CONTRIBUTI DI RICERCA CRENOS

DETERMINANTS OF TOURISTS' EXPENDITURE: SYSTEMATIC LITERATURE REVIEW, META-ANALYSIS, AND ECONOMETRIC ANALYSIS

Marta Meleddu
Dimitri Paolini
Valeria Posadas

WORKING PAPERS

2024/18

arkadia

CENTRO RICERCHE ECONOMICHE NORD SUD
(CRENOS)
UNIVERSITÀ DI CAGLIARI
UNIVERSITÀ DI SASSARI

CRENOS was set up in 1993 with the purpose of organising the joint research effort of economists from the two Sardinian universities (Cagliari and Sassari) investigating dualism at the international and regional level. CRENoS' primary aim is to improve knowledge on the economic gap between areas and to provide useful information for policy intervention. Particular attention is paid to the role of institutions, technological progress and diffusion of innovation in the process of convergence or divergence between economic areas. To carry out its research, CRENoS collaborates with research centres and universities at both national and international level. The centre is also active in the field of scientific dissemination, organizing conferences and workshops along with other activities such as seminars and summer schools.
CRENoS creates and manages several databases of various socio-economic variables on Italy and Sardinia. At the local level, CRENoS promotes and participates to projects impacting on the most relevant issues in the Sardinian economy, such as tourism, environment, transports and macroeconomic forecasts.

www.crenos.unica.it
crenos@unica.it

CRENoS – CAGLIARI
VIA SAN GIORGIO 12, I-09124 CAGLIARI, ITALIA
TEL. +39-070-6756397

CRENoS - SASSARI
VIA MURONI 25, I-07100 SASSARI, ITALIA
TEL. +39-079-213511

Title: DETERMINANTS OF TOURISTS' EXPENDITURE: SYSTEMATIC LITERATURE REVIEW, META-ANALYSIS, AND ECONOMETRIC ANALYSIS

Prima Edizione: Ottobre 2024
ISBN: 978 88 68515 454

Viale Bonaria 98 · 09125 Cagliari
Tel. 070/6848663 · info@arkadiaeditore.it
www.arkadiaeditore.it

Determinants of Tourists' Expenditure: Systematic Literature Review, Meta-analysis, and Econometric Analysis

Marta Meleddu
DiSEA, University of Sassari & CRENoS

Dimitri Paolini
DiSEA, University of Sassari & CRENoS

Valeria Posadas
DiSEA, University of Sassari

Abstract

This paper examines the existing literature on tourist expenditure in microeconometric and parametric studies (TEMPS) from 2013 to 2022. We employ a Systematic Literature Review to identify articles in the field. The last review regarding TEMPS by Brida and Scuderi (2013) is updated in this paper. This fills this gap of ten-year state-of-the-art analysis in the literature. Diverse methodologies have been utilised to investigate tourist expenditure, each characterised by varying degrees of complexity. This review aims also to shed light on the factors influencing the complexity of methodologies employed in TEMPS. After the article selection, a database was constructed to compile information and outcomes from the papers and the publishing journal. An econometric model was developed to analyse specific facets of the identified literature. Findings indicate that external factors unrelated to the paper positively influence the complexity methodology, while internal factors within the paper exhibit a negative impact.

Keywords: systematic literature review, econometric model, Poisson, tourist expenditure, methodology complexity

JEL Codes: Z30, Z38, Z39

Declaration of interest: There is no conflict of interest in this case.

Funding: Programma Operativo Nazionale "Ricerca e Innovazione" 2014/2020 DM 1061.

1. Introduction

The determinants of tourist expenditure have been extensively studied in the literature on tourism economics. The primary motivation for such studies is that tourist flows in many countries represent the primary source of economic growth and local development sources (Brida et al., 2013; Marrocu et al., 2015; Pulido et al., 2017; Aguiló et al., 2017; Massida et al., 2022; Boto-García & Baños-Pino, 2024). The researchers found that expenditure can be influenced by socioeconomic status, nationality, age, job, income, length of stay, accommodation type, travel companions, destination loyalty, package holiday status and psychographic variables. Analysing tourism spending, breaking it into parts and clarifying what influences it allows managers, researchers, and policymakers to understand how specific factors impact various expenditure categories (Massidda et al., 2022). For this reason, understanding the factors influencing tourism expenditure becomes crucial to fostering tourism's economic impact on destinations. Other authors explored the breakdown of various tourist expenditures, showing the reallocation of expenditures and how prices affect the expenditure distribution. Thus, policymakers and tourism institutions must understand not only how tourists allocate their spending but also how price fluctuations and external factors affect this allocation (Dobruszkes, 2013; Gómez-Déniz et al., 2020; Boto-García & Baños-Pino, 2024).

Several methodologies have been used to explore tourist expenditure, both parametric and non-parametric, and within the microeconometric and macroeconometric frameworks. This systematic literature review (SLR) analyses tourism expenditure microeconometric and parametric studies (TEMPS). Since the last literature review by Brida and Scuderi (2013), the number of publications on TEMPS has grown markedly. In their review, these authors found 86 papers focusing on this subject over 36 years, from 1977 to 2012. In ten years, between 2013 and 2022, we found 45 papers, which grew 34% in only ten years. These data suggest that the average number of publications per year almost doubled from 2.4 in the 1977-2012 survey to 5 in the period examined in this paper. This increase in the number of publications on the topic reflects a growing interest in determining factors influencing tourist consumption in different destinations.

Most TEMPS have relied on ordinary least squares (OLS) regression for estimation (Brida & Scuderi, 2013). However, OLS regression only offers estimates at the average level of spending, limiting the exploration of factors affecting those spending more or less than the average (Almeida & Garrod, 2017). This proves ineffective when identifying high-spending tourists for targeted marketing campaigns (Kozak & Martin, 2012). Sharma et al.'s (2019) research uses a more complex methodology than OLS. Through unconditional quantile regression, these authors demonstrate how the impacts of explanatory factors fluctuate throughout the spending spectrum, carrying significant implications for tourism promotion strategies. According to David et al. (2018), describing how one tourist's activity affects a destination's spending is straightforward. The authors argue that, however, it becomes complex when considering the network of multiple tourists engaging in daily activities. They also highlight the complexity of how these interactions influence the destination's overall

spending. Moreover, they add that traditional analyses fail to visually represent the paths within the network that require deeper exploration.

In addition, we can say that the crucial findings of Wang and Davidsons' (2010) literature review on microeconometric studies generate a remarkable influence on TEMPS research. The authors conclude that greater emphasis should be given to the microeconomic modelling of tourism demand and the investigation of the effect of psychological and destination-related factors on tourist expenditure. The results of our research show that the scientific community took note of Wang and Davidsons' (2010) suggestions. Furthermore, we also have Mehran and Olyas's (2019) review of tourist expenditure. This review differs from the previous ones and this study because it only analyses the literature on outbound tourism expenditure (OTE) without focusing on the methodologies used. The study concludes that the conceptual structure of OTE is premised on a sustainability platform, which is influenced by socio-cultural, environmental, economic, and political issues.

