farahmand & Chatterjee, 2008). Competitive pricing strategy requires companies setting their prices based on their peer group competitors (Enz et al., 2009). Finally, under cost-plus pricing strategy companies apply a profit margin on the top of the cost of the product to set the price without taking into consideration other market-based factors (Sahay, 2007). Companies react to changing market conditions by implementing dynamic pricing strategies which involves the determination of different prices to the same

products considering the change in their status (Liu et al., 2008). Therefore, using dynamic pricing, companies adjust their prices in response to changing marketplace conditions (Dimicco et al., 2003). As a method of optimizing the price, models of dynamic pricing strategies incorporate demand elasticities, forecasted demand and competitor prices to decide on optimal prices and eventually maximize the revenue (Cross et al., 2009). Thus, dynamic pricing helps companies to sell their products at the right time and at the right price to their target consumers (Kimes, 2002). The applications of dynamic pricing are dependent on the product categories. For example, in perishable product categories, as the product bear the risk of being outdated and the demand is conditioned on shelf life, dynamic pricing works based on aging factor (Adenso-Diaz et al., 2017). Thus, prices are offered on the decreasing trend towards the end of the shelf life. On the other hand, lodging industry is one of the playgrounds where the employment of dynamic pricing strategies is fully justified due to the several reasons. First, the market demand level in the industry is not stable due to the seasonal as well as economic effects. Thus, continuous adjustment of prices to changing market conditions is required by discounting the rates to level the occupancy rates in low demand times or to steal the market share in normal conditions (Enz et al., 2009). Second, as the industry have some availability issue with perishable assets such as rooms, occupancy rates should be maximized by managing the demand (Abrate et al., 2012). Due to these reasons, dynamic pricing strategies are widely used in the lodging industry for the purposes of revenue management based on the availability and demand factors (Bayoumi et al., 2013). In the practices of this industry, the price may follow an increasing or decreasing trend depending on the availability of rooms as it diminishes or remains the same throughout the period. Thus, hotel reservations made earlier may benefit from discounted prices since there are more available rooms at the time of early reservation compared to the times closer to the planned check-in date. This inter-temporal effect on price offerings is an important feature of dynamic pricing offerings in the lodging industry.

Due to the importance of the dynamic pricing subject for reaching at successful bottom line results, marketers need to understand the underlying dynamics of how consumers react to dynamic pricing practices and be able to set the optimum price levels for different temporal distance and demand level conditions. There are several studies which focused on dynamic pricing concept. These studies can be classified into two broad categories including studies which generated dynamic pricing models

(Feng & Xiao, 2000; Gallego & Ryzin, 1994; Zhao & Zheng, 2000) and those studies which investigate the effects of dynamic pricing applications on different aspects of consumer behavior (Haws & Bearden, 2006; Levin et al., 2009; Rohani, 2012). Although there are vast number of studies which focused on the effect of dynamic pricing on consumer behavior, to the best of our knowledge, there is a lack of studies which mainly focus on the effects of price discounts on purchase intentions in a dynamic pricing context taking into consideration the role of consumers' perceived risk and the timing of the offer. Perceived risk is a broad concept which was the subject of many studies in the literature. Due to the service-based nature of the lodging industry, the uncertainty about the consequences of a purchase decision is high and in general, when the uncertainty level increases, also the perceived risk level increases (Chakrabarti & Baisya, 2009). This makes the perceived risk an important feature of the decision-making process in this industry (Roehl & Fesenmaier, 1992). Combining the inter-temporal nature of dynamic pricing offers and the importance of perceived risk in consumer decision process in a service-based industry, the relationship between inter-temporal price offers in a discount format, the perceived risk level of consumers associated with the purchase situation and their purchase intentions in a dynamic pricing context needs to be investigated.

In this perspective, this study targets to fill a gap in the marketing literature by measuring the effects of dynamic pricing offers on the purchase intentions taking into consideration the roles of perceived risk and inter temporal effects of offer timing in the hospitality context. It is proposed that offering discounts will generate higher levels of purchase intentions and this effect will be mediated by the perceived risk of consumers related to the purchase of international holiday package. It is also proposed that the timing of the offer will have a moderating role on the effect of perceived risk on purchase intentions. This will eventually lead to the moderated mediation role of perceived risk on the effect of discount offering on purchase intentions.

DYNAMIC PRICING AND PURCHASE INTENTIONS

The advance in technologies and especially the rapid diffusion of internet provides several opportunities for companies and consumers in their interactions. Companies benefit from the availability of these advanced and cost-effective technologies when they set prices for the goods or services they offer. Due to the lack of information on demand information,

large amount of investment required setting the technological infrastructure including hardware and software, and the high transaction costs of changing the prices, companies were applying static pricing and were forced to fix their prices for a long period of time (Elmaghraby & Keskinocak, 2003). Today, the new technologies support companies to set their prices in a dynamic way by taking into consideration different customer needs, characteristics, and the availability of goods or services. They can acquire these skills of yield management and be able to set the right prices dynamically in a way that they offer the right product, to the right consumer, at the right time with the right prices (Kimes, 2002). Therefore, dynamic pricing considers the time factor in pricing and it is related with the pricing of a product overtime (Chenavaz et al., 2011). In other words, it is an inter-temporal discrimination of price by taking into consideration the uncertainty of future demand (Dasu & Tong, 2010).

Dynamic pricing, as a concept which attracted considerable attention of researchers from several disciplines including marketing, economics and operations, was the subject of many studies in the literature (Dong et al., 2008). However, with full respect to all contributions made by the previous studies, the focus of this one will be on the review of underlying factors influencing dynamic pricing decisions of companies, forms of dynamic pricing and its effects on consumer behavior in the context of finite inventories, such as the offers in tourism sector.

Tourism sector is a dynamic system having distinguishing characteristics (Croes & Semrad, 2012). Some of these unique characteristics are fixed and perishable room supply, uncertainty in demand and high operational fixed costs which collectively lead to continuous price adjustments (Corgel, 2004). The microeconomic theory, which presents the relationship between price and demand based on the downward sloping demand curve, suggests that when price decreases, the quantity demanded increases in cases of other factors hold constant (Enz et al., 2004). Taking the dynamic structure of the industry and dynamics of price and demand relations presented by the microeconomic theory into the dynamic pricing practices, we can conclude that hotel management confronts with both an inelastic room supply in a short-run and a downward sloping demand curve due to the seasonality effects which make them to set up some expectations about the rates that can be applied (Bull, 1997). However, these expected rates change overtime due to the different levels of demand leading to a continuous price adjustment and consequent fluctuations, which at the end bring the equilibrium by

changing the demand patterns (Croes & Semrad, 2012). Therefore, companies in the tourism sector often apply dynamic pricing strategies for the purpose of demand and revenue management as they have finite inventories. The availability of online tools supported the wide range adoption of dynamic pricing in this industry since they facilitate real time adjustment of prices based on the room availability, inventory level and competitive prices (Viglia et al., 2016).

Dynamic pricing decisions are generally influenced by three factors, namely learning, diffusion and network effects, and these factors individually and collectively determine the actual as well as inter-temporal pricing decisions of the companies (Chenavaz et al., 2011). Thus, the learning effect, a product of experience which leads to increasing productivity (Arrow, 1962), diffusion effect, explained as the increasing probability of sales due to the increasing penetration into the market (Bass, 1969) and finally network effects, explained as the dependence of the value of a product for the consumer on the number of users of that product (Economides, 1996) influence the dynamic pricing decisions of companies. Depending on the characteristics of the market whether the offers are replenishment or not, dependent to demand or not and whether customers are myopic or strategic, companies face different versions of dynamic pricing cases (Elmaghraby & Keskinocak, 2003). As a result of the interaction between the above-mentioned factors and characteristics, companies implement various types of inter-temporal pricing strategies (Jorgensen, 1986). Some companies implement a skimming pricing policy dynamically which consists of applying higher prices in the beginning and then decreasing the prices gradually. Products which are sensitive to network effects may be regarded as important determinants of this policy as they provide the opportunity of benefiting from the inter-temporal surplus of consumers (Mahajan et al., 1990). On the other hand, some companies implement a penetration pricing strategy dynamically, which consists of applying lower prices in the beginning and then increasing the prices gradually as the market penetration or sales reach a satisfactory level. This strategy works well in cases of new introductions to the market and when early adopters have strong influence on follower consumers (Chenavaz et al., 2011).

There are several studies which developed models for explaining the dynamics of the relationship between price, time and demand level. Gallego and Ryzin (1994) proposed a model estimating the optimum pricing policy as a function of the number of rooms available and the length of time horizon. Similarly, Badinelli (2000) focused on small hotels

and proposed a model based on the vacancies and time factors. The findings of the above-mentioned studies confirm the importance of room availability in defining the dynamic pricing strategies. Generally, with finite inventories, tourism companies implement a dynamic penetration pricing strategy involving the setting of prices lower when there is high availability of rooms and increase the prices as the availability shrinks.

From the consumers' side, as it is confirmed by the study of Abrate et al. (2012), customers who did not book earlier, in a case of high demand, they will have limited room choices and they will be convinced to pay higher amounts. According to Zhao and Zheng (2000), the optimal price for a given inventory level decreases over time in cases of decrease in the willingness of consumers to pay a premium. They conclude that this is not the case in the travel services. Thus, when the waiting costs are high for the customers, they will prefer to purchase upfront since they are risk averse and they decide when to buy the products (Su, 2007; Liu & Ryzin, 2008). One way of generating waiting costs for the customers in order to boost early reservations, is to implement a dynamic penetration price strategy; start with low prices and raise the prices gradually depending on the occupancy rate. Discounted prices are effective tools for controlling the occupancy rate with early reservations (Koide & Ishii, 2005). In this perspective, we can state that the price level and occupancy rate information are the two important factors which drive the demand for the rooms (Qu, et al., 2002).

Previous research conducted on the effect of discounted prices on purchase intentions and sales confirm the significant and positive effects in different context and situations. Kopalle et al. (1999) reported the significant and positive effect of sales promotions in the short-terms sales and concluded that sales promotions can be implemented more often in cases where consumers are price sensitive. As one of the types of sales promotions, discounted prices are found to have positive effects directly on purchase intentions (Santini et al., 2015; Chao & Liao, 2016). Additionally, Grewal et al. (1998) reported the indirect positive effect of discounted prices on purchase intentions through perceived value of the offering. Enz et al. (2004) compared the effect of discounted offers on occupancy rates and financial performance and concluded that discounted offers generate higher occupancy rates (short-term effect) while decreasing the revenue performance vis-a-vis competitors in the market.

In the light of previous studies and the associated findings on the effects of dynamic pricing and price discounts on consumer behavior, we propose the following hypotheses:

H1: Discount offers will have a direct positive effect on purchase intentions.

H2: Increasing levels of discounts will lead to increasing levels of purchase intentions.

DYNAMIC PRICING, PERCEIVED RISK AND PURCHASE INTENTIONS

Perceived risk is an important factor of consumer decision making process since the consumers' perception about the type and degree of risk involved in a situation affects their behavior (Cox & Rich, 1964). The concept is defined as the subjective probability of loss derived from unexpected and uncertain consequences of a purchase situation (Bauer, 1960). Due to its importance in consumer decision making process, it was the subject of many studies since several decades (Mitchell, 1999).

Perceived risk is a multidimensional construct composed of two components including uncertainty about and consequences of an action (Lin & Fang, 2006). Thus, when the uncertainty about the consequences of an action is high in a purchase situation, perceived risk becomes also higher (Hong & Cha, 2013). Taking into consideration the intangibility dimension of services such as hospitality, perceived risk is more intense since consumers do not have the opportunity to test the performance before purchasing it (Mitra et al., 1999). Previous studies in the literature identified six main dimensions of perceived risk construct including performance risk, financial risk, physical risk, convenience risk, social risk and psychological risk, which may derive as the outcomes of a purchasing action (Murray, 1991). This study focused on the moderating effect of performance risk dimension on the influence of discount offers on purchased intentions.

Consumers generally try to maximize the value they receive when they evaluate product and service alternatives and prefer the goods or services with higher perceived value (Dodds & Monroe, 1985). Value is defined as the difference between what you get (benefits) and what you give (costs) as a result of a purchasing situation and consumers make the comparison of these benefits and costs before making their final decisions

(Heskett et al., 1994). Previous studies confirm the positive effect of perceived value on purchase intentions (Chang & Wildt, 1994). The relationship between the discount offers and perceived risk can be explained based on mental accounting theory which suggests that consumers make their decisions based on the total utility generated by the transaction (Kim et al., 2005). Taking into consideration that the price of the product or service is a part of the total perceived utility, when there is a discount on it, this situation leads to the increase on the total perceived value of the transaction by maximizing the financial benefits and, at the same time, reducing the perceived risk by decreasing the amount of possible losses. Previous studies in the literature confirm the negative effect of sales promotions such as discounts on the perceived risk level of consumers (Garretson & Clow, 1999). In the light of the theoretical background and previous findings, the following hypotheses are proposed:

H3: Discount offers will negatively affect the perceived risk of consumers.

H4: Increasing level of discount offers will lead to decreasing levels of perceived risk.

As consumers perceive some level of risk in almost any situation depending on the context and situation they are involved in, this level of risk is an important determinant of the intention to purchase, which is in turn an indicator of the actual purchase decision (Tan, 1999). Previous studies in the literature confirm that there is an inverse relationship between the perceived risk level and purchase intentions of consumers in such a way that when perceived risk level increases, this leads to decreasing levels of purchase intentions (Bhukya & Singh, 2015; Hashim et al., 2017; Xie, 2017; Wood & Scheer, 1996). In the context of hospitality and tourism, the same negative effect of perceived risk on purchase intentions is also confirmed by the previous studies in the literature (Mitchell & Vassos, 1997; Kim et al., 2005). In the light of the existing findings in the literature, it is believed that perceived risk level of consumers will have a direct and negative effect on purchase intentions. Moreover, this negative direct effect of perceived risk is also expected to have a mediating role on the positive effects of discount offers on purchase intentions. In this perspective, the following hypotheses are proposed:

H5: Perceived risk level will negatively affect purchase intentions.

H6: The effect of discount offers on purchase intentions will be mediated by the perceived risk level.

H7: Increasing levels of discount offers will indirectly lead to increasing levels of purchase intentions through perceived risk.

PERCEIVED RISK, OFFER RECENCY AND PURCHASE INTENTIONS

Perceived risk represents the subjective evaluations of a possible loss in a purchase situation and this directly influences the purchase intentions of consumers (Sweeney et al., 1999; Kim et al., 2005). At the same time, this perception about the risk inherent in a situation is not static and varies over time (Doss et al., 2006). Thus, there is a time effect on the perceived risk which leads consumers to make inter temporal preferences. These inter temporal preferences affect consumers' behavior and are one of the determinants of their purchase decisions (Bartels & Urminsky, 2015; Shapiro, 2005).

The literature related with the dynamics of inter temporal decision making has grown extensively in the last 25 years (Zauberman & Urminsky, 2016). The algorithms of all decision-making models generated in those studies are defined by their temporal discounting function which can be defined as the comparison between the subjective values generated by delayed and immediate rewards for the consumers (Namboodiri et al., 2014). Thus, the timing of the reward or transaction directly relates with the perceived value of the person involved in the situation. When consumers perceive the duration longer, they tend to discount the outcomes more steeply than those durations which are perceived shorter (Kim & Zauberman, 2009). This eventually leads to the depreciation of perceived value in cases of longer waiting periods to get the benefits of the transaction.

When we consider the situation in the tourism context, subjective value of purchasing a holiday earlier is expected to be lower compared to purchasing it on spot due to the discounting of expected value. Thus, the timing of the offer is expected to moderate the relationship between the perceived risk and purchase intentions of consumers by altering the perception of value expected as a result of the purchasing the holiday. Moreover, based on the theoretical background as well as findings in the previous studies mentioned above, this situation is expected to result in a moderated mediation role of perceived risk on the effect of discount offers on purchase intentions of consumers.

In the light of the theoretical background and the findings in the literature we propose the following hypothesis:

H8: Offer recency will moderate the relationship between perceived risk and purchase intentions.

H9: Discount offers will have a conditional indirect effect on purchase intentions through the moderated mediation of perceived risk.

RESEARCH METHODOLOGY

Research design

This study has implemented an experimental design targeting to measure the effect of different discount levels offered on the purchase intentions of consumers, by taking into consideration the moderated mediation role of perceived risk. The study included two manipulated factors, namely discount level and timing of the offer (offer recency). The subjects were chosen among the citizens of Istanbul city who regularly go to international ski resorts each year with their families. Total number of questionnaires collected was 675.

Participants were divided into three main groups with equal number of subjects in each group. All groups were presented a scenario describing the case which they were about to decide to purchase a one-week ski resort package in Austria for their regular winter holiday. The picture of the hotel, one-week package details and offered price were also included in the scenario. The ski resort and other information employed in the scenario were hypothetical and developed for the purpose of this study. Thus, there were no prior knowledge of consumers about the ski hotel. The scenario text was also included a warning about the limited number of rooms left. Each group was presented with different discount level conditions. First group was presented with no discount ($Discount_{No}$) at all, just the regular price. Second group was presented with the regular price and 15% discount ($Discount_{Mid}$) applied to it. Finally, the third group was presented with the regular price and 30% discount ($Discount_{High}$) applied.

Each experiment group with different discount conditions was further divided into three sub-groups, with equal number of subjects for the introduction of the second manipulation factor- the offer recency. In each discount condition scenario, subjects were presented with additional

information regarding the time left for the holiday trip. In the first discount scenario (Discount$_{No}$), three sub-groups generated were presented with three different offer recency conditions. The first sub-group was presented a case where the winter holiday trip was scheduled to start one week after the purchase (Offer$_{Spot}$). Second sub-group was presented a case where the winter holiday was about to start after three months following the purchase transaction (Offer$_{Mid-Term}$). Finally, third sub-group was presented a case where the winter holiday was about to start after six months following the purchase transaction (Offer$_{Early\ Bird}$). The same sub-groups of offer recency condition were created and applied for the remaining two groups of discount conditions.

Following the introduction of the scenarios containing different discount conditions and the offer recency sub-conditions under each discount conditions, subjects were presented with the statements measuring their perceived risk about the purchasing situation as well as their purchasing intentions. Table 1 summarizes the details of the experimental design applied in this study.

Table 1. *Experimental Design*

Group	Discount Condition	Rate (%)	Sub-Group	Offer Recency	Time Left
0	Discount$_{No}$	0%	0.1	Offer$_{Spot}$	1 Week
			0.2	Offer$_{Mid-Term}$	3 Months
			0.3	Offer$_{Early-Bird}$	6 Months
1	Discount$_{Mid}$	15%	1.1	Offer$_{Spot}$	1 Week
			1.2	Offer$_{Mid-Term}$	3 Months
			1.3	Offer$_{Early-Bird}$	6 Months
2	Discount$_{High}$	30%	2.1	Offer$_{Spot}$	1 Week
			2.2	Offer$_{Mid-Term}$	3 Months
			2.3	Offer$_{Early-Bird}$	6 Months

Operationalization of variables

Perceived risk and purchase intentions scales were borrowed from the corresponding literature and necessary adjustments were made to these scales for the purpose of this study. Perceived risk scale was borrowed from the studies of Campbell and Goodstein (2001) and Noseworth and Trudel (2011). This four items nine points semantic differential scale was developed to measure a person's overall perceived risk regarding a purchase situation. The reliabilities reported for the scale were between 0.91 and 0.79 in these two studies, respectively. The scale employed in the study was adjusted to express the perceived risk as a function of offer period and converted into five points.

Table 2. *Perceived Risk and Purchase Intention Scales*

Perceived Risk		
How do you consider the risk of purchasing the holiday package from this international ski resort?		
Not At All Risky	(…)……………(…)………………(…)……………(…)……………(…)	Extremely Risky
Not At All Concerned	(…)……………(…)………………(…)……………(…)……………(…)	Highly Concerned
Very Unimportant	(…)……………(…)………………(…)……………(…)……………(…)	Very Important
Not At All Worried	(…)……………(…)………………(…)……………(…)……………(…)	Very Worried
Purchase Intention		
	How likely are you to buy the ski resort holiday package on offer?	
Highly Unlikely	(…)……………(…)………………(…)……………(…)……………(…)	Highly Likely
	How probable is it that you will purchase the product on offer?	
Highly Improbable	(…)……………(…)………………(…)……………(…)……………(…)	Highly Probable
	How certain is that you will purchase this product?	
Highly Uncertain	(…)……………(…)………………(…)……………(…)……………(…)	Highly Certain
	What chance is there that you will buy this product?	
No Chance At All	(…)……………(…)………………(…)……………(…)……………(…)	Very Good Chance

Purchase intentions scale was borrowed from the studies of Chandran and Morwitz (2005). This semantic differential scale with four items and seven points was developed to measure a person's stated likelihood of buying a product that is being offered in a purchase situation. The authors reported a reliability score of 0.89 in their study. The scale employed in the study was adjusted to express the purchase

intention of consumers regarding the discount level offered and it was converted into five points. The statements and scale items for perceived risk and purchased intentions are summarized in Table 2.

The modifications which were made to the borrowed scales led to the need of confirming the reliability of each scale employed. The reliabilities of the scales were tested by conducting a principal component analysis. The results of the principal component analysis confirmed the internal consistencies of all scales employed in the study. The analysis resulted in the extraction of two components and high level of internal reliabilities for each construct employed. The results of the principal component analysis are summarized in Table 3.

Table 3. *Results of the Principal Component Analysis*

Component	Construct	Coverage	Items	Loadings	α
1	Perceived Risk	Measures consumers' overall perceived risk with regard to a purchase situation.	4	0.467	0.978
2	Purchase Intentions	Measures consumers' stated likelihood of buying a particular product that is being offered in a purchase situation.	4	0.311	0.796

Analysis

Due to its common employment in studies which measure moderation, mediation and moderated mediation effects, PROCESS SPSS macro was used in order to test the moderated mediation model and associated hypothesis related to the relative total, direct and indirect effects of discount levels on purchase intentions through perceived risk (mediation effect) and relative conditional indirect effects of discount levels on purchase intentions through the moderated mediator role of perceived risk by offer recency (moderated mediation effect).

PROCESS is a modeling tool generated by Andrew F. Hayes to be used in SPSS and SAS statistical package programs. It is based on the observed variable OLS and logistic regression path analysis and this tool is widely used in several disciplines including social and health sciences. PROCESS estimates the direct and indirect effects of independent variables including single and multiple mediator models (parallel and

serial), interactions in moderation models and conditional indirect effects in moderated mediation models (Hayes, 2018). It provides the asymmetric bootstrap confidence interval (CI) estimates for the measurement of both relative indirect and relative conditional indirect effects (Hayes & Preacher, 2013).

FINDINGS

Total, Direct and Indirect Effects of Discount Offer on Purchase Intentions

The results of the analysis for measuring the total, direct and indirect effects of discount level on consumer purchase intentions, led to the generation of three estimation models summarized in Table 4.

Table 4. *Total, Direct and Indirect Effects of Discount on Purchase Intentions*

Antecedents	Model 1			Model 2			Model 3		
	Purchase Intention (Y)			Perceived Risk (M)			Purchase Intention (Y)		
	Coefficient	SE	p	Coefficient	SE	p	Coefficient	SE	p
Discount$_{Mid}$	c_1 0.822	0.065	<.001	a_1 -1.000	0.551	<.001	c^1_1 0.491	0.076	<.001
Discount$_{High}$	c_2 1.834	0.064	<.001	a_2 -2.173	0.550	<.001	c^1_2 1.114	0.113	<.001
Perceived Risk (M)	-------	-------	-------	-------	-------	-------	b - 0.331	0.043	<.001
Constant	I_y 2.453	0.046	<.001	I_m 4.067	0.389	<.001	I_y 3.801	0.182	<.001
	R^2 = .5473			R^2 = .6993			R^2 = .5835		
	$F(2,673) = 407, p<.001$			$F(2,673) = 782, p<.001$			$F(3,672) = 314, p<.001$		

Model 1 estimates the total relative effect of different discount levels on the purchase intentions of consumers. This model shows the sum of direct and indirect effects of discount offers on purchase intentions. Model 2 estimates the direct effect of discount offers on perceived risk. Finally, Model 3 estimates the direct effects of both discount offers and perceived risk on purchase intentions.

Starting with the direct effects of discount offers on purchase intentions, as it is confirmed by Model 3, discount offers have significant positive direct effects on purchase intentions (R^2 = 0.583, F(3,672) = 313, p<0.001). Thus, we accept H1. The results also confirm the significant and higher positive direct effect of middle level discount offers (Discount$_{Mid}$) on purchase intentions compared to cases with no discount offers (B=

0.491, p<0.001). When the discount level is higher (Discount$_{High}$), this also leads to significant and higher positive direct effect on purchase intentions compared to cases with no discount offers (B= 1.114, p<0.001). This result leads us to support H2. Model 3 also estimates the direct effect of perceived risk on purchase intentions and confirms the significant negative effect (R^2 = 0.583, F(3,672) = 313, p<0.001). Those consumers who are offered the same amount of discount or no discount at all and at the same time perceive the risk higher, are estimated to show lower level of intention to purchase (B= -0.331, p<.001). In the light of these results we accept H5.

Model 2 estimates the effect of different discount levels on perceived risk compared to cases with no discount offers. The results of the model confirm that discount offers have significant effect on the perceived risk levels of consumers (R^2 = 0.699, F(2,673) = 782, p<0.001). This result leads us to support H3. Moreover, when the level of discount offering increases, its negative effect on the perceived risk of consumer becomes stronger. Thus, when consumers are offered middle level discount offers (Discount$_{Mid}$), this leads to the generation of lower level of perceived risk (B= -1.000, p<0.001) compared to the cases with no discount offers. On the other hand, higher level of discount offers (Discount$_{High}$) generate even more stronger negative effects on the perceived risk of consumers compared to cases with no discount offers (B= -2.1729, p<0.001). In the light of these results we accept H4.

The indirect effect of discount offers includes the mediating role of perceived risk on the effect of discount offers on purchase intentions. Thus, it shows the effects of discount offers on purchase intentions through the perceived risk of consumers. The numerical expression of relative indirect effects of different discount offers through perceived risk is the product of regression coefficients in Model 2 and Model 3. Due to the non-normal sampling distribution of regression coefficients, a bootstrap confidence interval with 5,000 bootstrap samples is applied (Hayes & Preacher, 2013). The calculations of the indirect effects and the corresponding results are presented in the following equations:

Discount$_{Mid}$ = $a_1 b$ = -1.000(-0.331) = 0.331

Discount$_{High}$ = $a_2 b$ = -2.173(-0.331) = 0.720

The significance of the relative indirect effects is confirmed by checking the confidence intervals for different discount offers. The results are summarized in Table 5.

