

## TOURISM EXPENDITURE UNDER

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...ing the home-grown tourists to holiday abroad as a 'push' factor encouraging the holiday abroad. In the same way, climate in the place of origin has been used to explain the substitution pattern between travelling domestically and or abroad. Hence, climate conditions of the place of origin may make a difference in the willingness to pay for travelling. Such heterogeneity in willingness to pay is explained by spatial clusters because not all the tourists are equally sensitive to income and price adjustments.

## 2. OBJECTIVES

This study focuses on the underpinnings of the households' tourism expenditure decisions during the global economic crisis in 2009. In particular, this study tests if during an economic crisis, decisions on tourism expenditure depend on climate conditions of the place of origin, GDP and GDP growth, among other well-known determinants. It should be noted that cutback decisions on tourism expenditure are not independent of destination choice, and for that reason the model requires the estimation of both decisions simultaneously.

## 3. METHODOLOGY

The methodology proposed in this paper represents a new way of analyzing the impacts of an economic crisis on tourism expenditure. Two levels of analysis can be considered. On the one hand, macroeconomic data of tourism expenditure is usually explored. On the other hand, the microeconomic analysis of the household and regional variables of their environment that may enrich the analysis. If the econometric model takes into account all these variables simultaneously, then the linkage between GDP changes and tourists' behavior is enriched and it may be estimated more accurately. As far as we know, this paper is the first study that models the cutback decision on tourism expenditure. Modeling such decision is a challenge because it is not independent of the destination choice. For instance, households that travel domestically may not be as sensitive to the crisis as those who travel abroad. For this purpose, the econometric model employed is a simultaneous system of cutback decision and destination choice. More precisely, Simultaneous Semi-Ordered Bivariate Probit has proved to be the most useful econometric model for the estimation because it deals with the simultaneity of the cutback and destination choice decisions as well as the endogeneity.

...a joint dataset composed by microdata ... and macrodata of EU-27 regions in ...oyed belong to the survey —Attitudes of Tourism—, which corresponds to Flash ..., conducted by European Union in September ... considered was collected from Eurostat (GDP ... Power Standard) and World Meteorological ... (Climate Index).

## RESULTS

Estimations show a negative correlation between the probability of cutting back and how far the holidays are taking place. Its negative sign reinforces the idea that those households that are cutting back on tourism expenditure are more likely to spend their holidays closer to home. Current GDP and GDP growth are key determinants of the cutback decision on tourism expenditure. The model shows that both are negatively related with such decision. It is interesting to note that regions with bad climate are less likely to cut back than those households located in regions with good climate. It may be related with heterogeneous needs and preferences on tourism expenditure. Thus, tourism as a luxury good or service is relative to your needs, and climate in your place of residence is one key determinant for such preference.

Figure 1. Probabilities of cutback

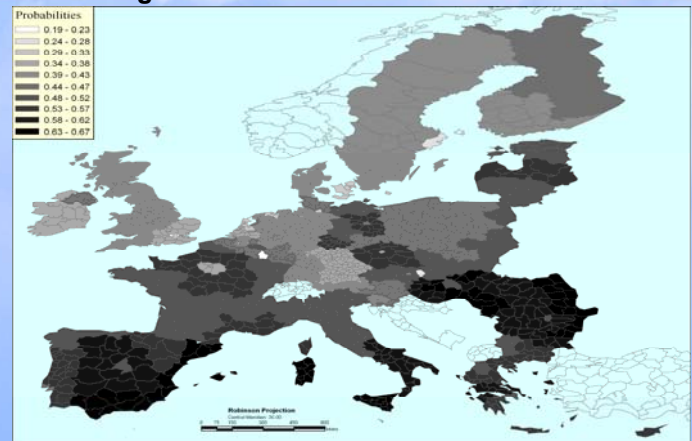


Figure 1 shows a post-estimation analysis on the probabilities of cutback on tourism expenditure, using a Geographical Information System approach for each European region. It can be observed marked differences between North-European and Mediterranean regions. This result may respond to climate and GDP differences. Additional analysis corroborates that the probability of cutting back grows with climate. It varies from a median probability of approximately 38% for regions with bad climate up to 66% for regions with good climate.

## 6. CONCLUSIONS

Public policy-makers and private agents need information on the sensitivity of different origin markets under an economic crisis in order to understand and anticipate how tourists react. This research has proved that during an economic crisis, households react cutting back their tourism expenditure depending on GDP, GDP growth, and climate in their place of origin. In that sense, there are marked differences between North-European and Mediterranean regions. It is interesting to note that regions with bad climate are less likely to cut back than those households located in regions with good climate.