

Estimation of the Price Elasticity of Demand for Green-Car in Commuting Train

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The fare of local train Green-car (higher-class car) seats will affect not only its demand, but also that of regular car of the same train. Therefore, it is important to estimate the impact of the price change on the Green-car demand, especially during weekdays' commuting time when the overcrowding is at a high level. This research focuses on a Green-car's two-stage pricing structure where the price jumps by JPY 210 when travel distance exceeds 50 km. Then, this research estimates the price elasticity using regression discontinuity design. The estimation results show that the elasticity is significantly larger than one, which means that the price sensitivity to demand is at a high level. Pricing decisions should be made carefully based on the estimation results of price elasticity and the current overcrowding degree of regular cars and Green-cars.