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Petrol prices and obesity

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Abstract

Using 13 waves of longitudinal data from Australia, we examine the relationship between petrol prices and obesity. Applying panel data models that control for individual fixed effects and the endogeneity of petrol prices, our results suggest that petrol prices have a negative effect on obesity. Specifically, our preferred instrumental variable estimates, which instrument for petrol prices using the Arca Oil Stock price and control for individual and time fixed effects, suggest that a standard deviation increase in petrol prices generates a 0.006 standard deviation decline in Body Mass Index (BMI), while a unit increase in petrol prices results in a 2 percentage point decrease in the probability that a survey participant is obese. These results are robust to several sensitivity checks. Back of the envelope calculations suggest that our results imply that a permanent \$1 per litre increase in petrol prices would reduce the number of people who were obese by 672,000 and save \$1.4 billion dollars in medical expenditure related to obesity every year. We also find that frequency of participation in physical activity and expenditure on meals eaten out are channels through which petrol prices affect obesity.

JEL classification: I12, Q41, R41

Keywords: petrol prices, obesity, body mass index, Australia



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