

To: The Honorable Bob Hall, Texas State Senator
Cc: Dr. Shashi Nambisan, Director, Alabama Transportation Institute
From: Steven Polunsky, Director, Transportation Policy Research Center
Date: March 6, 2019
Re: Review of *Motor Vehicle Safety Inspections for Passenger Vehicles in Texas*

Senator Hall, per your request we have reviewed the study “Economic and Safety Considerations: Motor Vehicle Safety Inspections for Passenger Vehicles in Texas.” From our review of this report, we are unable to conclude it substantively demonstrates that safety inspections save lives. Respectfully, we offer the following:

The three study tasks outlined in the report are:

1. Quantify the efficiency of the vehicle inspection program by analyzing the economic impacts of eliminating the passenger Motor Vehicle Safety Inspection Program in terms of potential cost and revenue changes for different entities impacted by the program;
2. Address the necessity of the Inspection Program by assessing the safety impact of eliminating the Inspection Program on all road users and vehicle owners in Texas; and
3. Make recommendations on whether the Inspection Program, as an element of vehicle titling, should be eliminated based on the economic and safety evaluations.

Strengths

- The structure and organization of the report are suitable and easy to read.
- The qualitative and quantitative approach methodology adopted are appropriate.
- The literature review is in depth and provides thorough coverage of the subject.
- Inputs from multiple stakeholders and data sources are suitably and sufficiently captured.

Potential Issues

- The definition of “efficiency,” reasons for selection of proxies for efficiency, and outcome of that analysis are unclear.
- Efficiencies are addressed in terms of direct cost to motorists of inspection, loss of revenues to the inspection station, and loss of revenues to the State of Texas. The study does not address potential efficiencies such as costs or benefits to the state and consumers from revenues associated with repairs.
- The study does not address alternatives to an annual inspection program such as
 - setting a minimum age of vehicle before inspections are required,
 - changing annual inspection requirement to multi-year,
 - active enforcement of vehicle condition laws,
 - mandatory inspection only at certain times such as at title transfer, or
 - incentivized voluntary inspections e.g. via insurance rates.

- The study's conclusion about effectiveness of inspection programs in other states is partly based upon out-of-state vehicles involved in crashes in Texas. This reliance may overstate the actual effectiveness due to issues such as selection bias – that is, drivers travelling long distances may select vehicles that are less likely to break down on a long trip, regardless of what other vehicles they may possess or have access to and their condition.
- The decisiveness of the report's conclusion seems inconsistent with the literature and with known shortcomings of research in this area generally. For example, on page 33 the authors note “the safety benefits of inspection programs are difficult to establish because of the limited amount of information available concerning the role that component failures play in highway crashes” yet the study confidently concludes “the fatality crash rate would be higher without such inspections.” Crashes are known to be the result of multiple factors. It is difficult to separate the effects of vehicle inspections in crash occurrence and hence severity of crashes without a comprehensive statistical analysis (e.g., econometric modeling). Descriptive statistics, as used in this work, may not provide enough evidence of the effect of vehicle inspection programs on crashes. We would not recommend their use as a sole basis for drawing definite conclusions and recommendations.
- The study lacks information about the number of defective vehicles on the road in Texas. Defective vehicle numbers and percentages should be compared to the overall fatality rate in Texas with respect to defective vehicles and other factors to place the issue in context.
- The study does not address the magnitude or impact of fraudulently issued stickers.
- The study was conducted outside of the context of modern safety initiatives such as Vision Zero and thus may not reflect current thinking in traffic safety.

Conclusion

We are unable to conclude based upon the information presented that the report substantively demonstrates that safety inspections save lives.

Contributors to this memo:

Dr. Gary Jordan
Dr. Kofi Adanu
Bouran Mozayen
Justin Fisher