En la determinación del gasto turístico: ¿Importan las métricas y los niveles?

Determining Tourist Expenditures: Do Metrics and Levels Matter?

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Abstract

This article seeks to analyse and compare expenditures made by independent tourists, measured using various metrics. The empirical application relies on quantile regression analysis and examines the determinant factors of different types of expenditure, while also accounting for spending variations among heavy, moderate, and light spenders.

The research was conducted with tourists to Israel from the U.S., UK, Germany, Russia, Ukraine, France, Italy, and the Netherlands over the course of July 2017. The empirical

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findings confirm the high complexity of the nature of tourist expenditures. The evidence indicates that the effects of the independent variables vary not only with respect to the expenditure metric but also as a function of expenditure level. Independent tourist expenditures across all quantiles and metrics depend upon the size of the travelling party, duration of stay, type of accommodation, and whether the tourists are from the U.S. Moreover, men spent more than women among light and heavy spenders; social media increases the expenditure for moderate and heavy spenders; and for heavy spenders, business traveller expenditure is less than other travellers.

Keywords: Tourism; Quantile regression; expenditures; FIT; Micro data; metric.

Resumen

El objetivo de este artículo es analizar y comparar los gastos que realizan los turistas independientes, medidos mediante diversas métricas. Para ello se aplica la metodología de regresión por cuantiles que examina los factores determinantes de los diferentes tipos de gasto, al tiempo que tiene en cuenta las variaciones del gasto entre los turistas que gastan mucho, moderadamente y poco.

La investigación se basa en una prueba de turistas que arribaron a Israel desde EE.UU., Reino Unido, Alemania, Rusia, Ucrania, Francia, Italia y los Países Bajos durante julio del 2017.

Los hallazgos empíricos confirman la alta complejidad de la naturaleza de los gastos turísticos. La evidencia indica que los efectos de las variables independientes varían no solo con respecto a la métrica de gasto sino también en función del nivel de gasto. Los gastos de los turistas independientes en todos los cuantiles y métricas dependen del tamaño del grupo de viajeros, la duración de la estadía, el tipo de alojamiento y si los turistas son de EE. UU o de otro país. Además, se puede observar que los hombres gastan más que las mujeres entre los turistas que menos gastan y también entre los más gastadores. Las redes sociales aumentan el gasto de los más gastadores y de los moderados. Dentro de la categoría de los turistas más gastadores, se puede ver que el gasto de los viajeros de negocios es menor que el de otros viajeros

1 Introduction

Over the years, the number of international tourists across the world has grown radically, reaching 1.4 billion in 2018, two years ahead of the long-term timeline forecasted by United Nations World Tourism Organization UNWTO in 2010. During the COVID-19 pandemic international tourism completely shut down, but nowadays tourist numbers have recovered and the competition for travellers which was already strong may intensify (World Tourism Organization, 2023). The tourism industry is an essential revenue contributor to the economies of various major tourist destinations across the globe (Pulido, Cárdenas, and Carrillo 2016; Perez and Juaneda 2000). In addition, tourism has indirect effects on the economy due to the dynamic causalities between tourism expenditure and financial development, international trade and growth (Işık et al. 2017).

Better understanding of the main drivers of tourist expenditures in each destination using appropriate econometric tools is a necessary guide for tourism managers as they develop relevant policies for each key market (Pulido, Cárdenas, and Carrillo 2016, Massidda, Piras and Seetaram 2022). The numerous review articles based on micro data that examine the determinants of widespread tourist expenditures attest to the rising academic interest in this field (Mudarra-Fernández, Carrillo-Hidalgo and Pulido-Fernández 2019; Brida and Scuderi 2013).

Most research that examines tourist spending analyses the expenditures per person per night, probably due to the limited availability of data on other types of expenditures (Marcussen 2011). However, other measurement scales of expenditure (e.g., expenditures per travel party, expenditures per night; and total expenses) resulted in different relevance of the explanatory variables and different magnitudes of their effects (Kozak, Gokovali and Bahar 2008). In the spirit of Rosselló-Nadal and He (2020) analysis of tourist expenditure, it can be argued that total expenses, expenditures per night and expenditure per party mainly capture the context of "quantity" while expenditure per person per night seems to describe the "quality," in the sense that tourist who more strongly value quality tourism will spend more. From

a practical standpoint, decision-makers should consider different types of expenditures, depending on the destination status (e.g., over-tourism, low travel seasons, and limited availability).