This paper not only updates the last review on TEMPS but also incorporates a metaanalysis and econometric analysis of the literature. This represents an innovation in the research field of tourist expenditure. The SLR presented in this research highlights the methodology aspects of the papers that apply quantitative parametric approaches. Similarly, Khoo et al. (2019) conducted an SLR on mixed methods tourism research, emphasising methodological aspects while considering the application of quantitative and qualitative methodologies. Therefore, our research questions are as follows: 1) What is the state of the art of the TEMPS since the last review? 2) What variables describe and are the principal components of the parametric studies on the determinants of tourist expenditure? 3) What factors affect the complexity of the methodology performed in parametric studies on the determinants of tourist expenditure?

Nidhra et al. (2013) state that a SLR evaluates and interprets all available research relevant to a specific research question, topic, area, or phenomenon of interest. The first stage of this process is planning. The research question and literature search strategies are first defined in this stage. The studies to be considered are selected through inclusion and exclusion criteria in the second stage. In the third stage, the quality of the selected papers is determined by constructing a specific quality indicator. Then, a meta-database is created from the selected texts by surveying the fundamental characteristics of our object of study (Tikito & Nissrine, 2019). Descriptive statistics were obtained from the meta-database, and principal component analysis was performed. Finally, a Poisson model (Wooldridge, 2012) was estimated to obtain some correlations of independent variables used in the articles, exogenous variables related to journal metrics, and others to the methodology they performed.

The results show that principal components exogenous to the paper positively influence the complexity of the methodology chosen in TEMPS. However, two of the main components endogenous to the paper negatively affect the choice of the complexity of the methodology. In turn, the principal endogenous components, household welfare and destination satisfaction, have no statistically significant relationship with the dependent variable complexity of the methodology used in the TEMPS. Compared to the studies published up to 2012, there is a greater interest in knowing the tourist's opinions, which can

be seen in the broader use of psychographic variables. This review provides a general overview of the state of the art in TEMPS, which allows empirical research to be conducted in context. Also, it identifies topics not yet explored in the literature. Finally, designing a TEMPS model permits a better pre-selection of the target and control explanatory variables. Section 2 explains the SLR methodology applied to the TEMS database to answer these research questions. Consequently, Section 3 summarises the meta-analysis's most remarkable statistics. This third section also discusses the results of the Poison Model. Finally, in Section 4, we give some concluding remarks regarding the research questions' responses, future lines of research, and policy implications.

2. Systematic literature review (SLR) of tourism expenditure microeconometric and parametric studies (TEMPS)

2.1. Strategies for searching and selecting primary studies

Concerning the literature search strategies (Nidhra et al., 2013), we created a tourist expenditure economic studies database from 2013 to 2022. This database was obtained from Scopus and Web of Science (WOS). The year that appeared in Scopus and WOS was when the paper was first published online. Therefore, the total number of papers found is 166. Of that total, 131 papers are found only in Scopus, 15 papers are found only in WOS, and 20 articles appear in both databases.

We define the criteria for including and excluding publications to select the articles most intricately linked to the research questions (Petticrew & Roberts, 2006). Then, we include articles available in full text, written in English or Spanish, and within the domain of TEMPS. Those languages were chosen because they are known to the author of this paper. Furthermore, we exclude studies that are not available in full text, are not related to the research questions, are outside the time range considered 2013-2022, and are related to tourist expenditure but are not TEMPS.

Next, out of the 166 publications, more than 69% are not TEMPS, meaning non-parametric or macroeconometric studies. However, TEMPS represents a smaller percentage, almost 28%. Three papers are not available in full text; only one is out of the publication range 2013-2022. Therefore, forty-six articles that we call TEMPS (see Table 2) were selected through the inclusion-exclusion criteria, constituting the total number of observations in the meta-database and the econometric analysis.

2.2. Assessing the Quality of the TEMPS

According to the methodology by Ain et al. (2019), the quality assessment (QA) is to make decisions concerning the quality of the selected investigations. This is important to guarantee the importance of their results and analyses. In doing so, the five (QA criteria) questions listed below are established to evaluate the selected papers:

Q1: Does the research topic addressed pertain specifically to tourism expenditure determinants in a microeconometric and parametric approach?

Q2: Is the context of the research clear?

Q3: Does the research adequately delineate the methodology?

Q4: Is the data collection procedure adequately explained?

Q5: Is the approach used for data analysis appropriately explained in the research?

Afterwards, to assess the quality level, three quality rankings – "high,medium," and "low" – are used for each QA criterion. Hence, the paper is assigned a score of 1 for a quality criterion if it completely satisfies it. Likewise, a study is assigned a rating of 0.5 if it partially meets a quality criterion. A score of 0 is given when a study does not fulfil a quality criterion. In this systematic literature review, the highest rating is 5 for the 5 QA criteria, while the lowest is 0. Based on the coding scheme, a study is of high quality: if > 3, e.g., 3.5, medium quality: if <3 and >1, e.g., 1.5, 2, and 2.5, low quality: if <1, e.g., 0.5 (Ain et al., 2019).

As a result, none of the selected papers were assigned a low quality. Likewise, the proportion of high-quality papers is high (93%), with almost 7% being medium quality. For example, the papers included in this 7% do not control for sociodemographic variables in the econometric model or explain the data collection procedure perfectly.

3. Meta-analysis and econometric analysis of the TEMPS

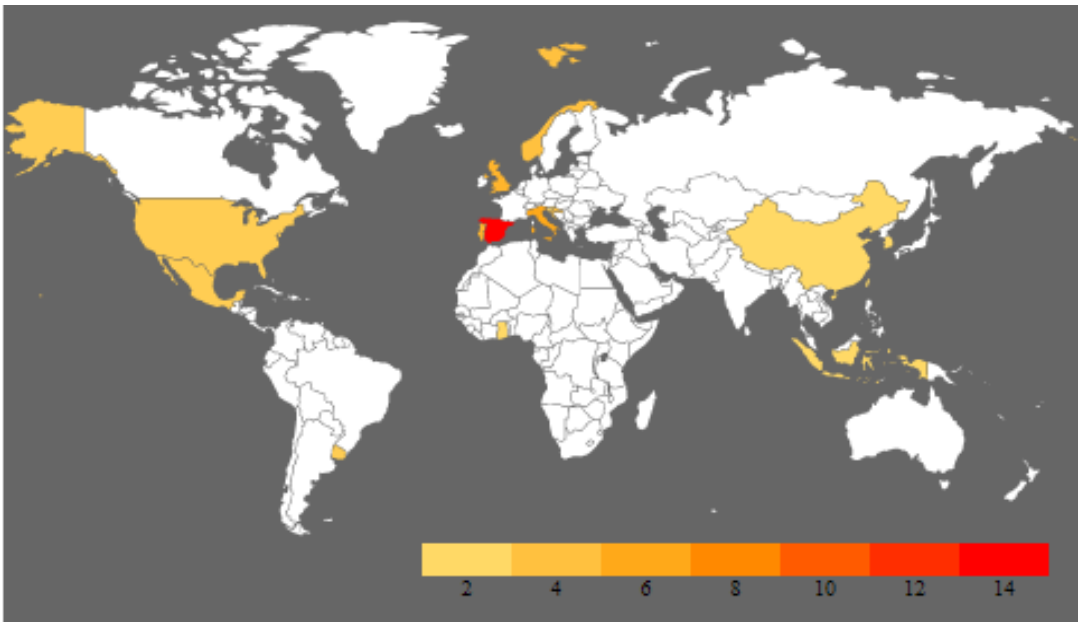
Meta-analysis is the statistical combination of results from two or more studies (Deeks et al., 2019). A database was created to gather the primary publication information of the articles to conduct the meta-analysis. It also contains the results obtained in the estimations of the different regression models. Then, we performed a principal component analysis on that meta-database. Next, we use econometric Poisson models to analyse the determinants of the complexity of the studies' methodology.

