Economic Sentiment Indicator as a demand determinant in tourism: A Case of Turkey

Mehmet Altin
Pamplin College of Business
Hospitality and Tourism Management
Virginia Polytechnic Institute and State University

and

Muzaffer Uysal
Pamplin College of Business
Hospitality and Tourism Management
Virginia Polytechnic Institute and State University

ABSTRACT

This study is Work In Progress and focuses on Phase 1 of the proposed study. Phase 2 will be implemented in spring 2011. The purpose of phase 1 is to introduce ESI (Economic Sentiment Indicator) to the field of tourism demand studies. The proposed study is intended to develop a demand model in which tourist arrivals to Turkey from select EU countries will be used as the dependent variable. Economic Sentiment Indicator (ESI) along with more traditional variables such Interest Rate, Relative Price, and Relative Exchange Rate will be brought into the model as the independent demand determinants. Using a new independent variable, ESI and use of time series econometric models (such as Cointegration and Error Correction Models), the study will estimate a tourism demand function for the select markets of EU countries. It is hoped that the findings of this study, once implemented in phase 2, will enable policy makers to develop more focused marketing and fiscal policies to target visitors. In addition, the usefulness of ESI will be demonstrated and its policy implications will also be developed.

Keywords: Tourism demand, Economic Sentiment Indicators, econometric models

INTRODUCTION

Tourism plays a key role in economic development of several countries and is one of the fastest growing industries in the world, employing approximately 220 million people and generating over 9.4% of world GDP (WTTC, 2009). Tourism is considered an important aspect of export activities that generate foreign currency and income for countries. The growing contribution of tourism has been accompanied by an increased interest in understanding the major factors which influence visitation levels to countries as destinations. Modeling tourism demand has been one of most rigorously investigated areas of tourism studies. Analyzing the effects of various demand determinants and accurately forecasting the future demand for tourism are the two major focuses of tourism demand studies (Song, Li, & Witt, 2008). Governments and
investors need to know factors affecting the destination choice and type of trips in order to create appropriate marketing strategies and for strategic planning (Kim & Uysal, 1998). Finding the right variables to understand and estimate tourism demand becomes very important and challenging in policy formulations. Thus, the objective of this study is to develop a demand model that incorporates not only traditional demand determinants such as PCI, relative price, exchange but also economic sentiment indicator as a new demand determinant into the model.

Most of the variables used in demand studies are able to explain certain aspect of the tourism demand, but if any, little research has conducted on how the prospective tourists’ state of mind regarding to their financial situation for both today and tomorrow may play a role in demand. The addition of economic sentiment indicator is intended to capture the possible effect of the sentiment that tourists as consumers may have about the general state of the economy. Lower values of the indicator would imply that individuals as consumers do not perceive the health of the economy favorably, thus its poor perception may manifest itself in different consumption patterns and consumer behavior. All things being equal, it is hypothesized that the higher the index, the higher its effect on demand would be. It is a very difficult task to try to understand what the people think about their economic condition. One of the problems with this approach is that generating such information is very difficult and costly for individual destinations. Fortunately, there is such an indicator (Economic Sentiment Indicator (ESI)) which is created to gauge and monitor consumer sentiments about the health of the economy in general. It is a very valuable indicator to understand European Union countries economic health. While there are different tools similar to this around the world, this study will focus on EU countries. ESI was generated by European Commission Directorate General for Economic and Financial Affairs and is now part of the European statistic tool Eurostat. The economic sentiment surveys are essential to understand economic conditions, and are used in forecasting and valuable for economic research. The survey for ESI uses about 125,000 firms and 40,000 consumers and is done every month across to EU countries.

**THE MODEL SPECIFICATION AND VARIABLES**

The general model of the study hypothesizes that demand for tourism to Turkey from select EU countries will be a function of Economic Sentiment Indicator, Interest rate in the generating countries, Relative price, and Exchange rates between the receiving and tourist generating countries.