The aim of this research is to focus on tourist expenditure as measured by different scales using quantile regression analysis. The main novelty of this research is the estimation of quantile regression models for several tourism expenditures depending on the measurement scale. Moreover, our study seeks to address some of the shortcomings discussed by Brida and Scudri (2013) by using a comprehensive set of factors that are expected to account for the major tourist characteristics, tourist origins, and the specific traits of Israel as destination. The research investigates tourists in Israel during July 2017 as a case study. The number of international tourists in Israel has been increasing in recent years, reaching a record 4.4 million in 2018 and an income of almost 6 billion dollars. The key markets of tourists visiting Israel are the U.S., UK, Germany, Russia, Ukraine, France, Italy, and the Netherlands (Israeli Ministry of Tourism 2019). Most of the tourists to Israel are Free independent Tourists (FITs) and those tourists behave in different ways compared to tourists on organized tours. The present study focussed specifically on FITs, which distinguishes it from most studies which include all the incoming tourists. The rest of the paper is organized as follows: A review of the existing literature is provided in Section 2wo. Section 3 covers the data and methodology, and section 4 present the findings. Section 5 offers reflections and conclusions.

2   Literature Review

2.1 Determining factors

Much research has been done at the micro level about the demand for tourism services (Brida and Scuderi 2013; Wang and Davidson 2010; Sainaghi 2012; Disegna and Osti 2016; Aguiló, Rosselló and Vila 2017). Divergent findings have emerged depending upon a) the

definition of the expense and the measurements used to assess it (metric, natural logarithms, and level form); b) the analytical methods used; and c) the geographic scope. Most of the research has analysed tourist expenses without distinguishing between organized and independent tourists (Hadjikakou et al. 2013; Park and Fesenmaier 2014; Lima, Eusébio and Kastenholz 2012), even though these two groups have different characteristics and make different travel decisions (Mehmetoglu 2006; Kristensen 2013). Furthermore, research that distinguishes between the expenditures of organized and independent tourists reveals different levels of expenditure. The profiles of international tourists are classified in terms of country of origin, demographic characteristics, trip characteristics, and the use of services and activities during the trip. The classification of tourists relates to their tourist expenditure (Mercadé-Melé and Barreal 2021; Barreal and Jannes 2021; Barreal, Ferrer-Rosell, Ristobal-Fransi and Jannes 2021; Millán Vázquez de la Torre and Pérez 2014).

Mudarra-Fernández, Carrillo-Hidalgo and Pulido-Fernández (2019) and Brida and Scuderi (2013) surveyed the literature examining the factors affecting consumption of tourism services at the tourist level. The explanatory variables were grouped based on the taxonomy proposed by Wang et al. (2006), which distinguishes between four main categories : budget constraints such as tourist income; socio-demographic characteristics such as age, gender, education, occupational status, and nationality; trip characteristics such as length of stay, number of people in the travel party, number of destinations, type of accommodations and transport used, trip timing, and psychological characteristics such as repeated behaviour and trip motivation.

Most of the research regarding budget constraint includes income as an explanatory variable since income has been shown to have a significant effect on level of expenses. At high and average levels of income, the effect of income on expenditure is usually positive (Park, Woo and Nicolau 2019; Brida and Scuderi 2013; Ramos-Domínguez, Hernández-Martín and Padrón-Ávila 2023). There is some evidence that at low levels of income, the affect maybe even negative (Alegre, Cladera and Sard 2011). Similarly, Marrocu, Paci and Zara (2015) found that income has a significant positive affect on the level of expenses. For a high level of expenses, the effect of income is higher than the effect for a lower level of expenses. According to Park, Woo and Nicolau (2019), information about income is not always

available, therefore education is sometimes used as a proxy for income (Fleischer and Felsenstein 2004; Marcussen 2011).