3.1. Statistics Results of the TEMPS meta-database

To begin with the analysis, the ranking of countries in the tourist survey that studies each paper of TEMPS is represented in the heat map shown in Figure 1. First, Spain has the most analysed destinations, representing more than 28%. Italy is following in the ranking, with less than half of Spain's publications (10,86%). Portugal and the United Kingdom follow this percentage with 9%. After that, we have Norway with 6,5%. The rest of the publications are distributed between two and one publication in different countries. These data show that Europe leads in TEMPS publications with seven countries and 69.5% of selected papers. Asia follows with five countries and accounts for 10,86% of the TEMPS. South America and Africa

have only one country with TEMPS: Uruguay and Ghana, respectively. Finally, North America has two countries with TEMPS: Mexico and the United States.

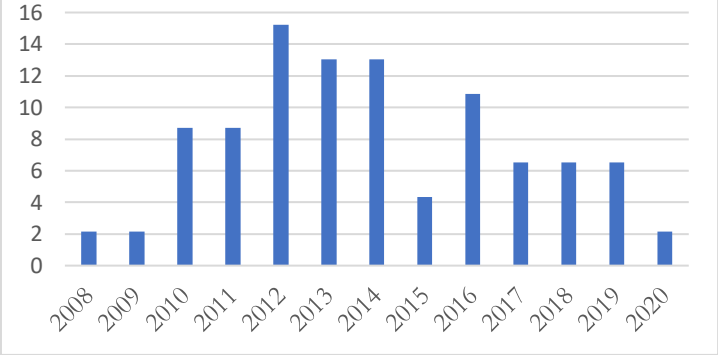
Figure 1- Ranking Survey's Country Heat Map



Source: Author's elaboration from Scopus Database. Heat map for all the countries in the survey papers included in the database.

Furthermore, Figure 2 illustrates the temporal distribution of surveys conducted in the countries analysed in the papers. Notably, surveys peaked between 2012 and 2014, with 19 papers. This accounts for 40% of the total 46 papers, encompassing surveys conducted over the 12 years from 2008 to 2020.

Figure 2: Survey's Year of the study %



Source: Author's elaboration from Scopus Database. It shows the percentage of papers for each year of the survey studied.

Also, considering the type of tourism analysed, inbound tourism studies are the most frequently conducted (76%). This percentage is followed by papers analysing outbound tourism with 15%. Almost 9% of studies on domestic tourism are in last place. In addition, the estimated number of regressions represents seventy in 10 years, from 2013 to 2022. The simple linear regression model is the most used methodology, accounting for 48,5%. This position is followed by quantile regression with a much lower percentage, 13%. Third and fourth place goes to the Heckman method with 11% and Tobit regression with almost 6%.

Finally, we observe more than 4% for the unconditional regression method. Then, the rest of the regressions are distributed by 1.4% in 12 different methodologies (mean level decomposition, regression adjustment, non-linear betha, interval, Poisson, logistic, seemingly unrelated, scad-elastic, latent class, hierarchical, finite mixture, and conditional counterfactual quantile level decomposition). Similarly, according to the 2013 review, the most common approach was the OLS, with 64% of the papers and 46.6% of the regressions. Also, the second alternative used in the literature before 2013 was the quantile regression model. The authors list but do not detail the share occupied by the rest of the methodologies surveyed: weighted least squares, LISREL equations, robust hierarchical regression with a downward weighting of outliers and robust OLS, Tobit regression, Heckman model, logit model, logit multinomial model, probit model, and switching regression.

Also, analysing the dependent variables in the regression models, the most used variable is "Total tourist expenditure per person for all length of stay (LOS)" (almost 48%). The same result is shown in Wang and Davidson (2010), with most papers using "Total trip expenditure" as the dependent variable. These results differ from Brida and Scuderi (2013), where the most used dependent variable was "Total tourist expenditure for party size," with 63.9% but in the total regressions.

Regarding the independent variables used in TEMPS, most papers do not study a particular independent variable. In this sense, almost 78% of the cases study the determinants of tourist expenditure without highlighting a specific independent variable. Then, we have nearly 9% of the studies that concentrate on psychographic variables associated with tourist satisfaction, controlling for socio-demographic and socio-economic variables. Lastly, we have six studies that use six different independent variables to highlight as determinants of tourist expenditure (activities, age, and income, before and after COVID, physical activities, socio-economic and trip characteristics).

Furthermore, income is the most used when examining the independent variables associated with economic constraints. It is significant and positive in around 45% of the cases, which aligns with the literature. However, the rest of the variables concerning economic constraints have a very low frequency of use, between one and three papers. Likewise, results of the determinants of tourist expenditure associated with socio-demographic variables aligned with the literature. The most frequently used variable is age, with almost 39% of cases in which it is significant and positive and 19.5% of cases in which it is significant and negative. Nationality is the second most used variable, with almost 7% of cases in which it is significant and positive. Also, in this variable, it is significant and negative in nearly 35% of cases. The third most used explanatory variable is gender, with almost 7% of cases where female is significant and positive. In addition, in this variable, only 2% of cases in which it is significant and negative. In 11% of the selected papers, male is significant, negative. It is significant and positive in just over 13% of the cases and not significant in 11%. Then, the businessperson variable stands out, with slightly more than 13% of cases where the regressor is significant and positive. In this case, the variable has no significant or negative cases. The remaining independent variables have lower frequencies.

