Abstract:
We provide evidence of the existence and magnitude of an accident externality of driving, whereby a driver's decision to take to the road affects fellow drivers' risk of accident. Every Friday evening traffic flows in Israel falls sharply when the Sabbath begins and religious Jewish drivers refrain from driving, and then picks up again on Saturday evening when they take to the road again, especially in more religious areas. Using plausibly exogenous variation from this recurring natural experiment, we estimate the effect of traffic flow on the per-vehicle risk of fatal or injurious accident. On average, we find that a 10% increase in traffic flow induces a 13% increase in the total risk of accident and a 3% increase in the per-vehicle risk of accident. The effect is more pronounced when traffic flow is greater. The externality only emerges on a perilous class of road sections, suggesting that the underlying mechanism is one of limited driver attention.