Table 5. *Indirect Effects of Discount Offers on Purchase Intentions*

Discount Level ---------→ Perceived Risk ---------→ Purchase Intention

	Effect	Boot SE	Boot LLCI	Boot ULCI
Discount$_{Mid}$ X_1	0.3314	0.0529	0.2309	0.4388
Discount$_{High}$ X_2	0.7200	0.1070	0.5092	0.9224

The confidence intervals for Discount$_{Mid}$ are reported as 95% CI = 0.2339 to 0.4388. As the confidence interval does not include any zero value and both values are positive, this leads us to conclude that there is a significant and positive indirect effect of Discount$_{Mid}$ on purchase intentions through the perceived risk of consumers. Similarly, the confidence intervals for Discount$_{High}$ are reported as 95% CI = 0.5092 to 0.9224. As the confidence interval does not include any zero value and both values are positive, again this leads us to conclude that there is a significant and positive indirect effect of Discount$_{High}$ on purchase intentions through the perceived risk of consumers. In the light of these findings, we can conclude that there is a significant mediating role of perceived risk on the relationship between discount offers and the purchase intentions of consumers. Thus, different levels of discount offer affect positively the purchase intentions through the perceived risk of consumers. However, this mediating effect of perceived risk is a partial one since the total and direct effects of discount offers on purchase intentions are different from zero and statistically significant. These results lead us to accept H6 and H7. The graphical representation of the direct and indirect effects of discount offers on purchase intentions are summarized in Figure 1.
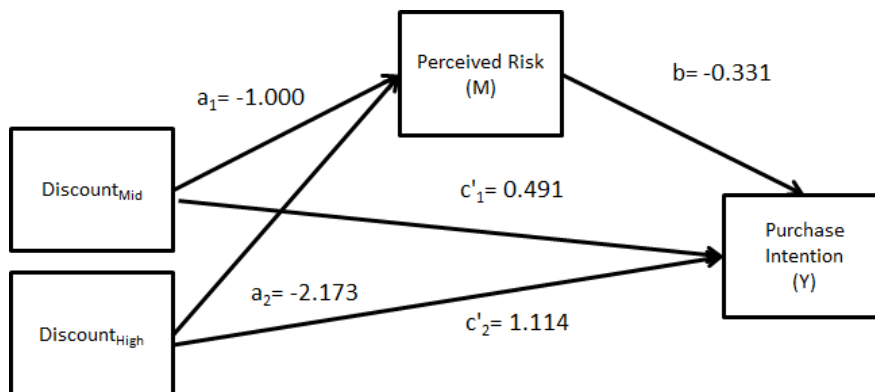
Figure 1. *Direct and Indirect Effects of Discount Offer on Purchase Intentions*

Moderating Role of Offer Recency on the Effect of Perceived Risk on Purchase Intentions

The results of the analysis, which targets to measure the moderating role played by the offer recency on the effect of perceived risk on purchase intentions, confirmed that this effect is contingent on the offer recency level by generating significant interaction effects for both Offer$_{Mid-Term}$ and Offer$_{Early\ Bird}$ situations (y=0.2498, p<0.001 and y=0.5154, p<0.001). As suggested by Aiken and West (1991), the calculation of interaction effect is made by computing the slopes -1 and +1 of the offer recency. The results of this interaction effect is summarized in Table 6 where the product of perceived risk and offer recency resulted in the generation of higher levels of purchase intentions for both Offer$_{Mid-Term}$ and Offer$_{Early-Bird}$ compared to Offer$_{Spot}$.

Table 6. *Moderation Effect of Offer Recency*

Predictor	DV= Purchase Intention (Y)					
	Coefficient	SE	t	p	95% CI LL	95% CI UL
Perceived Risk (b_1)	-0.6292	0.4490	-13.9990	<.001	-.7175	-.5410
Offer$_{Mid-Term}$ (b_2^1)	-0.5505	0.1511	-3.6440	<.001	-.8472	-.2539
Offer$_{Early-Bird}$ (b_2^2)	-0.6643	0.1379	-4.8159	<.001	-.9351	-.3935
Interaction (b_3^1)	0.2498	0.4730	5.2774	<.001	.1569	.3428
Interaction (b_3^2)	0.5154	0.0432	11.9308	<.001	.4306	.6002

The graphical representation of the conditional effects is presented in Figure 2. In cases of spot offers, the differential effect of perceived risk level is high on purchase intentions. However, this difference starts to shrink when consumers are exposed to the cases of Offer$_{Mid-Term}$ and Offer$_{Early-Bird}$. Thus, the effect of perceived risk on purchase intentions changes due to the offer recency level exposed. In the light of these findings and significant interaction effects, we conclude that the offer recency moderates the effect of perceived risk on purchase intentions of consumers. Thus, we accept H8.
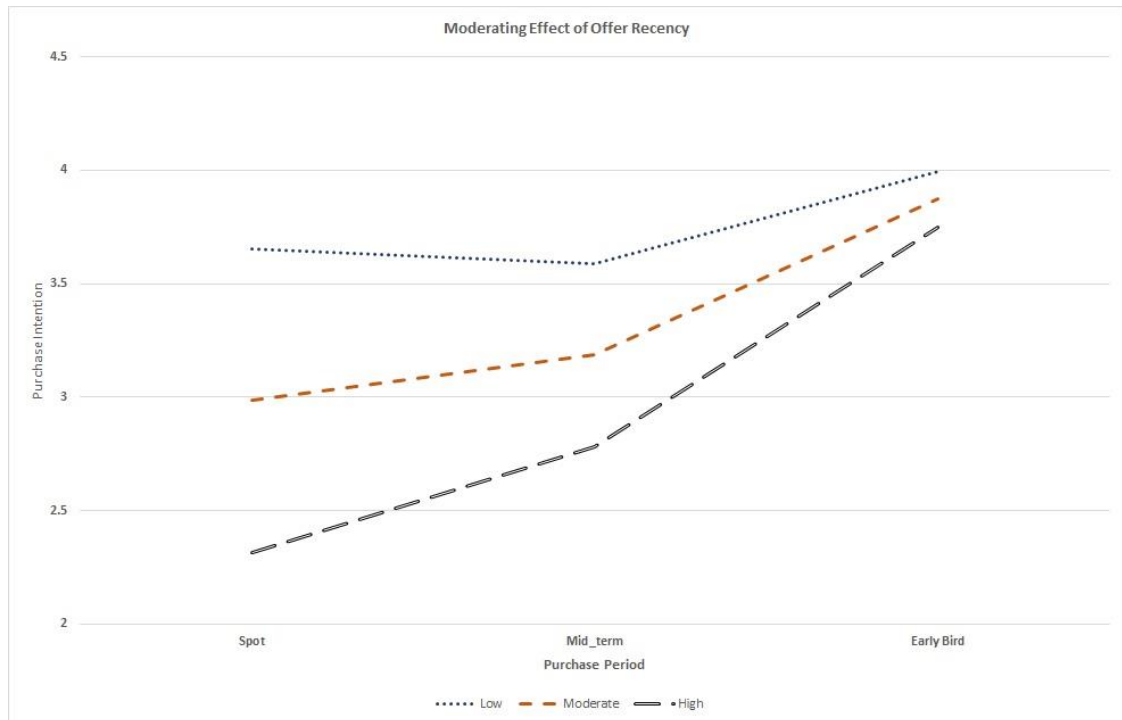
Figure 2. *Interaction Effect of Moderation*

The Relative Conditional Indirect Effect of Discount Level on Purchase Intentions

The conditional indirect effect of discount level on purchase intentions covers the moderated mediation role of perceived risk on this effect. In order to test this effect, we measure the indirect effects of discount levels on three different levels of perceived risk, namely low (-1 SD), average (mean) and high (+1 SD) levels. The result of this analysis is summarized in Table 7.

When consumers are offered middle level discounts (Discount$_{Mid}$), the conditional relative indirect effect of this discount level on purchase intentions through the perceived risk is the highest in cases where the offer is done one week earlier (Offer$_{Spot}$) than the check-in date (0.63, 95% CI = 0.5177 to 0.7366). On the other hand, when the offer time is three months earlier than the check-in date (Offer$_{Mid-Term}$), the indirect effect of Discount$_{Mid}$ on purchase intentions through perceived risk starts to decrease and it is weaker compared to Offer$_{Spot}$ (0.38, 95% CI = 0.2673 to 0.4931). Similarly, when the offer time is six months earlier than the check-in date (Offer$_{EarlyBird}$), then the conditional relative indirect effect of this

discount level on purchase intentions through the perceive risk is the lowest compared to both Offer$_{Spot}$ and Offer$_{Mid-Term}$ (0.11, 95% CI = 0.0434 to 0.1839). The index of moderated mediation was calculated in order to test the significance of these differences and consequently to confirm the conditional relative indirect effect of Discount$_{Mid}$ on purchase intentions through perceived risk. The results of this calculation confirmed the significant moderated mediation effect of offer recency for both Offer$_{Mid-Term}$ (-0.25, 95% CI = -0.3218 to -0.1814) and Offer$_{Early\ Bird}$ (-0.52, 95% CI = -0.6097 to -0.4204) cases compared to Offer$_{Spot}$.

Table 7. *Results of the Moderated Mediation Analysis*

Discount Level	Period	Conditional Relative Indirect Effect of Discount Level on Purchase Intentions			
		Coefficient	SE	95% CI LL	95% CI UL
Discount$_{Mid}$	Spot (-1 SD)	0.6292	0.0566	0.5177	0.7366
	Mid-Term (M)	0.3794	0.0574	0.2673	0.4931
	Early Bird (+1SD)	0.1138	0.0360	0.0434	0.1839
Discount$_{High}$	Spot (-1 SD)	1.3672	0.0968	1.1683	1.5487
	Mid-Term (M)	0.8244	0.1152	0.5944	1.0446
	Early Bird (+1SD)	0.2473	0.0772	0.0951	0.3922

The second part of Table 7 shows the results of the analysis related to the conditional relative indirect effect of Discount$_{High}$ on purchase intentions through the perceived risk. This conditional indirect effect is the highest in cases where the offer is done one week earlier (Offer$_{Spot}$) than the check-in date (1.37, 95% CI = 1.1683 to 1.5487). On the other hand, when the offer time is three months earlier than the check-in date (Offer$_{Mid-Term}$), the indirect effect of Discount$_{High}$ on purchase intentions through perceived risk starts to decrease and it is weaker compared to Offer$_{Spot}$ (0.82, 95% CI = 0.5944 to 1.0446). Similarly, when the offer time is six months earlier than the check-in date (Offer$_{EarlyBird}$), then the conditional relative indirect effect of this discount level on purchase intentions

through the perceived risk is the lowest compared to both Offer$_{Spot}$ and Offer$_{Mid\text{-}Term}$ (0.25, 95% CI = 0.0951 to 0.3922). As it is done in previous analysis, the index of moderated mediation was calculated in order to test the significance of these differences and consequently to confirm the conditional relative indirect effect of Discount$_{High}$ on purchase intentions through perceived risk. The results of this calculation confirmed the significant moderated mediation effect of offer recency for both Offer$_{Mid\text{-}Term}$ (-0.54, 95% CI = -0.6889 to -0.4024) and Offer$_{Early\ Bird}$ (-0.52, 95% CI = -0.6097 to -0.4204) cases compared to Offer$_{Spot}$. In the light of these findings, H9 can be accepted.

DISCUSSION AND CONCLUSION

The objective of this study was to measure the effect of dynamic pricing applications on the purchase intentions of consumers by taking into consideration the moderated mediation role of perceived risk by offer recency. The study involved several measurement models to explore the underlying dynamics between discount offers, perceived risk, offer recency and purchase intentions. The results of the study lead to several conclusions and contributions which need to be elaborated vis-a-vis to the previous findings in the literature.

One of the findings in this study is related with the direct effects of discount offers on the customers' purchase intentions. In line with the expectations and findings in the existing literature, discount offers are found to have positive direct effects on purchase intentions (Bakırtaş, 2013; Rizwan et al., 2013). Moreover, the results confirmed that the level of discount determines the level of purchase intentions in a way that more attractive discounts generate higher level of purchase intentions. This result also finds some support in the existing literature (Palazon & Delgado-Ballester, 2009). However, there are also studies which report an inverted U type explanation rather than linear relationship between the benefit levels and consumer behavior in the context of sales promotions (Grewal et al., 1998). The results of this study also confirm the significant negative effect of discount offers on perceived risk of consumers. Increasing levels of discount leads to lower levels of perceived risk and this is in line with the findings in the existing literature (Garretson & Clow, 1999).

Another finding in this study, which is in line with the results of the existing studies in the literature, is the direct negative effect of perceived

risk on purchase intentions. Parallel to the existing studies, when the perceived risk of consumers increases, their purchase intentions become lower. This result finds strong support in the previous studies which are focused on this subject (Ashoer & Said, 2016; Xie, 2017; Wood & Scheer, 1996).

There are two important contributions of this study to the existing literature. The first one is related with the mediating role of perceived risk on the effect of discount offers on purchase intention in a way that different levels of discount offers affect positively the purchase intentions through the perceived risk of consumers. Compared to cases with no discount at all, the differential positive direct effects of DiscountMid and DiscountHigh on purchase intentions start to decrease when the perceived risk of consumers mediates this effect. This result is an important contribution of this study to the existing literature since there is a lack of studies focusing on the mediating effect. A second important contribution of this study is that this mediating role of perceived risk is moderated by the offer recency, which leads to consumers' inter temporal decisions and plays a moderated mediation role on the effect of discount offers on purchase intentions. This finding also contributes to the existing literature by filling a gap in the relationship between dynamic pricing, perceived risk and timing factor.

PRACTICAL IMPLICATIONS

The results of this study lead to several practical implications. First, one of the results indicate that offering a discount compared to not offering it, increases the intention of consumers to purchase the ski resort holiday package. Moreover, the level of discount determines the level of purchase intention. Those hotels which compete in a highly competitive markets and offer holiday packages for international customers need to acquire them as soon as possible, in order to maximize the occupancy rate. They need to find the optimum level of discount which will boost the sales without harming the profitability and, eventually, lead to maximization of occupancy rate at the earliest time possible.

Another finding of this study is the negative effect of perceived risk on purchase intentions. When consumers feel uncertainties about the performance of the hotel, this will increase their perceived risk and eventually their purchase intention will be lower. It is found that the perceived risk level also mediates the effect of discount offers on purchase

intentions. When consumers perceive higher levels of risk, the effect of discounts on purchase intentions becomes weaker. In order to cope with this challenge, marketers need to encourage their satisfied customers to share their opinions with other consumers in the market as much as possible. As the opinion of other consumers is an important determinant of decision making in hotel selections, these opinions are expected to help customers to eliminate the uncertainties and consequently lower the perceived risk levels. Thus, all platforms including social media, forums and web sites should be used by the marketers to boost customer opinion sharing. Customers should be encouraged and incentivized to share their opinions in these platforms.

The timing of the offer was also found as an important factor influencing the effect of discounts on purchase intentions through perceived risk level. In comparison with no discount cases, the positive effect of discounts on purchase intentions diminishes in all discount levels due to the inter-temporal effect on perceived risk levels. Marketers should try to adjust their marketing mix to eliminate the uncertainties of consumers derived from purchasing the holiday package earlier. First, a direct solution is to offer insurance to the international customers, as some tourism agencies already provide. Marketers may engage in such insurance programs or work with agencies which provide such insurances in order to decrease the perceived risk level. On the other hand, if there is no such program, as the return of the package becomes impossible after a certain period, depending on the cancellation and refund policy, one of the immediate tools that can be provided to those consumers, who won't be able to travel, is an opportunity to sell their holiday package. The hotel may create a late market program which will start 7 days earlier before the check-in date and if there are no rooms available in the hotel, the hotel may provide original buyers the opportunity to sell their package at a discounted price. This program may provide value for all parties including the original owner of the package, the hotel and the prospect late buyer.

As a result, hotel managers, who target to maximize the occupancy rate in an optimum way, need to implement a dynamic pricing policy which will create and sustain a balance between perceived performance risk of purchase in a particular hotel, inter temporal risk perceptions and the discounts offered in order to maximize the expected value for both their customers and their hotel.

LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

This study was conducted in the tourism context and the type of product employed in the experimental design was the international ski resort holiday package. This is a limitation for the study which leads to some generalizability issues. As a direction for future studies, it is suggested to conduct the same study in different contexts, for different products and in a cross-country setting in order to increase the generalizability of the study and provide deeper understanding of the underlying dynamics.

REFERENCES

Abrate, G., Fraquelli, G., & Viglia, G. (2012). Dynamic pricing strategies: Evidence from European hotels. *International Journal of Hospitality Management, 31,* 160–168.

Adenso-Diaz, B., Lozano, S., & Palacio, A. (2017). Effects of dynamic pricing of perishable products on revenue and waste. *Applied Mathematical Modelling*, *45*, 148-164.

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park: Sage.

Arrow, K. J. (1962). The economic implications of learning by doing. *Review of Economic Studies*, *29*(3), 155-173.

Ashoer, M., & Said, S. (2016). The impact of perceived risk on consumer purchase intention in Indonesia. *A Social Commerce Study Proceeding of the International Conference on Accounting, Management, Economics and Social Sciences (ICAMESS)*, 1-13.

Badinelli, R. (2000). An optimal, dynamic policy for hotel yield management. *European Journal of Operational Research*, *121*, 476–503.

Bakırtaş, H. (2013). Impact of sales promotion on purchase decision of consumers: An application in tourism sector. *International Journal of Human Sciences*, *10*(1), 676-694.

Bartels, D. M., & Urminsky, O. (2015). To know and to care: How awareness and valuation of the future jointly shape consumer spending. *Journal of Consumer Research*, *41*(6), 1469–1485.

Bass, F. M. (1969). A new product growth model for consumer durables. *Management Science, 15*(4), 215-227.

Bauer, R. A. (1960). Consumer behavior as risk taking. In R. Hancock (Ed.), *Dynamic Marketing for a Changing World* (pp. 389-398), Proceedings of 43rd Conference, American Marketing Association.

Bayoumi, A. E., Saleh, M., Atiya, A. F., & Aziz, H. A. (2013). Dynamic pricing for hotel revenue management using price multipliers. *Journal of Revenue and Pricing Management*, *12*(3), 271-285.

Bhukya, R., & Singh, S. (2015). The effect of perceived risk dimensions on purchase intention: An empirical evidence from Indian private labels market. *American Journal of Business*, *30*(4), 218-230.

Bull, P. (1997). Mass tourism in the Balearic Islands: An Example of concentrated dependence. In D. Lockhart and D. Dukakis-Smith (Eds.), *Island Tourism: Trends and Prospects* (pp.137-151). London: Pinter.

Campbell, M. C. & Goodstein, R.C. (2001). The Moderating Effect of Perceived Risk on Consumers' Evaluations of Product Incongruity: Preference for the Norm. *Journal of Consumer Research*, 28 (December), 439-449.

Chakrabarti, S., & Baisya, R. K. (2009). The influences of consumer innovativeness and consumer evaluation attributes in the purchase of fashionable ethnic wear in India. *International Journal of Consumer Studies*, *33*(6), 706-714.

Chandran, S. & Morwitz, V. G. (2005). Effects of Participative Pricing on Consumers' Cognitions and Actions: A Goal Theoretic Perspective. *Journal of Consumer Research*, 32 (September), 249-259.

Chang, T. Z., & Wildt, A. R. (1994). Price, product information and purchase intention: An empirical study. *Journal of the Academy of Marketing Science*, *22*(1), 16-27.

Chao, R. F., & Liao, P. C. (2016). The impact of brand image and discounted price on purchase intention in outlet mall: Consumer attitude as mediator. *The Journal of Global Business Management*, *12*(2), 120-128.

Chenavaz, R., Carrier, L. P., Etienne, L., & Paraschiv, C. (2011). Dynamic pricing in management science. *Journal of Economics Studies and Research*, 1-16.

Corgel, J. B. (2004). Predictive powers of hotel cycles. *Real Estate Issues*, *28*(4), 32-36.

Cox, D. F., & Rich, S. U. (1964). Perceived risk in consumer decision making: The case of telephone shopping. *Journal of Marketing Research*, *1*(4), 32-39.

Croes, R., & Semrad, K. J. (2012). Does discounting work in the lodging industry? *Journal of Travel Research*, *51*(5), 617-631.

Cross, R., Higbie, J., & Cross, D. (2009). Revenue management's renaissance. *Cornell Hospitality Quarterly, 50*(1), 56–81.

Dasu, S., & Tong, C. (2010). Dynamic pricing when consumers are strategic: Analysis of posted and contingent pricing schemes. *European Journal of Operational Research*, *204*(3), 662-671.

Dimicco, J. M., Maes, P., & Greenwald, A. (2003). Learning curve: A simulation-based approach to dynamic pricing. *Electronic Commerce Research*, *3*(3/4), 245-276.

Dodds, W. B., & Monroe, K. B. (1985). The effect of brand and price information on subjective product evaluation. *Advances in Consumer Research*, *12*, 85-90.

Dong, L., Kouvelis, P., & Tian, Z. (2008). Dynamic pricing and inventory control of substitute products. *Manufacturing and Service Operations Management, 11*(2), 317-339.

Doss, C., McPeak, J., & Barrett, C. (2006). Interpersonal, intertemporal and spatial variation in risk perceptions: Evidence from East Africa. *Working Papers 948*, Economic Growth Center, Yale University.

Economides, N. (1996). The economics of networks. *International Journal of Industrial Organization*, *14*(2), 673-699.

Elmaghraby, W., & Keskinocak, P. (2003). Dynamic pricing in the presence of inventory considerations: Research overview, current practices, and future directions. *Management Science*, *49*(10), 1287-1309.

Enz, C., Canina, L., & Lomanno, M. (2009) Competitive pricing decisions in uncertain times. *Cornell Hospitality Quarterly*, *50*(3), 325–341.

Enz, C. A., Canina, L., & Lomanno, M. V. (2004). Why discounting doesn't work. *The Center for Hospitality Research Reports*, *4*(7), 1-28.

Farahmand, A., & Chatterjee, C. (2008). The case for dynamic pricing. *Hospitality Upgrade*, 154-155.

Feng, Y., & Xiao, B. (2000). A continuous-time yield management model with multiple prices and reversible price changes. *Management Science, 46*(5), 644-657.

Gallego, G., & Ryzin, G. (1994). Optimal dynamic pricing of inventories with stochastic demand over finite horizons. *Management Science, 40*, 999–1020.

Garretson, J. A, & Clow, K. E. (1999). The influence of coupon face value on service quality expectations, risk perceptions and purchase intentions in the dental industry. *Journal of Services Marketing*, *13*(1), 59-72.

Gefen, D. (2002). Reflections on the dimensions of trust and trustworthiness among online consumers. *ACM SIGMIS Database*, 33(3), 38–53.

Grewal, D., Krishnan, R., Baker, J., & Borin, N. (1998). The effect of store name, brand name and price discounts on consumers' evaluations and purchase intentions. *Journal of Retailing*, *74*, 331-352.

Hashim, N.A., Husin, Z., Othman, I.L., & Zain, A.Y. (2017). The roles of perceived risks and price on the purchase intention of China-made home appliances among career women in Malaysia. *International Journal of Management Studies (IJMS)*, *24*(1), 169-185.

Haws, K., & Bearden, W. (2006). Dynamic pricing and consumer fairness perceptions. *Journal of Consumer Research, 33*, 304-311.

Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (2nd ed.). New York: The Guildford Press.

Hayes, F. A., & Preacher, K. J. (2013). Statistical mediation analysis with a multi categorical independent variable. *The British journal of mathematical and statistical psychology*, *67*(3), 451-470.

Heskett, J. L., Jones, T. O., Loveman, G. W., Sasser, E. W., & Schlesinger, L. A. (1994). Putting the service-profit chain to work. *Harvard Business Review*, *72*(2), 164-174.

Hong, I., & Cha, H. S. (2013). The mediating role of consumer trust in an online merchant in predicting purchase intention. *International Journal of Information Management*, *33*, 927–939.

Jorgensen, S. (1986). Optimal dynamic pricing in an oligopolistic market: A survey, dynamic games and applications in economics. In T. Basar (ed.). *Lecture Notes in Economics and Mathematical Systems* (vol. 265, pp. 179-237). Berlin: Springer.

Kim, B. K., & Zauberman, G. (2009). Perception of anticipatory time in temporal discounting. *Journal of Neuroscience, Psychology and Economics*, *2*(2), 91-101.

Kim, L. H., Kim, D. J., & Leong, J. K. (2005). The effect of perceived risk on purchase intention in purchasing airline tickets online. *Journal of Hospitality & Leisure Marketing*, *13*(2), 33-53.

Kimes, S. E. (2002). Perceived fairness of yield management. *The Cornell Hotel and Restaurant Administration Quarterly*, *43*, 21-30.

Koide, T., & Ishii, H. (2005). The hotel yield management with two types of room prices, overpurchase and cancellations. *International Journal of Production Economics*, *93–94*, 417–428.

Kopalle, P. K., Mela, C. F., & Marsh, L. (1999). The dynamic effect of discounting on sales: empirical analysis and normative pricing implications. *Management Science*, *18*(3), 317-332.

Levin, Y., McGill, J., & Nediak, M. (2009). Dynamic pricing in the presence of strategic consumers and oligopolistic competition. *Management Science*, *55*(1), 32-46.

Lin, T., & Fang, C. (2006). The effects of perceived risk on the Word-of-Mouth Communication DYAD. *Social Behavior and Personality: An international journal*, *34*, 1207-1216.

Liu, Q., & Ryzin, G. (2008). Strategic capacity rationing to induce early purchases. *Management Science, 54*(6), 1115-1131.

Liu, X., Tang, O., & Huang, P. (2008). Dynamic pricing and ordering decision for the perishable food of the supermarket using RFID technology. *Asia Pacific Journal of Marketing and Logistics*, *20*(1), 7-22.

Mahajan, V., Muller, E., & Bass, F. M. (1990). New product diffusion models in marketing: A review and directions for research. *The Journal of Marketing*, *54*(8), 1-26.

Mitchell, V.W. (1999). Consumer perceived risk: conceptualizations and models. *European Journal of Marketing*, *33*(1/2), 163-195.

Mitchell, V. W., & Vassos, V. (1997). Perceived risk and risk reduction in holiday purchases: A cross-cultural and gender analysis. *Journal of Euromarketing*, *6*(3), 47-79.

Mitra, K., Reiss, M. C., & Capella, L. M. (1999). An examination of perceived risk, information search and behavioral intentions in search, experience and credence services. *Journal of Services Marketing*, *13*(3), 208-228.

Murray, K. B. (1991). A test of services marketing theory: consumer information acquisition activities. *Journal of Marketing*, *55*(1), 11-25.

Namboodiri, V. M. K., Mihalas, S., Marton, T. M., & Shuler, M. G. H. (2014). A general theory of intertemporal decision-making and the perception of time. *Frontiers in Behavioral Neuroscience*, *8*, 1-18.

Noseworth, T. J. & Trudel, R. (2011). Looks Interesting, but What Does It Do? Evaluation of Incongruent Product Form Depends on Positioning. *Journal of Marketing Research*, 48 (6), 1008-1019.

Palazon, M., & Delgado-Ballester, E. (2009). Effectiveness of price discounts and premium promotion. *Psychology & Marketing*, *26*(12), 1108-1129.

Qu, H., Xu, P., & Tan, A. (2002). A simultaneous equations model of the hotel room supply and demand in Hong Kong. *International Journal of Hospitality Management*, *21*, 455–462.

Rizwan, M., Irshad, Q., Ali, K., Nadir, M., & Ejaz, M. (2013). Impact of sales promotional tools on purchase intentions. *International Journal of Management Sciences and Business Research*, *2*(1), 36-49.

Roehl, W. S., & Fesenmaier, D. R. (1992). Risk perceptions and pleasure travel: An exploratory analysis. *Journal of Travel Research*, *30*(4), 17-26.

Rohani, A. (2012). Impact of dynamic pricing strategies on consumer behavior. *Journal of Management Research*, *4*(4), 143-159.

Sahay, A. (2007). How to reap higher profits with dynamic pricing. *MIT Sloan Management Review, 48*, 53–60.

Santini, F. O., Sampaio, C. H., Perin, M. G., & Vieira, V. A. (2015). An analysis of the influence of discount sales promotion in consumer buying intent and the moderating effects of attractiveness. *Revista de Administracao*, *50*(4), 416-431.

Shapiro, J. M. (2005). Is there a daily discount rate? Evidence from the food stamp nutrition cycle. *Journal of Public Economics*, *89*(2-3), 303-325.