Like the results obtained in previous reviews regarding trip-related variables, the most used variable is the length of stay. Then, in more than 39% of cases, the variable is significant and positive. The regressor was significant and negative in almost 22% of the estimated regressions. It is worth noting that in a very low percentage of just over 4%, length of stay was not significant as a determinant of tourist expenditure. The next most used variable was hotel accommodation, with just over 30% of cases where the variable was significant and positive. In almost 11% of papers, the regressor is significant and negative. However, the variable was non-significant in a very low percentage of just over 2%. The third most used variable is party size, with over 15% of cases where it was significant and positive. In around 17% of the cases, it was significant and negative. In almost 6,5%, the regressor was found to be non-significant as a determinant of tourist expenditure. Following the ranking but not in line with the literature, the following most used variable was repeated visits. In just over 10% of cases, it was significant and positive. In 15% of the papers, it was significant and negative. Also, it has a non-negligible percentage of cases where the regressor was non-significant (6,5%). It is followed by holiday purpose with equal percentages of negative and positive significance (almost 11%). In only one case, the variable was found to be non-significant.

The importance of the tourists' opinions in TEMPS has grown. In general, there is an increasing use of psychographic variables. This contrasts with what was found in the previous literature reviews of TEMPS. The most frequently used determinants are culture and

gastronomy, with just over 13% of the cases, which was significant and positive. 6.5% were significant and negative in both variables and no non-significant cases were found. The second most used psychographic variable is tourist destination satisfaction, with 6.5% of cases where the variable is significant and positive. In just over 10% of cases, the regressor was significant and negative, and there were no cases of non-significance. It is followed in third place by atmosphere and safety satisfaction, with almost 9% of cases where the variable is significant and positive. In 6.5%, the variable is significant and negative, with no non-significance cases. In fourth place, we have tourist attractions satisfaction with almost 9% of significant and positive cases. In just over 4% of papers, the regressor was significant and negative, and there were no cases of non-significance.

3.2. Principal Components Analysis of the TEMPS Meta-database Results

A data matrix's principal component analysis (PCA) takes out the essential patterns in the matrix regarding a complementary set of scores and loading plots. The analysis results depend on the matrix size (Wold et al., 1987). In the PCA, the latent variable combines highly correlated regressors with the observed variables. The latent variable scores are iteratively measured for each construct to ensure validity. The item reliability is inspected through the factor loadings. This indicates how each indicator, which forms the construct, correlates with its relevant latent variable. Cronbach's alpha (C.alpha) is used to assess the internal consistency and the variance of the sum of the variables in a block (Presenza et al., 2019).

In the PCA, we identified two principal components: exogenous to the paper and endogenous to the paper (see Figure 3). The first principal component variables are Year, SCOPUS, WOS, ScoWo, 2 Years Impact Factor, 5 Years Impact Factor, Cite Score, SNIP, and SJR. The first three variables are dummies for articles found in SCOPUS, WOS, and both databases (ScoWo), respectively. The Impact Factors at 2 and 5 years were obtained from the metrics of each journal. The last three variables were obtained from each journal's metrics published by SCOPUS. Cronbach's alpha (C. alpha) was used to test the internal consistency of the variables that make up the principal component exogenous to the paper. We obtained a reliable coefficient of 0,76, which exceeds the 0.70 threshold for all the constructs, as seen in Table 1.

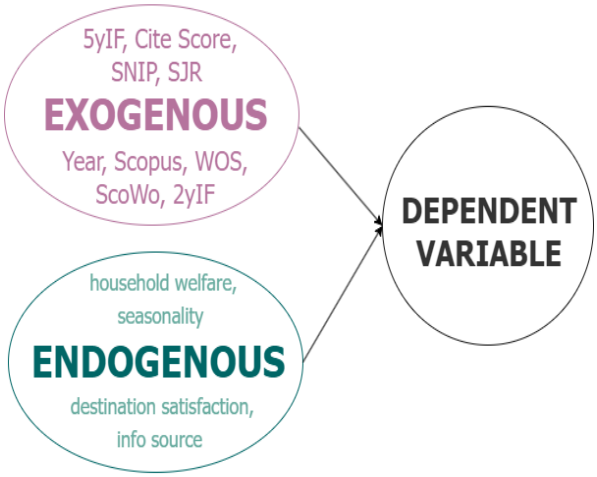
Table 1: Constructs' Cronbach's Alpha

Construct	C. Alpha
Exogenous	0,76
Household Welfare	0,9018
Destination Satisfaction	0,7963
Information Source	0,79
Seasonality	0,8392

Source: Author's elaboration from Scopus Database. Cronbach's Alpha of each construct results from the Principal Component Analysis of the meta-database variables.

In the endogenous to the paper construct, we identified four main components. These principal components are household welfare, destination satisfaction, information sources, and seasonality.

Figure 3: Endogenous and exogenous principal components



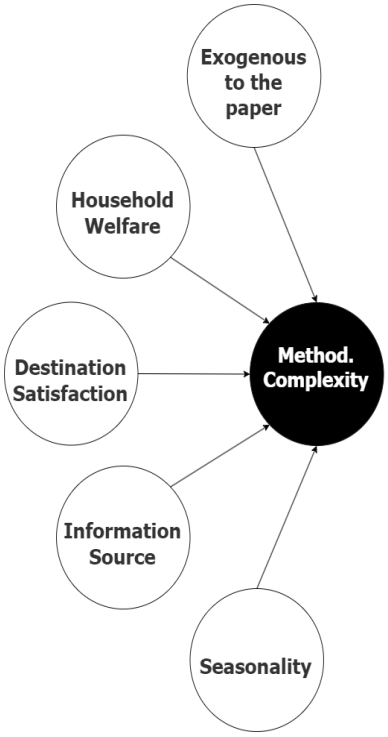
Source: Author's elaboration from Scopus Database. Diagram of the principal components are exogenous and endogenous to the paper obtained from the Principal Components Analysis.

3.3. Poisson Econometric Model for Methodology Complexity in TEMPS

A Poisson regression was obtained through quasi-maximum likelihood estimation. This aimed to find correlations between the selected papers' principal components and

methodology complexity. We use this methodology because the dependent variable is discrete and takes non-negative values. A count variable or a discrete variable with few values cannot have a normal distribution. Then, the distribution for count data and discrete variables with few values is the Poisson distribution. Thus, we model the expected conditional value of the dependent variable *methodology complexity* as an exponential function. (Wooldridge, 2012). *Methodology complexity* is a discrete variable that takes values from 1 to 15 according to the methodology's complexity level. Table 2 shows the methodology applied on each paper, indicating the level in each column. Figure 4 shows the correlation we intend to analyse between the dependent variable and the principal components obtained.

Figure 4: Principal Components Diagram for Methodology Complexity



Source: Author's elaboration from Scopus Database. Diagram of the principal components and the dependent variable methodology complexity.

