

摘 要

為健全台北市整體大眾運輸規劃，台北市政府曾針對台北市地區規畫五大客運站，經評估後確定推動者包括交九站、市府站。本研究係探討台北都會區國道客運站建置後，台北都會區內國道客運旅次需求與國道客運站月台、國道客運路線班次間之供需關係。研究目標年為各客運站及高速鐵路皆建設完成時期，研究中所探討之客運站包含交九站、市府站與板橋站。本研究透過旅行時間成本價值作為對旅客選擇影響之因素，可求得目標年尖峰時段(下午五至八時)民眾至各客運站搭乘不同路線客運之旅次需求班次數，進而將其班次供需數值進行調整以達到供需平衡之狀況。

研究中探討三種旅次分配情境，情境一為不考量旅行時間，而以鄰近地區客運需求為服務對象加以計算。情境二利用時間成本價值分配結果探討各客運集中地區之旅次供需狀況。情境三係因情境二中發現松江與士林地區旅次需求吸引性強，故考量設立圓山站提供往基隆、桃園等通勤旅次之服務。透過不同之功能定位與路線配置方式，共求得十種調整方案結果。方案評估係以使用者考量之總旅運時間價值成本最小、營運者總班車營運成本最小、管理者月台成本收益最大等三項貨幣化指標進行評估。本研究結果顯示，在不考量新設客運站之成本因素下最適方案為：客運路線班次分配參考情境一之結果，使旅客能就近搭乘，並設立圓山站(假設於捷運圓山站鄰近地區)。在功能定位上，交九與板橋站服務往基隆與西部各縣市路線，市府站服務台中以北之西部路線及東部路線，圓山站服務往基隆、桃園之短程通勤旅次。於目標年，板橋站須再新增四個月台數以滿足未來年之需求，並提出目標年與現年之客運路線班次數變異量，期能使各客運站使用更具效益，並同時提昇大眾運輸服務效能。未來可進一步探討台北縣地區新增客運站之可能性，與考量其他影響旅客選擇之因素。

關鍵字：國道客運、國道客運站、供需分析

Abstract

Taipei City government has planned five main Intercity-Bus terminals to integrate the scheme of public transit in Taipei City. Jiao Jiu and Shi Fu are the two terminals that have been approved after evaluation. The main objective of this study is to estimate the demand and supply of Intercity-Bus route numbers and platforms in Taipei City and Taipei County. Travel time cost is chosen to be the key factor for travelers to choose their terminals and trip route. This study first obtain route numbers in every Intercity-Bus terminal from the demand side, and then adjust the route numbers based on the balance between demand and supply.

There are three scenarios simulated in this study. For scenario one, we distribute trip demand into the nearest Intercity-Bus terminal. For scenario two, we use travel time cost to count up the trip attraction in every terminal. And for scenario three, we build a new terminal “Yuan Shan”, based on the results from scenario two. Finally, we can get ten alternatives from different route adjustment regulations. The evaluation of every alternative considers the monetary index including minimum total travel time cost for the users, minimum total vehicle operation cost for the operators, and maximum profits of platform rent for the managers.

After the analysis, the best alternative is adjusting route numbers according to scenario one, and building one more terminal of Yuan Shan terminal. The function for terminals is positioned as servicing western Taiwan cities routes for Jiao Jiu and Ban Chiao terminal, servicing western Taiwan cities routes but limited to Taichung and eastern Taiwan cities routes for Shi Fu terminal, and servicing routes to Keelung and Taoyuan for Yuan Shan terminal. The study also shows the variation of every route to every other city, and hopes to let every Intercity-Bus terminal become more useful and promote the public transit.

Key words : Intercity-Bus, Intercity-Bus terminal, supply and demand analysis