Su, X. (2007). Intertemporal pricing with strategic customer behavior. *Management Science*, *53*(5), 726-741.

Sweeney, J. C., Soutar, G. N., & Johnson, L. W. (1999). The role of perceived risk in the quality-value relationship: A study in a retail environment. *Journal of Retailing*, *75*(1), 77-105.

Tan, S. J. (1999). Strategies for reducing consumers' risk reduction aversion in Internet shopping. *Journal of Consumer Marketing*, *16*(2), 163-180.

Taylor, A. G. (2001). Coupon response in services. *Journal of Retailing, 77*, 139-151.

Teng, L. (2009). A comparison of two types of price discounts in shifting consumers' attitudes and purchase intentions. *Journal of Business Research*, *62*, 14-21.

Viglia, G., Mauri, A., & Carricano, M. (2016). The exploration of hotel reference prices under dynamic pricing scenarios and different forms of competition. *International Journal of Hospitality Management*, *52*, 46-55.

Wood, C. M., & Scheer, L. K. (1996). Incorporating perceived risk models of consumer deal assessment and purchase intent. *Advances in Consumer Research*, *23*, 399-404.

Xie, C. (2017). The influence of perceived risk on purchase intention – A case study of Taobao online shopping of fresh fruit. *Asian Agricultural Research, 9*(5), 30-35.

Yi, Y., & Yoo, J. (2011). The long-term effects of sales promotions on brand attitude across monetary and non-monetary promotions. *Psychology and Marketing*, *28*, 879-896.

Zauberman, G. & Urminsky, O. (2016). Consumer intertemporal preferences. *Current Opinion in Psychology*, *10*, 136-141.

Zhao, W., & Zheng, Y. (2000). Optimal dynamic pricing for perishable assets with non-homogeneous demand. *Management Science*, *46*, 375–388.

THE EMPIRICAL EVIDENCE ON TOURISM-URBANIZATION-CO2 EMISSIONS NEXUS

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ABSTRACT

This study explores the tourism-urbanization-CO2 emissions nexus in the top 10 touristic destination over the period 1995-2016. Panel VAR methodology is employed. The findings of bivariate VAR models suggest the urbanization (UP) to have a significant positive response to the tourism receipts per capita (TR) as well as the negative response of the UP to the emissions of CO2. The outcome of trivariate model suggests a significant positive response of UP to its lagged value. However, tourism receipts per capita are found to respond negatively to the urbanization. The significant negative coefficient of -0.032 with UP suggests a negative response of urbanization to CO2 emissions. IRFs (Impulse Response Functions) suggest a negative response of CO2 to TR in the short-run. The impact is not found to be significant in the long-run. Besides that, the results suggest a positive decreasing response of urbanization to emissions of CO2. The results of this paper advocate the great environmental-awareness of citizens in the top 10 tourist destination suggesting that sustainable tourism has no alternative and key decision makers should develop strategies and do necessary steps in order to promote the development of sustainable tourism since the environment-friendly tourism is suggested to be the only acceptable one.

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INTRODUCTION

Climate changes are one of the most demanding issues nowadays. These changes are strongly associated with the greenhouse gasses (GHG) emissions. A great concern among policy makers is the fact that GHG emissions have significantly contributed to the global warming, have increased the sea level worldwide as well as the average temperatures. An important question here is whether or not the consequences are disproportionate in terms of developed countries taking into account the fact that these countries are leaders in terms of CO2 emissions. This research focuses on CO2 emissions since it accounts for more than 82% of total GHG emissions in countries that are in the group of developed (Zarzoso, 2008).

In terms of GHG emissions, Cunanan (2018) gives an overview of carbon intensive industries. Among these, the leader is energy consumption. UNDP suggests that 75% of all CO2 emissions at global level is associated with the usage and supply of fossil fuels (UNCFCCC, 2000). The second ranked in terms of top 5 carbon intensive industries are various kinds of land use such as agriculture. The impact of this sector on GHG emission is found to be twofold: 1. in order to obtain lands suitable for agriculture there is a need to clear many hectares of the forests, hence the number of CO2 absorbers has significantly reduced; 2. agriculture connected with animals emits not only CO2 but also the other kinds of GHG. The third sector is displayed to be the industry. In the year 2014, this sector is found to release about 21% of the total emission of CO2. This arose from the strong association of this sector with the fossil fuels necessary to operate many processes in industry. The fourth sector, very important for the topic of this paper, is transportation. In terms of the overall sector, the leader in terms of CO2 emission is road transport (72%). Besides this, Cunanan (2018) highlights the need to take into account the indirect emission connected with the cargo in transportation devices. Lastly, residential sectors are found to be ranked as fifth. Residential sectors produce CO2 by consuming energy intensively.

In terms of tourism industry, it is important to emphasize its significant positive externalities connected with the improvements in infrastructure, increasing new employment opportunities, increasing foreign direct investments, creating significant amount of revenue and enhancing the economic growth of the touristic destinations (Isik et al., 2018; Satrovic & Muslija, 2017). This sector is also rising exponentially in last decades and becoming the largest industry globally. UNWTO

Tourism Highlights from 2017 record the highest value of tourist arrivals to date. It has increased by 7% compared to the year 2016. In the line with positive externalities, it is essential to emphasize the negative externalities associated with tourism industry. Due to its reliance on transportation, tourism industry is found to be one of the leaders in terms of CO_2 emissions (Isik et al., 2017). Apart from the transportation, many services provided by the host countries to tourists are considered to be energy-consuming. This energy is in general produced from non-renewable resources and thus releases significant amounts of GHG (Scott & Becken, 2010). Hence, tourism industry alone is found to release 8% of the total GHG globally in Lenzen et al. (2018). In addition, tourism industry has increased urbanization especially in very popular touristic destinations since many working places have been opened which has increased the demand of locals for residential sectors. As indicated before, residential sectors are one of the leaders in terms of CO_2 emission.

With regard to the relationship between urbanization and emission of CO_2, Wang and Li (2017) suggest that CO_2 is determined by diverse factors. Urbanization is found to be one of them. In terms of urbanization, a great attention is given to the population growth. The population growth in urban areas is closely related to the increase in energy consumption which directly leads to the increase in GHG emission. Moreover, the demand for food increases, as well as for the agricultural land, decreasing the number of CO_2 absorbers. Urbanization also leads to an increase in demand for residential sectors in urban areas. As indicated before, these sectors significantly contribute to the CO_2 emission. Thus, studies to date in general agree that there is a positive link between GHG emissions and the urbanization movement of the society (Satterthwaite, 2009). However, Wang and Li (2017) indicate that urbanization might have positive results, too, such as increasing the efficiency of public transport and hence decreasing the consumption of energy as well as CO_2 emissions.

With regards to findings presented by Wang and Li (2017), urbanization is found to play a significant role in the reduction of CO_2 emissions. This is since it significantly increases the efficiency of public transport, which is an important service of tourism industry. Thus, urbanization can play an important role in sustainable tourism. In the light of sustainable tourism, it is important to emphasize that ecotourism is not expected to have a disruptive impact on environment; it ought to support the conservation aims of the tourist destination and has a minor negative effect to the culture of the destination. In addition, it is expected to

increase the income and job opportunities in the local economy (Gossling, 2000). Besides that, the author suggests the necessity to limit the non-renewable resources. This limit is determined by the potentials to supply the renewable resources based energy. Moreover, the amount of wastes should not over range the assimilation capacity of the ecosystem of interest. Thus, the overall conclusion of Gossling (2000) is the necessity to replace fossil fuels based energy for renewable one which is found to be more appropriate, especially in developing countries. Besides that, the replacement is a key determinant of the development of the sustainable tourism (Satrovic, 2018b).

In terms of renewable energy, Işik and Radulescu (2017) stress the need to explore the tourism-renewable energy-growth nexus in the long run in order to develop the sustainable growth strategy. However, the authors emphasize that this is still an open question among research community suggesting that it is not clear whether or not renewable energy contributes to the economic growth and tourism industry or it is rather a consequence of these two phenomena. Therefore, this link has not been explored quite intensively in the long-run. The empirical findings by Işik and Radulescu (2017) suggest that renewable energy has a positive impact on economic growth in the long-run, which was the important insight for policy implications.

Taking into account previous paragraphs, it can be concluded that tourism-urbanization-CO2 emissions nexus is a topic that receives much attention among research community nowadays. Yet, a consensus is not achieved since the results strongly differ by regions and the level of development of the countries. Most of the studies analyze the link between variables of interest but do not pay much attention to the link in short- and long-run, which was the motivation to conduct this research. Besides that, most of the studies use time-series data and do not analyze the panel of the countries.

The objective of this paper is to examine the tourism-urbanization-CO2 emissions nexus in top 10 touristic destinations while applying the panel VAR. Moreover, the research aims to investigate separately tourism-urbanization nexus and CO2-urbanization nexus. Apart from these, a trivariate model will also be estimated analyzing the link between tourism-urbanization-CO2 emissions, representing the third objective of this research. The results of this paper suggest policy makers that sustainable tourism and development has no alternative. Thus, key policy makers need to make necessary efforts in order to promote both

sustainable tourism and development, taking into account the fact that population increases exponentially as well as CO2 emissions.

The contribution of this paper to the literature can be summarized as following. First, it is believed that this is a first work to give empirical evidence on the tourism-urbanization-CO2 emissions nexus in the top 10 touristic destinations worldwide. Second, this study also differs from previous studies since it takes into account the latest available data (1995-2016) and considers the short- and long-run effects. Lastly, contrary to previous studies, the panel VAR is employed together with IRFs - impulse response Functions and FEVD - forecast-error variance decomposition.

The rest of this paper outlines the literature on the tourism-urbanization nexus as well as on CO2 emissions- urbanization nexus. Besides that, a comprehensive overlook of methodology is given, together with the interpretation of the variables. The analysis moves forward to the interpretation of the results of empirical research. The concluding remarks are presented in the last section together with the recommendations for policy makers.

LITERATURE REVIEW

This paper is interested to examine the bivariate models treating tourism-urbanization nexus and CO2 emissions-urbanization nexus as well as to provide empirical evidence on the trivariate model considering all variables of interest. Hence, this section provides empirical evidence on all relationships of interest to date.

Qian et al. (2012) used the case of China to explore the urbanization that is driven by tourism industry. The authors highlight the fact that consumption-based tourism tends to contribute to the urbanization. Apart from this, authors suggest that it will significantly change the economic structures. Urbanization based on tourism brought in significant changes such as the increase in service sectors as well as the increase in residential sectors. This urbanization is defined as an action that leads to the exclusively built or regenerated cities for the purpose of tourism e.g. pleasure (Mullins, 2003). Thus, urbanization is found to have a strong link with the industries related to tourism (Mullins, 1991).

Luo and Lam (2016) have used the case of China to investigate the link between hotel development and urbanization. They have collected primary data using the interviews. The empirical research suggests,

economic dimension to be of the great importance. Besides that, population as well as cultural dimension is found to have a significant impact. The development of hotel industry represents a key element of the tourism in the case of China. In early 90's, the development of China was essentially focused on the development of hotel industry (Yu, 1992). With regard to urbanization, it is important to emphasize that China does not only face an exponential economic and the growth of the population, it also faces a rapid urbanization (Li &Yao, 2009). Moreover, urbanization is considered to be a critical factor to modernize rural societies. Zhang et al. (2013) has suggested a positive link between hotel development and urbanization in terms of China.

These results are confirmed by McCroskey (1990) in the case of USA, Shakouri et al. (2017) in the case of Asia-Pacific countries, and Isik et al. (2018) in the case of Greece. With regards to the Greece, authors suggest that tourism is one of the leading economic sectors but also one of the leaders in term of CO_2 emissions. Thus, it is of great importance for decision makers to take these facts into account while creating the tourism development strategies. These findings of Isik et al. (2018) are partially supported by Sghaier et al. (2018) in the case of Egypt.

Zhang et al. (2018) have utilized the gravity model to explore the impact of urbanization on the emission of CO_2 in the case of China. The results of this paper suggest no significant impact of urbanization. Moreover, the energy consumption is found to be a significant determinant of CO_2 emissions. Hence, the authors highlight the need for policy makers to introduce the environment friendly policy standards. The results of this paper should be seriously taken into consideration given that China is leader in terms of GHG emissions at the global level. Moreover, Han et al. (2018) suggests the urbanization to be one of the major producers of CO_2 in China. Hence, in addition to the consumption of energy, urbanization brings in a great concern in terms of environmental degradation in China (Du et al., 2016). Jebli and Hadhri (2018) employ the Granger causality technique to explore the link between tourism, CO_2 emissions due to the transport sector, real GDP and energy. This paper suggests a bidirectional causal link between tourism and real GDP as well as between the tourism and energy. Zaman et al. (2017) suggest that CO_2 emissions are intensified due to the tourism development and income. Thus, the authors stress the need to stimulate tourism sector to use green energy and thus decrease the environmental depletion.

Sadorsky (2014) have employed panel data to explore the link between urbanization and CO2 emission. The findings suggest both positive and negative effects of urbanization on environmental degradation. The author also highlights the drawback in research to data that do not take into account the link between urbanization and CO2. Hence, those environmental policies that do not take into account the aforementioned link, will discourage the sustainable development. Moreover, many of the cities have increased their wealth by increasing the manufacturing. On one hand, this tends to increase the environmental concerns but on the other hand, wealthier cities may reduce the CO2 emissions via innovations in technology or better regulations of the environment (McGranahan et al., 2001).

With regard to the case of China, the empirical evidence reported by Wang et al. (2018) is presented. The data are collected in the time span between 1990 and 2013. The findings of this paper outline two opposing impacts of urbanization on CO2 emissions. The population rise is found to have a negative impact on CO2 emissions while land and economic urbanization are found to contribute positively to the CO2 emissions. Special attention is given to the energy efficiency advocating that CO2 emissions increase in the case when the efficiency of energy decreases. The positive impact is also reported in the case of FDI – foreign direct investments.

Shahbaz et al. (2016) have explored the link between urbanization and CO2 emissions in the case of Malaysia at the quarter level. The findings of this paper suggest economic growth to be the leader in terms of CO2 emissions. Besides this, the consumption of energy as well as trade openness are found to release significant amounts of CO2. Urbanization is found to have negative impact on CO2 emissions initially. However, it is found to have a negative impact after the threshold level. Solarin and Shahbaz (2013) provide supportive evidence to this research in the case of Angola.

Most of these papers analyze the link between urbanization and CO2 emissions or urbanization and tourism while collecting the time-series data. Taking into account the fact that tourism significantly contributes to the urbanization as well as CO2 emissions, there is a need to explore the link between these three variables of interest. Thus, the present paper aims to fill in the gap in literature by analyzing the tourism-urbanization-CO2 emissions nexus in the top 10 touristic destinations by using the panel VAR model.

METHODOLOGY AND VARIABLES

VAR (Vector Autoregression) models are used for decades in time-series data. However, VAR models for panel data were proposed in 1980s (Sims, 1980). The advantage of panel VAR compared to time-series VAR is that it first enables to deal with the difference among units. Thereby it easily deals with both, static and dynamic, interdependencies (Canova & Ciccarelli, 2013). One of the most important features of panel VAR models is their ability to control for the heterogeneity and dynamics in the coefficients. The methodology applied in this paper follows Love and Zicchino (2006).

With respect to variables, it is important to emphasize that panel VAR consider all variables endogenous. To formalize the PVAR (Panel Vector Autoregression), there is a need to introduce the general form of the VAR model. Hence, Canova and Ciccarelli (2013) suggest the following form of the general VAR model (Eq. 1):

$$Y_t = A_0(t) + A(lag)Y_{t-1} + u_t \quad (1)$$

where Y_t denotes the variables that are endogenous, u_t are assumed to be IID (independent and identically distributed). In addition, lag operator is denoted by $A(lag)$. As indicated above, panel VAR differs from the general VAR by introducing the difference among units. Hence, equation 2 formalizes panel VAR model:

$$y_{it} = A_{0i}(t) + A_i(lag)Y_{t-1} + u_{it} \quad (2)$$

where $i = 1, \dots, N$ and $t = 1, \dots, T$, u_{it} denotes the vector of disturbance. This paper will empirically test the tourism-urbanization-CO2 emissions nexus. Thus, Eq. 3 summarizes the models of interest as following:

$$UP_{it} = \sigma + \sum_{i=1}^{k} \beta_i\, UP_{t-1} + \sum_{j=1}^{k} \theta_j\, TR_{t-j} + \sum_{m=1}^{k} \varphi_m\, CO2_{t-m} + u_{1t}$$

$$TR_{it} = \alpha + \sum_{i=1}^{k} \beta_i\, UP_{t-1} + \sum_{j=1}^{k} \theta_j\, TR_{t-j} + \sum_{m=1}^{k} \varphi_m\, CO2_{t-m} + u_{2t}$$

$$CO2_{it} = d + \sum_{i=1}^{k} \beta_i\, UP_{t-1} + \sum_{j=1}^{k} \theta_j\, TR_{t-j} + \sum_{m=1}^{k} \varphi_m\, CO2_{t-m} + u_{3t} \quad (3)$$

Where every dependent variable is estimated as a function of its lagged value as well as the other variables (lagged). The shocks are denoted by u. The annual data are collected in the time-span between 1995 and 2016. The criterion to select a time-frame was the availability of the statistics on the variables of interest. UP (urban population (% of total)) is used as a proxy of urbanization. Moreover, international tourism, receipts (current US\$) is considered appropriate as a proxy of tourism. This variable is suggested by Satrovic and Muslija (2017; 2018). Lastly, CO2 emissions (metric tons per capita) are denoted by CO2. Since CO2 variable is expressed per capita, we have calculated international tourism, receipts per capita in order to make data comparable and to ease the interpretation. Besides panel VAR, this paper will use 200 Monte Carlo simulations to calculate the confidence bounds assigned with IRF. Lastly, forecast-error variance decomposition will be calculated following the propositions of Abrigo and Love (2016). Hence it is important to summarize the selection of panel VAR model, the estimations as well as the inference within the GMM - generalized method of moments framework. Abrigo and Love (2016) have formalized the k – variate fixed effects panel VAR that has p order as following (Eq. 4):

$$Y_{it} = Y_{it-1}A_1 + Y_{it-2}A_2 + \cdots + Y_{it-p+1}A_{p-1} + Y_{it-p}A_p + X_{it}B + u_{it} + e_{it} \quad (4)$$

where the vector of independent variables $(1xk)$ is denoted by Y_{it}; vector of exogenous covariates $(1xl)$ by X_{it}; fixed effects have the dimension of $(1xk)$ and are denoted by e_{it}; coefficients to be estimated are denoted by $A_1 \dots A_p, B$. The rest is explained above. With regards to the GMM framework, various estimators have been proposed to estimate the panel VAR. However, many drawbacks are assigned to these frameworks. For instance, in the case of unbalanced panel, the first-difference transformation enlarges the gap. Taking into account these disadvantages, forward orthogonal deviation is proposed but it may not include the last available observations (Abrigo & Love, 2016). Equation-by-equation estimation may provide the consistent estimation but at the cost of efficiency. However, Eq. 4 is estimated using this approach and explained in detail in Abrigo and Love (2016).

In terms of the model selection, it is important to select the lag order. This paper follows the criteria proposed by Andrews and Lu (2001). With regards to the IRF, it can be calculated by rewriting the aforementioned model as an infinite VMA (vector moving-average), where the parameters may be denoted by φ_i (Abrigo&Love, 2016).

$$\varphi_i = \begin{cases} I_{k,} & i = 0 \\ \sum_{j=1}^{i} \varphi_{t-j} A_j, & i = 1, 2, \dots \end{cases} \quad (5).$$

At last, shocks are orthogonalized by isolating the contribution of every variable to the FEVD. As in IRF, it is important to determine the confidence intervals. These can be determined using analytics or some of the resampling techniques.

RESULTS OF THE RESEARCH

To present the results of empirical section it is important to emphasize that the top 10 touristic destinations are selected using the data on number of arrivals of tourists in the year 2016. The first row in the Table 1 indicates the ranking. The empirical findings of this research are first presenting the most important measures of summary statistics for all countries of interest. With regards to the tourism receipts per capita, significant differences among countries are reported indicating the maximum average value in terms of Spain. The minimum average value of tourism receipts per capita is reported for China. Standard deviations are also confirming the significant differences among countries. In terms of CO2 emissions (metric tons per capita), the highest reported value on average is in the case of United States. The least country in terms of CO2 emissions (metric tons per capita) is reported to be Thailand. Lastly, the ratio of urban to total population is found to be the highest (on average) in the case of United Kingdom. The lowest ranked country in terms of urbanization is Thailand. The measures of descriptive statistics suggest significant differences among these top 10 touristic destinations in terms of all variables of interest. The statistics on CO2 emissions is very concerning suggesting that those countries with the highest value of tourism receipts are in the same time the leaders in terms of CO2 emissions which leads to growing concerns about the sustainable tourism.

Table 1. *Descriptive Statistics*

	Measur.	China (4)	France (1)	Germany (7)	Italy (5)	Mexico (8)	Spain (3)	Thailand (9)	Turkey (10)	United Kingdom (6)	United States (2)	Total
TR	mean	23.13	780.75	485.72	630.83	107.68	1081.91	322.78	272.72	666.02	496.77	486.83
	sd	10.41	190.95	160.41	98.34	23.91	246.58	209.89	138.61	164.88	144.04	341.13
	max	37.14	1062.50	728.40	793.10	161.54	1413.04	753.62	506.49	969.23	781.25	1413.04
	min	7.25	450.00	292.68	473.68	72.34	675.00	129.03	83.87	440.68	344.83	7.25
CO2	mean	4.88	5.69	9.79	7.25	3.99	6.61	3.68	3.78	8.27	18.49	7.24
	sd	1.97	0.49	0.56	0.91	0.23	0.98	0.67	0.63	1.09	1.40	4.34
	max	7.56	6.28	10.86	8.22	4.35	8.10	4.75	5.08	9.48	20.18	20.18
	min	2.65	4.57	8.82	5.27	3.54	5.03	2.67	2.94	5.93	16.30	2.65
UP	mean	43.36	77.28	75.93	67.96	76.45	77.53	38.41	68.12	80.22	79.89	68.52
	sd	8.23	1.58	1.13	0.87	1.95	1.32	6.52	3.80	1.55	1.32	14.92
	max	56.74	79.92	77.22	69.86	79.58	79.84	48.45	74.13	82.89	81.86	82.89
	min	30.96	74.91	73.92	66.92	73.37	75.86	30.28	62.12	78.35	77.26	30.28

Note: TR: international tourism, receipts (current US$); CO2: CO2 emissions (metric tons per capita); UP: urban population (% of total)

In addition to the measures of descriptive statistics, this empirical research proceeds to the panel VAR model. Beforehand, there is a necessity to test for unit-root of the variables in levels and first differences. This empirical analysis suggests three commonly used tests for the stationary properties. Table 2 shows the results.

Table 2. *Unit-root Tests in Level and First Difference*

Trend included in the model	lnTR		D.lnTR		lnCO2		D.lnCO2		lnUP	
Method	Stat.	p-value	Stat.	p-value	Stat.	p-value	Stat.	p-value	Stat.	p-value
ADF – Fisher inverse chisquare	14.06	0.827	86.70	0.000	17.00	0.653	60.59	0.000	66.08	0.000
Im–Pesaran–Shin test	2.08	0.981	-8.35	0.000	1.10	0.864	-10.86	0.000	-1.97	0.024
Levin–Lin–Chu (LLC) t* test	-0.35	0.362	-9.46	0.000	-1.48	0.069	-11.23	0.000	-2.94	0.002

With regards to the tourism receipts variable per capita as well as CO2 emissions (metric tons per capita), it is important to emphasize that all of the tests suggest the presence of unit-root in levels. Hence, the null on the unit-root cannot be rejected indicating the non-stationary series. However, these tests suggest that first differences are stationary rejecting the null hypothesis assuming the unit-root. These results are approved for a 1% significance level. Additionally, we have tested for the stationary

properties of the urbanization proxy variable. Im–Pesaran–Shin test suggests that this variable is stationary in the level for a 5% level of significance. However, the stationary properties are also confirmed by ADF (Augmented Dickey–Fuller) – Fisher inverse chisquare and Levin–Lin–Chu (LLC) t* test for a 1% significance level assuming the stationary series in the first difference. Due to the fact that all of the variables are reported to be stationary in the first difference, this research proceeds to the estimation of panel VAR.

Table 3. *The order of PVAR*

Order	CD	J	J p-value	MBIC	MAIC	MQIC
1	0.999918	39.61991	0.055584	-97.4098	-14.3801	-48.0956
2	0.999963	16.71587	0.542715	-74.6373	-19.2841	-41.7611
3	0.999969	10.61476	0.303042	-35.0618	-7.38524	-18.6237

Table 4. *VAR Models (Bivariate – GMM Estimation)*

Independent variables	Dependent variables	
Model 1: UP and TR		
	lnUP	D.lnTR
$lnUP_{t-1}$	0.998	-0.204
	$(0.009)^{***}$	(0.202)
$D.lnTR_{t-1}$	0.012	0.221
	$(0.006)^{*}$	(0.151)
Model 2: UP and CO2		
	lnUP	$D.lnCO_2$
$lnUP_{t-1}$	0.977	-0.054
	$(0.009)^{***}$	(0.065)
$D.lnCO2_{t-1}$	-0.034	0.039
	$(0.018)^{*}$	(0.107)
Model 3: TR and CO2		
	D.lnTR	$D.lnCO_2$
$D.lnTR_{t-1}$	0.130	0.011
	(0.083)	(0.035)
$D.lnCO2_{t-1}$	0.260	0.097
	(0.221)	(0.101)

Note: ***, **, * significant at 1%, 5% and 10% respectively.

To estimate the panel VAR, it is necessary to determine the order of the model. Andrews and Lu (2001) suggests that the selection criterion is based on the R square, as well as the Hansen's (1982) J statistics with the level of significance. The sum of moment conditions is assumed to be

higher than the number of endogenous variables. Table 3 displays the measures used to determine the order of the model. The findings suggest the lowest values of MBIC (Modified Bayesian Information Criterion) and MQIC (Modified Quasi Akaike Information Criterion) in terms of the first-compared to second- and third-order panel VAR. MAIC (Modified Akaike Information Criterion) suggests that the lowest values are displayed for the second-order panel VAR. Due to the fact that MBIC and MQIC suggest the first-order panel as optimal, we continue our analysis by applying GMM (Generalized Method of Moments) to obtain the coefficients for the first-order panel VAR (Satrovic, 2018a).

The results of panel VAR models (bivariate) are displayed in Table 4. The urbanization is found to have a significant positive response to the tourism receipts per capita in model 1. In addition, a significant positive response of UP to UP is also found. Other responses are not found to be significant. With respect to the second model, it is important to underline a negative response of the urbanization to the emissions of CO_2. Additionally, a response of UP to UP is found to be significant and positive. All other influences in model 2 as well as those in model 3 are not reported to be significant.

Table 5. *VAR based Granger causality (bivariate models)*

Equation	Excluded	chi2	p-value
lnUP	D.lnTR	3.358	0.067
D.lnTR	lnUP	1.013	0.314
lnUP	D.lnCO2	3.523	0.061
D.lnCO2	lnUP	0.700	0.403
D.lnTR	D.lnCO2	1.385	0.239
D.lnCO2	D.lnTR	0.106	0.744

The eigenvalues are calculated for these three models. The values <1 suggest the stability of the models. This finding is also supported by graph suggesting that all eigenvalues are within the unit circle. To present results on causality, Granger causality test was employed. Table 5 shows that tourism receipts per capita Granger cause urbanization. However, UP is not found to cause TR. Model 2 suggests that CO_2 emissions Granger cause urbanization, while urbanization is not found to have a causal impact on CO_2 emissions. Lastly, there is no evidence on the Granger causality in the link between CO_2 and tourism.