We estimate a regression on the dependent variable *methodology complexity* (MC). The explanatory variables constitute the principal components found in the PCA: exogenous to the paper (X_1), household welfare (X_2), destination satisfaction (X_3), information source (X_4), and seasonality (X_5). This regression is represented in Equation one below. *Methodology complexity* is a discrete variable that takes on relatively few values from 1 (least complex methodology: simple linear regression model) to 15 (most complex methodology: non-linear betha regression model).

$$E(MC/X_1, X_2, X_3, X_4, X_5) = exp\,(\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5) \quad \textbf{(1)}$$

Taking the log of equation one, the logarithm of the expected value is linear (Wooldridge, 2012):

$$log[E(MC/X_1, X_2, X_3, X_4, X_5)] = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 \quad \textbf{(2)}$$

Therefore, using approximation properties, $100\beta_j$ or $100\alpha_j$ is roughly the percentage change in expected conditional value, given a one-unit increase in the independent variables (Wooldridge, 2012).

3.4 . Results of the Poisson Econometric Model for Methodology Complexity in TEMPS

Table 3 summarises the results of the quasi-maximum likelihood estimations for the regression. As we can observe, it is statistically significant at the 5% significance level. The dependent variable *methodology complexity* has a positive and statistically significant relationship with the component exogenous to the paper (β_1=0,37295***). Regarding the endogenous to the paper components, a negative and highly statistically significant relationship is observed for the component seasonality (β_5=-0,16619***). In addition, a negative and lowest statistically significant relationship is observed for the component information source (β_4= -0,18462*).

Therefore, factors exogenous to the paper positively influence the complexity of the methodology chosen to study the determinants of tourist expenditure in TEMPS. This means that the better ranked the journal, the more complex the methodology applied. However, two of the factors endogenous to the paper negatively influence the choice of the complexity of the methodology: information source and seasonality. This implies that the more these variables are used, the less complex the methodology becomes. In turn, the endogenous factors of household welfare and destination satisfaction have no statistically significant relationship with the complexity of the methodology used in the TEMPS. The two results regarding endogenous to the paper factors imply that the chosen regressors in the model are not related to the complexity of the methodology applied in the study. Negative relations do not seem to be a meaningful result.

Table 2: Summary of the Methodology performed in each paper and the MCL (Methodology Complexity Level)

MCL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	OLS	Logistic	Tobit	Heckman	Q.Reg.	Unc. Q. Reg.	Reg. Adj.	Seemingly unrelated	Interv. Reg.	Scad-elastic	Latent class	Finite Mixture	Hierarchical	Quasi Max.Lik.	Non-linear
Abbruzzo et al. (2014)										X					
Aguiló et al. (2017)	X														
Alegre and Pou (2016)				X											
Alfarhan et al. (2022)					X										
Almeida and Garrod (2017)					X										
Baños & Boto (2021)							X								
Brida and Tokarchuk (2015)				X											
Brida and Tokarchuk (2017)				X											
Brida et al. (2013)				X											
Brida et al. (2014)				X											
Buning et al. (2016)			X												
Cárdenas et al. (2016)	X														

(Continued)

MCL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	OLS	Logistic	Tobit	Heckman	Q.Reg.	Unc. Q. Reg.	Reg. Adj.	Seemingly unrelated	Interv. Reg.	Scad-elastic	Latent class	Finite Mixture	Hierarchical	Quasi Max.Lik.	Non-linear
Castañeda et al. (2019)											X				
Chen et al. (2022)					X										
David et al. (2018)	X														
Dayour et al. (2016)	X														
Disegna and Osti (2016)			X												
Engström and Kipperberg (2015)	X														
Farías and Baric (2020)													X		
Ferreira and Carneiro (2021)	X														
Ferreira, M., et al. (2020)									X						
Gómez et al. (2020)															X
Lin et al. (2021)				X											
Marksel et al. (2017)		X													
Marrocu et al. (2015)					X										
Massidda et al. (2020)					X										

(Continued)

MCL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	OLS	Logistic	Tobit	Heckman	Q.Reg.	Unc. Q. Reg.	Reg. Adj.	Seemingly unrelated	Interv. Reg.	Scad-elastic	Latent class	Finit Mixture	Hierarchical	Quasi Max.Lik.	Non-linear
Massidda et al. (2022)	X														
Melstrom (2017)														X	
Mora and Garcia (2020)			X												
Mortazavi and Lundberg (2019)												X			
Park et al. (2020)				X											
Pérez and Ledesma (2021)						X									
Perić et al. (2019)	X														
Perles et al. (2021)	X														
Pulido et al. (2016)	X														
Pulido, Cárdenas and Durán (2017)	X														
Pulido, Cárdenas and Carrillo (2017)	X														
Pulido et al. (2020)	X														
Rudkin and Sharma (2017)						X									
Serra et al. (2015)	X														
Sharma et al. (2019)						X									

(Continued)

MCL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	OLS	Logistic	Tobit	Heckman	Q.Reg.	Unc. Q. Reg.	Reg. Adj.	Seemingly unrelated	Interv. Reg.	Scad-elastic	Latent class	Finit Mixture	Hierarchical		
Smolčić and Soldić (2016)	X														
Soldić (2017)	X														
Subanti et al. (2018)	X														
Thrane (2015)								X							
Thrane (2016)				X											

Source: Author's elaboration from Scopus Database. The summary of the methodology performed in each paper and the Methodology Complexity Level (MCL).

Table 3: Quasi-maximum likelihood estimated coefficients

Regressors	Methodology Complexity
Exogenous to the paper	0,37295*** (0,063)
Endogenous to the paper	
Household Welfare	0,17380 (0,089)
Destination Satisfaction	0,13996 (0,135)
Information Source	-0,18462* (0,089)
Seasonality	-0,16619*** (0,043)

Standard errors in parentheses $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

Source: Author's elaboration from Scopus Database. Table of the results of the Maximum Likelihood Estimation for the Poison Model for Methodology Complexity

Regarding Poisson post-estimation tests, both the Deviance Goodness of fit and Pearson's Goodness of fit were found statistically significant for the regression of *methodology complexity*.

4. Conclusions

This paper updates the last review on TEMPS, filling the gap of ten years of state-of-the-art literature. In addition, it includes a meta-analysis and econometric examination of this literature. This marks an advance in research on tourist spending. The SLR outlined in this study focuses on the methodological aspects of papers using quantitative parametric approaches. Consequently, the research questions are as follows. 1) What has been the state of the art of the TEMPS since the last review? 2) what variables describe and are the principal components of the parametric studies on the determinants of tourist expenditure? 3) What factors affect the complexity of the methodology performed in parametric studies on the determinants of tourist expenditure?

The results show that although the number of TEMPS follows a higher annual average than the previous review, this type of study is much smaller than the macroeconomic or non-

parametric studies on tourist expenditure. This may show a trend toward the growth of this type of study and a greater complexity of the methodologies applied. Regarding the type of independent variables used in the TEMPS, there is a greater interest in the tourists' opinions. This is reflected in increased psychographic variables, mainly linked to tourist satisfaction. These variables have also proved positive and significant in explaining tourist expenditure. Nevertheless, the percentage of TEMPS that use psychographic variables is still low. Then, increasing the number of TEMPS, which analyse tourist opinion regressors is still necessary. It is essential to highlight that most papers do not focus on a particular regressor. Future research should determine which are regressors of interest and which control variables. It is also necessary in future works to apply some methodology to select the regressors properly. For example, papers can perform Principal Components or Directed Acyclic Graph analysis (Pearl, 2016).