The common variables in the socio-demographic category are education, gender, age, and country of origin. Despite the prevalent assumption in the literature, the effect of these variables on expenses is not always significant (Mudarra-Fernández, Carrillo-Hidalgo and Pulido-Fernández 2019; Brida and Scuderi 2013; Wang and Davidson 2010; Massidda, Piras and Seetaram 2022). While most research has not found significant differences between men and women expenditures (Rashidi and Koo 2016), Craggs and Schofield (2009) showed that women's expenditures on tourism services are higher than those of men. Marcussen (2011), Massidda, Piras and Seetaram (2022) and Ramos-Domínguez, Hernández-Martín and Padrón-Ávila (2023) found the opposite result. Hung, Shang and Wang (2012) found a significant positive correlation between tourists' level of education and their level of expenditure, especially for higher expenditure levels. They claimed that tourists with a higher education level of education can make better use of tourism services. Based on the common assumption that the expenditure level among younger tourists is lower than that of older tourists, the expectation is that age will have a positive effect. Nevertheless, a few studies revealed a negative effect of age (Brida and Scuderi, 2013; Gómez-Déniz, Pérez-Rodríguez and Boza-Chirino 2019) and showed that at a certain age the positive effect can change to a negative effect (Thrane and Farstad 2011). With respect to country of origin, previous research pointed out differences between tourist expenditure (and their explanatory variables) from different nationality or origin country (Ramos-Domínguez, Hernández-Martín and Padrón-Ávila 2023; Mudarra-Fernández, Carrillo-Hidalgo and Pulido-Fernández 2019; Wu, Zhang, and Fujiwara 2013).

The primary factors relating to the trip itself are length of stay and party size. Length of stay has a positive effect on expenditures (Driml, Ballantyne and Packer 2017; Vu et al. 2017; Marrocu, Paci and Zara 2015), though according to Brida and Scuderi (2013) this result does not hold when average daily expenses are examined. Furthermore, for expense per person per night, the effect of length of stay is negative (Alegre, Cladera and Sard 2011, Massidda, Piras, Seetaram 2022, Ramos-Domínguez, Hernández-Martín and Padrón-Ávila (2023)). Party size affects the level of expenditure such that as the party size increases the total

expenditures usually increase while the expense per person decreases (Brida and Scuderi 2013; Gómez-Déniz, Pérez-Rodríguez and Boza-Chirino 2019; Ramos-Domínguez, Hernández-Martín and Padrón-Ávila 2023). Moreover, Marrocu, Paci and Zara (2015) found that party size has a convex effect on expenses person/night.

Some research also analysed the effect of accommodation type and technology use. Type of accommodation affects the level of expenditure because accommodation usually constitutes a large part of tourist expenses. Research that examined this variable found that type of accommodation had a significant impact on total expenditures (Marrocu, Paci and Zara 2015; Brida and Scuderi 2013, Massidda, Piras and Seetaram 2022; Ramos-Domínguez, Hernández-Martín and Padrón-Ávila 2023). Use of technology demonstrates a positive relationship with tourist expenditures (Romao et al. 2013). Furthermore, a correlation emerged between tourist expenditures and advanced trip planning, such that more information about the destination correlated with higher tourist expenditures (Lima, Eusébio and Kastenholz 2012). Use of up-to-date sources of information also leads to higher expenditure per person (Park, Woo and Nicolau 2019).

Fewer studies have addressed the psychological aspects of tourism, perhaps due to the complexity of these variables and the difficulties in summarizing this type of data due to divergent definitions and measurement means (Brida and Scuderi 2013). Nonetheless, when psychological factors are examined, they usually include tourist satisfaction level, return visits and trip purpose. The purpose of the trip is directly related to total tourist expenditures (Mudarra-Fernández, Carrillo-Hidalgo and Pulido-Fernández 2019, Massidda, Piras and Seetaram 2022). Marrocu, Paci and Zara (2015) found that the expense of return visits is higher than first-time visits, and that tourists visiting friends and relatives (VFR) have lower expenditures than tourists with other motivations. This result is supported by Park, Woo and Nicolau (2019) and Massidda, Piras and Seetaram (2022), who found that the top spenders are those whose purposes are leisure, recreation, holiday, and shopping. VFR tourists and those who indicate "business or professional activities" as their primary motivation spend less than others.

