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Behavioral Anomalies and Fuel Efficiency: Evidence from Motorcycles in Nepal

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ABSTRACT

Air pollution is a grave problem in urban areas of developing countries, with the transport sector being one of the largest contributors to emissions as well as global warming. In Kathmandu, Nepal, motorcycles comprise the largest share of the total fleet of vehicles, and are responsible for a large share of total emissions from the transport sector. A possibility to reduce carbon dioxide emissions would be for individuals to switch to more fuel-efficient vehicles. However, a gamut of behavioral anomalies and market failures inhibit individuals from investing in fuel-efficient motorcycles (the well-known energy-efficiency gap). In this study, we use novel data from Kathmandu, Nepal to understand the socio-economic determinants of some of these behavioral anomalies and market failures. As a second step, we then evaluate their effect on fuel economy choices of individuals, and well as on the energy-efficiency gap in the choices that they make. We find that present-biased and loss-averse individuals are less likely to invest in more fuel-efficient motorcycles. Moreover, present-bias also plays a role in determining the energy-efficiency gap in their choices. These initial results provide novel evidence on the drivers of the energy-efficiency gap with respect to transport choices in low and middle-income countries, and thus on the effectiveness of different policy measures to address the gap.