The demand function for origin country i to destination country j is then given by:

\[ ARRV_{ij} = f(ESI_i, IR_i, RP_{ij}, RX_{ij}) \]

Where

- \( ARRV_{ij} \) = Visitor arrivals from origin country i to destination country j at given time
- \( ESI_i \) = Economic Sentiment Indicator for origin country i
- \( IR_i \) = Interest rate in origin country i
- \( RP_{ij} \) = Relative price for tourists from origin country i to destination country j
- \( RX_{ij} \) = Relative exchange rate for tourist from origin country i to destination country j

The simplest relationship to tourism demand is a linear relationship which is given by:

\[ ARRV_{ij} = A + ESI_i^\alpha + IR_i^\beta + RP_{ij}^\gamma + RX_{ij}^\delta + \varepsilon_{ij} \]
Where A, α, β, γ, δ are coefficients that will be estimated empirically and ε_{ij} is the error term. Linear relationship used because of its simplicity and easiness of using for regression analysis. Empirical studies show that many tourism demand relationship can be approximately represented by the linear relationship over the sample period under the consideration (Smeral, Witt, & Witt, 1992). However, the model would also be estimated using a double-logarithmic form so that estimated coefficients would become elasticities of the demand determinants.

**Variable Specification**

ARRV (Tourist Arrival): Tourist arrival data indicates the total number of tourists to destination country j from origin countries i and is most commonly used dependent variable in tourism demand studies (Crouch, Schultz, & Valerio, 1992; N. Kulendran, 1996; Song, Wong, & Chon, 2003; Uysal & Crompton, 1984; Var, Mohammad, & Icoz, 1990). For this particular study monthly statistics from European Union countries to Turkey are used. The data here complied by the Ministry of Tourism and Culture. The data to be used will cover monthly data from 2001 to 2007.

ESI (Economic Sentiment Indicator): Economic Sentiment Indicator currently surveys 125,000 firms and 40,000 consumers every month across EU countries.

IR (Interest Rate): Interest rate is the rate that which is paid by borrower to lender for the use of borrowed money, basically interest rate is the cost of the money used. Interest rate data collected from OECD statistical databases on a monthly short term rate will be used for all the given countries.

RP (Relative Price): Determining the cost of living in the destination country is hard. Researchers usually use CPI (Consumer Pricing Index) for cost of living; some others use the exchange rate because tourists know more about exchange rates than CPI. While CPI is not considered reasonable measure for tourism price, because it shows average consumer spending patterns and is convenient, it is a preferred proxy for tourism prices (Morley, 1994). Relative Price in a sense uses CPI’s of countries. The index is usually adjusted for the exchange rates. The typical calculation of RP is as follows:

\[
RP_{ij} = \frac{CPI_j}{X_j}
\]

Where \( RP_{ij} \) is Relative Price in origin i for destination j, \( CPI \) is Consumer Price Index, \( X \) is Exchange Rate, \( i \) is origin country and \( j \) is destination country.

RX (Relative Exchange Rate): Exchange rate is the value of origin countries’ currency in the terms of the destination country’s currency. In a sense it shows how much of the one country’s money worth in the terms of other country’s money. “If a currency devalues in a foreign country, international tourism becomes ‘less expensive’ and results in increased travel flows to that country. Conversely, an increase in the value of a country’s currency will make international tourism ‘more expensive’ and cause decreased travel in that country” (Uysal, 1998).
It is considered as an important indicator of the tourism demand and is used in several ways (Algieri, 2006; Eugenio-Martin, Martin-Morales, & Sinclair, 2008; Nada Kulendran & Witt, 2003).

It is hoped that using the Economic Sentiment Indicator of demand the study will be able to tap into people hopes and/or worries for today and future. Therefore with the hypothesized model, the study will demonstrate if the economic sentiment indicator is a viable demand determinant along with other traditional ones. The estimation of the model will use econometric models which will include ARIMA, Cointegration, and Error Correction Models.

EXPECTED IMPLICATIONS

This study will generate information that will enable policy makers and destination managers to assess the relative importance of demand determinants for the select countries. The study will also demonstrate the usefulness of Economic Sentiment Indicator as an important demand determinant in tourism demand estimations models. The elasticities to be obtained from the double-log form of the model will also reveal the level of demand responsiveness to changes in cost of living, exchange rate differentials, and Economic Sentiment Indicator. Knowing how such variables will affect demand would help policy makers to develop appropriate measures to encourage demand from EU countries. The second phase of the study will be implemented in spring 2011.

REFERENCES