2.2 Tourist expenditure measures

Expenses can be examined in several ways, though most researchers analyse only one expenditure variable. Some exceptions are a) Gómez-Déniz, Pérez-Rodríguez and Boza-Chirino (2019), who studied the variables affecting tourists' expenditure while differentiating between expenses at origin and expenses at destination. b) Marrocu, Paci and Zara (2015), who analysed the effect on the following four variables: expenditure with and without travel costs, expenditure for accommodation, and food and beverage expenditure. They found that the effects vary for different expenditure components and also depend on the level of expense. Similarly, Massidda yet al. (2022) analysed the expenditure of British travellers on different items of consumption. c) Marcussen (2011), used seven independent variables: expenses per person per night, accommodation per person per night, transportation per person per night, other expenses per person per night, expenditure per night, expenditure per person and total expenditure. He found that some of the variables (type of accommodation, length of stay, party size, package tours, and income level) affected all of the dependent variables, while other variables (country of origin and purpose of travel) affected only some of the dependent variables.

This paper examines whether the models differ with respect to total expenses, expenses per day, expenses per person and expenses per person per day. If no differences emerge between the effects of these different variables, then any one of them can be used, based on availability. But if a difference emerges between the variables, then the dependent variable must be chosen carefully.

In addition, different dependent variables may be important for different suppliers. For example, for transportation providers, spending per person may be more relevant than spending per person per night; while for accommodation suppliers, spending per travel per night may be more important and for destination marketing organizations, total spending per travel party per stay may be the most important measure of expenditure (Marcussen 2011).

2.3 Econometric technique

Marrocu, Paci and Zara (2015) and Park, Woo and Nicolau (2019) analysed expenditures in Sardinia and South Korea using different econometric methods, including ordinary least squares (OLS) and quantile regression (QR). By comparing the accuracy of different estimation methods, they concluded that QR is the most accurate method. Park, Woo and Nicolau (2019) included a variety of explanatory variables and found that the following variables had effects on tourist expenditures per person: occupation (self-employed); education (academic degree); country of origin; trip purposes; traveling with family or friends; information sources; and consumer price index in the origin and destination countries. QR analysis indicated that the positive effect of information sources on total expenditure per person is higher for tourists with lower levels of expenditure. Similarly, Marrocu, Paci and Zara (2015) used QR analysis to examine whether the effect of the determinant factor is constant over the range of expenses. They found that party size and number of sites visited had a smaller effect among tourists with lower expense levels. On the other hand, the effect of previous visits to Sardinia was higher for travellers with a high level of expenditure compared to tourists with lower expenditure levels. Ramos-Domínguez, Hernández-Martín and Padrón-Ávila (2023) used quantile regression to study the expenditure of tourists from the five main countries of origin to the Canary Islands. They found that as age increases, the daily expenditure increases, particularly among tourists with higher income. They also found that men spend more money than women, especially in the highest and lowest expenditure groups.

3   Methodology

The study was based on closed questionnaires designed to learn about visits of FITs to Israel and the level of their expenditures during their visits. The questionnaires were anonymous, and the collected data were used for research purposes only. The research questionnaire was developed and distributed by Mertens Hoffman, a company that conducts surveys for the Israel Ministry of Tourism. The stratified sampling method was used, and the response rate was over 90 percent. The survey was translated into English, Spanish, Russian and French. Questionnaires were distributed in July 2017 at Ben Gurion International Airport to tourists concluding their visit to Israel. In total, 464 questionnaires were collected, of which

414 were valid. The questionnaire covered different aspects that describes the tourists and her tour in Israel including gender, age, education, use of social network before and during the trip, places and attractions visited in Israel, expenditures for various components of the trip, paid in Israel or abroad.

This study applied the QR method used by Marrocu, Paci and Zara (2015) and Park, Woo and Nicolau (2019), rather than the popular descriptive statistics and ordinary least squares (OLS) methods. The QR method is better than OLS because OLS estimations consider only the average response of tourist expenditures to changes in the determinants, while overlooking possible differences among consumer segments, such as heavy spenders and light spenders (Hung, Shang and Wang 2012). QR addresses this issue by distinguishing between different levels of tourist expenses; in this study, QR was applied to light, moderate and heavy spenders. Unlike in previous applications of the QR method in examining tourist expenditures, in our analysis an optimal model was fitted by applying backward selection for each quantile (0.25=light, 0.5=moderate, 0.75=heavy). More specifically, in the first stage, all the independent variables were entered into the equation and the equation was estimated separately for each quantile. If some of the explanatory variables were insignificant the less significant variables were taken out, and the equation was estimated again. This continued until all of the variables had a significance of 5% or less. This process can lead to different sets of explanatory variables for each quantile.