Since this paper is interested in the link between all three variables of interest, this research proceeds to the estimation and interpretation of trivariate model. Table 6 presents these results.

Table 6. *VAR Model (Trivariate – GMM Estimation)*

Independent variables	Dependent variables		
	lnUP	D.lnTR	D.lnCO2
lnUP$_{t-1}$	0.988	-0.311	-0.088
	(0.008)***	(0.167)*	(0.059)
D.lnTR$_{t-1}$	0.006	0.156	-0.002
	(0.005)	(0.120)	(0.035)
D.lnCO2$_{t-1}$	-0.032	-0.376	0.033
	(0.014)**	(0.333)	(0.094)

The outcome of this model suggests a significant positive response of UP to its lagged value. However, tourism receipts per capita are found to respond negatively to the urbanization. This result is very promising suggesting the great environmental-awareness in the top 10 tourist destination. Hence, the tourism that differs from sustainable tends to decrease with the level of urbanization. The significant negative coefficient of -0.032 with UP suggests a negative response of urbanization to CO2 emissions confirming the previous notation of great environmental-awareness of citizens in top 10 tourist destination indicating that sustainable tourism and development has no alternative. With respect to the results of Wald test, Table 7 displays a unidirectional Granger causal link running from CO2 emissions to urbanization as well as of urbanization to TR confirming the results of the trivariate panel VAR model.

Table 7. *Results of the Granger causality tests*

| Equation	Excluded	
	D.lnTR	D.lnCO2
lnUP	1.568	5.150
	(0.211)*	(0.023)
	lnUP	D.lnCO2
D.lnTR	3.473	1.275
	(0.062)	(0.259)
	lnUP	D.lnTR
D.lnCO2	2.216	0.004
	(0.137)	(0.947)

Note: * p-value

In order to increase the effectiveness of the result' interpretation, panel VAR is in general accompanied with the forecast-error variance decomposition (FEVD) and IRFs. Before estimating and graphing these measures, there is a need to test for the stability of trivariate PVAR model. Table 8 (eigenvalues) and Graph (1) confirm the assumption of the stability of these models.

Table 8. *Stability of the model*

| Eigen value		
Real	Imaginary	Modulus
0.989	0.000	0.989
0.163	0.000	0.163
0.025	0.000	0.025
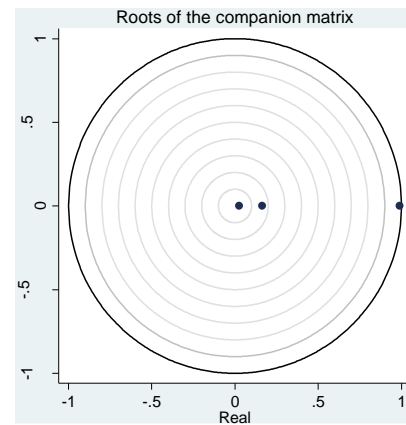
Graph 1. *Stability of the model*

Since panel VAR is interested to explore the impact of potential shocks assigned to exogenous variables (Abrigo&Love, 2016), this analysis moves forward to FEVD and IRF. The results are displayed in the Table 9 advocating that urbanization, tourism and CO2 proxy variables are found to interpret the 83.1%, 3.6% and 13.3% of the of the variation in urbanization. In addition, these variables are found to explain respectively about 5.3%, 92.5% and 2.2% of the variation in the proxy variable of tourism. At last, the variables of interest are found to interpret the 3.3%, 0% and 96.7% of the variability of CO2 emissions.

To conclude the empirical analysis, we display and interpret IRFs. Graph 2 shows a negative response of CO2 to TR in the short-run. The impact is not found to be significant in the long-run. Besides that, the results suggest a positive decreasing response of urbanization to emissions of CO2. The response of tourism to CO2 emissions is not found to be different from zero. Apart from these results, it is important to emphasize an increasing positive response of TR to the urbanization supporting the idea of great environmental-awareness of citizens in top 10 touristic destinations. Urbanization is found to react positively to the emissions of CO2 but only in the short-run. This response is decreasing and becomes zero in the long-run. This holds true for the link between UP and TR.

Table 9. *Forecast-Error Variance Decomposition*

Response variable	Impulse variable			Response variable	Impulse variable			Response variable	Impulse variable		
lnUP	lnUP	D.lnTR	D.lnCO2	D.lnTR	lnUP	D.lnTR	D.lnCO2	D.lnCO2	lnUP	D.lnTR	D.lnCO2
0	0.000	0.000	0.000	0	0.000	0.000	0.000	0	0.000	0.000	0.000
1	1.000	0.000	0.000	1	0.054	0.946	0.000	1	0.033	0.000	0.967
2	0.920	0.016	0.065	2	0.052	0.926	0.022	2	0.033	0.000	0.967
3	0.883	0.024	0.093	3	0.052	0.926	0.022	3	0.033	0.000	0.967
4	0.864	0.028	0.108	4	0.052	0.926	0.022	4	0.033	0.000	0.967
5	0.853	0.031	0.116	5	0.052	0.926	0.022	5	0.033	0.000	0.967
6	0.846	0.032	0.122	6	0.052	0.926	0.022	6	0.033	0.000	0.967
7	0.840	0.034	0.126	7	0.052	0.925	0.022	7	0.033	0.000	0.967
8	0.837	0.035	0.129	8	0.052	0.925	0.022	8	0.033	0.000	0.967
9	0.834	0.035	0.131	9	0.053	0.925	0.022	9	0.033	0.000	0.967
10	0.831	0.036	0.133	10	0.053	0.925	0.022	10	0.033	0.000	0.967
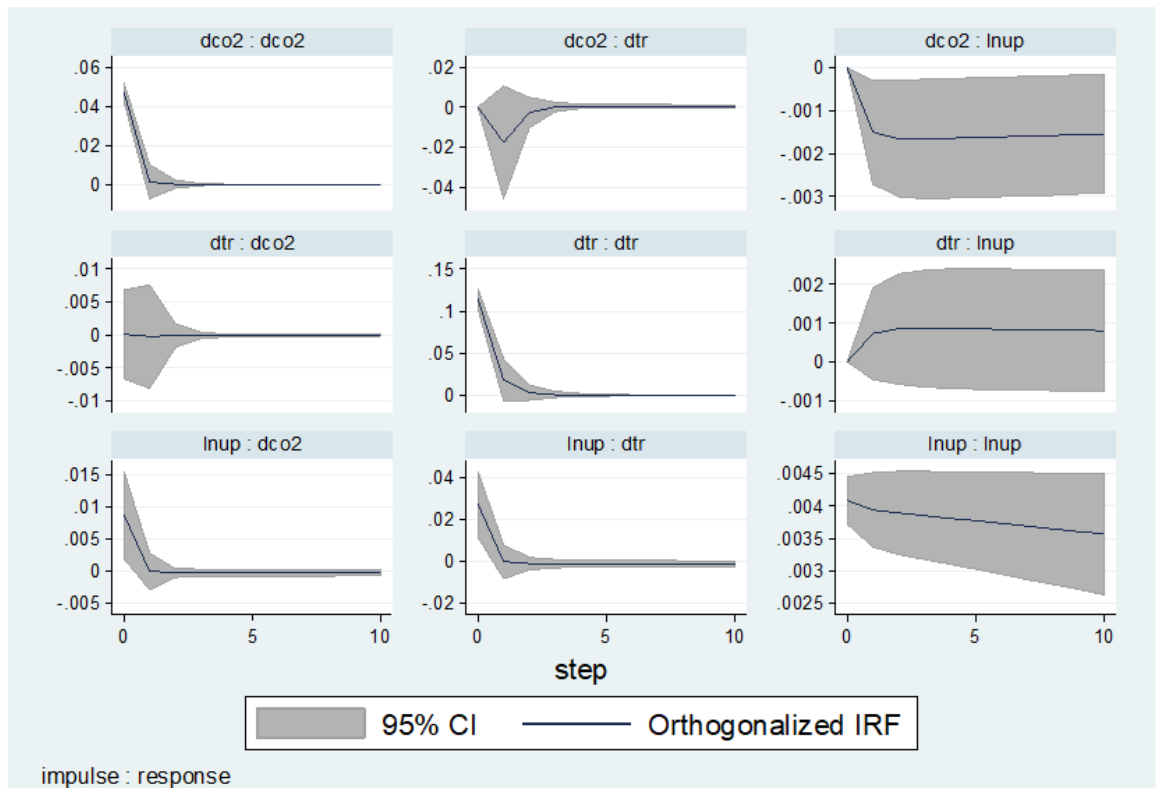
Graph 2. *IRF Plots*

DISCUSSION AND CONCLUSION

This paper has analyzed the tourism-urbanization-CO2 emissions nexus collecting the annual panel data in the period between 1995 and 2016 for the sample of top ten touristic destinations. Panel VAR methodology is used to examine the 2- and 3-variable models. First-order panel is suggested to be optimal.

Model 1 (bivariate) shows a significant positive response of urbanization to the tourism receipts per capita in model 1. These findings are well supported by (Guo et al., 2015) suggesting that the urbanization rate has a positive correlation contribution to the development of tourism economics. Moreover, the positive link is also supported by Patty & Kuncoro (2016). In addition, a significant positive response of UP to UP is also found. Other responses are not found to be significant. With respect to the second model, it is important to underline a negative response of the urbanization to the emissions of CO2. All of the models are found to be stable. Receipts per capita are found to Granger cause urbanization. However, UP is not found to cause TR. Model 2 suggests that CO2 emissions Granger cause urbanization, while urbanization is not found to have a causal impact on CO2 emissions.

The outcome of trivariate model suggests a significant positive response of UP to its lagged value. However, tourism receipts per capita are found to respond negatively to the urbanization. The significant negative coefficient of -0.032 with UP suggests a negative response of urbanization to CO2 emissions. This evidence on the negative link is also given by Chen et al. (2018); Sharma (2011) and York et al. (2003). However, these authors suggest that the sign of the link between these variables of interest strongly depends on the level of development and can be the results of the different impact of the CO2 emission reduction policies.

With respect to the results of Wald test, a unidirectional Granger causal link running from CO2 emissions to urbanization is reported as well as of UP to TR. In terms of IRFs, a negative response of CO2 to TR in the short-run is displayed. The impact is not found to be significant in the long-run. Besides that, the results suggest a positive decreasing response of urbanization to emissions of CO2. The response of tourism to CO2 emissions is not found to be different from zero.

The findings of this paper seem to be very promising suggesting the great environmental-awareness in the top 10 tourist destination. Hence, the tourism that differs from sustainable one tends to decrease

with the level of urbanization. The sustainable tourism and development is assumed to be without alternative in the examined countries. Thus, the policy implications of this paper suggest that key decision makers should develop strategies and do necessary steps in order to promote the development of sustainable tourism since the environment-friendly tourism is reported to be the only acceptable one. In order to promote the sustainable tourism, it is important to emphasize a key role of renewable energy. Thus, sustainable tourism and green energy are very closely connected. To develop the green energy, there is the key role of government to create renewable energy friendly policies. The same holds true for the sustainable tourism. It is of crucial importance to promote both green energy and sustainable tourism since those can significantly contribute to the economic growth and mitigate the emission of greenhouse gases. This is even more important since the fossil fuels based energy and tourism based on this energy can cause serious environmental issues not only in these top 10 touristic destinations but also at the global level. Moreover, it is crucial to attract the investors to support the renewable energy projects. Initially, these projects may be expensive but promise high returns in the both short- and the long-run, and thus can be very attractive for investors. Thus, countries may start with small and medium projects connected with the renewable energy. Besides these, policy implications should also include the education on the society in the whole on the positive externalities on the sustainable tourism and green economy for the economy as a whole.

The main limitations of this study are that it did not analyze the role of renewable energy in the nexus of interest. The introduction of the proxy of renewable energy is of key importance assuming the fact that it can significantly reduce the CO2 connected with the tourism services that are found to be significant energy gluttons. Moreover, the potential impact of the 2007-2008 financial crises is not observed even though this crisis has influenced significantly tourism receipts at the global level. At last, the analysis based on individual time-series has not been conducted but can provide the important insights for policy makers.

Thereby, the recommendations for future research may include the necessity to introduce the renewable energy while analyzing the nexus of interest. Besides, it is of key importance to explore the potential shocks due to the financial crisis in the years 2007-2008. In addition, there is a need to analyze and compare the dynamic in the nexus of interest for all top 10 touristic destinations individually. Despite these limitations, this paper represents the contribution to the literature to date in the sense that

it gives the preliminary evidence on the tourism-urbanization-CO2 emissions nexus in the top 10 touristic destinations, and uses the last available data and presents the results in the both short- and long-run. In addition, it employs the panel VAR together with IRFs and FEVD to provide the empirical evidence.

REFERENCES

Abrigo, M., & Love, I. (2016). Estimation of panel vector autoregression in Stata: A package of programs. Working Paper No. 16-2. University of Hawai.

Andrews, D.W.K., & Lu, B. (2001). Consistent model and moment selection procedures for GMM estimation with application to dynamic panel data models. *Journal of Econometrics, 101*(1), 123-164.

Canova, F., & Ciccarelli, M. (2013). Panel vector autoregressive models a survey. ECB Working Paper Series, No 1507.

Chen, S., Jin, H., & Lu, Y. (2018). Impact of urbanization on CO2 emissions and energy consumption structure: a panel data analysis for Chinese prefecture-level cities. *Structural Change and Economic Dynamics. In press. Doi:10.1016/j.strueco.2018.08.009*

Cunanan, M. (2018). Carbon intensive industries – the industry sectors that emit the most carbon. Retrieved 23 November, 2018 from https://ecowarriorprincess.net/2018/04/carbon-intensive-industries-industry-sectors-emit-the-most-carbon/.

Du, L.M., Hanley, A., & Zhang, N. (2016). Environmental technical efficiency, technology gap and shadow price of coal-fuelled power plants in China: A parametric metafrontier analysis. *Resour. Energy Econ., 43*, 14-32.

Gossling, S. (2000). Sustainable tourism development in developing countries: Some aspects of energy use. *Journal of Sustainable Tourism, 8*(5), 410-425.

Guo, Y., Chai, Y., & Wang, S. (2015). Urbanization, tourism revenue growth and regional non-equilibrium. *International Journal of Tourism Cities, 1*(3), 177-183.

Han, F., Xie, R., Lu, Y., Fang, J., & Liu, Y. (2018). The effects of urban agglomeration economies on carbon emissions: evidence from Chinese cities. *J. Clean. Prod. 172*, 1096-1110.

Hansen, L. P. (1982). Large sample properties of generalized method of moments estimators. *Econometrica, 50*(4), 1029-1054.

Isik, C., Dogru, T., & Turk, E. S. (2018). A nexus of linear and non-linear relationships between tourism demand, renewable energy consumption, and economic growth: Theory and evidence. *Int J Tourism Res., 20*, 38-49.

Işik, C., & Radulescu, M. (2017). Investigation of the relationship between renewable energy, tourism receipts and economic growth in Europe. *Statistika: Statistics and Economy Journal, 97*(2), 85-94.

Işık, C., Kasımatı, E., & Ongan, S. (2017). Analyzing the causalities between economic growth, financial development, international trade, tourism expenditure and/on the CO2 emissions in Greece. *Energy Sources, Part B: Economics, Planning, and Policy, 12*(7), 665-673.

Jebli, M.B., & Hadhri, W. (2018). The dynamic causal links between CO2 emissions from transport, real GDP, energy use and international tourism. *International Journal of Sustainable Development & World Ecology, 25*(6), 1-10.

Lenzen, M., Sun, Y.Y., Ting, Y.P., Geschke, A., & Malik, A. (2018). The carbon footprint of global tourism. *Nature Climate Change, 8*, 522–528.

Li, B., &Yao, R. (2009). Urbanisation and its impact on building energy consumption and efficiency in China. *Renew Energy, 34*, 1994-1998.

Love, I., & Zicchino, L. (2006). Financial development and dynamic investment behavior: Evidence from panel VAR. *The Quarterly Review of Economics and Finance, 46*(2), 190-210.

Luo, J. M., & Lam, C. F. (2016). A qualitative study of urbanization effects on hotel development. *Journal of Hospitality and Tourism Management, 29*, 135-142.

McCroskey, M. L. (1990). Arizona's community-built hotels. *Cornell Hotel and Restaurant Administration Quarterly, 31*, 26-33.

McGranahan, G., Jacobi, P., Songsore, J., Surjadi, C., & Kjellen, M. (2001). *The citizen at risk: From urban sanitation to sustainable cities*. London: Earthscan.

Mullins, P. (1991). Tourism urbanization. *International Journal of Urban and Regional Research, 15*(3), 326-342.

Mullins, P. (2003). The evolution of Australian tourism urbanization. In L. M. Hoffman, S. S. Fainstein, and D. R. Judd (Eds.), *Cities and visitors: Regulating people, markets and city space* (pp. 126-142). Oxford: Blackwell Publishing.

Qian, J., Feng, D., & Zhu, H. (2012). Tourism-driven urbanization in China's small town development: A case study of Zhapo Town, 1986–2003. *Habitat International, 36*(1), 152-160.

Patty, R., & Kuncoro, M. (2016). The linkage between industrialization, urbanization, and tourism: lessons from ASEAN and Indonesia. *International Journal of Business, Economics and Law, 11*(3), 33-44.

Sadorsky, P. (2014). The effect of urbanization on CO2 emissions in emerging economies. *Energy Economics, 41*, 147-153.

Satrovic, E. (2018a). *Merits of Life Insurance*. Munich: GRIN Verlag.

Satrovic, E. (2018b). The human development relies on renewable energy: Evidence from Turkey. 3rd International Energy & Engineering, Book of Proceedings, Gaziantep, Turkey; 19-27. Retrieved 11 January, 2019, from https://docs.wixstatic.com/ugd/315b3d_a4d7493ae65e4815be5ae3ab05f83d3f.pdf.

Satrovic, E., & Muslija, A. (2017). Foreign direct investments and tourism: Empirical evidence from Turkey. ICPESS Proceedings, 2, 88-100.

Satrovic, E., & Muslija, A. (2018). Causality relationship between foreign direct investment and tourism. *International Journal of Economics and Administrative Studies, 22*, 65-76.

Satterthwaite, D. (2009). Implications of population growth and urbanization for climate change. *Environ Urban, 2*, 545–567.

Scott, D., & Becken, S., (2010). Adapting to climate change and climate policy: Progress, problems and potentials. *Journal of Sustainable Tourism, 18*, 283-95.

Sghaier, A., Guizani, A., Ben Jabeur, S., & Nurunnabi, M. (2018). Tourism development, energy consumption and environmental quality in Tunisia, Egypt and Morocco: A trivariate analysis. *GeoJournal, 1-17. In press. Doi:10.1007/s10708-018-9878-z*

Shahbaz, M., Loganathan, N., Muzaffar, A. T., Ahmed, K., & Ali Jabran, M. (2016). How urbanization affects CO 2 emissions in Malaysia? The application of STIRPAT model. *Renewable and Sustainable Energy Reviews, 57*, 83-93.

Shakouri, B., KhoshnevisYazdi, S., & Ghorchebigi, E. (2017). Does tourism development promote CO2 emissions? *Anatolia, 28*(3), 444-452.

Sharma, S. S. (2011). Determinants of carbon dioxide emissions: empirical evidence from 69 countries. *Applied Energy, 88(1),* 376-382.

Sims, C.A. (1980). Macroeconomics and reality. *Econometrica, 48*(1), 1-48.

Solarin, S. A., & Shahbaz, M. (2013). Trivariate causality between economic growth, urbanisation and electricity consumption in Angola: Cointegration and causality analysis. *Energy Policy, 60*, 876-884.

UNFCCC, (2000). Climate Change Information Sheet 22. Retrieved 17 April, 2019, from http://unfccc.int/cop3/fccc/climate/fact22.htm

Wang, S., & Li, C. (2017). The impact of urbanization on CO_2 emissions in China: An empirical study using 1980–2014 provincial data. *Environmental Science and Pollution Research, 25*(3), 2457-2465.

Wang, S., Zeng, J., Huang, Y., Shi, C., & Zhan, P. (2018). The effects of urbanization on CO 2 emissions in the Pearl River Delta: A comprehensive assessment and panel data analysis. *Applied Energy, 228*, 1693-1706.

York R., Rosa, E. A., & Dietz T. (2003). STIRPAT, IPAT and ImPACT: Analytic Tools for Unpacking the Driving Forces of Environmental Impacts. *Ecological Economics, 46,* 351-365.

Yu, L. (1992). Hotel development and structures in China. *International Journal of Hospitality Management, 11*(2), 99-110.

Zaman, K., Moemen, M. A. E., & Islam, T. (2017). Dynamic linkages between tourism transportation expenditures, carbon dioxide emission, energy consumption and growth factors: evidence from the transition economies. *Current Issues in Tourism, 20*(16), 1720-1735.

Zarzoso, I. M. (2008). The impact of urbanization on co2 emissions: evidence from developing countries. Retrieved 29 December, 2018 from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1151928.

Zhang, G., Zhang, N., & Liao, W. (2018). How do population and land urbanization affect CO2 emissions under gravity center change? A spatial econometric analysis. *Journal of Cleaner Production, 202*, 510–523.

Zhang, H., Luo, J. M., Xiao, Q., & Guillet, B. (2013). The impact of urbanization on hotel development: Evidence from Guangdong Province in China. *International Journal of Hospitality Management, 34*, 92-98.

THE EFFECTS OF P-O ETHICAL FIT, EXPECTED PAY AND CORPORATE IMAGE ON JOB CHOICE DECISION[1]

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ABSTRACT

Our research extends the current recruiting relevant studies by identifying how intrinsic (person-organization ethical fit, P-O ethical fit) and extrinsic factors (pay level and perceived corporate image) influence job choice decision solely and interactively. A 2×2 between-subjects experimental design was conducted with 210 graduating students in Taiwan, and written scenarios were used to simulate a job choice setting. These scenario cases are related to hotels which focus on environmentally relative corporate social responsibility (CSR) activities. The results show a significant difference in job offer acceptance rates among job seekers with diverse P-O ethical fit and the effect of P-O ethical fit on perceived corporate image was partially supported. The following discussion and suggestion will be made to provide ideas for recruiting management and it will also contribute to academic research.

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INTRODUCTION

Applicant job decisions are motivated not only by extrinsic motivation but also by intrinsic motivation (Deci & Ryan, 2000; Gagné & Deci, 2005). McGinley et al.'s (2018) study highlighted the power of an organization's status on its attractiveness to job seekers. Moreover, it indicated a significant positive interaction effect with individuals' need for status. According to motivation theories, extrinsic motivation is derived from linkages between job choice decision and external rewards such as monetary factors, whereas intrinsic motivation comes from job seekers' perception of an organization or personal interests in a job. The results of one meta-analytic study by Chapman et al. (2005) also stated that non-monetary attributes such as job, organization, and recruiter attributes were all related to applicant acceptance intention and job choice decision. Thus, identifying the effects of intrinsic versus extrinsic motives to recruitment has become an important issue for employers.

Surroca et al.'s (2010) study highlighted the significance of recruiting and hiring employees with attitudes and values that fit the corresponding organization. The attraction-selection-attrition (ASA) model supports the ideas that job seekers will be more attracted to organizations whose values match their own (Schneider, 1987; Smith, 2008), and research on person-organization fit (P-O fit) demonstrate that employees are attracted and committed to organizations that better fit their values (Judge & Cable, 1997; Kristof, 1996; Lievens et al., 2001; Schneider, 1987; Smith, 2008). In line with this logic, Finegan & Theriault (1997) evaluated the relationship between corporate codes of ethics and P–O fit, determining that the more an employee's personal values are reflected in a company's code of ethics, the more favorably the employee will evaluate the value of the code of ethics. These findings can be viewed as the better P-O ethical fit between job seekers and corresponding organization, the higher applicants' intent to apply for or accept the job offer will be. However, there is no evidence indicating how different conditions of the match will affect applicants' job search decision. The current experimental research thus attempted to test the effects of four different P-O ethical fits on applicants' job decision choice.

Pay level, one kind of extrinsic motivators, has been known as an essential factor influencing applicants' job choice decisions (Cable & Judge, 1994; Chapman et al., 2005; Jurgensen, 1978; Rynes & Cable, 2003). Job seekers look for a job that will allow them to make a decent material living (Cable & Judge, 1994) and prefer higher-paying jobs to lower-

paying jobs (Rynes & Cable, 2003). For this reason, employers who provide more monetary incentives than other prospective employers are more likely to effectively attract targeted applicants. Therefore, we used the expected pay as one of the predictors in this study to identify its effect on applicants' job seeking decision.

A study by Gatewood et al. (1993) pointed out that job seekers have a higher willingness to apply for companies with a better reputation, in other words, job seekers' perceptions of the company when choosing a job opportunity are also an important factor in their consideration (Collins & Stevens, 2002). Along with logic, the current research also tests the effect of organization image on applicants' job choice decision, and furthermore to investigate what is the linkage between different P-O ethical fits and job seekers' perceived corporate image and how it relates to their job choice.

The effects of individual characteristics interact with organizational attributes to affect perceived fit, attractiveness, and job choice has been investigated on the previous recruitment research (e.g. Cable & Judge, 1996; Erdogan & Bauer, 2005; Judge & Cable, 1997). Other work has focused on how the intrinsic and extrinsic motivators influence job seekers' attitudes, intentions, and perceived fit, and choices (Allen et al., 2007; Deci & Ryan, 2000; Gagné & Deci, 2005). Our research extends the current recruiting relevant studies by identifying how intrinsic (P-O ethical fit) and extrinsic factors (pay level and perceived corporate image) influence job choice decision solely and interactively.

LITERATURE REVIEW

Applicants looking for a job that enables them to make a decent material living is the reason that applicants seek a job (Cable & Judge, 1994) and prefer higher-paying jobs to lower-paying jobs (Rynes & Cable, 2003). The wider the range of pay level within the applicants' job pool, the greater the salient effect the pay level has on job choice (Highhouse et al., 1999). Pay level, therefore, has been acknowledged as an important factor influencing applicants' job choices (Cable &Judge, 1994; Chapman et al., 2005; Jurgensen, 1978; Rynes & Cable, 2003). For this reason, employers who provide more monetary incentives than other prospective employers are more likely to successfully attract targeted applicants. We thus propose the following hypothesis:

H1: Expected pay will positively relate to job seekers' job choice decision.

In the past few decades, researchers have continued to study the factors of which organizations attract job seekers, especially those related to job searching decisions (Barber, 1998). Personal-Organization fit (P-O fit) has been extensively studied in organizational behavior and business fields (e.g. Ambrose et al., 2008; Cable & Judge, 1996; Firfiray & Mayo, 2017; Gully et al., 2013; Valentine et al., 2002). Cable and Judge (1996) explain the idea of P-O fit from the job seekers' perspective in that job seekers prefer organizations that have the same personality as they do. Judge and Cable (1997) continue to indicate that job seekers often attempt to match their values with an organization's reputation. Much research also proves the strong and important effects of the positive relationship between employees and the organizations on employee recruitment and retention, and job seekers often try to match their values to the organization's reputation (see Cable & Judge, 1996; Chatman, 1991; Ehrhart & Ziegert, 2005; Judge & Cable, 1997). These findings support that ethical fit is an important feature of personal organizational fit and affects employees' willingness to apply for jobs (Sims & Kroeck, 1994). Although corporate social responsibility (CSR) does not totally represent ethics, it is an ethical behavior metric that reflects organizational culture and values and is easily understood by people. Therefore, we use CSR practice as the signal of the ethical value of an organization.