Findings also show that factors that affect the complexity of the methodology performed in TEMPS are exogenous and endogenous to the paper. The exogenous to the paper component is mainly journal metrics. The endogenous components of the paper are household welfare, destination satisfaction, information source and seasonality. Considering these results, government policies in tourist destinations and tourism business managers must focus on those endogenous factors to increase tourist expenditure. The characteristics of each tourist destination must be considered. However, in general terms, economic policy should focus on those endogenous factors to achieve a positive economic impact on the destination. Factors exogenous to the paper positively influence the complexity of the chosen methodology in TEMPS. The better the journal metrics, the more complex the methodology. However, endogenous factors exhibit a negative impact. This last result interpretation constitutes a limitation in this research because nothing can be inferred from it.

A systematic literature review on non-parametric tourist expenditure studies is essential for future research. A meta-database could also be added to the literature to allow for the development of econometric models to explain some of the phenomena of increased methodological complexity in studying tourist expenditure patterns. Future research could also explore the patterns and the relationships between tourist agents, hotel owners, government, tourist transport companies, and other tourism-related industries that may influence tourist consumption patterns. However, new spatial and time allocations of tourists were generated due to social distance, and less accommodation in hotels due to social distance (Müller, 2021). This type of phenomenon should be on the agenda of the organisations in charge of conducting surveys or the ministries of tourism of the countries to capture this type of population (Müller, 2021) states.

References

Abbruzzo, A., Brida, J. G., & Scuderi, R. (2014). Scad-elastic net and the estimation of individual tourism expenditure determinants. *Decision Support Systems*, 66, 52–60. https://doi.org/10.1016/j.dss.2014.06.003

Aguiló, E., Rosselló, J., & Vila, M. (2017). Length of stay and daily tourist expenditure: A joint analysis. *Tourism Management Perspectives,* 21, 10–17. https://doi.org/10.1016/j.tmp.2016.10.008

Ain, N., Vaia, G., DeLone, W. H., & Waheed, M. (2019). Two decades of research on business intelligence system adoption, utilization and success – A systematic literature review. *Decision Support Systems*, 125, 113113. https://doi.org/10.1016/j.dss.2019.113113

Alegre, J., & Pou, L. (2016). US household tourism expenditure and the Great Recession: An analysis with the Consumer Expenditure Survey. *Tourism Economics,* 22(3), 608–620. https://doi.org/10.5367/te.2014.0429

Alfarhan, U. F., Nusair, K., Al-Azri, H., & Al-Muharrami, S. (2022). Modelling expenditure differentials of international tourists by targeted utility: A synthesized theoretical and quantile decomposition approach. *International Journal of Consumer Studies,* 46(1), 324-344. https://onlinelibrary.wiley.com/doi/epdf/10.1111/ijcs.12683

Almeida, A., & Garrod, B. (2017). Insights from analyzing tourist expenditure using quantile regression. *Tourism Economics,* 23(5), 1-8. https://doi.org/10.1177/1354816616668108

Baños, J. F., & Boto, D. (2021). The impact of COVID-19 on tourists' length of stay and daily expenditures. *Tourism Economics*, 29(2), 437-459. https://doi.org/10.1177/13548166211053419

Boto-García, D, & Baños-Pino, J.F. (2024). The economics of second-home tourism: Are there expenditure reallocation effects from accommodation savings? *Tourism Economics*, 30(4), 969-995. https://doi.org/10.1177/13548166231177555

Brida, J. G., Monterubbianesi, P. D., & Zapata, S. (2013). Análisis de los factores que influencian el gasto de los turistas culturales: el caso de los visitantes de museos de Medellín. *Revista de Economía del Rosario* 16(1), 149-170. https://ideas.repec.org/p/pra/mprapa/37622.html

Brida, J. G., Fasone, V., Scuderi, R., & Zapata, S. (2014). Research note: Exploring the determinants of cruise passengers' expenditure at ports of call in Uruguay. *Tourism Economics* 20(5), 1133–1143. https://doi.org/10.5367/te.2013.0322

Brida, J. G., & Tokarchuk, O. (2015). Keeping mental budgets: visitors' spending at a Christmas market. *Tourism Economics*, 21(1), 67–82. https://doi.org/10.5367/te.2014.0437

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. https://doi.org/10.1016/j.tourman.2017.01.016

Brida, J. G., & Scuderi, R. (2013). Determinants of tourist expenditure: A review of microeconometric models. *Tourism Management Perspectives,* 6, 28–40. https://doi.org/10.1016/j.tmp.2012.10.006

Buning, R. J., Cole, Z. D., & McNamee, J. B. (2016). Visitor expenditure within a mountain bike event portfolio: Determinants, outcomes, and variations. *Journal of Sport and Tourism*, 20(2), 103-122. https://doi.org/10.1080/14775085.2016.1239547

Cárdenas, P. J., Pulido, J., & Pulido, M. (2016). The Influence of Tourist Satisfaction on Tourism Expenditure in Emerging Urban Cultural Destinations. *Journal of Travel and Tourism Marketing*, 33(4), 497-512. https://doi.org/10.1080/10548408.2015.1064061

Castañeda, J A., Vena, J., Rodríguez, M. A., & Martínez, R. (2019). Analysis of domestic cultural tourism spend by segment in the city of Granada: An observational data approach. *Tourism Management Perspectives,* 29, 18–30. https://doi.org/10.1016/j.tmp.2018.10.001

Chen, T., Hwang, M., & Chang, Y. (2022). The effect of wealth effect and population aging on tourism expenditure. *Current Issues in Tourism*, 25(11), 1852-1865. https://doi.org/10.1080/13683500.2021.1937959

David, T., Hernández, J. M., & Moreno, S. (2018). Understanding tourists' leisure expenditure at the destination: a social network analysis. *Journal of Travel and Tourism Marketing*, 35(7), 922-937. https://doi.org/10.1080/10548408.2018.1447533

Dayour, F., Atanga, C., & Taale, F. (2016). Determinants of backpackers' expenditure. *Tourism Management Perspectives*, 17, 36–43. https://doi.org/10.1016/j.tmp.2015.11.003

Deeks, J., Higgins, J., & Altman, D. (2019). Analysing data and undertaking meta-analyses. *Handbook. Cochrane Training.* Chap.10.
https://training.cochrane.org/handbook/current/chapter-10

Disegna, M., & Osti, L. (2016). Tourists' expenditure behavior: the influence of satisfaction and the dependence of spending categories. *Tourism Economics*, 22(1), 5–30.
https://doi.org/10.5367/te.2014.0410

Dobruszkes, F. (2013). The geography of European low-cost airline networks: A contemporary analysis.
Journal of Transport Geography, 28, 75–88. https://doi.org/10.1016/j.jtrangeo.2012.10.012

