

Choice Analysis of Ground Access to São Paulo/Guarulhos International Airport Using Adaptive Choice-Based Conjoint Analysis (ACBC)

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Abstract : Airports are demand-generating poles that affect the flow of traffic around them. The airport access system must be fast, convenient, and adequately planned, considering its potential users. An airport with good ground access conditions can provide the user with a more satisfactory access experience. When several transport options are available, service providers must understand users' preferences and the expected quality of service. The present study focuses on airport access in a comparative scenario between bus, private vehicle, subway, taxi and urban mobility transport applications to São Paulo/Guarulhos International Airport. The objectives are (i) to identify the factors that influence the choice, (ii) to measure Willingness to Pay (WTP), and (iii) to estimate the market share for each modal. The applied method was Adaptive Choice-based Conjoint Analysis (ACBC) technique using Sawtooth Software. Conjoint analysis, rooted in Utility Theory, is a survey technique that quantifies the customer's perceived utility when choosing alternatives. Assessing user preferences provides insights into their priorities for product or service attributes. An additional advantage of conjoint analysis is its requirement for a smaller sample size compared to other methods. Furthermore, ACBC provides valuable insights into consumers' preferences, willingness to pay, and market dynamics, aiding strategic decision-making to provide a better customer experience, pricing, and market segmentation. In the present research, the ACBC questionnaire had the following variables: (i) access time to the boarding point, (ii) comfort in the vehicle, (iii) number of travelers together, (iv) price, (v) supply power, and (vi) type of vehicle. The case study questionnaire reached 213 valid responses considering the scenario of access from the São Paulo city center to São Paulo/Guarulhos International Airport. As a result, the price and the number of travelers are the most relevant attributes for the sample when choosing airport access. The market share of the selection is mainly urban mobility transport applications, followed by buses, private vehicles, taxis and subways.

Keywords : adaptive choice-based conjoint analysis, ground access to airport, market share, willingness to pay

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