Abstract

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Setting a Fair-Fare Structure for Improved Transit Passengers’ Accessibility.

In transit planning, accessibility “to” (i.e. access to transit) and “through” transit (i.e. geographical coverage of transit) are considered as important service quality indicators (Beimborn et al., 2003 Handy and Clifton, 2001 Murray and Wu, 2003). Typically, travel time (or distance) is used as a measure for accessibility “through” transit. In recent studies, researchers pointed out that transit fare could be an obstacle to accessibility. For example, El-Geneidy (2016) suggested that travel cost (i.e. the transit fare one pays) would also influence accessibility through transit. In addition, a more recent study suggested that an increase in transit flat fare would result in a loss in accessibility. Such loss was found to be inversely proportional to the length of the trips (i.e. substantial for short trips and unworthy for long trips), which can be considered “unfair” for short-trip users (Ma et al., 2017). This study expands on Ma et al. (2017) and constructs a fair-fare structure for improved passengers’ accessibility. It is assumed that a transit agency needs to introduce a new fare policy that will cover its increasing capital and operating costs. A pre-determined loss of accessibility is set for all short, medium, and long trips and a new fare structure is established accordingly. The City of Kelowna, BC, is selected as a case study.