The selection of the explanatory variables for this study was driven by the most recent literature in the field and used the following three groups of variables: budget constraints (BC), socio-demographic characteristics (SC), trip-related characteristics (TC) and psychological variables (PC). Budget constraints (income) was excluded due to lack of information but, as in previous literature, education level was used as a proxy. The model is specified as follows:

$$E_i^j = \beta_0^j + BC_i\beta_1^j + SC_i\beta_2^j + TC_i\beta_3^j + PC_i\beta_4^j + \varepsilon_i^j$$

where E_i^j represents the expenditure of tourists, i is measured on metric j (total expense, expense per night, expense per person, expense per night per person), β_0^j is a constant term for metric j, BC_i is a vector of budget constraint (education), SC_i is a vector of socio-demographic characteristics (gender, age, education, marital status [married/single]),

country of origin (U.S., UK, Germany, Russia, Ukraine, France, Italy, and the Netherlands), TC_i is a vector of trip-related characteristics (accommodation, number of nights stayed, party size, use of social media before and during the trip, flying with low-cost carrier, depth of visit (visits to more than three sites). Psychological variables (return visit, motivation for visit [business, VFR, holiday, other] are represented by PC_i. β_i^j are parameters to be estimated. As in previous literature, the independent variables have been included in logarithmic form.

In addition, the model included quadratic terms both for length of stay and for party size to take advantage of possible nonlinearities.

The statistical packages SPSS 25 and EViews 9 were used for statistical analysis of the data. The analysis included QR regression as well as general descriptive statistics.

4 Results

The descriptive statistics include the demographic variables. Table 1 describes the descriptive statistics of the data.

Table 1. Description of sample by demographic data.

Variable		N	%
Gender	Male	222	53.6
	Female	192	46.4
Marital status	Single	211	52.6
	Married	174	43.4
Income	Below Average	187	47.8
	Average	98	24.4
	Above Average	107	27
Education	12 years of school	146	36.6
	Higher education	253	63.4
Age	Below 24	48	11.6
	25 to 34	103	24.9
	35 to 44	79	19.1
	45 to 54	104	25.1
	Above 55	80	19.3

For the entire sample of 414 valid respondents, the average length of stay was 9 days, with an average party size of 1.44. Of these, 285 (68.8 percent) came as solo travellers, 100 (24.2 percent) were in a party of two people and only 29 (7 percent) were part of a party larger than two people. The total average expense for the trip was $2650 and the average expense per

person per night was $310. The sample included a similar percentage of men and women. About half (52.6 percent) were single and most (63.4 percent) had higher education.

The following sections describe the common results for all quantiles and all expense metrics.

As expected, trip duration had a positive effect on total expenses or expenses per person and a negative effect on expenditure per night or per person per night. The effect was concave for total expenditure or expenditure per person.

Similarly, party size had a negative effect on expenditure per person per night and per person, and a positive effect on expenditure per night. FITs from the USA had a higher level of expenditure than other FITs, for all types of expenditure. FITs that stayed in hotels (as opposed to other types of accommodation) had a higher level of expenditure.

The following variables were not significant in any of the models: use of low-cost carriers, return visit, education level, Italy as country of origin, visiting more than three sites and trip motivation of holiday or VFR.

Tables 2 to 4 present the final estimated models for each expense quantile and metric. As mentioned, some of the explanatory variables that were introduced in the original models were omitted from the final model because they were insignificant (5% or less).

Table 2: Determinate factor of expenses for low spenders (Q=0.25)

	Per person per day	Per person per trip	Per group per day	Total
PARTY_SIZE	-0.204*** (0.054)	-0.189* (0.085)	0.297** (0.090)	0.247* (0.099)
NIGTHS	-0.048*** (0.009)	0.175*** (0.025)	-0.051*** (0.011)	0.173*** (0.023)
NIGTHS2[1]		-0.004*** (0.001)		-0.005*** (0.001)
USA	0.269*** (0.079)	0.630*** (0.112)	0.431*** (0.095)	0.584*** (0.110)

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[1] Night 2 is quadratic terms for length of stay.

