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New Jersey Department of Transportation
Bureau of Research

Technical Brief

GO BUS IMPACT ANALYSIS

NJ TRANSIT launched two relatively new enhanced bus services, Go Bus, which features improved bus stops with redesigned shelters, limited stop services to reduce running time, traffic signal priority, branding for visibility, and other characters aimed at providing a convenient commuting experience and efficient connections for corridor residents and commuters. NJ TRANSIT is interested in the shift in travel patterns that have occurred as a result of the GO Bus, including auto diversions and induced ridership. This study also sought to understand the impact of BRT-like elements on ridership and customer satisfaction.

Background

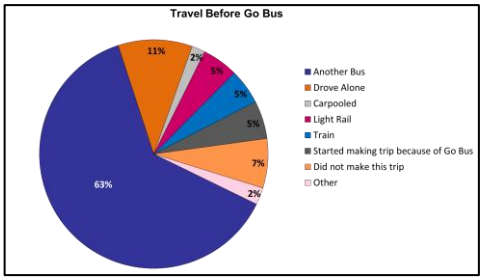
New Jersey Department of Transportation (DOT)/NJ TRANSIT contracted with the New Jersey Institute of Technology (NJIT) research team led by Dr. Liu to explore the impact of GO Bus service. The research team conducted an onboard survey on GO Bus and its parallel local routes, held focus groups, and conducted a stated preference survey to understand the value customers place on various attributes of service.

Research Objectives and Approach

NJ TRANSIT is interested in the shift in travel patterns that have occurred as a result of the GO Bus. This includes auto diversions and induced ridership. It is also important to understand the riders' perceptions of BRT-like elements and their impact on ridership and customer satisfaction.

Main Findings

As demonstrated in the graph, over 60% of the GO Bus riders came from another NJ TRANSIT Bus, showing the attractiveness of the enhanced GO Bus service over local bus service. This was also confirmed by the focus group discussions.



The second largest mode shift came from automobile users – about 11% of all GO Bus riders switched from driving alone and another two percent switched from carpools. This finding shows that high-quality bus services can compete with cars, helping to reduce traffic congestion and reduce the environmental impact of local travel.

Customers who switched from another travel mode to the GO Bus were asked to select the primary reasons they switched. Among all GO Bus customers, "convenience" emerged as the top reason, with 40% of responses. "Fewer stops," a distinguishing feature of the GO Bus service, garnered 33% of responses, followed by "faster service" and "frequency of service." These findings were confirmed by the MaxDiff results, which found that travel time and frequency attributes were valued twice as high as branding attributes. The cost of parking, cost of gasoline, improved bus shelters, and other reasons played comparatively smaller roles in motivating travelers to use the GO Bus.

Overall, 60% of responses included a time saving aspect of GO Bus service, i.e. fewer stops, faster service, and frequency of service. This is reflected in customers' perceived time savings as reported by customers in the survey, which averaged 16 minutes for GO 25 respondents and 20 minutes for GO 28 respondents. Based on a comparison of schedules between GO Bus and local parallel routes, the perceptions of time savings are greater than actual time savings. Actual time savings on the service is between 5-7 minutes for non-airport customers on GO 28 and 3-4 minutes on GO 25. For Bloomfield Avenue corridor customers traveling to the airport in the midday, direct service via GO 28 is estimated to save 17-27 minutes because it eliminates the need to transfer in downtown Newark. This is more in line with the perceived time savings.

The results of this study show that NJ TRANSIT's enhanced bus routes, GO 25 and GO 28, provide an attractive alternative to other modes of travel along the Springfield Avenue and Bloomfield Avenue corridors in Newark. While most, 63%, of GO Bus customers switched to using GO Bus from other local buses, roughly 13% switched from driving alone or carpooling, showing the potential of enhanced bus services to attract a broader spectrum of customers. Detailed analyses regards to attributes of service, customer satisfaction, travel time savings, and demographic and travel characteristics can be found in the final report.

The results of this study indicate that municipalities, transit agencies, and their customers can benefit from the introduction of enhanced bus services, even if they are not full-scale Bus Rapid Transit. The most important features to focus resources on are those that reduce travel times for customers, while branding helps draw attention to the service as a unique, premium service.

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A final report is available online at http://www.state.nj.us/transportation/research/research.html

If you would like a copy of the full report, please FAX the NJDOT, Division of Research and Technology, Technology Transfer Group at (609) 530-3722 or send an e-mail to Research.Division@dot.state.nj.us and ask for:

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