## **Session G2**

## Modeling Hotel Competition in Networks: Evidence from Zurich - Yong Chen

This study examines the network structure of hotel competition in a market and how the network structure affects hotel performance. The network of hotel competition is created when a hotel i in a set of N hotels names another hotel j (i =/ j) as its competitor, and so an directed edge is created from i to j. This leads to a directed network to describe the competitive relationships among all N hotels in the set. If hotel j also names i as its competitor, the edge between i and j is undirected, and so the competitive relationship is reciprocal. This allows us to create an undirected network to describe hotel competition in a different way. The goal of this study is two-fold. From an empirical point of view, we are interested to understand what the topological structure of such competition networks might manifest in the market. We will map the network of hotel competition in the Zurich market of Switzerland, where we are able to collect data of 109 hotels. From a theoretical point of view, we aim to develop a set of network models or use existing network models, such as random graphs, small-world networks, and scale-free network models, to explain the network formation mechanism of hotel competition. That is, we need to know what behavioral principles and hotel decisions at the micro level lead to the topological structure of competition networks at the macro level.

This study is expected to contribute to both tourism and hospitality management research and network analysis and economics. Insofar as tourism and hospitality management is concerned, this study will provide a new managerial perspective for us to understand how and the extent to which hotel performance, i.e., average daily rate (ADR) and occupancy (OCC), can be explained by the networks of hotel competition. Intuitively, different markets with different degrees of competition would end up with different network structures, which in turn affect firm performance. Insofar as network analysis and economics are concerned, this study provides a new methodological perspective of modeling firm competition in a network. Firm competition has long been discussed in a dichotomy where the target firm is treated as the competitor of all other firms, or vice versa, to simplify the analysis. In such dichotomy, not only are the dynamic relationships between all firms other than the two are dismissed, but the relationship between the two target firms is linear. The network approach enables us to take into account and model all the competitive relationships of all firms at the same time, thereby advancing our understanding of firm competition in the market.

## Competition or Cooperation? Examining the spatial Interactivity of Chinese outbound tourism destinations - Bo Zhou and Peili Zhang

The spatial interactivity among tourism destinations have always been a significant issue in the domain of tourism economics. Currently, the majority of studies have concentrated on the inter-city scale, analyzing interactions between two destinations, with very limited research conducted at the international level and focused on the interactions among multiple destinations. This study initially constructs a spatial panel model covering 90 Chinese outbound tourism destinations (90 countries located 5 continents in the world) from 2003 to 2019 to analyze the spatial interdependency among these destinations, which aims to fill a research gap in the study of spatial interactivity among multiple tourism destinations at the national level, as well as a research gap of Chinese outbound tourism research. This study attempts to enrich and expand the theoretical horizon in tourism economic geography, and provide practical insights on the formulation of marketing strategies for a given country to attract more Chinese to visit.

## Determinants of Employment in the Tourism Sector in Brazil: 2003-2019 – Jean Tavares

Context: The tourism industry plays a vital role in the economic development of a country. The development of the tourism industry makes it possible to create employment and increase society's income. Purpose: This article aims to identify the determinants of employment in the tourism sector in Brazil, including GDP per capita, occupation rate in hotels, disbursement of public financing for tourism, and the exchange rate, during the period 2003-2019 thus excluding years 2020 and 2021 given the generalized halt of tourism activities around the world. Methodology: Data were analyzed using SPSS software, using a corrected heteroscedasticity model. Results: Results show that only two variables are statistically significant to the model: the Gross Domestic Product (GDP) per capita and the Occupancy Rate. The variables Exchange Rate and Disbursement by Federal Financial Institutions (credit offer) were not statistically significant. Originality/value: This study presents the idea that even if a tourist destination has unique tourist attractions with the capacity to attract national and international tourists, as is the case in Brazil, the level of employment in the tourism sector also partially depends on the country's economic growth (GDP) and the level of occupation of its wider economy.