Hotel	0.933*** (0.101)	0.741*** (0.117)	0.766*** (0.110)	0.795*** (0.112)
GENDER	-0.376*** (0.113)	-0.424** (0.149)	-0.493** (0.156)	
UK		0.575*** (0.161)		
FRANCE	0.418** (0.147)			
RUSSIA	-0.729* (0.368)			
GERMANY	-0.464** (0.179)			
NETHERLAND		0.388* (0.184)		0.379* (0.168)

*P<0.05 **P<0.01 *** P<0.001

Among light spenders, women's expenditures (per night, per person per night, per person) were lower those of men, with the exception of total expenditure. FITs from the Netherlands had a higher expenditure (total, per person), while FITs from the UK had a higher expenditure per person. FITs from France exhibited a higher expenditure per person per night, while FITs from Russia and Germany had lower levels of expenditure compared to those from other countries.

Table 3: Determinate factor of expenses for moderate spenders (Q=0. 5)

	Per person per day	Per person per trip	Per group per day	Total
PARTY_SIZE	-0.188** (0.057)	-0.196*** (0.049)	0.314*** (0.052)	0.323*** (0.048)
NIGTHS	-0.046*** (0.009)	0.185*** (0.017)	-0.040*** (0.007)	0.187*** (0.017)
NIGTHS2[2]		-0.005*** (0.001)		-0.004*** (0.001)
USA	0.207** (0.074)	0.275*** (0.078)	0.148* (0.071)	0.203** (0.077)
Hotel	0.763*** (0.081)	0.817*** (0.091)	0.743*** (0.087)	0.842*** (0.081)
UK				0.239* (0.115)
FRANCE	0.356* (0.159)			
RUSSIA	-0.761*** (0.162)	-0.826*** (0.178)	-0.681*** (0.175)	-0.670*** (0.173)
UKRAINE	-0.676**	-0.740***	-0.602*	-0.578** (0.200)

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[2] Night 2 is quadratic terms for length of stay.

	(0.232)	(0.220)	(0.277)	
GERMANY			-0.254* (0.106)	
SOCIALBEFORE				0.187* (0.079)
SOCIALDURING		0.154* (0.073)		

*P<0.05 **P<0.01 *** P<0.001

Among moderate spenders, the total expenditure of FITs from the UK was higher than the total expenditure of other tourists, though this difference did not emerge for other types of expenditure. On the other hand, FITs from France had a higher expenditure per person per night. FITs from Russia and Ukraine had lower expenditure levels for all types of expenditure. FITs from Germany had lower levels of expenditure per night.

Using social media before the trip had a positive effect on total expenditure, while using social media during the trip had a positive effect on the expenditure per person.

Table 4: Determinate factor of expenses for high spenders (Q=0.75)

	Per person per day	Per person per trip	Per group per day	Total
PARTY_SIZE	-0.796*** (0.187)	-0.175** (0.063)	0.320*** (0.075)	0.313*** (0.065)
NIGTHS	-0.036*** (0.007)	0.153*** (0.024)	-0.042*** (0.007)	0.178*** (0.020)
NIGTHS2[3]		-0.003*** (0.001)		-0.004*** (0.001)
PARTY_SIZE2[4]	0.110* (0.044)			
USA	0.174* (0.088)	0.308** (0.092)	0.202** (0.077)	0.267** (0.088)
Hotel	0.677*** (0.091)	0.521*** (0.091)	0.625*** (0.101)	0.619*** (0.091)
GENDER		-0.209* (0.088)		
FRANCE	0.278* (0.131)		0.337*** (0.149)	
RUSSIA	-0.537*** (0.111)			-0.561*** (0.150)
GERMANY	-0.217* (0.105)			-0.322** (0.098)
SOCIALBEFORE	0.289*** (0.081)	0.240** (0.088)		
SOCIALDURING			0.196** (0.075)	

[3] Night 2 is quadratic terms for length of stay.

[4] Party size 2 is quadratic terms for party size.

Business				-0.241** (0.090)
Age			0.086** (0.027)	
MARRIED	0.181** (0.068)			

*P<0.05 **P<0.01 *** P<0.001

Age had a positive effect on the expenditure per night. Married FITs had a higher expenditure person/night compared to single FITs, and women's expenditure per person was lower than men.

Party size had a positive convex effect on expenditure per person per night. Expenditure level among French FITs' expenditure (per person per night, per night) was higher. FITs from Russia and Germany had lower levels of total expenditure and expenditure per person per night.

Use of social networks before the trip had a positive impact on expenditure (per person per night, per person), while using social media during the trip had a positive impact on expenditure per night. Total expenditure was lower among business FITs than among other tourists.

