

The Hong Kong Polytechnic University
Department of Logistics and Maritime Studies
Research Seminar

A Series of Airport Management Studies

by

Mr Hanxiang ZHANG
PhD Student
Department of Logistics and Maritime Studies
The Hong Kong Polytechnic University

Date: 22 October 2018 (Monday)
Time: 13:00pm - 14:00pm
Venue: R501, Shirley Chan Building
The Hong Kong Polytechnic University

(Conducted in English)

Abstract:

Airports are a vital part of the air transport industry. This series of studies discusses (i) airport pricing of airport aeronautical and non-aeronautical services, (ii) the role of business and leisure passengers for pricing and capacity investments, and (iii) airport congestion management strategies when market conditions vary.

In the first study, airport provides aeronautical and non-aeronautical services to air travelers. Aeronautical services include runways, control tower and others; non-aeronautical services (also called ancillary goods) include foods and beverages, accessories and so on. One important feature in our setting is that passengers can buy ancillary goods both at the airport and in the city-center. Thus, there is rivalry between the airport and the city-center for selling ancillary goods to passengers. Passengers can be myopic or foresighted depending on whether they take ancillary good prices into consideration when decide to travel or not to travel. Preliminary results indicate that the welfare-evaluation of equilibrium airport charges and ancillary prices can be independent of whether passengers are myopic or foresighted.

The second study considers a single congested airport that offers (only) aeronautical services to business and leisure passengers. Business passengers have a high time valuation and low price-elasticity of demand relative to leisure passengers. Profit- and welfare-maximizing pricing strategies are identified and compared to derive policy lessons. Preliminary results show the following that profit-maximizing airport pricing can be welfare-optimal when capacities are given, while profit-maximization can never be welfare-optimal when capacities are endogenously chosen. The results indicate that public-private partnerships where the operator is concerned with pricing and the government is concerned with capacity investments can reproduce the welfare-maximizing solution. Furthermore, this policy approach can make business as well as leisure passenger better-off relative to a purely privately operated and owned airport.

The third study will focus on airport congestion management. The airport uses slots or prices to control airport congestion and there are business and leisure passengers as in the second study. A major difference of this study relative to the other two studies described above is that it involves changing market environments.

Bio:

ZHANG Hanxiang is currently a PhD student under the supervision of Dr. CZERNY, Achim I.. His research interests are theoretical and empirical transport economics.

Please email to clare.lau@polyu.edu.hk for enquiries.

All are welcome!