

Promoting Better Health Through Active Commuting: Can We Pay People To Exercise?

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U.S. policies have promoted development favoring automobiles at the cost of all non-motorized transport (Sallis et al. 2004) but some policymakers today seek to reverse this trend. Bike/walk commuting offers one way to incorporate physical activity into everyday routines (Oja, Vuori & Paronen 1998) and address goals to increase physical activity (HHS 1996). But today, non-motorized transport options are not typically included in commute mode models. Economists have studied the elasticity of demand for transportation modes. For urban commuting, all vehicle modes have an elasticity of less than one, that is increasing the cost of commuting by car (or decrease the cost of an alternative mode) will have little effect on choice (Gomez-Ibanez, Tye & Winston 1999). Despite this, some believe that incentives promoting alternate modes will increase usage (Storchmann 2003). This study considers the effectiveness of a policy promoting non-motorized commuting through economic incentives.

This study analyzed the elasticity of demand of a recent bike/walk commuter incentive program. Over time, the incentive offered was reduced due to program budget constraints. Demand for commute trips was analyzed controlling for the incentive amount, distance traveled, longevity in program, non-motorized mode, gender and season. This study analyzed the 160 program participants who made at least 1 bike/walk trip during the 6 months before and after the incentive changed. A binomial probit model with random effects (Greene 2007; Greene 2007) showed an incentive elasticity of .13, meaning that the behavior of these commuters changed very little in response to the decreased incentive.

The incentive had little effect on the probability that a trip is made in any particular week, all other variables being held constant. Although none of the variables individually have a large impact on the decision to make a trip, gender has the largest effect on the decision to make a trip with the probability of being female decreasing the likelihood of making a trip. Winter and spring have a negative effect on the decision to walk or bike to work. Autumn has a positive effect on the decision to commute by bike or foot.

This research represents a preliminary investigation into the role incentives may play in promoting bike/walk commuting. While this research shows that small, economic incentives do not greatly increase demand for non-motorized commute trips, the literature shows that policy solutions affect demand for commute modes, but must be evaluated for likely impact before implementation, as this research suggests that a small incentive may be more of a reward for existing behavior than an impetus to change behavior. Further research could determine policy solutions to encourage non-motorized commuting and size the potential market for non-motorized commuting.

References

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