Several theoretical models demonstrate the importance of organizational characteristics to applicants' job-searching outcomes. For example, Signal Theory (Spence, 1973) shows how prospective job seekers may utilize clues provided by the organization and use them to support the job choice decision process (Wanous, 1992). The linkage between CSR and financial performance is noted by Branco and Rodrigues (2006). They demonstrate that companies known by its good social responsibility reputation may attract better employees or motivate and increase current employees' motivation and morale as well as their commitment and loyalty to the company, thereby improving financial outcomes. Turban and Greening (1997) argued that a firm's CSR practices can be seen as an important attracting factor of potential employees. For job seekers, job search decisions will also be based on subjective perceptions and judgments of the company's "organizational image" and will be a key factor influencing job seekers' perceived strengths and weaknesses (Barber, 1998). Along with this logic, the current research employs four types of P-O ethical fit which are positive hotel CSR and high cognition of CSR (PH), positive hotel CSR and low cognition of CSR (PL), negative hotel CSR and high cognition of CSR (NH), and negative hotel CSR and

low cognition of CSR (NL) to test the effects of P-O ethical fit on job seekers' job choice decision. We propose the following hypotheses:

H2: There is a significant difference among P-O ethical fit on job seekers' job choice decision. PH fit will make job seekers more likely to accept job offer than the other 3 kinds of fits.

Corporate image is an abstract concept that is the subjective attitude and feeling of the customer's perception or message about a particular product or service type given by the organization (Boulding, 1956). This perspective is similar to Riordan et al. (1997), which states that corporate image is the basis of corporate identity and determines the stakeholder's perception of corporate-related activities. Scholars conducted research on organizational brands and recruiting indicating a positive correlation between the image of the top 500 companies and college students' job-seeking tendencies (Gatewood et al., 1993). Therefore, internal and external image management has a significant influence on the brand (Duncan & Moriarty, 1998), it not only positively related to consumers' (Liat et al., 2014) and employees' perceptional and behavioral outcomes but also the specific presentation of the company's brand (Hoeffler & Keller, 2002). Rynes et al. (1991) also had a result in a research regarding to job attractiveness that organizational social performance and culture affect new employees' willingness to apply. Organizations with better social performances can also attract better job seekers and have better recruitment results. Zairi and Peters (2002) pointed out that when companies fulfill their social responsibilities, they will have a positive impact on the corporate image and help maintaining the relevant competitive advantage of the company. It can be seen that CSR is not just a pursuit of international trends, but one of the means to improve the corporate image and enhance competitive advantage. Therefore, following hypotheses were proposed:

H3: Job seekers with different P-O ethical fit will have a significant difference in the perceived corporate image. Job seekers with PH fit will have a higher level of the perceived corporate image than the other 3 kinds of fits.

H4: The interaction among P-O ethical fit, perceived corporate image, and expected pay will affect job seekers' job choice decision.

METHODOLOGY

The study was carried out with a 2×2 experimental design (see Table 1). Two well-known hotels that actually exist in the Sun Moon Lake Soil and Water Conservation Area, where is located in central Taiwan, were selected and their information was rewritten to establish the basic information content and the social responsibility practices of the two scenario hotels. This study used a single set of pre- and post-test design. All subjects were randomly assigned to two CSR settings. Participants were categorized to the high or low cognition of CSR team by their scores of CSR cognition scales. The cutoff point was the mean (m=5.94) of individuals' cognition of CSR. In the end, every participant was classified to one of the following ethical P-O groups:

1. PH– positive Hotel CSR and high cognition of CSR

2. PL– positive Hotel CSR and low cognition of CSR

3. NH– negative Hotel CSR and high cognition of CSR

4. NL– negative Hotel CSR and low cognition of CSR.

Table 1. *The P-O ethical fit between job seekers and hotel*

| | | Job seekers' cognition of CSR (n=210) | |
		High	Low
Hotel CSR	Positive(CSRP)	PH (n=59)	PL (n=46)
	Negative (CSRN)	NH (n=51)	NL (n=54)

Procedure

A brief introduction of this research project was given by the researcher in person and the materials were distributed to all participants in several undergraduate classes in Management College located in central Taiwan. All participants were graduate students or senior students of undergraduate programs who are going to graduate within 6 months, so

that they were qualified potential job applicants. There are 3 steps in this experiment:

Step 1: All participants were asked to complete the CSR cognition survey.

Step 2: All participants read the same scenario about the introduction to the Hotel and its recruitment advertisement. The information of the average salary in this industry was offered, and then participants were asked to provide their expected pay if they were to apply for this job.

Step 3: Two different environmental protection relevant CSR scenarios were assigned in this step. Two scenario articles were rewritten from real reported cases derived from public media in the Sun Moon Lake soil and water conservation area in Taiwan. We used these two scenarios to describe the positive CSR and negative CSR settings. All participants answered their perceived corporate image of the hotel and their willingness to accept a job offer provided by the hotel after reading these descriptions.

(1) Hotel with positive CSR (CSRP): News report related to positive CSR.

(2) Hotel with negative CSR (CSRN): News report related to negative CSR.

Participants

College graduates were used as samples in many previous studies (e.g. Carless, 2005; Kim & Park, 2011; Quinetta et al., 2005), because these students were very close to joining the job market. They were seen as potential job seekers in the very near future. This research, therefore, used these senior students who are going to join the market within 6 months as experimental subjects. Experiment was conducted in February and March 2018. The participants include 200 senior undergraduate business students at a university in central Taiwan. Across the sample, the distribution of the age groups was 82.4% under 22 years old (minimum age was 18), 15.2% was 23 years old, 1.0% was 24 years old, and 1.4% was older than 25 years old. Men comprised 29% of the sample. All data used in this study were collected from written surveys distributed and collected in respondents' classrooms by the first author at the university during a regularly scheduled class period. Each participant received a package containing instructions, surveys, and scenario case. Respondents were asked to read the scenarios while imagining themselves as job seekers preparing to apply for a job in the case hotel. All participants were randomly assigned

to 2 case hotel settings, and participants were grouped to high or low CSR cognitive awareness based on the results of their answers to the CSR cognition scale.

Measurement Scales

CSR Cognition Scale. This scale was adopted from Park (2009). A total of 27 items were incorporated into the six dimensions of this scale, and 2 unrelated dimensions were excluded in this study. All items were rated on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). Example items of each dimension were: The hotel implements renewable energy programs; the hotel implements recycling programs; the hotel implements a linen and towel reuse program; the hotel purchases locally produced ingredients; the hotel implements environmental training programs; and, the hotel supports local communities to enhance the local environment. The overall fit supports the measurement model and the χ^2fit statistic is 291.3 with 146 degrees of freedom ($p<.001$). The RMSEA is .069 and the CFI is .98. The measures demonstrate adequate construct validity and reliability.

Perceived Corporate Image. The 4-item scale was adopted by De Wulf et al. (2001). These four items were "I think the social image of this hotel is very good", "This hotel has a good reputation", "I think this hotel will have a higher social rating", and "I think this hotel can be trusted". The Cronbach's alpha was .97 for the scale.

Expected Pay. This variable was measured with one item: "What is your expected salary for this job?" Participants were asked to put a check mark on the box representing the expected pay for his or her job.

Job Choice Decision. One dichotomous item was used to measure this variable: "Would you accept this job offer or not?" Participants were asked to put a check mark on the box of Yes or No. In this study, we were particularly interested in knowing whether participants would accept the job offer when considering intrinsic and extrinsic factors.

RESULTS

In consideration of the effects of confounding variables, results from a series of chi-square tests and analyses of variance (ANOVA) indicate that

participants' gender $((\chi (1) =1.17, p = 0.28)$ and age $(F=0.48, p =0.77)$ did not significantly differ across the four experimental conditions. Table 2 lists the means, standard deviations, and inter-correlations among all study variables.

Table 2. *Descriptive Statistics and Correlation of the Variable (N=210)*

	Variable	m(sd)	PH	PL	NH	NL	CI	JCD	EP
1.	Ethical P-O fit-PH[a]	-	1						
2.	Ethical P-O fit-PL[b]	-	-.331**	1					
3.	Ethical P-O fit-NH[c]	-	-.368**	-.312**	1				
4.	Ethical P-O fit-NL[d]	-	-.354**	-.300**	-.333**	1			
5. Perceived Corporate Image (CI)		4.52(1.62)	.554**	.274**	-.482**	-.353**	1		
6. Job Choice Decision(JCD)[e]		–	.343**	.128	-.328**	-.149*	.517**	1	
7. Expected Pay (EP)		.42(.50)	.079	-.032	-.026	-.025	.045	.019	1

*Note: ** p<.001, * p<.05; [abcde] Dummy variables*

Table 3. *P-O Ethical Fit * Job Choice Decision Cross-Tabulation*

		Job Choice Decision	
P-O Ethical Fit		No	Yes
PH	n	18	41
	% of all	8.6%	19.5%
PL	n	21	25
	% of all	10%	11.9%
NH	n	46	8
	% of all	21.9%	3.8%
NL	n	36	15
	% of all	17.1%	7.1 %

Note: χ^2 (3, N=210) = 40.77, p=.00

Table 3 reports the results of the difference of job seekers with diverse kind of P-O ethical fit on their job choice decision. Chi-square test is most commonly used for the testing of relationships between categorical variables, especially when the number of samples is too small, for

example, the number of samples per group is less than 30 (Gay, 1992). In support of Hypothesis 2, the chi-square result revealed a significant difference (χ^2 (3, n=210)=40.77, p=0.00). The percentage of agreeing to accept the job offer in the group of job seekers with PH P-O ethical fit (19.5%) is higher than the rest of the three groups (PL, 11.9%; NH, 3.8%; NL, 7.1%).

One-way ANOVA was used to test the effect of P-O ethical fit on the perceived corporate image, the results shown in Table 4. Results indicating significant differences in diverse P-O ethical fit on the perceived corporate image (F(3,206) =82.68, p=0.000, η_p^2 =.5.5). The post-hoc analysis revealed that (1) group with PH (m=5.95, sd=.78) is significantly (p=0.00) higher than group with NH (m=3.20, sd=1.32); (2) group with PH is significantly (p=0.00) higher than group with NL (m=3.52, sd=1.33); (3) group with PL (m=5.36, sd=.85) is significantly (p=0.00) higher than group with NH; and (4) group with PL is significant higher than group with NH (p=.00), but there are no significant differences between group PH and group PL, and group NH and group NL. These results partially support Hypothesis 3.

Table 4. *ANOVA Result of the P-O Ethical Fit on Perceived Corporate Image* ($n = 210$)

Source of Variability	SS	df	MS	F	P	η_p^2
Fit	299.34	3	99.78	82.68	0.000	0.55
Error	248.62	206	1.21			
Total	547.96	209				

As shown in Table 5, the effect of expected pay on job choice decision shown in model 1 indicated no significant result (β = -0.04, p > 0.05). Therefore, Hypothesis 1 was not supported. Nevertheless, the P-O ethical fit, perceived corporate image, and expected pay did not have significant interaction effects on job choice decision (β = -0.66, -0.50, -0.23, 0.02, p > 0.05; see Table 5). These outcomes were inconsistent with Hypothesis 4.

Table 5. *Results of Logistic Regression with Dependent Variable as Job Choice Decision*

Variables	Job Choice Decision		
	Model 1	Model 2	Model 3
Intrinsic Variable			
Ethical fit- PH [H1]	4.23**	3.24*	2.19
Ethical fit- PL [H1]	3.98**	1.67	1.94
Ethical fit- NL[H1]	3.40*	4.00	5.65
Ethical fit- NH [H1]	4.19**	2.86	4.12
Perceived Corporate Image (CI)	.78**	.55*	.50
Extrinsic Variable			
Expected pay (EP) [H2]	-.04	.05	.06
Two-way interaction terms [H4]			
PH✕CI		.46	2.16
PL✕CI		.51	1.71
LH✕CI		.28	.80
NH✕CI		-	-
PH✕EP		-.20	.76
PL✕EP		.42	.84
NL✕EP		-.82	-.99
NH✕EP		-	-
Three-way interaction terms			
PH✕CI✕EP			-.66
PL✕CI✕EP			-.50
NL✕CI✕EP			-.23
NH✕CI✕EP			.02
-2 Log likelihood	218.68	213.246	208.64
Cox & Snell R^2	.292	.31	.33
Nagelkerke R^2	.389	.41	.43

*Note: ** p<.001, * p<.01*

DISCUSSION

The present study investigates the intrinsic and extrinsic motivators, namely P-O ethical fit, the perceived corporate image, and expected pay of job seekers on their job choice decision. Previous research in job choice contexts revealed that applicant decision making is both determined by extrinsic and intrinsic motivation, and job seekers are motivated to choose a job which provides external rewards or possesses consistent values with them. In the current study, the hypothesis testing the effect of pay on job choice decision was not supported. Pay level, one of the monetary factors, can induce applicants' external motivation, while non-monetary attributes

such as P-O fit may affect their intrinsic motivation to accept the job. Applicants may choose a lower pay job with favorable non-monetary attributes as they are motivated by intrinsic motivation rather than extrinsic motivation. Our result implied that there may be determinants of job seekers' decisions other than expected pay, in turn raising the possibility that other attributes, especially non-monetary attributes, may have stronger effects on job seekers' acceptance of a job offer.

Research has uncovered evidence that job seekers consider non-monetary attributes during the recruitment process (Cable & Judge, 1994; Chapman et al., 2005; Jurgensen, 1978; Rynes & Cable, 2003). Previous research indicated that there is a positive effect of P-O fit and organizational attractiveness towards job choice. This research took it one step further by investigating the effect of ethical value match between organization and individual. We categorized it into 4 types and tested the relationships between them and job choice decision. Comparing positive and negative fits, we found that job seekers are more likely to accept a job offer when they have positive P-O ethical fit with the counterpart hotel; whereas job seekers are less likely to accept a job offer with the negative P-O ethical fit. The positive fit also facilitates job seekers to have a higher degree of the perceived corporate image than others. In two dis-match conditions, it was found that job seekers who have higher CSR cognition exhibit the lowest job acceptance rates with hotels with negative CSR. These findings primarily confirmed Cable and Judge's (1996) statement that "Job seekers prefer organizations that have the same ''personality'' as they do", but further clarified that only positive fit may have a meaningful influence on applicants' job choice decision when considering ethical value fit. We also found that job seekers with positive P-O ethical fit have a significantly higher level of the perceived corporate image than applicants' in groups NL and PL. Our statistical results also indicated that job seekers with high CSR cognition will have a higher perceived corporate image than those with low CSR cognition after reading positive CSR reports of the scenario Hotel. After reading negative CSR reports of the scenario Hotel, applicants with high CSR cognition have lower perceived corporate image of this Hotel than those with lower CSR cognition. These findings aligned with Branco and Rodrigues (2006), Fombrun and Shanley (1990), and Turban and Greening's (1997) studies that conducting CSR creates and delivers a positive corporate image of an organization to the public which increases positive feelings of the public to the organization and continues to improve organizational attractiveness.

This effect will be more significant while there is a positive match between personal and organizational ethical value.

Such results can be verified through a person-organization fit; basically, the organization preferred by the job seeker is the organization's attributes that work closely with its personality traits (Chatman, 1989; Chatman, 1991; Judge & Bretz, 1992; Cable & Judge, 1994). Organizational credibility and image play an important role in the appeal of job seekers (Cable & Turban, 2001; Tom, 1971). As Soelbe (1967) suggests that initial screening judgment is an important part. Job seeker's initial preference is usually determined by limited information. The rest of the decision-making process is mostly about confirmation. In other words, the job seeker will judge the preference of the company according to the information provided by the company in the early stage of the job search. Therefore, if the information provided by the company is preferred by the job seeker, it means that the two parties are more consistent in image or attribute. And, in turn, this may increase the willingness to seek employment, so the results of this study are similar to those of past studies. Therefore, in this study, if the value congruence between the individual and the organization is positive and higher, it means that they are more suitable for each other.

CONCLUSION

The effects of ethical fit between the organization and individual and perceived organizational image are more powerful than the pay level at attracting applicants. And the explanation for this preference is that most applicants want to work for a company which shares similar values with them rather than driven merely by external inducements. In addition, this effect of value match on accepting a job offer is stronger for applicants who have a positive ethical fit with their counterpart organization. From these findings, employers should be able to identify their core ethical value, form their organizational culture and engage in relevant CSR. Furthermore, to communicate their ethical value and CSR performance with their potential job seekers at an early stage, thus enabling them to convey information about non-monetary attributes suited to job seekers.

Practical Implications

The degree of suitability of the individual's own image and the organizational image has a positive impact on the attractiveness of the organization; the higher the suitability of each other, the stronger the attraction of the organization. Basically, the organization of job seekers' preference is that the attributes of the organization are closely related to their personality traits. Netemeyer et al. (1997) argue that the general meaning of individual-organizational adaptation refers to the consistency between individual personality traits, beliefs, goals, and values, and organizational culture, strategic needs, organizational norms, organizational goals, and organizational values. If the similarity between the individual and the organization is higher, it means that they are more suitable for each other.

In this study, it was found that when participants read the news about the social responsibility of the case hotel, the perception of its image has a multiplier effect. In other words, to conceal the organization's wickedness and boast of its goodness has a great significance to the establishment and maintenance of its corporate image. This study provided the CSR relevant report in the newspaper of the case hotel to participants as media for communicating with the applicants about the hotel's CSR. The company itself should consider what kind of media should be used to communicate its concept of corporate philosophy, corporate culture, and values to actual performance. All these should be consistent. It is because, in the early stages of job hunting, job seekers mostly judged their company based on limited information. If companies can give potential candidates a message that fully reflects their important core values at this stage, then they can attract candidates with the same values.

Limitation and Future Research Directions

There are some limitations to this research. First, generalizability concerns may be raised by using student samples as potential applicants. However, participants in the study were undergraduates on the verge of receiving their degree. They were intending to search for a job within one year. Additionally, past research that used graduating students as potential applicants suggested that the job-seeking decision processes of graduating students are similar to those of real applicants (Turban et al., 1995). Future

studies are nevertheless needed to apply our findings to test other types of job seekers (Breaugh & Starke, 2000).

Second, we provided a reference level for industrial wages in the hospitality industry. This reference may result in the anchoring effect of the participants on the expected pay. In addition, the effect of pay level on job acceptance intention and choice varies for applicants at different stages of job seeking (Harold & Ployhart, 2008). The current study focused solely on the final job choice decision. Research suggested that applicants' job-choice strategies may vary from one recruitment-process stage to another (Osborn, 1990). Moreover, the job-choice factors that applicants take into consideration vary from one recruitment stage to the next (Uggerslev et al., 2012). Future research is suggested to use a sequential manipulation to explore the changes in the expected pay of the applicant at the different stages during the job-seeking processes and explore how applicants combine monetary and non-monetary attributes in these stages.

REFERENCES

Allen. D. G., Mahto, R.V., & Otondo, R. F. (2007). Web-based recruitment: Effects of information, organizational brand, and attitudes toward a Web site on applicant attraction. *Journal of Applied Psychology, 92*, 1696-1708.

Ambrose, M., Arnaud, A., & Schminke, M. (2008). Individual moral development and ethical climate: The influence of person-organization fit on job attitudes. *Journal of Business Ethics, 77*(3), 323–333.

Barber, A. (1998). *Recruiting Employees: Individual and Organizational Perspectives*. Thousand Oaks, CA: Sage Publications.

Boulding, K. E. (1956). *The Image: Knowledge in Life and Social.* Ann Arbor, MI: University of Michigan Press.

Branco, M. C., & Rodrigues, L. L. (2006). Corporate social responsibility and resource-based perspectives. *Journal of Business Ethics, 69*, 111–132.

Breaugh, J. A., & Starke, M. (2000). Research on employee recruitment: So many studies, so many remaining questions. *Journal of Management, 26*, 405–434.

Cable, D. M., & Judge, T. A. (1994). Pay preferences and job search decisions: A person-organization fit perspective. *Personnel Psychology, 47*(2), 317–348.

Cable, D. M., & Judge, T. A. (1996). Person-organization fit, job choice decisions, and organizational entry. *Organizational Behavior and Human Decision Processes, 67*(3), 294–311.

Cable, D. M., & Turban, D. (2001). Recruitment image equity: Establishing the dimensions, sources, and value of job seekers' organizational beliefs. *Research in personnel and human resources management, 20*, 115–163.

Carless, S. A. (2005). Person-job fit versus person-organization fit as predictors of organizational attraction and job acceptance intentions: A longitudinal study. *Journal of Occupational and Organizational Psychology, 78*, 411–429.

Chapman, D. S., Uggerslev, K. L, Carroll, S. A., Piasentin, K. A., & Jones, D. A. (2005). Applicant attraction to organizations and job choice: A meta-analytic review of the correlates of recruiting outcomes. *Journal of Applied Psychology, 90*, 928-944.

Chatman, J. A. (1989). Improving interactional organizational research: A model of person-organization fit. *Academy of Management Review, 14*(3), 333–349.

Chatman, J. A. (1991). Matching people and organizations: Selection and socialization in public accounting firms. *Administrative Science Quarterly, 36*(3), 459–484.

Collins, C. J., & Stevens, C. K. (2002). The relationship between early recruitment-related activities and the application decisions of new labor-market entrants: A brand equity approach to recruitment. *Journal of applied psychology*, *87*(6), 11–21.

De Wulf, K., Odekerken-Schröder, G., & Iacobucci, D. (2001). Investments in consumer relationships: A cross-country and cross-industry exploration. *Journal of Marketing, 65*(4), 33–50.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, *11*, 227-268.

Duncan, T., & Moriarty, S. E. (1998). A communication-based marketing model for managing relationships. *The Journal of Marketing*, *62*, 1–13.

Ehrhart, K. H., & Ziegert, J. C. (2005). Why are individuals attracted to organizations? *Journal of Management, 31*(6), 901–919.

Erdogan, B., & Bauer, T. N. (2005). Enhancing career benefits of employee proactive personality: The role of fit with jobs and organizations. *Personnel Psychology, 58*, 859-891.

Finegan, J., & Theriault, C. (1997). The relationship between personal values and the perception of the corporation's code of ethics. *Journal of Applied Social Psychology, 27*(8), 708–724.

Firfiray, S., & Mayo, M. (2017). The lure of work-life benefits: Perceived person-organization fit as a mechanism explaining job seeker attraction to organizations. *Human Resource Management, 56*(4), 629-649.

Fombrun, C., & Shanley, M. (1990). What's in a name? Reputation building and corporate strategy. *Academy of Management Journal, 33*(2), 233–258.

Gagné M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior, 26*, 331-362.

Gatewood, R. D., Gowan, M. A., & Lautenschlager, G.J. (1993). Corporate image, recruitment image and initial job choice decisions. *Academy of Management Journal, 36*(2), 414–427.

Gay, L. R. (1992). *Educational Research: Competencies for Analysis and Application* (4th ed.). Merrill, NY: M. Macmillan International.

Gully, S. M., Phillips, J. M., Castellano, W. G., & Han, K. (2013). A mediated moderation model of recruiting socially and environmentally responsible job applicants. *Personnel Psychology, 66*, 935-973.

Harold, C. M., & Ployhart, R. E. (2008). What do applicants want? Examining changes in attribute judgments over time. *Journal of Occupational and Organizational Psychology, 81*, 191–218.

Highhouse, S., Stierwalt, S. L., Bachiochi, P. D., Elder, A. E., & Fisher, G. (1999). Effects of advertised human resource management practices on attraction of African-American applicants. *Personnel Psychology, 52*, 425-442.

Hoeffler, S., & Keller, K. L. (2002). Building brand equity through corporate societal marketing. *Journal of Public Policy & Marketing, 21*(1), 78–89.

Judge, T. A., & Bretz, R. D. (1992). Effects of work values on job choice decisions. *Journal of Applied Psychology, 77*(3), 261–271.

Judge, T. A., & Cable, D. M. (1997). Applicant personality, organizational culture and organization attraction. *Personnel Psychology, 50*, 359–394.

Jurgensen, C. E. (1978). Job preferences (What makes a job good or bad?). *Journal of Applied Psychology, 63*, 267-276.

Kim, S. Y., & Park, H. (2011). Corporate Social Responsibility as an organizational attractiveness for prospective public relations practitioners. *Journal of Business Ethics, 103*, 639–653.

Kristof, A. L. (1996). Person-organization fit: An integrative review of its conceptualizations, measurement, and implications. *Personnel Psychology, 49*(1), 1-49.

Liat, C.B., Mansori, S., & Huei, C.T. (2014). The associations between service quality, corporate image, customer satisfaction, and loyalty: Evidence from the Malaysian hotel industry. *Journal of Hospitality Marketing & Management, 23*, 314-326.

Lievens, F., C., Decaeateker, C., & Coetsier, P. (2001). Organizational attractiveness for prospective applicants: A person-organization fit perspective. *Applied Psychology: An International Review, 50*(1), 30-51.

McGinley, S. P., Yang, W., & Zhang, L. (2018). Snob appeal? Impact of company status perceptions on employee recruitment. *Journal of Hospitality Marketing & Management, 27*(1), 85-105.

Netemeyer, R.G., Boles, J.S., McKee, D.O., & McMurrian, R. (1997). An investigation into the antecedents of organizational citizenship behaviors in a personal selling context. *Journal of Marketing, 61*(3), 85–98.

Osborn, D. P. (1990). A reexamination of the organizational choice process. *Journal of Vocational Behavior, 36*, 45–60.

Park, J. (2009). *The relationship between top managers' environmental attitudes and environmental management in hotel companies*. Doctoral Dissertation, Virginia Polytechnic Institute and State University, Virginia, USA.

Quinetta, M. R., Christopher J. C., & Shaul, O. (2005). The effects of recruitment message specificity on applicant attraction to organizations. *Journal of Business and Psychology, 19*(3), 319-339.

Riordan, C. M., Gatewood, R. D., & Bill, J. B. (1997). Corporate image: employee reactions and implications for managing corporate social performance. *Journal of Business Ethics,16*(4), 401–412.

Rynes, S. L., & Cable, C. M. (2003). Recruitment research in the twenty-first century. In W. C. Bor Man, D. R. Ilgen, & R. J. Klimoski (Eds.), *Handbook of psychology: Industrial and organizational psychology* (pp. 55-76). Hoboken, NJ: John Wiley and Sons.

Rynes, S. L., Bretz, R. D., & Gerhart, B. (1991). The importance of recruitment in job choice: A different way of looking. *Personnel Psychology, 44*(3), 487–521.

Schneider, B. (1987). The people make the place. *Personnel Psychology, 40*(3), 437-454.

Sims, R. L., & Kroeck, K. G. (1994). The influence of ethical fit on employee satisfaction, commitment, and turnover. *Journal of Business Ethics, 13*(12), 939–947.

Smith, D.B. (2008). *The People Make the Place: Dynamic Linkages between Individuals and Organizations*. New York, NY: Taylor and Francis.

Soelber, P.O. (1967). Unprogrammed decision making. *Industrial Management Review, 8*(2), 19–29.

Spence, M. (1973). Job market signaling. *Quarterly Journal of Economics, 87*, 355-374.

Surroca, J, Tribo, J., & Waddock, S. (2010). Corporate responsibility and financial performance: The role of intangible resources. *Strategic Management Journal, 31*, 463-490.

Tom, V. R. (1971). The role of personality and organizational images in the recruiting process. *Organizational Behavior and Human Performance, 6*(5), 573–592.

Turban, D. B., Campion, J. E., & Eyring, A. R. (*1995*). Factors related to job acceptance decisions of college recruits. *Journal of Vocational Behavior, 47*, 193-213.

