

**Tourists spending behaviour in Portugal: A quantile regression analysis**

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**Abstract**

One of the criteria for understanding the degree of tourism development is based on the level of tourists' spending at the destination. A plethora of studies have used tourist spending to assess the economic impacts of different segments (e.g. Kozak, 1999; Kozak, Bahar & Gokovalı, 2007) and investigating its determinants such as behavioural factors (Godbey & Graefe, 1991; Lau & McKercher, 2004; Kastenholtz 2005; Lehto et al, 2004; Thrane, 2002), economic and socio-demographics including age, gender, occupation, education, household income, nationality and marital status (Agarwal & Yochum, 1999) and more recently motivations were also included ( Serra, Correia & Rodrigues, 2015). Most of the research aiming to cluster the tourism markets have relied on the spending mean by groups (e.g. Suh & Gartner, 2004). Other stream of research has attempted to understand why certain groups spend so differently (Lew, 2012). The least square regression is the most widely applied technique to determine the statistical significance of such differences. However, the least-square regression only estimates the average mean across groups. This study pretends to understand the average difference across groups and the differences between the higher and lower ranges across the groups. The quantile regression method measures tourist spending in different categories against a fixed range of dependent variables, which distinguishes between lower, medium, and higher spenders. The results show that quantile regression is less susceptible to be influence by outlier values and is better able to target finer tourist spending market segments. Based on the quantile regression analysis, this study pretends to understand the behavior spending patterns by quantiles. The results of this study will allow the practitioners to design different market segment strategies.

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