5 Discussion and Conclusion

5.1 Discussion

Due to the growing importance of international tourism and the economic importance of tourist expenditures to the destination countries, understanding the variables that affect tourist expenditures is of prime importance. This study focuses on FITs, who today comprise a large portion of international tourists. Indeed, in many countries, including Israel, FITs account for approximately two-thirds of international tourists. FITs are flexible concerning their travel; therefore, research should differentiate between FITs and organized tourists.

Most research focusing on tourist spending has analysed only one type of expenditure, such as expenditure per person per night, total expenditure, expenditure per person or expenditure per night. This paper compared the effects of various variables on all types of expenditures.

The independent variables were grouped as follows: a. budget constraints (using education as a proxy for income); b. sociodemographic characteristics (e.g., gender, age); c) trip

characteristics (e.g., duration, travel party size); and d) psychological characteristics (repeated behaviour and trip motivation).

The analysis method used in this study follows the QR method, which distinguishes between light, moderate and heavy spenders. Such an approach is essential since in recent years the number of tourists to Israel has increased rapidly while the infrastructure has not, so that some tourism segments suffer from over tourism. These segments may differ according to service level and expenditure level.

The study was based on 414 questionnaires distributed at Ben Gurion International Airport among FITs concluding their visit to Israel.

The empirical findings confirm the high complexity of the nature of tourist expenditures; evidence was found. The evidence emerging from the QR model results indicates that the effects of the independent variables vary not only with respect to expenditure type but also as a function of expenditure level (light, moderate, heavy).

The regression results for all quantiles showed that trip duration has a positive impact on total expenses and expenses per person (as in Vu et al. 2017; Driml, Ballantyne and Packer 2017) and a negative impact on expenditure per night and expense per person per night (as in Brida and Scuderi 2013 and Massidda, Piras and Seetaram 2022). This finding is consistent with the results of Marcussen (2011). The effect was concave for total expenditure or expenditure per person, unlike the results of Marrocu, Paci and Zara (2015), who found a convex effect regarding expenses per tourist per night for tourists with a high level of expenses. In addition, party size had a negative effect on expenditure per person per night and per person and a positive effect on per night expenses and total expenditure, in line with the results of Marcussen (2011), Gómez-Déniz et al. (2019) and Ramos-Domínguez, Hernández-Martín and Padrón-Ávila (2023).

FITs from the USA had a higher expenditure level than did other tourists for all types of expenditure. This finding is in line with the results of Wu, Zhang, and Fujiwara (2013), who found that level of expenditure increases as the distance from the destination increases. Among the countries surveyed, the USA was the furthest from Israel. Accordingly, one would expect that FITs from Russia or the Ukraine would have higher expenditures than those from

France, Germany, and other nearby countries. Yet the results of this study reveal the opposite. This finding may be explained by the economic status of those countries and the attractiveness of low-cost flights. The assumption is that geographic segmentation will have a similar effect in other countries.

FITs that stayed in hotels (as opposed to other types of accommodation) had a higher level of expenditure. This is in line with Marrocu, Paci and Zara (2015), Brida and Scuderi (2013), Park, Woo and Nicolau (2019), Massidda, Piras and Seetaram (2022) and Ramos-Domínguez, Hernández-Martín and Padrón-Ávila (2023). The effect of staying in hotels is greater among light spenders than among moderate and heavy spenders.The effect of length of stay does not change between quartiles, similar to the findings of Marrocu, Paci and Zara (2015). However, the size of the group traveling together and the USA as country of origin had differential effects on different quartiles.

These findings lead to the conclusion that some variables, such as party size, length of stay, hotel accommodation and USA as country of origin, are robust and have the same effect direction for all expense levels and metrics, while the effects of the other variables are dependent on quantile and metric. Although this finding makes it difficult to provide a straightforward summary, it provides a comprehensive picture of the travel consumption behaviour of FITs in Israel.

The gender of FITs had an impact among light spenders and heavy spenders, with women spending less than men. This is similar to the results obtained by Marcussen (2011) and Ramos-Domínguez, Hernández-Martín and Padrón-Ávila (2023) for per person per night and total travel expenditures. The differences between the genders emerged mostly in the higher or lower quantiles, possibly explaining why most research that estimated average expenditure did not find any differences (Rashidi and Koo 2016). Among moderate and heavy spenders, expenditure is positively correlated with the use of social media to search for up-to-date information. These results support those of Romao et al. (2013), Lima, Eusébio and Kastenholz (2012) and Park, Woo and Nicolau (2019).