Turban, D. B., & Greening, D. W. (1997). Corporate social performance and organizational attractiveness to prospective employees. *Academy of Management Journal, 40*(3), 658–672.

Uggerslev, K. L., Fassina, N. E., & Kraichy, D. (2012). Recruiting through the stages: A meta-analytic test of predictors of applicant attraction at different stages of the recruiting process. *Personnel Psychology, 65*, 597–660.

Valentine, S., Godkin, L., & Lucero, M. (2002). Ethical context, organizational commitment, and person-organization fit. *Journal of Business Ethics, 41*(4), 349–360.

Wanous, J. (1992). *Organizational Entry: Recruitment, Selection, and Socialization of Newcomers* (2nd ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

Zairi, M., & Peters, J. (2002). The impact of social responsibility on business performance. *Managerial Auditing Journal, 17*(4), 174–178.

THE EFFECT OF INTERACTIVE IT TABLE SERVICE ON CONSUMER'S REVISIT INTENTION[1]

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ABSTRACT

In the hospitality and catering industry, consumers are accustomed to face-to-face services, but the problems of Taiwan's aging society and the migration of manpower outward have become increasingly serious recently, impacting its service demands. In order to promote service quality and competitiveness and adapt to the global trends of industry technicalization, more and more scholars are thinking about the integration of innovative technological equipment or service modes for Taiwan's catering industry and exploring the impacts and effects of such integration. This study thus probed into the influences of the interactive table service on consumers' enjoyment of ordering and the revisit intention. It employed simple linear regression and verified if the hypothetical framework had a partial mediating effect. The results of this study demonstrated that consumers can gain pleasure by using a digital ordering machine, which affects their willingness to revisit. This study provides management implications and serves as a reference for future practitioners in terms of practice and for the academic community in terms of subsequent research.

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INTRODUCTION

Most advanced countries in the world have entered an aged society with lower fertility rates. The proportion of the elderly has increased, while that of the working age population has declined. According to a study on Taiwan's population in 2016, the elderly accounted for 17.4%, while the young population was 18.2% (Department of Statistics, Ministry of the Interior, 2016). Estimates have stated its total population would decrease by approximately 17% to 27% from 2016 to 2061, resulting in a shortage of manpower (National Development Council, 2016). The United Nations Department of Economic and Social Affairs predicted that the proportion of working population (15-64 years old) in advanced countries such as the United States, Japan, and Germany would also gradually decline. According to the National Development Council, the proportion of labor force in Taiwan would fall from 74% in 2015 to 53% in 2055, and the number of working population would drop from 17.37 million in 2015 to 10.18 million (Chang, 2016). Take the catering industry for example, from the Data Center of the Ministry of Finance, the number of registered profit-making businesses has shown a growing trend year after year, from 106,287 in 2011 to 124,124 in 2015 (Hsieh, 2016). The above data indicate that Taiwan has entered an aging society, while its catering industry has flourished, resulting in a manpower shortage.

With the advance of science and technology, informatization has become a trend in the future. It is able to help reduce labor costs, improve the competitiveness of various industries, and introduce and utilize information systems. At present, industries in Taiwan are gradually replacing traditional manual services by science and technology-based systems. These are called the interactive table services meaning that consumers can consume without the help of service personnel. It is becoming an inevitable trend to combine automation and the catering industry. The digitalization of ordering helps enhancing operation performance and customer satisfaction.

This study therefore produced an electronic menu so that consumers can clearly understand all dishes, including ingredients and cooking methods. After ordering, relevant information is transmitted to the kitchen to reduce the time of meal preparation. When the kitchen finishes the dishes, service personnel receive alert prompts simultaneously so that they can serve freshly cooked dishes to customers quickly. More importantly, the digital ordering machine can remember consumers' dietary habits and preferences. Information on each visit of a customer is

stored in a database. When the same customers visit next time, service personnel can clearly understand their needs so as to make them perceive whole-hearted services. Synchronization of information among the three parties and analysis of big data not only reduces errors, but also greatly improves service efficiency.

Industries in Taiwan are gradually replacing traditional manual services by science and technology-based systems so that consumers can consume without the need of service personnel. The characteristics and advantages of a digital ordering machine in the catering industry are that consumers directly contact the machine rather than service personnel for ordering, so that they can become more immersed in the atmosphere of a restaurant via such user-friendly machines. Furthermore, a machine has no emotion. In contrast, service personnel might have their service quality affected by their emotions. The catering industry is people-oriented, but it faces problems like shortage of manpower, increase in salaries, and high turnover rate. Service quality might be influenced by service personnel's stress and emotions. Past research studies tended to explore the impacts of willingness to engage practitioners on operation performance (Wang et al., 2012) as well as the benefits of modes and self-service technologies (SSTs) (Meuter et al., 2003). Most ordering machines in the past only had basic functions of ordering and checkout and were operated by service personnel. However, this study allowed consumers to operate the digital ordering machine by themselves and get information in a digital manner to see if, through such practice, they could learn dishes and ordering procedures. Due to the fun in ordering via such machine, consumers can become more immersed in the dining atmosphere of a restaurant and no longer need to rely on service personnel.

One of the main goals of this study was to investigate the consequent changes in the catering industry. For more clarification, further research questions can be listed are as follows.

(1) To investigate whether the digital ordering machine has a positive impact on consumers' fun in ordering.

(2) To investigate whether the digital ordering machine and consumers' fun in ordering have a positive impact on consumers' willingness of revisit.

(3) Serve as a reference for catering enterprises to innovate service models in the future, according to the research results.

In the following sections, interactive IT table service on consumers' revisit intention model is developed based on the literature on interactive IT table service, enjoyment of ordering, and revisit intention; and the hypotheses that specify the directions of relationships among the constructs are proposed.

LITERATURE REVIEW

The first step for practitioners in the catering industry to increase the value of customers and maintain a sustainable business is to improve the quality of service. Nowadays, as technicalization becomes a trend, practitioners are introducing self-service electronic ordering systems to link internal and external service procedures. A digital ordering machine allows customers to learn detailed information on each dish and promotional products and facilitates them in making a decision on ordering. The technology experienced on-site and the consequent the enjoyment of ordering and fun attract customers to order and increase their desire of consumption.

Interactive IT Table Service

More functions of an ordering machine are expected to be developed in order to better serve customers. Most traditional ordering machines only have functions like ordering, serving, and checkout, and they are used by service personnel. The functions of such ordering machines are limited by the systematic functions offered by restaurants (Ahn & Seo, 2018). Therefore, this study allowed consumers to operate a new digital ordering machine by themselves and to perceive the differences from machines in the past. This machine is operated by consumers rather than service personnel. The so-called self-service means that, without the direct help of service personnel, consumers can complete service activities on their own (Globerson & Maggard, 1991). Today, Self-Service Technologies (SSTs) are replacing manual services in a traditional restaurant. Consumers use the Internet or interact with a machine to get the goods or services they need (Wang et al., 2012). They also pointed out that for consumers, when they ordered food by themselves, they could know the contents, nutrition, and price through the ordering system. Bitner et al. (2000) pointed out that, during self-service, consumers can generate spontaneous pleasure. For consumers, they see a drop in waiting time, benefit from efficient, flexible,

and easy machines, experience a higher degree of customization (Meuter & Bitner, 1998), and have fun in receiving science and technology-based services (Dabholkar, 1996). A self-service ordering system not only enables consumers to experience the fun of self-service and brings about other entertainment effects, but also increases the transmission speed and efficiency of services, reduces costs, and meets individual service needs (Seybold, 1998; Berry, 1999; Sindell, 2000). Fun in science and technology-based services can get closer to consumers (Wang, 2016).

Enjoyment of Ordering

For convenience and efficiency, many catering enterprises have introduced self-service ordering machines. Such machines not only speed up the efficiency of ordering, but also bring about more fun to consumers. Currently, many restaurants made changes to their ordering modes. They set up a tablet on each table, so consumers no longer need to wait for service personnel to take their order. Through the interactive machine, they can learn about dishes and order by themselves. The kitchen can receive ordering information in real time and start cooking. The time spent on the introduction of dishes and ordering is saved (Lo, 2014).

As the indoor positioning sensing system enjoys wider popularity, global researchers have noted that wireless network positioning, radio frequency identification (RFID) positioning, and passive RFID are being used to study robots for service. Such robots can be used in restaurants to provide basic services like ordering and delivering dishes to consumers (Yu et al., 2012). Wang et al. (2012) assumed that, through a self-service ordering system, consumers not only can learn about each dish, including ingredients, nutritional contents, and prices, but also enjoy the fun in using technological gadgets. Bitner et al. (2000) asserted that consumers are more pleasant during self-service. Consumers have fun in using science and technology-based services (Dabholkar, 1996). Hence, the integration of digital ordering machine systems with the catering industry not only reduces the time for introduction of dishes and ordering, but also adds fun to ordering. In summary, this study proposed the first hypothesis (H1).

H1: Interactive IT table service has a positive impact on enjoyment of ordering processing

Revisit Intention

With the intensification of market competition, people in recent years have become more and more aware that customer relationship management is a key to the success of modern enterprises. First, in order to win in the competition of a modern market, restructuring is not enough. It is more important to win customers' recognition. The key to the success of an enterprise is to increase customers' willingness to revisit (Pullman & Gross, 2004). Thus, science and technology have become a critical point in business innovation. Restaurant operators have increased their budgets in science and technology (Lorden & Pant, 2016), as most customers prefer entertainment-oriented service scenarios. Practitioners can thus provide appropriate entertainment facilities to consumers to improve the latter's positive emotion and satisfaction (Wakefield & Blodgett, 1994). Aside from whole-hearted services, restaurants can design activities and entertainments to bring about different surprises to customers, create more added value and drive customers' intention of consumption again (Hemmington, 2007). Wakefield and Blodgett (1994) held that the design of a set of activities or entertainments can enhance customers' positive emotions and repurchase intention. Thus, customers may revisit a restaurant, because of its self-service ordering machine. To sum up, this study proposed H2.

H2: Interactive IT table service has a positive impact on revisit intention.

Repurchase intention is a behavior that governs cognition and emotion. The more positive experience customers have, the more likely they will revisit a place or recommend it to others (Schoefer & Diamantopoulos, 2008). Yalch & Spangenberg (2000) found that, when experiencing positive emotions in a consuming place, customers are more likely to approach the place again. Therefore, it will be a future trend to introduce self-service ordering systems to the catering industry. Ahn & Seo (2018) also deemed that it is becoming increasingly popular for restaurants to use digital ordering machines or intelligent electronic products to attract customers. Appropriate experience design can increase customers' loyalty (Pullman & Gross, 2004). The more pleasant and satisfied consumers feel, the higher their willingness to revisit is (Wang et al., 2010). Successful entertainment experiences can create unique and unforgettable feelings to customers and achieve positive publicity through word of mouth (Pine & Gilmore, 1998). Therefore, a digital ordering machine may bring about fun in ordering to consumers and increase their willingness to revisit. Hence, this study proposed H3 as follows:

H3: Consumers having higher enjoyment on the ordering process will increase the impact of interactive IT table service on consumers' revisit intention.

RESEARCH METHOD

In response to global technicalization, Taiwan's catering industry is keeping up with international standards. As the working population recedes, people's demands for quality of life are increasing day by day. This study probed into the combination of the catering industry, science and technology in order to introduce new thinking into the ordering service to consumers of the catering industry. A digital ordering machine system can provide consumers with more convenient services, unify procedures, and increase consumer satisfaction. This study referred to the questionnaire of Wu et al. (2015) and explored if the digital ordering machine could influence consumers' fun in ordering and their willingness to revisit or if self-service directly affects consumers' willingness to revisit. See Figure 1 for the research framework and hypotheses proposed.
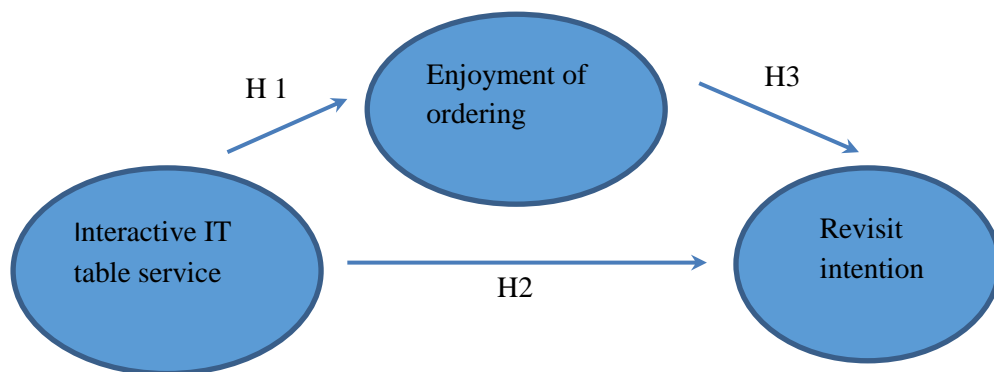

Figure 1. *Research Framework*

H1: Interactive IT table service has a positive impact on enjoyment of ordering processing.

H2: Interactive IT table service has a positive impact on revisit intention.

H3: Consumers having higher enjoyment on the ordering process will increase the impact of interactive IT table service on consumers' revisit intention.

Research Design

This study utilized the customers of a steak house in Taichung City, Taiwan as its subjects. Every Saturday from June to November 2017, copies of a questionnaire were distributed onsite. An animal-like model was placed on each table. The model contained a tablet with ordering and voice systems. Whenever a customer wants to order, the tablet states, "Welcome! Which part of my body do you want to eat today?" The screen then displays different parts of a cow for customers to select. When customers order, their data are then sent directly to the kitchen. Dishes are prepared in order and delivered by service personnel. Through the user interface with rich images and the voice system, customers can order by themselves via the digital ordering machine. After completing the process in person, customers were asked to fill in the questionnaire. Total of 223 copies were distributed in this study. After recovery and screening, 207 copies were valid and used for analysis purposes.

Verification of the Partial Mediating Effect

This study adopted SPSS 20.0 to perform the statistical analysis of simple linear regression, to verify if the hypothetical framework had a partial mediating effect, if the hypotheses of this study were valid, and to check, based on the mediating effect, if the fun in ordering is a reason influencing consumers' use of the digital ordering machine. First, it considered the first 30 copies of the questionnaire as the target of the pre-test and verified if the questionnaire was reliable. It then predicted if the Cronbach's α value of the digital ordering machine to the fun in ordering was significant and then if the Cronbach's α value of the digital ordering machine to willingness to revisit was significant. Lastly, it simultaneously predicted if the Cronbach's α values of the digital ordering machine and fun in ordering to the willingness to revisit were significant. If the coefficient ability becomes smaller based on the comparison of the results with H3, then it means that the fun in ordering can predict the willingness to revisit in this model, and that it has a partial mediating effect and is a mediating variable that indirectly affects the willingness to revisit; otherwise, the fun in ordering has a complete mediating effect.

Reliability

In order to confirm that each dimension corresponding to each item was consistent and stable, first, reliability analysis was conducted, and Cronbach's α values were used to measure reliability. Nunnally (1978) suggested that Cronbach's α should be greater than 0.7. This study measured the correlation of common factors among variables and calculated total and individual variances as the basis for the test of consistency. 30 copies of the questionnaire were used in the pre-test. As shown in Table 1, all their coefficient values were above 0.7. Then the reliability of all the questionnaires' copies was analyzed. As shown in Table 1, the coefficient values reached the standard required by the scholar, indicating that the questionnaire of this study has high internal consistency.

Table 1. *Pre-Test and Post-Test Coefficient Values Dimension*

	Pre-test α values	Post-test α values
Enjoyment of ordering	0.839	0.818
Interactive IT table service	0.757	0.848
Revisit intention	0.785	0.757

Partial mediating effect

This study used simple linear regression analysis to test if fun in ordering is a mediating variable between digital ordering and willingness to revisit. Baron and Kenny (1986) presented that an independent variable that affects a third variable generated by a result variable is a mediating variable. The mediation effect stands for the effect of an independent variable on a dependent variable through a mediating variable (Hsiao, 2009). If a mediating variable can explain a part of an influence, then it is a partial mediating effect. If the correlation coefficient is significant, then it is a complete mediating effect.

RESULTS

Regression analysis

The first step predicted if the influence of digital ordering on revisit intention is significant (H1). As shown in Table 2, the standardized coefficient is 0.509 and P = 0.000. It thus reaches a significant level. The

study then predicted if the influence of digital ordering on fun in ordering is significant (H2). As shown in Table 3, the standardized coefficient is 0.495 and P = 0.000. It also reaches a significant level. Lastly, it used digital ordering and fun in ordering to predict willingness to revisit at the same time (H3). It performed regression analysis to test if fun in ordering is a mediating variable. As shown in Table 4, the P value of digital ordering reaches a significant level, and the standardized coefficient is 0.288. The coefficient is less than the result of H1, implying that fun in ordering has a partial mediating effect.

Table 2. *Regression Analysis for Interactive IT Table Service and Enjoyment of Ordering Relationship*

Model 1	standardized coefficient βeta	t	Significant	R	$\triangle R^2$
（constant）	-	4.833	0.000	0.259	0.255
Interactive IT table service	0.509	8.461	0.000		

Table 3. *Regression Analysis for Interactive IT Table Service and Revisit Intention Relationship*

Model 2	standardized coefficient βeta	t	Significant	R^2	$\triangle R^2$
（constant）	-	8.491	0.000	0.245	0.241
Interactive IT table service	0.495	8.151	0.000		

Table 4. *Regression Analysis for Mediating Relationship*

Model 3	standardized coefficient βeta	t	significant	R^2	$\triangle R^2$
（constant）	-	0.973	0.332		
Interactive IT table service	0.288	4.653	0.000	0.409	0.403
Enjoyment of ordering	0.446	7.198	0.000		

DISCUSSION AND CONCLUSION

Customers were captivated by the process of ordering their food digitally. The touch screen, ordering functions, greetings, and digital machine operations contributed to a memorable and unique experience. These findings correspond to those of Bitner et al. (2000), who deemed that consumers were pleased during self-service and also those of Dabholkar (1996), who thought that consumers enjoyed science and technology-based services. Therefore, the integration of digital ordering machine systems into the catering industry can drastically improve efficiency and entertainment to the ordering procedure. In addition, the results showed an increase in customer's willingness to revisit due to the implementation of the digital ordering machine. This observation is consistent with Wakefield and Blodgett (1994) who designed a set of activities/ entertainments for customers to participate in, feel positive emotions, and raise repurchase intention.

The subjects of this study were randomized customers from a steak house in Taichung City, Taiwan. This study serves as a reference for scientific and technological innovation in the catering industry. It allowed consumers to operate a new digital ordering machine by themselves. This machine is different from the traditional personal digital assistant (PDA) that can only be operated by service personnel. The animal-like model and design of greetings raised consumers' intimacy and provided an unforgettable dining experience.

This study reviewed the relevant literature, established a theoretical framework, and summarized its results. In addition, it offers the following contributions to the managers. In the recreation and tourism industry, although there are many theories related to the catering industry, few papers have discussed the impact of digital ordering on the catering industry. Therefore, this study thoroughly explored the interactive IT table service, enjoyment of ordering, and intention to revisit. It obtained results based on the data of partial mediating effect that can serve as a reference for future research. This study proposed and analyzed research questions. It discovered some of the positive effects (increasing customer re-visitation, order efficiency, and etc.) with regards to ordering meals via the interactive IT table service. Consumers are more pleasant during self-service when they have fun in using science and technology-based services. This result is conducive for practitioners in the catering industry to set up appropriate business guidelines.

The limitations of this study only focused on one steak house in Taichung, which found it easy to apply the digital ordering machine. It regarded young people as the majority of its research subjects. After operating the digital ordering machine, consumers were asked to fill in a questionnaire. This study only classified consumers by gender, failing to explore the interaction between the digital ordering machine and service personnel.

It is suggested that follow-up scholars can expand the scope to restaurants in Taiwan equipped with an interactive IT table service, learn the needs of a digital catering machine by consumers of different age groups, and design more functions in line with consumers' needs. Furthermore, they can go more in depth on the positive/negative impacts of a digital ordering machine on service personnel and restaurants. For example, how does the operation of a digital ordering machine by consumers affect a restaurant's serving efficiency, revenue and cost, as well as the pressure placed upon service personnel?

REFERENCES

Ahn, J. A., & Seo. S. B. (2018). Consumer responses to interactive restaurant self-service technology (IRSST): The role of gadget-loving propensity. *International Journal of Hospitality Management, 74*, 109–121.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182.

Berry, L. L. (1999). *Discovering the Soul of Service*. New York: Free Press.

Bitner, M. J., Brown, S. W., & Meuter, M. L. (2000). Technology infusion in service encounters. *Journal of the Academy of Marketing Science*, *28*(1), 138-149. https://doi.org/10.1177/0092070300281013

Chang, J. H. (2016). *Development status and trend of commercial robots. Institute for Information Industry*. Retrieved November 19, 2016, from http://www.nspark.org.tw/documentlibrary/view/248/19_Doc_20160908150354.pdf

Dabholkar, P. A. (1996). Consumer evaluations of new technology-based self-service options: An investigation of alternative models of service quality. *International Journal of Research in Marketing, 13*(1), 29-51.

Globerson, S., & Maggard, M. J. (1991). A conceptual model of self-service, *International Journal of Operations & Production Management, 11*(4), 33-43, https://doi.org/10.1108/01443579110002977

Hemmington, N. (2007). From service to experience: Understanding and defining the hospitality business. *The Service Industries Journal, 27*(6), 747-755.

Hsiao, W. L. (2009). *The practical book of introduction to multivariate analysis.* Taipei: GOTOP.

Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). New York: McGrew-Hill.

Hsieh, Y. J. (2016). *Industry Analysis: The development trend in the catering industry*. Taiwan Trend Research, Retrieved November 19, 2016, from http://www.twtrend.com/share_cont.php?id=51

Lo, Z.H. (2014). The first restaurant in Yasukuni, Japan's fixed food chain, is equipped with a tablet and a buffet. Retrieved November 19, 2016, from http://www.ithome.com.tw/news/91881

Meuter, M. L., & Bitner, M. J. (1998). Self-service technologies: extending service frameworks and identifying issues for research. Paper presented at the American Marketing Association. Conference Proceedings.

Meuter, M. L., Ostrom, A., Bitner, M. J., & Roundtree, R. (2003). The influence of technology anxiety on consumer use and experiences with self-service technologies. *Journal of Business Research*, *56*(11), 899-906.

Ministry of the Interior Department of Statistics (2016). *Ministry of the Interior Department of Statistics reported in the third week of 2016*, 2016/10/15 Retrieved November 11, 2016, from http://www.moi.gov.tw/stat/ news_content.aspx?sn=10225&page=3

National Development Council (2016). *The Republic of China population estimate (2016 to 2061 years)*, the first edition of the Republic of China in August 105, the first brush.

Pine, B. J., & Gilmore, J. H. (1998). Welcome to the Experience Economy. *Harvard Business Review, 76*, 97-105.

Pullman, M. E., &Gross, M. A. (2004). Ability of experience design elements to elicit emotions and loyalty behaviors. *Decision Sciences*, *35*(3), 551-578.

Schoefer, K., &Diamantopoulos, A. (2008). Measuring experienced emotions during service recovery encounters: Construction and assessment of the ESRE scale. *Service Business*, *2*, 65-81.

Seybold, P.B. (1998). *Customers.com: How to Create a Profitable Business Strategy for the Internet and Beyond.* New York: Crown Business.

Sindell, K. (2000). *Loyalty Marketing for the Internet Age: How to Identify, Attract, Serve, and Retain Customers in an E-commerce Environment*. Chicago: Dearborn Financial Publishing.

Wakefield, K., & Blodgett, J. G. (1994). The importance of services capes in leisure service settings. *Journal of Services Marketing, 8*(3), 66-76.

Wang, S., Tsai, C. Y., &Chu, Y. C. (2010). Tourist behavior in Hakka Cultural Parks. *African Journal of Business Management, 4*(14), 2952-2961.

Wang, J.H., Cheng, C. C., &Hsu, J. L. (2012). A study on the acceptance and operating performance of self-service electronic ordering service for catering industry-integrating views of the customers and operators. *Journal of Performance and Strategy Research, 9*(1), 63-84.

Wang, Y. (2016). *The first Taiwanese remote robot clerk punched the card to work*. Chinese DIGITIMES, 2016/11/25 Retrieved November 19, 2016, from http://www.chinatimes.com/realtimenews/20160825004860-260410

Wu, W. C. V.; Wang, R. J.; Chen, N. S. (2015). Instructional design using an in-house built teaching assistant robot to enhance elementary school English-as-a-foreign language learning. *Interactive Learning Environments, 23*(6), 696-714.

Yalch, R. F., & Spangenberg, E. R. (2000). The effects of music in a retail setting on real and perceived shopping times. *Journal of Business Research, 49*(2), 139-147.

Yu, Q., Yuan, C., Fu, Z., & Zhao, Y. (2012). An autonomous restaurant service robot with high positioning accuracy. *Industrial Robot: An International Journal, 39*(3), 271-281.

THE IMPACTS OF HOST PHOTOS ON CONSUMER PURCHASE PROBABILITY IN P2P SHORT-TERM RENTAL PLATFORM: MEDIATING EFFECT OF INITIAL TRUST

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ABSTRACT

In recent years, the shared housing rental platform (hereafter, the short-term rental platform), designed to serve the Peer-2-Peer (P2P) market, has flourished and received extensive attention from the business community and academia. However, few studies have focused on the effect of hosts' personal information on consumer purchase behavior. This article selects the host's photo as an entry point because of its important position in the site interface and builds a conceptual framework among host photo, reputation, initial trust, and consumer purchase probability based on Face Processing Theory. Three-hundred valid, scenario-based questionnaires were used for hypotheses testing. Results show that photo-based social impression

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perception and reputation both help consumers form initial trust, which ultimately affects consumer purchase probability ; photo-based perceived social impression has a greater impact on initial trust and purchase probability than does reputation. Results will provide some guidance for the marketing management of sharing platform organizations.

INTRODUCTION

With the development of network technology, the traditional economic model has undergone earth-shaking changes, contributing to the birth of the sharing economy. Established in 2008, Airbnb, a model of a shared housing rental platform within the sharing economy, has reached a market value of US $31 billion (Smith, 2018). However, compared to foreign countries, the sharing economy in China developed slightly later. It firstly emerged in 2010 and has flourished in many fields. Examples include accommodation services (e.g. Ant Short Rent), taxi services (e.g. Didi), and bike services (e.g. Mobike). Using the shared housing rental platform as an example, the China Shared Accommodation Development Report (2018), released by the Sharing Economy Research Center of National Information Center, pointed out that China's online short-term rental business played an important role in the local accommodation market. The market transaction volume was 8.5 billion RMB yuan in 2016 and grew to 14.5 billion RMB yuan (2.28 billion US dollars) in 2017, with a high growth rate of 70.6%, and is expected to reach 50 billion yuan in 2020 (National Information Center, 2018).

