The Effectiveness of Different Incentives Programs in Encouraging Safe Driving

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Abstract

This study examined the effectiveness of different financial incentives in improving drivers' behavior and their safety performance. The study examined the effect of awards through the comparison of driving behavior as reflected by speeds, tailgating, and frequent change of lanes without signaling. These behaviors were examined before, during, and after the experiment in order to determine whether the experiment has an impact on behavior even after the awards were stopped. The study examined the hypothesis that small awards with a relatively high probability of winning are more effective than large but rarely obtained awards.

The study offers a new approach to enforce traffic speed. While this approach has been tested in laboratory studies and simulations, the current research was the first to test it under real-world conditions in the field.

The current study had three main objectives: first, to examine the overall effectiveness of immediate rewards for safe driving; Second, to compare the effectiveness of small rewards with high probability versus large rewards with low probability on driving behavior, and the third objective was to examine whether the experiment had an impact on behavior after stopping of the awards.

Study participants were 133 bus drivers working at a private bus firm, "Metropolin". The experiment lasted for 86 days, during which the best drivers were awarded on a daily basis based on their safety performance. The level of safety performance was calculated using three major traffic violations: speeding, tailgating, and frequent change of lanes.

The study demonstrated that the combination of surveillance, using rewards (in this case a monetary compensation), and informing the drivers on their driving performance in real time brought about a lasting and significant decline in traffic violations. The results supported the hypothesis that financial incentives are effective in improving safe driving behavior, and have also shown that the improvement in driving was maintained in the period immediately after the compensations were stopped. The conclusions with regards to the inventive structure were less significant. It was difficult to infer unequivocally regarding the most effective incentive structure, as both groups showed a significant lasting decline in the amount of violations committed. Nonetheless, the results do show some advantage for small rewards with high

probability over large awards with low probability. The results failed to support the hypothesis that initially large rewards with low probability would be more effective but, as drivers realize they are less likely to receive such awards, small rewards with high probability will become more effective.

The study creates a new perception regarding the enforcement of speeding, shifting from expansive state-led enforcement carried out through the police and the juridical system towards cheap and effective incentive-based enforcement. The results can bring about the adoption of this incentive method by the bus firm, as well as other bus firms, insurance firms, and the Department of Transportation.