FITs from France had higher expenditures per person per night compared than other FITs for all quantiles. FITs from Russia had lower expenditures per person per night. In addition, for moderate spenders, tourists from Russia had lower expenditures on all metrics. The

effect of UK, Netherland, Ukraine and Germany as country of origin depended on the specific quantile and metrics. The total expenditures of FITs traveling for business was lower than among other heavy spenders, similar to the results of Park, Woo and Nicolau (2019). The variables of age and marital status had a significant effect only for heavy spenders, possibly explaining the contradictory results in the literature (Ramos-Domínguez, Hernández-Martín and Padrón-Ávila [2023] found age to be significant, but specifically at higher expenditure levels).

As the model comparison is based on tourist expenditures in Israel, more destinations must be analysed to assess the generalizability of the findings. This approach may also be applied to specific types of expenditure, such as transport, accommodations, and restaurants. Moreover, choosing the "right" expenditure metric is essential for economic analyses focusing on environmental issues that consider the gains and losses from tourism.

5.2 Implications for managers

Planning for tourism after COVID-19 that must take social distancing into consideration should focus on tourists with the highest level of expenses per night, since every travel party may be isolated from all other parties. For destinations with low demand (or during low season periods), marketing has to attract tourists and therefore should focus on those with the highest total expenditure level, without considering length of stay or party size. For over tourism destinations (or during high season periods), expenditure per tourist per night should be targeted due to restricted facilities. In addition, since there are a variety of service levels, decision-making should consider different expenditure quantiles as appropriate to the service.

Additional implications for Israel tourism managers

USA FITs are the best target market since they had the highest expenditure level for all metrics and all quantiles.

Light Spenders

Policymakers and tourist suppliers should target men. If expenditure per person per night is the target, French FITs should be the focus. If per person expenditure is the target, FITs from Netherland and the UK should be the focus. If total expenditure is the target, FITs from the

Netherlands should be the focus. Finally, if tourist services are in limited supply, it is preferable not to target the Germany and Russian markets. At this level of expenditure, social media has no effect.

Moderate Spenders

Policymakers and tourism suppliers targeting total expenditure should seek out FITs from the UK and advertise in advance on social media platforms. On the other hand, if the target is expenditure per person per night, they should focus on French FITs. Real-time advertisement on social networks will affect the expenditure per person. If tourist services are in limited supply, it is preferable not to target the Ukrainian and Russian markets.

Heavy Spenders

Policymakers and tourism suppliers targeting expenditure per person per night should concentrate on married FITs and French FITs and should advertise on social media platforms before the trip. The Russian and German markets are less favourable. If the target is expenditure per person, the focus should be on men and social media platforms should again be utilized before trips. If the target is expenditure per night, the focus should be on older FITs and FITs from France, and the use of social media platforms during the trip should be considered.

5.3 Conclusions

The results of this study confirm that there is a high level of complexity when it comes to tourist expenditures. The results shows that the effects of the independent variables depended on the expenditure metric (expenditures per night, expenditure per party, expenditure per person per night and expenditure per trip) as well as on the expenditure level (High, moderate of light spenders). Independent tourist expenditures across all quantiles and metrics depended upon the size of the travelling party, duration of stay, type of accommodation, and whether the tourists are from the U.S. The results also showed that, men spent more than women among light and heavy spenders; social media increased the expenditure among moderate and heavy spenders; and for heavy spenders, business travel expenditure was less than for other types of travel.

Despite the novelty and interest of the results found, this study presents certain limitations that should be considered. First, the study relies on respondents' ability to provide accurate information about their expenditure and not on real behavioural data. Moreover, although the sample is large enough for statistical inferences it may suffer from presentative issues, since data was collected on a single destination and over a specific high season month. A wider analysis comparing the results of different destinations and over the year could result in building a stronger ground of tourism knowledge. Future studies should be conducted to look further into post COVID-19 pandemic tourist expenditure as a total and on different items of consumptions. In addition, future studies should also focus on analysing nationality and expenditure patterns to compare their findings with the ones presented in this paper.[5]

Acknowledgements

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[5] These countries were selected because of their significant number of tourists visiting Israel

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