The shared housing rental platform (hereafter referred to as the tourism short-term rental platform), is a place where house owners provide their personal houses or just a single room for people to rent. The utility of the shared housing rental platform is similar to the third-party platform because it provides a separate space in which two kinds of users, consumers and suppliers, can benefit from peer-to-peer (P2P) transactions. The existing research focusing on tourism short-term rental sites can almost be divided into three aspects. The first mainly concentrates on the business model, problems in development, and how to solve these problems. The second is for understanding consumers' motivations to use the sharing platform, while the third often focuses on website platforms (such as website usability, usefulness and entertainment, system construction, etc.), room attributes (such as room prices, area, location, etc.), and other factors (such as online reviews and historical purchase

quantity, etc.) that influence consumers' purchase attitudes and behaviors. However, when consumers browse short-term rental sites, such as Airbnb or similar platforms, e.g., Ant Short Rental, it is easy to observe an interesting phenomenon; next to photos of the living space, the website also requires hosts to upload their personal portrait photos. The questions to answer are: What impact do personal photos of the hosts have on the consumer's psychology and behavior? and What is the influence mechanism among them? So, doing will not only help explain the special phenomenon and uncover how the interface factors of short-term rental sites affect consumers' purchase intention in theoretical implications of the present research, but also provide important managerial and practical implications for managers of P2P rental platforms and hosts to facilitate online transactions.

Despite the importance of hosts' personal information, little empirical effort has been made to address the relationship between hosts' personal information and consumer purchase intention in the field of tourism P2P short-term rental. With respect to the literature search results, only a few articles came to our attention. Ert et al. (2016) showed that the more trustworthy and attractive the host's photos, the higher the consumers' intention to lease the accommodation directly. In a similar vein, Fagerstrøm et al. (2017) studied the impact of hosts' facial expressions in their photos upon the consumers' approach and avoidance tendency, and the results showed that hosts with positive facial expressions tend to evoke higher approach tendency and less avoidance tendency as opposed to negative facial expressions. Ma et al. (2017) found that the text-based self-descriptions and trustworthiness of Airbnb host profiles might influence consumer behavior. They argued that longer self-descriptions and a mix of topics on Airbnb profile pages are perceived to be more trustworthy, with the ability to positively predict consumer choice for the host on Airbnb.

During the decision-making process, constrained by information asymmetry between hosts and buyers, consumers are always concerned about whether property and personal safety can be guaranteed and whether the host's information is credible (Ert et al., 2016). Thus, when choosing an accommodation, consumers may go through a time-consuming process (Xie & Mao, 2017). Consequently, customer trust has become a prerequisite for maintaining the steady development of the platform because the transaction can be deterred easily if consumers do not trust the host. In recent years, scholars have confirmed that the formation and development process of trust is dynamic, which can be

divided into two phases: exploration (initial trust) and commitment (continuous trust) (Chang et al., 2014; McKnight et al., 2002). Initial trust is the essential basis for future continuous trust which will predict the trustor's further understanding of platform information and transaction decision making (Jarvenpaa et al., 2000). Therefore, it is necessary to understand the role of initial trust under the P2P short-term rental platform. The current research defines initial trust as a subjective trustful behavior, based on social judgments of the host's photos and reputation when the consumer is browsing the site interface. To reveal the intrinsic mechanism of how consumers' behavior is affected by hosts' photos and reputation (e.g. review point), we introduce the variable of initial trust into the conceptual framework.

Although prior studies have achieved a lot, several research gaps can be observed in the literature review. On the one hand, photo-based social impression research is not well understood. Specifically, the five fundamental dimensions underlying photo-based social judgement have been identified, i.e., trustworthiness (Yang, 2014), attractiveness (Ert et al., 2016), competence (Todorov et al., 2005), dominance, and confidence (White et al., 2017). However, past research focused much on trustworthiness and attractiveness (Ert et al., 2016; Ma et al., 2017). On the other hand, some factors closely associated with P2P tourism platforms, such as initial trust, have not received attention despite their crucial implications for the P2P sharing economy. Rare studies have explored antecedents and consequences of initial trust in the field. As Lewis and Weigert (1985) said, trust is deeply and closely related to the context. Therefore, this paper aims to find what factors will influence initial trust when a consumer is browsing the site interface.

In view of the existing research deficiencies, based on Face Processing Theory, this work applies the empirical method to examine the possible relationship among hosts' photos, hosts' reputation, initial trust and purchase probability. This paper uncovers the black box of how hosts' personal information influences consumer purchase probability. The paper attempts to reveal the effects of photo-based social impression perception and hosts' reputation on consumer purchase probability and its mechanism. Hence, it provides substantial evidence and practical marketing implications for P2P platforms and hosts.

LITERATURE REVIEW

Theoretical Basis

Face Processing Theory argues that we can readily infer much information from faces, accordingly, gaining their inner and hidden essence and thoughts (Lu et al., 2010). Similarly, some scholars tried to use physiognomy for better understanding of the phenomenon (Todorov et al., 2015), stating that visual appearance is a window to the soul. They tried to explain the phenomenon from the view of evolution, for primitive humans wanted to recognize people who were willing to cooperate and share their resources. In our daily life, we inadvertently make trait inferences and social judgement based on strangers' facial appearance, which is called face processing. In general, people with a smile often give others a better impression, implying a character which is approachable and warm, while neutral facial expressions reflect a more rational and logical impression. Wang et al. (2016) noted that individuals with a broad smile were perceived as warmer but less competent than were individuals with a slight smile. Such judgement appears to predict individual decision making; for example, candidates who seem more attractive can easily be hired and get higher salaries (Aimei et al., 2009).

Photo-Based Social Impression Perception

While our accurate judgment of whether a person is worthy of trust in life requires long-term interaction and communication, we often make judgments of whether someone is trustworthy based on an occasional encounter in real life. Generally, the length of time it takes to form a social judgement through photographs is no more than 0.1 seconds (Olivola & Todorov, 2010; Willis & Todorov, 2010). Further, photo-based social impression perception will not change in a short time. Impression perception is basically automatic and uncontrolled and is robust and fast (Todorov et al., 2009). Its formation process mainly takes place through stable, implicit cognitive schemata processing. In this article, social impression perception is conceptualized as the extent of integral perception through hosts' photo exposure.

Numerous studies have proved the important role of face-based trait evaluation in interpersonal communication and trust (Bente et al., 2012; Olivola et al., 2014). For example, Stirrat and Perrett (2010) noted that after paralyzing the impact of familiarity and emotions variables, the

likelihood of obtaining cooperation and reciprocity is higher for people with trustworthy faces, which directly influences social decision results such as purchasing behavior intentions. In the initial stage, due to the lack of relevant and available information between interaction partners, this effect is more significant, especially in a situation like computer-mediated communication. Moreover, a face-based social impression will show a continuous guiding effect on subsequent multiple judging and decision-making behaviors (Xu et al., 2013).

Regarding the P2P short-term rental context, the purpose of hosts' photos is to display multi-dimensional signals through social cues. Specifically, when consumers browse the website and make eye contact with hosts' portrait photos in the unconscious situation, they occasionally and unconsciously will form the first impression to strange encounters, i.e., initial trust and decision making. The underlying effects of the photos are: 1) conveying visual signals relevant to the social impression perception and 2) expressing the hosts' willingness to cooperate by exposing their private information and disclosing their identities to consumers. Hence, the behavior of uploading private portrait symbolizes that the host is sincere and trustworthy, which holds a potential contribution to foster and prompt initial trust (Todorov et al., 2005). Ert et al. (2016) discovered the potential and positive relation of photo-based trustworthiness and attractiveness in Airbnb with the probability of successful accommodation booking through the experiment methods. In summary, it was hypothesized that photo-based perception has a positive effect on consumers' attitude and behavior intention, stated as Hypothesis 1 and Hypothesis 2:

H1: Photo-based social impression perception positively affects consumer initial trust.

H2: Photo-based social impression perception positively affects consumer purchase probability.

Host Reputation

With the development of network information technology and online transactions, online shopping has become a giant trading market. However, due to the difficulty in face-to-face contact with services and products, customers perceive high trade risks and uncertainty regarding the quality of products, as it cannot be verified. Reputation, an intangible

indicator of product quality assessment, is a core element for decision making. It originates from consumers with purchasing and consuming experience, and it developed through consumers' feedback in the form of text reviews, star ratings, and other ways. In line with that, the essence of reputation is facilitating online trust and strengthening trading confidence (Wu et al., 2011).

Past empirical research on online reputation dates to the emergence of eBay. Scholars adopted both second-hand data and experimental evidence to confirm how reputation affects transaction behaviors (Hayne et al., 2015; Hui et al., 2016). Findings suggested that when a host's reputation was higher, consumers intended to pay more money for the auction. In addition, consumers' perceived risks and uncertainty were lower during the process of purchasing decision making. Similarly, Melnik and Alm (2005) also concluded that host's overall reputation positively influenced consumers' willingness to pay. In the domain of tourism, several previous studies have addressed the positive impact of reputation. Recently, Ert et al. (2016), regarding the booming development of Airbnb, found that hosts who have a high reputation attract consumers to generate a positive attitude and strong willingness to pay, in a sense. Research conducted by Bente et al. (2012), from the perspective of Signal Theory, differentiated the impacts of reputation scores and host photos. They found that photos from a host who has a positive reputation (signaling s/he is worthy of being trusted) and is trustworthy, are more likely to gain trust and high purchase rates.

Reputation, as an explicit propositional clue that cannot be ignored, has been shown to function as the antecedent to consumer trust and purchase probability. Thus, we take the host's reputation as a driving factor and independent variable. In sum, in the P2P platform, the following hypotheses are proposed:

H3: The host's reputation has a positive effect on initial trust.

H4: The host's reputation has a positive effect on consumer purchase probability.

Mediation of Initial Trust

Trust is a process-based outcome that changes dynamically over time and interactions (Ennew et al., 2011). Continuous trust is pulled directly from familiar parties who share credible information with each other and is

often based on direct interaction (McKnight et al., 2002; Stouthuysen et al., 2018). It differs from the initial stage in which buyers desperately lack firsthand knowledge or prior experience, yet it is cultivated by frequent interaction and abundant communication between hosts and buyers. Doney and Cannon (1997) defined initial trust as subjective credibility, i.e. when trust parties first encounter each other in a temporary buying context, the trustor perceives the credibility and benevolence of a target of trust. Lee and Choi (2011) claimed that initial trust refers to the willingness to believe in others even in the absence of trustee information and interaction. When both parties are strangers, and in the risk of information asymmetry, they have to resort to contextual cues when making decisions. Some contend that consumers evaluate visual situational cues (i.e. host photo and reputation) in terms of first eye contact and overall perception of the unfamiliar host in the P2P short rental platform to gain initial trust (Fagerstrøm et al., 2017).

In the initial phase of online shopping, inspiring initial trust is important for consumers' buying decisions. Ridings et al. (2002) believed that initial trust can reduce complexity and perceived risk because it lacks face-to-face contact, and thus help predict the downstream effects of both giving and getting information behavior through a virtual community. Research by Jarvenpaa et al. (2000) showed that consumers recognized differences in hosts' reputation and would ultimately increase their willingness to patronize by reducing perceived risk. In conclusion, it was suggested that, after the formation of initial trust, consumers gradually generate confidence and expectation regarding the accommodation supplied by the hosts, and consequently enhance their online purchase probability. Hence, the following hypothesis is proposed:

H5a: Initial trust mediates the relationship between photo-based social impression perception and consumer purchase probability.

H5b: Initial trust mediates the relationship between host reputation and consumer purchase probability.

Based on the assumptions above, this paper proposes the conceptual framework and hypotheses below (see Figure 1).
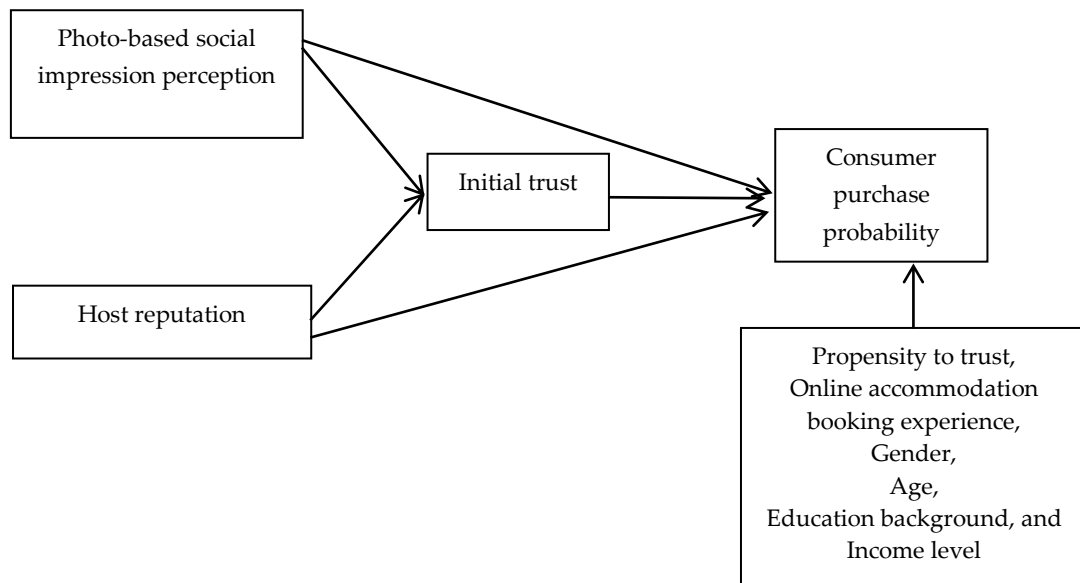
Figure 1. *Conceptual framework*

RESEARCH DESIGN

Pretests

To ensure the validity of experimental stimuli in formal situation questionnaires, two independent pretests were conducted.

Pretest 1. Ten ambient male snapshots were selected from a famous short-term rental platform in China. The selection criteria were clear and legible, with the same pixel (120×120), no covering the face, e.g. eyeglasses, hair, hands, and no visible makeup, as well as assuring that all photos were frontal headshots. Twenty-two individuals (11 women and 11 men) were recruited online. The participants were asked to complete the online survey. Participants were informed that this study was designed to examine people's first impression. They were shown one of the selected photos and asked to judge the age, attractiveness, warmth, and competence perceptions of the target on a seven-point scale (1 = strongly disagree, 7 = strongly agree). The proportion of respondents were similar to previous studies (Bente et al., 2012). In the main study, based on the prior research and combined with the features of the short-term rental platform, we added the scores of two items' scale (competence and warmth) into one, taking the average rating value to symbolize the independent variable, social impression perception. In *Pretest 1*, in an

attempt to control the potential effects of stimulus' age and attractiveness on choice, we finally selected two photos with similar ranking. Manipulation and confound checks suggested no differential between the two photos, respectively ratings of age (M_{P1} = 1.91, M_{P2} = 2.00, p = 0.58, representing the same-aged stimuli) and attractiveness (M_{P1} = 4.55, M_{P2} = 4.10, p = 0.18, representing the same attractive perception), thereby excluding their impacts on experimental outcomes.

Pretest 2. Pretest 2 was conducted to test the effectiveness of the reputation manipulation. Forty-four participants were recruited online and randomly assigned either the *high* or *low* reputation condition. To select the appropriate reputation scores for the main study, a second pretest was conducted, under the foundation of Joo (2015). All possible cases (1-5 stars) were shown to participants to ask for the trust rating on a seven-point Likert scale. Results show that 69.8% of the participants believe 4.5 stars or more is trustworthy, whereas 76.7% think 4.0 stars or less is not trustworthy. To better distinguish between high and low reputation, 3.0 stars and 5.0 stars were selected to manipulate reputation, which is consistent with prior research (Bente et al., 2012).

Procedure

To make this research as realistic as possible, participants were shown screenshots from the Mayi website (www.mayi.com), a popular short-term rental website in China, to improve their understanding. Adobe Photoshop software was used to prepare the survey stimuli. In the survey, all the information in screenshots was the same, except the host photo and reputation score. Firstly, participants were informed that this study examined people's attitude towards the short-term rental website. To allow participants to integrate into the questionnaire situation, they were guided to imagine that they were visiting an online short-term rental website to choose an accommodation for holidays. Then, they read one of four questionnaires (two host photos * two host reputation) and completed the survey immediately.

Sample and Data Collection

Undergraduate and graduate students (including MBA) were chosen as the target population for reasons which can be stated as: 1) China Shared Accommodation Development Report 2018 mentioned that most users of

this rental site are millennials, young adults aged 20-40 years and generally highly educated (National Information Center, 2018); 2) The young adult group is the main force in online accommodation booking websites with abundant booking experience (Kucukusta et al., 2015); and 3) Student samples are justifiable, as they have few problems using new technology and are potential market consumers of these P2P platforms (Transparency Market Research, 2018).

Data was randomly collected from the web-based survey and offline questionnaire in a comprehensive university in Changsha China from September 2017 to October 2017. After removing 26 invalid responses because of missing or completing the same answers, a total of 300 valid responses were collected for data analysis. Descriptive statistics are presented in Table 1.

Table 1. *Demographic Profile of Participants (N = 300)*

	Frequency		Frequency
<u>Gender</u>		<u>Education</u>	
Male	106 (35.3%)	High school & diploma	14 (4.7%)
Female	194 (64.7%)	Undergraduate student	173 (58%)
<u>Income (Yuan)</u>		Master's or doctorate	113 (37.3%)
<1500	49 (16.3%)	<u>Age</u>	
1500-3000	32 (10.7%)	<24	87 (29.1%)
3001-5000	71 (23.7%)	25-29	127 (42.3%)
5001-8000	68 (22.7%)	30-34	55 (18.3%)
>8000	80 (26.6%)	>35	31 (10.3%)

Measures

All measures are drawn from established works and adopt the back-translation method to ensure questionnaire validity. Furthermore, two experienced marketing researchers were invited to adjust and modify the questionnaire in Chinese, according to some features of P2P website.

The questionnaire was divided into two parts. The first section includes six variables, i.e., photo-based social impression perception, host reputation, initial trust, consumer purchase probability, propensity to trust, and online accommodation booking experience. The second section of the survey included demographic questions.

The measured scale of social impression perception was generated from the combination of the research of White et al. (2017) and Bente et al.

(2012), based on unique features of the short-term rental context, including two items such as perceived warmth and competence. The scale used to measure host reputation was adapted from Johnson and Grayson (2005), including two items. The three-item scale of initial trust was extracted from McKnight et al. (2002). Consumer purchase probability was measured with three items adopted from Parasuraman et al. (2005) and Nowlis and Simonson (1997). Propensity to trust is conceptualized as the general willingness to trust others (Cheung & To, 2017), and three items were adapted from Zhao et al. (2015) and Gefen and Straub (2004). Lastly, online accommodation booking experience was measured with two items from Wu et al. (2017). All respondents were required to evaluate the degree of agreement or disagreement via a seven-point Likert scale (1 = strongly disagree, 7 = strongly agree).

Additionally, six control variables, including propensity to trust, online accommodation booking experience, gender, age, education background, and income level were also measured, respectively.

RESULTS

Manipulation Check

To verify the manipulation of host reputation, manipulation and confound check were conducted. Independent sample t-tests showed that the ratings of host reputation were higher when the host had 5.0 stars than 3.0 stars (M_{high} = 4.15, M_{low} = 3.56, t = 3.06, p < 0.05).

Reliability and Validity

SPSS 20.0 software was used to conduct the exploratory factor analysis and hypothesis testing. The KMO score of exploratory factor analysis (EFA) is 0.843, moreover, Bartlett's Sphere Test indicates that the sample is suitable for factor analysis.

To evaluate reliability, Cronbach's alpha coefficient value was used as an indicator. If the Cronbach's alpha coefficient of each variable exceeds the standard threshold value of 0.7, data is considered reliable (Nunnally & Bernstein, 1994). As shown in Table 2, all Cronbach's alpha coefficients were above 0.789, fulfilling the data reliability requirements.

Table 2. *Measurement Statistics of Variables*

Construct	Indicator Loadings	Composite Reliability	Cronbach's α	AVE Value
Photo-based social impression perception		0.730	0.835	0.575
PSIP_1	0.744			
PSIP_2	0.772			
Host reputation		0.827	0.855	0.706
HR_1	0.788			
HR_2	0.889			
Initial trust		0.896	0.920	0.742
IT_1	0.828			
IT_2	0.859			
IT_3	0.896			
Consumer purchase probability		0.755	0.714	0.513
CPP_1	0.824			
CPP_2	0.737			
CPP_3	0.562			
Propensity to trust		0.879	0.838	0.710
PTR_1	0.721			
PTR_2	0.888			
PTR_3	0.906			
Online accommodation booking experience		0.887	0.823	0.797
OABE_1	0.890			
OABE_2	0.895			

To assess the construct validity, all variables' average variance extracted (AVE) is must be above 0.50 (Fornell & Larcker, 1981). To establish convergent validity, each item loading needs to exceed the recommended threshold of 0.50 (Marriott & Williams, 2018). Discriminant validity was considered next. The square root of variable's AVE value should be higher than correlations among itself and other variables. Table 2 and Table 3 show each variable was satisfying the established cut-off.

Table 3. *Mean, Standard Deviation, Correlation and Square Root of AVE*

Variable	1	2	3	4	5	6
1 Social impression perception	**.758**					
2 Host reputation	.601	**.840**				
3 Initial trust	.656	.496	**.861**			
4 Consumer purchase probability	.548	.491	.507	**.716**		
5 Propensity to trust	.311	.262	.291	.338	**.843**	
6 Online accommodation booking experience	.152	.233	.035	.165	.377	**.893**
Mean	4.20	4.12	3.96	4.76	5.15	4.85
Standard deviation	1.40	1.18	1.25	1.11	1.46	1.11

The potential common method deviation test was considered in three steps. At the beginning, the survey scope was expanded as much as possible, combining both online and offline questionnaire distribution, and the data source was controlled to a certain extent. Next, Harman's single factor test was conducted, and the results of exploratory factor analysis of all items showed that the first factor explained 36.83% of the total variance, which needed to be less than 50% (Podsakoff et al., 2003). Lastly, considering the disadvantages of Harman's test, the double factor model was used to test again, that was, adding a first-order method factor with all of the measures as an indicator. If the method factor is added, the model fit will be highly optimized (i.e. CFI and TLI increase by more than 0.1, RMSEA and SRMR decrease by more than 0.05), indicating there is a serious common method deviation (Wen et al., 2018). It was found that CFI and TLI increase by 0.038 and 0.053 separately, and RMSEA and SRMR decrease by 0.031 and 0.012 separately. In conclusion, the statement above underlines a lack of common method deviation in this research.

Hypothesis Testing

This study utilized multiple linear regression analysis to evaluate the conceptual framework, and the specific parameter estimates per model appear in Table 4. In each regression equation, variance inflation factor (VIF) values were in the range of 1.02 to 1.72, which was below the threshold of 3.0; therefore, there was no serious multicollinearity problem (Hair et al., 2011).

Table 4. *Results of Multiple Linear Regression Analysis*

	Consumer purchase probability						Initial trust				
	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11
Gender	.011	-.011	.039	.027	.007	.039	-.041	-.069	.001	-.016	-.025
Age	-.026	-.044	-.029	-.039	-.047	-.035	.035	.012	.030	.022	.010
Education	-.026	-.005	-.019	.007	-.010	-.004	-.084	-.058	-.074	-.067	-.063
Income level	.092	.103	.079	.080	.091	.076	.032	.046	.012	.020	.023
Online accommodation booking experience	.039	-.017	.017	.127	.023	-.040	-.077	-.148*	-.110*	-.131*	-.130*
Propensity to trust	.231*	.170*	.126*	.069*	.119*	.103*	.268*	.192*	0.111*	.109*	.101*
Social impression perception			.421*			.292*			0.627**	.526**	0.538*
Host reputation		375*			.248*			.473*		.173*	0.185*
Initial trust				.389*	.269*	.206*					
SIP × HR											.092*
R²	.126	.300	.340	.309	.368	.371	.107	.311	.457	.476	0.484
△R²	.126	.174	.214	.292	.067	.031	.107	.204	.351	.369	0.008
F	7.063*	17.916*	21.495*	18.653*	21.157*	21.481*	5.833*	18.830*	35.163*	33.007*	30.251*

Note: N = 300; Coefficients are standardized regression coefficients; **p < 0.01.

In Table 4, the effects of six control variables on consumer purchase probability were tested in M1. In M2 and M3, consumer purchase probability was considered as a dependent variable, and host reputation and social impression perception were considered as independent variables, separately. The results showed host reputation (β = 0.375, p < 0.01) and social impression perception (β = 0.421, p < 0.01) had a positive effect on consumer purchase probability. Therefore, the results supported H2 and H4. In M4, using initial trust as an independent variable and consumer purchase probability as a dependent variable, it was found that initial trust (β = 0.389, p < 0.01) significantly influenced consumer purchase probability. In M8 and M9, initial trust was considered as a dependent variable, and host reputation and social impression perception were considered as independent variables, separately. It was found that host reputation (β = 0.473, p < 0.01) and social impression perception (β = 0.627, p < 0.01) had a positive effect on initial trust. Hence, the results also supported H1 and H3. In M5 and M6, based on Wen and Ye (2014) and Baron and Kenny (1986) procedure, it was found that initial trust partially mediated the relationship between host reputation and consumer purchase probability, and social impression perception and consumer purchase probability separately, so H5a and H5b were also supported.

Given the potential questioning of the stepwise regression method to check mediation, the current research also adopted the non-parametric percentile method of bootstrap (5000) bias correction (BC) recommended by Hayes et al. (2008). The estimated specific indirect effect from social impression perception to consumer purchase probability through initial trust was 0.156 (95 per cent BC bootstrap = 0.0729, 0.2427), hence, H5a was supported. Likewise, H5b was also supported because the estimated specific indirect effect from host reputation to consumer purchase probability through initial trust was 0.139 (95 per cent BC bootstrap = 0.0903, 0.2010). These results suggested significantly partially mediated the impact of initial trust.

In Table 4, M7 was used to check the effects of six control variables on initial trust. In M10, host reputation and social impression perception were used as independent variables simultaneously and initial trust as dependent variable. To test the interaction effect between social impression perception and host reputation, *negative* and *positive* social impression groups were made by adding and subtracting the standard deviation, and then standardized all the variables in the regression equation in M11, and a new interaction term was created. Results of social impression perception × host reputation in Table 4 showed that the

interaction had a significant effect on initial trust (β = 0.092, p < 0.01). Comparing M11 with M10, the model fit significantly increased (R^2 = 0.484, p < 0.01) after introducing interaction.

Findings showed that whenever in high or low reputation condition, positive photo-based social impression perceptions can lead to more significant initial trust (Figure 2). In addition, when considering the influence of positive social impression perception, high host reputation and interaction effect, initial trust is the most significant. Results suggested that positive photo-based social impression perception generates a complementary and strengthening effect on initial trust (Figure 2).
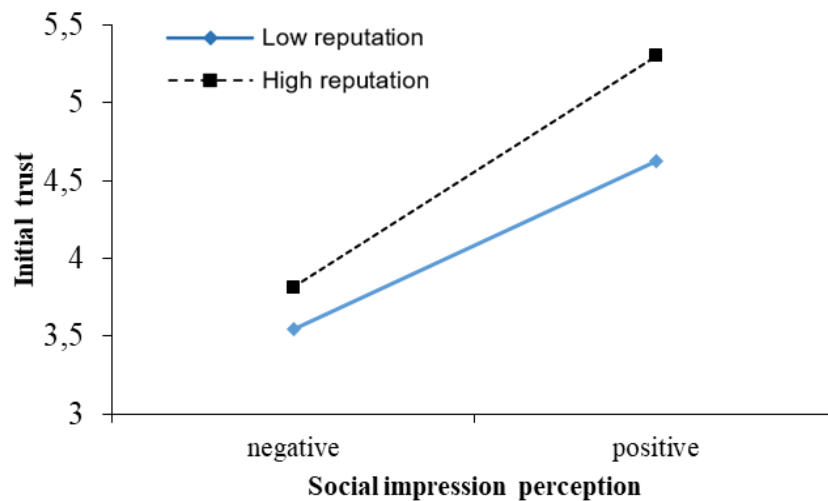

Figure 2. *Interaction effect*

CONCLUSION AND IMPLICATIONS

The study aimed at empirically investigating the impact of host photo and host reputation on consumer purchase probability. Following our arguments, photo-based social impression perceptions and reputation are positively related to initial trust and consumer purchase probability, which helps uncover the inherent mechanism. Simulated questionnaire method was utilized to analyze how the specific cues presented in the site interface (i.e. host's personal photo and reputation) are transformed into purchase probability. In particular, the findings highlight stronger evidence for host photo than host reputation to improve consumer

purchase probability. According to Fagerstrøm et al. (2017), the influence of host photo ranked second to the room price.