Engström, T., & Kipperberg, G. (2015). Decomposing the heterogeneous discretionary spending of international visitors to Fjord Norway. *Tourism Management,* 51, 131-141.
https://doi.org/10.1016/j.tourman.2015.05.020

Farías, E., & Barić, D. (2020). The economic impact of tourism on protected natural areas: examining the influence of physical activity intensity on visitors' spending levels. *Eco.mont*, 12(2), 22-32. https://austriaca.at/?arp=0x003b9f6b

Ferreira, M., & Carneiro, M. (2021). Maximizing the potential of river sports to boost sustainable tourism development: Identification of the determinants of tourist consumption associated with river sports. *Journal of Tourism and Development*, 1(2), 149-166.
https://proa.ua.pt/index.php/rtd/article/view/10711/18015

Ferreira, F., Fernandes, G., Cabral, J., & Silva, C. (2020). Is the spending behaviour of tourists affected by low-cost carriers' operation? Some empirical evidence. *Tourism Management Perspectives*, 33, 12-33. https://doi.org/10.1016/j.tmp.2019.100630

Gómez-Déniz, E., Pérez-Rodríguez, J. V., & Boza-Chirino, J. (2020). Modelling tourist expenditure at origin and destination. *Tourism Economics*, 26(3), 437-460.
https://doi.org/10.1177/1354816619840845

Khoo, C., Mura, P., & Yung, R. (2019). The time has come: a systematic literature review of mixed methods research in tourism. *Current Issues in Tourism*, 22(13), 1531-1550.
https://doi.org/10.1080/13683500.2017.1406900

Kozak, M., & Martin, D. (2012) Tourism life cycle and sustainability analysis: profit-focused strategies for mature destinations. *Tourism Management*, 33(1), 188–194. https://doi.org/10.1016/j.tourman.2011.03.001

Lin, V., Qin, Y., Li, G., & Wu, J. (2021). Determinants of Chinese households' tourism consumption: Evidence from China Family Panel Studies. *International Journal of Tourism Research*, 23(4), 542-554. https://doi.org/10.1002/jtr.2425

Marksel, M., Tominc, P., & Božičnik, S. (2017). Cruise passengers' expenditures: The case of port of Koper. *Tourism Economics,* 23(4), 121-143. https://doi.org/10.5367/te.2016.0560

Marrocu, E., Paci, R., & Zara, A. (2015). Micro-economic determinants of tourist expenditure: A quantile regression approach. *Tourism Management*, 50, 13-30. https://doi.org/10.1016/j.tourman.2015.01.006

Massidda, C., Piras, R., & Seetaram, N. (2022). Analysing the drivers of itemised tourism expenditure from the UK using survey data. *Annals of Tourism Research Empirical Insights*, 3, 1-9. https://doi.org/10.1016/j.annale.2022.100037

Massidda, C., Piras, R., & Seetaram, N. (2020). A Microeconomics Analysis of the Per Diem Expenditure of British Travellers. *Annals of Tourism Research*, 82, 1–14. https://doi.org/10.1016/j.annals.2020.102877

Mehran, J., & Olya H. (2019). Progress on outbound tourism expenditure research: A review. *Current Issues in Tourism*, 22(20), 2511-2537. https://doi.org/10.1080/13683500.2018.1517734

Melstrom, R. T. (2017). Estimating a model of sportfishing trip expenditures using a quasi-maximum likelihood approach. *Tourism Economics,* 23(2), 448–459. https://doi.org/10.5367/te.2015.0511

Mora, J., & García, F. (2020). International Remittances as a Driver of Domestic Tourism Expenditure: Evidence from Mexico. *Journal of Travel Research,* 60(8*),* 1752-1770. https://doi.org/10.1177/0047287520962222

Mortazavi, R., & Lundberg, M. (2019). Expenditure-based segmentation of tourists taking into account unobserved heterogeneity: The case of Venice. *Tourism Economics,* 26(3), 475-499. https://doi.org/10.1177/1354816619841713

Müller, D. K. (2021). 20 years of Nordic second-home tourism research: a review and future research agenda. *Scandinavian Journal of Hospitality and Tourism*, 21(1), 91-101. https://doi.org/10.1080/15022250.2020.1823244

Pearl, J., Glymour, M., & Jewell, N. P. (2016). *Causal Inference in Statistics; A Primer*. Wiley, United Kingdom.

Park, S., Woo, M., & Nicolau, J. L. (2020). Determinant Factors of Tourist Expenses. *Journal of Travel Research*, 59(2), 267-280. https://doi.org/10.1177/0047287519829257

Pérez, J. V., & Ledesma, F. (2021). Unconditional quantile regression and tourism expenditure: The case of the Canary Islands. *Tourism Economics*, 27(4), 626-648. https://doi.org/10.1177/1354816619891552

Perić, M., Dragičević, D., & Škorić, S. (2019). Determinants of active sport event tourists' expenditure – the case of mountain bikers and trail runners. *Journal of Sport and Tourism*, 23(1), 19-39. https://doi.org/10.1080/14775085.2019.1623064

Perles, J., Moreno, L., Torregrosa, T., & Ramón, A. (2021). Satisfaction, seasonality and tourist expenditure in consolidated tourist destinations. *Anatolia*, 32(3), 489-500. https://doi.org/10.1080/13032917.2021.1901752

Petticrew, M., & Roberts, H. (2006). Systematic Reviews in the Social Sciences. *Blackwell Publishing*. https://doi.org/10.1002/9780470754887

Presenza, A., Abbate, T., Meleddu, M., & Sheehan, L. (2019). Start-up entrepreneurs' personality traits. An exploratory analysis of the Italian tourism industry. *Current Issues in Tourism,* 23(17), 2146-2164. https://doi.org/10.1080/13683500.2019.1677572

Pulido, J., Cárdenas, P., & Carillo, I. (2016). Trip Cultural Activities and Tourism Expenditure in Emerging Urban-cultural Destinations. *International Journal of Tourism Research*, 18(4), 286-296. https://doi.org/10.1002/jtr.2047

Pulido, J., Cárdenas, P., & Carrillo, I. (2017). Explaining tourism expenditure based on trip characteristics in emerging urban-cultural destinations. *Tourism Review*, 72(1), 68-86. https://doi.org/10.1108/TR-09-2016-0040

Pulido, J., Cárdenas, P., & Durán, J. (2017). Socio-Economic Profile of Tourism Expenditure in Emerging Urban-Cultural Destinations. *Tourism Planning and Development*, 14(3), 318-336. https://doi.org/10.1080/21568316.2016.1218365

Pulido, J., Rodríguez, B., & Cárdenas, P. (2020). Key factors of tourism expenditure in emerging urban-cultural destinations. *Anatolia*, 31(1), 31-49. https://doi.org/10.1080/13032917.2019.1691615

