Discussion of *"Time-Varying Risk Aversion? Evidence from Near-Miss Accidents"*, by Xi & Shum

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[1]IVASS

- Nice paper, published on ReStat, convincing evidence

- Further evidence on the importance of moving from outcome-based to behavior-based contracts

- Challenges traditional actuarial principle: more accidents(claims) more risk, higher premiums

- Main take-away: traumatic driving events make people safer in the short run

- Idea: preferences for risk are not stable over time and vary discontinuously

- Consistent with evidence of state dependence (Cosconati (2021), Ceccarini (2008))

Quick sum-up

- step 1: reduced form evidence on the causal effect of near-miss accidents on behavior using detailed telematic data
    - evidence of risk reduction in behaviors (cell usage, distance driven)
- step 2: structural model to identify the mechanism underlying the effect based on optimal choices of driving habits
- step 3: some figures: if the actuarial discount on near miss accidents is taken into account the actual premium would imply overall large savings

Caveat

1 data limitation on observable characteristics and claims occurrence/size of claims

2 estimation of accident probability might leave out other unobservable risk factors, more sophisticated GLM could be estimated

3 behavioral choices might (i) depend on further contractual features and (ii) be forward looking

Implications

- risk aversion varies for a relatively short amount of time (two weeks) $\rightarrow$ enough to change traditional pricing based on yearly claims?
- it depends on the frequency of near miss accidents $>>$ larger than real accidents
- strong case for real time insurance
- in Italy certain UBI contracts are charged on monthly basis
- incentivising real time insurance makes sense from an actuarial/behavioral viewpoint
- NO data to support this statement in the Italian context: would be nice to have info on driving habits, near-miss accidents, crashed and so forth ...