Initial trust is a key performance mediator between independent variables (photo-based social impression perception and host reputation) and dependent variable (consumer purchase probability). As expected, after introducing the interaction item of host photo and reputation into the theoretical model, the model fit was improved significantly, indicating the existence of interaction effects. Authors infer the result is due to a different type of trust. There are two ways to trigger trust (Lewis & Weigert, 1985). One way focuses on the integrated emotional bond between consumer and host, which results from sense and feeling rather than reasoning and understanding (emotional trust – host photo). Another way refers to consumers' rational judgement of the hosts' competence and relevant visual information (cognitional trust – host reputation). As a result, the combined effect of host photo and reputation on initial trust is greater than their separate individual utility.

Theoretical and Practical Implications

Theoretical contributions

Firstly, our study contributes to the Face Processing Theory by investigating photo-based social impression perceptions in the realm of P2P platform, therefore expanding the applied scope of this theory. Until now, studies on the impact of host photos in the P2P market have lagged far behind the practical development. Although several scholars have emphasized the multi-faceted perception of photographs in the field of interpersonal trust (Bente et al., 2012; Olivola et al., 2014), much remains unknown in the tourism P2P rental platform context. In the current study, perceived warmth and competence to measure photo-based social impression perception were taken, whereas the previous work documented how trustworthiness and attractiveness of photographs may shape consumers' purchase attitude and decision making (Ert et al., 2016; Yang, 2014). In doing this, the complementary examination of host photo sheds light on the blank of the multi-faceted perception in the P2P market and enriches the existing research framework to some extent.

Secondly, this paper initially explores the role of initial trust in the tourism field and enriches researches related to trust to a certain degree. Although there are research outcomes afterwards, figuring out the impact

of initial trust in interpersonal relationship and online purchasing fields, only a few studies have paid attention to the online tourism field. Past research has addressed how initial trust can predict future purchase behavior (Lee et al., 2011; Lu et al., 2010); however, further relevant studies are urgently needed to clarify the antecedents of initial trust. In fact, the role of initial trust is revealed in this study as a mediator within the context of tourism short-term rental sites. In a word, this study contributes to the existing trust literature by confirming the importance of initial trust in the travel industry.

Thirdly, this research is the first to break down the previous independent factor research setting in the tourism field. Specifically, analysis of the joint influence of host photos and reputation on consumer trust behavior and purchasing intention was carried out. Results confirm that not only review ratings but also the host's personal information contribute to consumers' purchase decisions, which helps complete the stream of past studies and suggests a new path for better understanding consumers' psychological and behavioral decision making.

Managerial implications

According to research results, the following suggestions are put forward for P2P tourism platform managers and hosts.

Firstly, for hosts, the significant effect of hosts' individual photo on consumer purchase probability was found, which indicates that a positive or negative impression may be triggered by this type of content. Positive photos can lead to consumers' higher initial trust and purchase intention. More specifically, social impression perception was a more influential factor for consumer intention than reputation. Thus, the photo should be carefully selected, especially when the host has a low reputation. Nowadays, numerous hosts in the platform use anime and landscape pictures as avatars on the website. These types of pictures, being different from personal photos, cannot effectively convey sincere willingness to cooperate, but easily lead to negative impression for buyers, hindering further purchasing behaviors at the first stage of the transaction. Therefore, encouraging consumers to provide positive personal photos is a significant marketing strategy to convey cooperative and willful signals.

Secondly, our findings serve P2P online tourism operators. For instance, when hosts register, platform managers should inform them to

upload appropriate personal photos. What is more, a host with a high review rating should be encouraged, whereas a host with a low rating should be supervised and urged to improve their services, to achieve win-win cooperation between platform companies and hosts.

Finally, this study's results can not only be applied to tourism short-term rental sites, but also to similar P2P online platforms with personal avatars, such as Mafengwo, Douban, and Tujia. These platforms might restrict users to use only personal photos to cultivate consumer trust. In the information era, due to information overload and asymmetry, searching costs seem high. Therefore, people can speed up their decision-making process by resorting to simple cues, for instance, host photos and reputation.

Limitations and Future Research

Like with other studies, there are certain limitations in the current research. First, this study narrowly focuses on the integrated perception of appearance cues inherent in photos. Other factors, such as shooting angle and gaze direction are also worth studying in future research. To keep the experimental stimulus as clean as possible, the main focus was on the overall photograph. However, further research could test whether findings of the current study could be replicated. Second, this research investigates external cues, i.e. host reputation and photo, yet many more cues influence consumers' behavior in real life. Hence, future research to approach this reality and explore whether there are other crucial factors should be encouraged. In addition, this research controls the interference of gender and age. It may be fruitful to examine the impacts of gender and age group on consumer attitude or behavior.

REFERENCES

Aimei, L., Wenquan, L., & Lianyu, L. (2009). The implicit facial attractiveness stereotype research in personnel interview circumstances. *Psychological Science, 32*(4), 970-973.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182.

Bente, G., Baptist, O., & Leuschner, H. (2012). To buy or not to buy: Influence of host photos and reputation on buyer trust and purchase behavior. *International Journal of Human-Computer Studies, 70*(1), 1-13.

Chang, Y., Xiao, W., Yan, J., Qiu, Y., & Fu, J. (2014). Influence of service quality on phase trust under C2C environment. *Chinese Journal of Management, 11*(8), 1215-1223.

Cheung, M. F. Y., & To, W. M. (2017). The Influence of the propensity to trust on mobile users' attitudes toward in-app advertisements: An extension of the theory of planned behavior. *Computers in Human Behavior, 76*, 102-111.

Doney, P. M., & Cannon, J. P. (1997). An examination of the nature of trust in buyer-host relationships. *Journal of Marketing, 61*(2), 35-51.

Ennew, C., Kharouf, H., &Sekhon, H. (2011). Trust in UK financial services: A longitudinal analysis. *Journal of Financial Services Marketing, 16*(1), 65-75.

Ert, E., Fleischer, A., & Magen, N. (2016). Trust and reputation in the sharing economy: The role of personal photos in Airbnb. *Tourism Management, 55*, 62-73.

Fagerstrøm, A., Pawar, S., Sigurdsson, V., Foxall, G. R., & Yani-de-Soriano, M. (2017). That personal profile image might jeopardize your rental opportunity! On the relative impact of the host's facial expressions upon buying behavior on Airbnb. *Computers in Human Behavior, 72*, 123-131.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*, 39-50.

Gefen, D., & Straub, D. W. (2004). Consumer trust in B2C e-commerce and the importance of social presence: Experiments in e-products and e-services. *Omega, 32*(6), 407-424.

Hayes, A. F., Slater, M. D., & Snyder, L. B. (2008). *The sage sourcebook of advanced data analysis methods for communication research*. London, UK: Sage.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice, 19*(2), 139-51.

Hayne, S. C., Wang, H., & Wang, L. (2015). Modeling reputation as a time-series: Evaluating the risk of purchase decisions on eBay. *Decision Sciences, 46*(6), 1077-1107.

Hui, X., Saeedi, M., Shen, Z., & Sundaresan, N. (2016). Reputation and regulations: Evidence from eBay. *Management Science, 62*, 3604-3616.

Jarvenpaa, S. L., Tractinsky, N., & Saarinen, L. (2000). Consumer trust in an internet store: A cross-cultural validation. *Journal of Computer-Mediated Communication, 1*(1-2), 45-71.

Johnson, D., & Grayson, K. (2005). Cognitive and affective trust in service relationships. *Journal of Business Research, 58*(4), 500-507.

Joo, J. (2015). Roles of the buyer's trust in host in posted-price model of consumer to consumer e-commerce. *Journal of Theoretical & Applied Electronic Commerce Research, 10*(3), 30-44.

Kucukusta, D., Law, R., Besbes, A., & Legohérel, P. (2015). Re-examining perceived usefulness and ease of use in online booking: The case of Hong Kong online users. *International Journal of Contemporary Hospitality Management, 27*(2), 185-198.

Lee, J. N., & Choi, B. (2011). Effects of initial and ongoing trust in IT outsourcing: A bilateral perspective. *Information and Management, 48*(2), 96-105.

Lewis, J. D., & Weigert, A. (1985). Trust as a social reality. *Social Forces, 63*(4), 967-985.

Lu, Y., Zhao, L., & Wang, B. (2010). From virtual community members to C2C e-commerce buyers: Trust in virtual communities and its effect on consumers' purchase intention. *Electronic Commerce Research & Applications, 9*(4), 346-360.

Ma, X., Hancock, J. T., Mingjie, K. L., & Naaman, M. (2017). Self-disclosure and perceived trustworthiness of Airbnb host profile. *Proceedings of the 2017 ACM Conference on*

Computer Supported Cooperative Work and Social Computing. Portland, Oregon, USA, February 25 - March 01, 2017.

Marriott, H. R., & Williams, M. D. (2018). Exploring consumers perceived risk and trust for mobile shopping: A theoretical framework and empirical study. *Journal of Retailing & Consumer Services, 42*(1), 133-146.

McKnight, D. H., Choudhury, V., & Kacmar, C. (2002). The impact of initial consumer trust on intentions to transact with a website: A trust building model. *Journal of Strategic Information Systems, 11*(3), 297-323.

Melnik, M. I., & Alm, J. (2005). Host reputation, information signals, and prices for heterogeneous coins on eBay. *Southern Economic Journal, 72*, 305-328.

National Information Center (2018). China shared accommodation development report 2018. Retrieved December 18, 2018, from www.sic.gov.cn/index.htm

Nowlis, S. M., & Simonson, I. (1997). Attribute-task compatibility as a determinant of consumer preference reversals. *Journal of Marketing Research, 34*(2), 205-218.

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York, NY: McGraw-Hill

Olivola, C. Y., & Todorov, A. (2010). Elected in 100 milliseconds: Appearance-based trait inferences and voting. *Journal of Nonverbal Behavior, 34*(2), 83-110.

Olivola, C. Y., Eubanks, D. L., & Lovelace, J. B. (2014). The many (distinctive) faces of leadership: Inferring leadership domain from facial appearance. *Leadership Quarterly, 25*(5), 817-834.

Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005). E-S-Qual: A multiple-item scale for assessing electronic service quality. *Journal of Service Research, 7*(3), 213-233.

Podsakoff, P. M., MacKenzie. S. B., Lee. J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879–903.

Ridings, C. M., Gefen, D., & Arinze, B. (2002). Some antecedents and effects of trust in virtual communities. *Journal of Strategic Information Systems, 11*(3-4), 271-295.

Smith, J. (2018). From broke to billionaires: The rise of Airbnb founders who rented out air mattresses in their apartment for $80-a-night to make rent and now run a $30billion global travel empire. Retrieved December 18, 2018, from https://www.dailymail.co.uk/news/article-5918039/From-broke-billionaires-rise-Airbnb-founders.html

Stirrat, M., & Perrett, D. I. (2010). Valid facial cues to cooperation and trust: Male facial width and trustworthiness. *Psychological Science, 21*(23), 349-354.

Stouthuysen, K., Teunis, I., Reusen, E., & Slabbinck, H. (2018). Initial trust and intentions to buy: The effect of vendor-specific guarantees, customer reviews and the role of online shopping experience. *Electronic Commerce Research & Applications, 27*, 23-38.

Todorov, A., Mandisodza, A. N., Goren, A., & Hall, C. C. (2005). Inferences of competence from faces predict election outcomes. *Science, 308*(5728), 1623-1626.

Todorov, A., Olivola, C. Y., Dotsch, R., & Mende-Siedlecki, P. (2015). Social attributions from faces: Determinants, consequences, accuracy, and functional significance. *Annual Review of Psychology, 66*(1), 519-45.

Todorov, A., Pakrashi, M., Oosterhof, N. N. (2009). Evaluating faces on trustworthiness after minimal time exposure. *Social Cognition, 27*(6):813-833.

Transparency Market Research. (2018). Peer-to-peer Lending market to be worth US$897.85 billion by 2024 – TMR. Retrieved December 29, 2018, from

https://www.prnewswire.com/news-releases/peer-to-peer-lending-market-to-be-worth-us-897-85-billion-by-2024-tmr-883066968.html

Wang, Z., Mao, H., Li, Y. J., & Liu, F. (2016). Smile big or not? Effects of smile intensity on perceptions of warmth and competence. *Journal of Consumer Research, 43*(5), 787-805.

Wen, Z., Huang B., & Tang D. (2018). Preliminary work for modeling questionnaire data. *Journal of Psychological Science, 41*(1), 204-210.

Wen, Z., & Ye, B. (2014). Analyses of mediating effects: The development of methods and models. *Advances in Psychological Science, 22*(5), 731-745.

White, D., Sutherland, C. A. M., & Burton, A. L. (2017). Choosing face: The curse of self in profile image selection. *Cognitive Research Principles & Implications, 2*(1), 1-9.

Willis, J., & Todorov, A. (2010). Making up your mind after a 100ms exposure to a face. *Psychological Science, 17*(7), 592-598.

Wu, W. Y., Huang, P. C., & Fu, C. S. (2011). The influence of an online auction's product price and e-retailer reputation on consumers' perception, attitude, and behavioral intention. *Scandinavian Journal of Psychology, 52*, 290-302.

Wu, W. Y., Quyen, P. T. P., & Rivas, A. A. A. (2017). How e-servicescapes affect customer online shopping intention: The moderating effects of gender and online purchasing experience. *Information Systems and e-Business Management, 15*, 689-715.

Xie, K., & Mao, Z. (2017). The impacts of quality and quantity attributes of Airbnb hosts on listing performance. *International Journal of Contemporary Hospitality Management, 29*(3), 2240-2260.

Xu, F., Cai, W., Ma, F., & Wu D. (2013). Evaluation of face trustworthiness and its relationship with trust propensity. *Studies of Psychology and Behavior, 1*(4), 433-439.

Yang, X. (2014). The role of photographs in online peer-to-peer lending behavior. *Social Behavior & Personality, 42*(3), 445-452.

Zhao, H., Wang, X., & Zhou, B. (2015). Relationship among interaction, presence and consumer trust in B2C online shopping. *Management Review, 27*(2), 43-54.

Practical Tourism Research, authored by Stephen L. J. Smith, 2017, Wallingford: CABI International, ISBN-13: 978-1-78064-887-3, pp. 268

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This book represents one of the CABI's tourism publications which focuses on research methods and techniques in the field of tourism. Moreover, this book is a practical guide to the paths and anecdotes that a researcher should follow in the research process from beginning to the end, and includes basic terminology, concepts and approaches. It is written in down-to-earth language, aiming at students and novice researchers in the tourism field.

The need for research in the field of tourism is crucial but accurate reference material is thin on the ground. This book fills an important gap in the literature, enabling tourism scholars to conduct their work in the best manner. It is also a useful resource, not only for researchers in tourism sector, but also for a wider audience of social science academics.

The book is 268 pages long and consists of 10 chapters featuring the nature of research (Chapter 1), planning a research project (Chapter 2), survey design and sampling (Chapter 3-5), other useful methods (Chapter 6-9) and presenting results (Chapter 10). This book is rich in specifics, starting from asking a research question to reporting the results of techniques (determining research question, reviewing relevant research, designing survey, sampling, survey, focus group, case study) in qualitative and quantitative approaches.

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According to the author, Stephen L. J. Smith, although there is a lot of research in the field of social sciences, there are still under-researched areas and facts to be discovered in the field of tourism. Therefore, Chapter 1 of the book conceptualizes the phenomenon of tourism from different perspectives and includes some definitions to explain the nature of tourism studies, without removing it from the context of other social science researches. Then, by classifying areas of research in tourism field into pure research, consultancy, workplace research, action research etc., it facilitates understanding of its comprehensibility. The main aim of this chapter is to enable the researcher towards understanding the phenomena in which he/she is involved by asking rational questions and engaging in research with logical and appropriate processes. Hence, this section of the book is dedicated to clarifying those issues that are considered as the most complex ones in the minds of researchers, by referring to research paradigms and approaches (deductive-inductive) for a better understanding of social science research.

Chapter 2 (Planning a Research Project) also provides extensive information on data sources and collection, analytical method selection and scientific ethical standards. It answers questions like: How to conceptualize the purpose of the study? How to ask the research question and develop hypotheses? How to conduct a literature review?

Chapter 3 (Questionnaire Design and Delivery) describes why surveys are widely used in research. Explaining concepts such as open and closed-ended questions, and providing tips to increase the number of survey respondents, it lays out the framework of a basic survey.

While Chapter 4 (Selecting a Sample) provides the rationale for sampling, appropriate sample selection, sample classifications, and adequate sample size, Chapter 5 (How to Conduct Personal Interviews and Focus Groups) provides an in-depth discussion on the focus group and the interview, on how to conduct and conclude these, and on developing techniques for coding transcripts of interviews.

Chapter 6 (Indices and Scales) explains the use of indices and scales in tourism studies and supports researcher in developing these quantitative tools for further analysis. Book further continues with Chapter 7 (Case Studies) which discusses case study types and how they differ from other research techniques and Chapter 8 (Content Analysis) looks into content analysis, which is another analysis approach, how it differs from other strategies and various ways of using this strategy in detail.

Chapter 9 (Netnography) explains the rational position of the netnography, which is one of the techniques used in qualitative research approaches, and details the steps in the research process. Readers are given insights into the advantages and disadvantages associated with the technique, as in the previous sections.

Finally, Chapter 10 (Research Reports and Presentations) gives engaging tips on the clearing of research findings; not just how to compose a report at the writing stage, but also on how to present an oral presentation, with additional information we will not find in every research book.

Each chapter concludes with references and detailed web sources that provide both pertinent and statistical information, with exercises that can reinforce and practice what we have learned. Almost every chapter contains Focus Boxes containing short but practical commentary on the theme. In addition, the end of each chapter draws conclusions which are specific to the nature of the research and its natural process, or which cannot easily be found elsewhere. The author further contextualizes these conclusions by presenting a unique analysis of the area as it applies to tourism. The author's own experience is clearly evident throughout. Personally, I consider this book as a very suitable text for undergraduate as well as for early post-graduate students. Although the book does not cover all research methods, it is practical and easy to understand. The author's language is simple and sincere, and it is the kind of study that will make the process of doing research in tourism more approachable. Therefore, it could be an invaluable aid to students in preparing their theses and projects, as it presents comprehensive, systematic methodology for research.

AN ANTHROPOLOGICAL INSIGHT ON THE COMMONALITIES BETWEEN TOURISM AND ARCHAEOLOGY

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Over the years, archaeology matured towards something else than a scientific discipline. Archaeological sites are culturally showed as emerging and recycled tourist attractions (Robb, 1998; Bateman, 2006; Rowan & Baram, 2004; Karlsson & Gustafsson, 2006). At a closer look, tourism is understood as a leisure activity which is enrooted in the needs of relaxing and evasion while archaeology - as a knowledge platform which is based on scientific method - explores the history of ancient cultures. This raises a more than interesting question respecting the commonalities and differences between archaeology and tourism. To some extent, archaeologists find ancient relics and objects which not only belonged to "Others" who have perished but –and what is more important- have no sense beyond the borders of archaeological knowledge. At the same time, tourists visit archaeological ruins which are interpreted according to the social imaginary which was filled by archaeologists (Cohen, 1985; Rubio, 2006). As Korstanje (2012) puts it, the notion of history has been historically criticized to be functional to the imperial order. The first ethnologists developed a paternalist viewpoint to understand the non-western "Other". Based exclusively on the beliefs that the pre-modern Europe disappears once industrialism advanced, the ethnographers and field-workers strongly believed the aboriginal world would be in the bias of extinction (Stocking, 1968). The needs of protecting

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them associated with the urgency to collect relics, lore, utensils, artefacts as well as oral-stories and myths led fieldworkers to document everything they experienced or simply met. Paradoxically, the produced information was employed by the colonial officers to domesticate the aborigines (Boas 1904). Any travel is a foundational act of conquest (Clifford, 1988). To put the same in bluntly, the advances of science were politically manipulated to keep the centre-periphery dependency (Harris, 2001). From its onset, archaeology adopted a linear vision of the time which was ideologically marked by the evolution theory. Societies were framed as organisms which evolve in the time towards a maturate form. The agrarian life will irreversibly be overwhelmed by industrial capitalism. While protecting means preserving this reason emphasized the needs of creating museums to locate the collected relics. This double tension ascribed to the fact that archaeology and anthropology situated as scientific options studying non-western cultures at the time little attention was paid to "the own nesting in western ethos" (Edgeworth, 2006). In this respect, archaeology valorises other ancient cultures elaborating its own discourse about how these perished aboriginal communities lived. To a major or lesser degree, the non-western "Other" is excluded from the formation of archaeological discourse. The notion of identity is unilaterally oriented to delineate the borders of an emptied encounter. While tourists interact –to some extent- with natives, this does not happen with archaeologists who often imagine the functionality of object they came across. However, both tourism and archaeology are symbolically embedded into the same cultural matrix which gives legitimacy to the organization of modern capitalism around the cultural values of novelty, uniqueness and exemplarity. Archaeology cements the knowledge imagining other conditions which are certainly closed and inexpungable to tourists but at a first glimpse, both look for the ideals of uniqueness. While the research´s success depends upon the originality of the ancient relic, the tourist-gaze (citing Urry, 2002) is in quest of something new to possess. The ideals of control, protection and classification which resulted from the colonial enterprise still remain in tourism consumption. The archaeological object is classified by its intrinsic value which exceeds the monetary transaction. In fact, these objects are valueless. Tourists expropriate the gazed landscape through the introduction of the camera, while archaeologists introduce another technological instrument to construct the same one-sided view of the world. Archaeology looks to reconstruct those lost worlds anthropology vaticinated but tourists finally consume a much deeper idealized and mirroring landscape that interrogates their own existence. This process of reflexibility is partially given by the "nothingness" which means the lack

of any interaction between the selfhood and the alterity. Like museums, not only the archaeological sites are spaces of death but they have no dwellers, no natives, and no life. This cultural appropriation cannot be achieved without the process of sacralisation which precedes tourism consumption. Equally important, archaeology provides cultural tourism industry with the commodities to function. Visitors and archaeologists – and perhaps this is the moot-point to debate- are obsessed by authenticity. As Thomas Yarrow (2006) puts it, from its inception archaeology has been denounced by a lack of reflexibility with the local agency. This suggests that social interaction seems to be a real obstacle for archaeologists and once the desired object is found they come back home. The instrumentalization of the non-existent "Other" plays a crucial role in the objectivity of the knowledge production of archaeology. Hence the created ideological discourse rests on a false interpretation of the past. Most certainly, the logic of discovery has no sense without the production and fabrication of codes and interpretations. The idea of authenticity gives accuracy to these symbolic frameworks. To put the same in other terms, authenticity echoes the dominant discourse of the colonial rule which divides the world in two: those cultures to be preserved and those which should be discarded. The technology of mystification that prompted the creation of museums endorses value to some (relics) object while others are covered. Annette Weiner (1992) discovered how the aboriginal relics are often sacralised to become "alienable things" which are excluded from the marketplace and the mutual exchange. The copycat establishes a dialectical relation with the authentic object. The exchanged objects, aligned with the logic of the market, reconstructs the cycle of social reciprocity. While these objects are copycats, the foundational authentic object is preserved in the core of society as an "inalienable thing". The same confrontational relation applies for museums and what Dean MacCannell dubbed as "staged authenticity". MacCannell (1976) alerts that the interest of visitors for consuming authenticity is directly proportional to the creation of staged-authenticity. Archaeology looks for the reconstruction of an ancient culture. The discipline is in quest of the truth but in so doing, paradoxically the "non-western Other" is arbitrarily reconfigured according to the proper ethnocentrism of archaeologists and fieldworkers.

This short commentary piece is not aimed to exert a radical criticism on cultural tourism but in evincing the connection of the cultural consumption and the colonial logic. MacCannell is right when he confirms tourism occupies the place of the totem in aboriginal cultures, as a

mediating process that led the alienated workers and their political institutions. The tourist-gaze needs from the ideological message that reminds its superiority over other (perished) cultures (Urry, 2002). This sense of exceptionality seems to be determined by the quest of novelty. Museums, which act as political artefacts of control, exhibit two significant aspects of the phenomenon. On one hand, it signals to the needs to control the pastime to organize the labour in modern capitalism. On another, -echoing Mary Louise Pratt (2007)- the imperial eyes are moved to travel to overseas territories to mark non-western others while they avoid being marked. To say the same in other terms, the needs of protecting others equates some assumption the proper culture is superior, stronger or more sophisticated. This evinces that far from being naïve persons –as Boorstin said- and archaeologists an authoritative voice, both represents a dialectical tension of exchangeable agents within the constellations of imperialism.

REFERENCES

Bateman, J. (2006). Pictures, ideas, and things: the production and currency of archaeological images. In M. Edgeworth (Ed.), *Ethnographies of Archaeological Practices* (pp 68-80). Lanham: Altamira Press.

Boas, F. (1904). The history of anthropology. *Science*, *20*(512), 513-524.

Clifford, J. (1988). *The Predicament of Culture: Twentieth-Century Ethnography, Literature, and Art*. Massachusetts: Harvard University Press.

Cohen, E. (1985). The tourist guide: The origins, structure and dynamics of a role. *Annals of Tourism Research*, *12*(1), 5-29.

Edgeworth, M. (2006). Preface. In M. Edgeworth (Ed.), *Ethnographies of Archaeological Practices.* Lanham: Altamira Press

Harris, M. (2001). *The rise of anthropological theory: A history of theories of culture*. New York: Rowman Altamira.

Karlsson, H & Gustafsson, A. (2006). Among Totem Poles and Clan Power in Tanum, Sweden. In M. Edgeworth (Ed.), *Ethnographies of Archaeological Practices* (pp 137-147). Lanham: Altamira Press.

Korstanje, M. (2012). Reconsidering cultural tourism: An anthropologist's perspective. *Journal of Heritage Tourism*, *7*(2), 179-184.

Maccannell, D. (1976). *The tourist: A new theory of the leisure class.* Berkeley: University of California Press.

Pratt, M. L. (2007). *Imperial eyes: Travel writing and transculturation*. Abingdon: Routledge.

Robb, J. G. (1998). Tourism and legends archaeology of Heritage. *Annals of Tourism Research*, *25*(3), 579-596.

Rowan, Y. M., & Baram, U. (Eds.). (2004). *Marketing heritage: Archaeology and the consumption of the past*. Rowman Altamira.

Rubio, S. P. (2006). La ciudad fingida. Representaciones y memorias de la Barcelona turística. *Pasos. Revista de turismo y patrimonio cultural*, *4*(1), 13-28.

Stocking, G. W. (1968). *Race, culture, and evolution: Essays in the history of anthropology*. Chicago: University of Chicago Press.

Urry, J. (2002). *The tourist gaze*. London: Sage.

Weiner, A. B. (1992). *Inalienable possessions: The paradox of keeping-while-giving*. Berkeley: University of California Press.

Yarrow, T. (2006). Sites of Knowledge: Different ways of knowing an archaeological excavation. In M. Edgeworth (Ed.), *Ethnographies of Archaeological Practices* (pp. 20-32)*. Lanham: Altamira Press.

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