Rudkin, S., & Sharma, A. (2017). Enhancing understanding of tourist spending using unconditional quantile regression. *Annals of Tourism Research*, 66, 188-191. https://doi.org/10.1016/j.annals.2017.06.003

Serra, J., Correia, A., & Rodrigues, P. M. M. (2015). Tourist Spending Dynamics in the Algarve: A Cross-Sectional Analysis. *Tourism Economics,* 21(3), 475–500. https://doi.org/10.5367/te.2015.0482

Sharma, A., Woodward, R., & Grillini, S. (2019). Unconditional quantile regression analysis of UK inbound tourist expenditures. *Economics Letters*, 186, 108857. https://doi.org/10.1016/j.econlet.2019.108857

Smolčić, D., & Soldić, D. (2016). Satisfaction as a determinant of tourist expenditure. *Current Issues in Tourism*, 20(7), 691-704. https://doi.org/10.1080/13683500.2016.1175420

Soldić D. (2017). Analysing off-season tourist expenditure. *European Journal of Tourism Research*, 17, 215-230. https://doi.org/10.54055/ejtr.v17i.304

Nidhra, S., Yanamadala, M., Afzal, W., & Torkar, R. (2013). Knowledge transfer challenges and mitigation strategies in global software development—A systematic literature review and industrial validation. *International Journal of Information Management*, 33(2), 333– 355. https://doi.org/10.1016/j.ijinfomgt.2012.11.004

Subanti, S., Respatiwulan, Hakim, A. R., Handajani, S. S., & Hakim, I. M. (2018). The determinant of household tourism expenditure in Central Java Province, Indonesia. *Journal of Physics: Conference Series*, 983(1), 012073. https://iopscience.iop.org/article/10.1088/1742-6596/983/1/012073

Thrane, C. (2015). Students' summer tourism: An econometric analysis of trip costs and trip expenditures. *Tourism Management Perspectives*, 15, 65-71. https://doi.org/10.1016/j.tmp.2015.03.012

Thrane, C. (2016). The Determinants of Norwegians' Summer Tourism Expenditure: Foreign and Domestic Trips. *Tourism Economics*, 22(1), 31-46. https://doi.org/10.5367/te.2014.0417

Tikito, I., & Nissrine, S. (2019). Meta-analysis of Systematic Literature Review Methods. *International Journal of Modern Education and Computer Science (IJMECS)*, 11(2), 17-25. https://doi.org/10.5815/ijmecs.2019.02.03

Wang, Y., & Davidson, M. C. G. (2010). A review of micro-analyses of tourist expenditure. *Current Issues in Tourism*, 13(6), 507–524. https://doi.org/10.1080/13683500903406359

Wold, S., Esbensen, K., & Geladi, P. (1987). Principal Component Analysis. *Chemometrics and Intelligent Laboratory Systems*, 2(1-3), 37-52. https://doi.org/10.1016/0169-7439(87)80084-9

Wooldridge, J. (2012). Introductory Econometrics: A Modern Approach. *Cengage Learning. Fifth Edition. Chapter 17*, 584-595. https://economics.ut.ac.ir/documents/3030266/14100645/Jeffrey_M._Wooldridge_Introductory_Econometrics_A_Modern_Approach__2012.pdf

Ultimi Contributi di Ricerca CRENoS

I Paper sono disponibili in: http://www.crenos.unica.it

24/17 *Pasqualina Arca, Gianfranco Atzeni and Luca Deidda,* "Collateral requirements, cost of credit, and firms' discouragement from applying for bank loans"

24/16 *Giampiero M. Gallo, Ostap Okhrin, Giuseppe Storti,* "Dynamic tail risk forecasting: what do realized skewness and kurtosis add?"

24/15 *Stefano Borgioli, Giampiero M. Gallo, Chiara Ongari,* "Financial Returns, Sentiment and Market Volatility: a Dynamic Assessment"

24/14 *Vincenzo Candila, Oguzhan Cepni, Giampiero M. Gallo, Rangan Gupta,* "Influence of Local and Global Economic Policy Uncertainty on the volatility of US state-level equity returns: Evidence from a GARCH-MIDAS approach with Shrinkage and Cluster Analysis"

24/13 *Ester Rita Lucia Sanna, Marta Meleddu,* "Integrating justice and ecological economics: a theoretical framework and indicator toolkit for analysing conflict in protected areas"

24/12 *Federico Aresu, Emanuela Marrocu, Raffaele Paci,* "EU funds and TFP growth: how the impact changed over time and space"

24/11 *Ivan Etzo, Raffaele Paci, Cristian Usala,* "Brain gain vs. brain drain. The effects of universities' mobile students on territorial inequalities"

24/10 *Giommaria Spano,* "Financial frictions, common ownership and firms' market power in a general equilibrium model"

24/09 *Roberto Saba, Anna Pireddu,* "Energy and Environmental Synergy: Cooperative Strategies for the Euro-Mediterranean Transition"

24/08 *Maria Grazia Pittau, Francesco Politano, Roberto Zelli,* "Educational divide between voters: A nationwide trend?"

24/07 *Federico Atzori, Vittorio Pelligra,* "Framed norms. The effect of choice-belief information on tax compliance"

24/06 *Simone Nobili,* "Concentration, Market Power and International Tax Competition"

24/05 *Maria Grazia Pittau, Pier Luigi Conti, Roberto Zelli,* "Inference for deprivation profiles in a binary setting"

24/04 *Edoardo Otranto,* "A Vector Multiplicative Error Model with Spillover Effects and Co-movements"

24/03 *Luca Serafini, Emanuela Marrocu, Raffaele Paci,* "Smart Strategies, Smarter Performance: the Impact of S3 and Industry 4.0 on Firms' Outcomes"

24/02 *Hugues Champeaux, Elsa Gautrain, Karine Marazyan,* "Men's premarital migration and marriage payments: Evidence from Indonesia"

24/01 *Pablo Álvarez-Aragón, Hugues Champeaux,* "Measuring Norms and Enumerator Effects: Survey Method Matters"

23/15 *Fabio Cerina, Xavier Raurich,* 'Saving Behaviour and the Intergenerational Allocation of Leisure Time"

23/14 *Leonardo Vargiu, Bianca Biagi, Maria Giovanna Brandano, Paolo Postiglione,* "Research Infrastructures and Regional Growth: the case of Europe"

23/13 *Alberto Tidu,* "Dissecting inequality: conceptual problems, trends and drivers"

23/12 *Luciano Mauro, Francesco Pigliaru,* 'Italy's National Recovery and Resilient Plan: Will it Narrow the North-South Productivity Gap?*"*

23/11 *Fabrizio Antolini, Samuele Cesarini, Giorgio Garau,* "The economic impact of the tourism sector on the overall Italian economy: An Input-Output Approach"

23/10 *Giorgio Garau, Andrea Karim El Meligi,* "The Impact of the Pandemic and War on Surplus Redistribution Mechanisms: A Sectoral Analysis of France and Italy"

www.crenos.unica.it

ISBN 9788868515454