What motivates safe driving? Joy or punishment?
A comparison of the effects of gamification and sanctions

Dicle Berfin Köse contact@dicleberfin.com;
Benedikt Morschheuser benedikt.morschheuser@kit.edu

World Health Organization's report (2018) states that road traffic injuries are the main cause of death for children and young adults aged between 5 and 29 years, and they are the eight leading cause of death for all age groups. Reducing the number of deaths in road traffics, as one of the sustainable development goals, hasn't been reached yet; in fact the number of deaths has increased between 2013 and 2016 (World Health Organization, 2018). Road safety is being sustained by enforcing legislation regarding for example speed, drink-driving, seat-belt and helmet use. A growing trend in encouraging safe driving makes use of gamification: Drivies (Telefonica, 2015), SmartDriver (Easton, 2015), VivaDrive (VivaDrive, 2019) are only few examples of gamified applications that encourage safe and sustainable driving by changing driver behavior. Gamification has been employed in various fields such as learning and development of healthy and beneficial habits in order to increase long-term commitment and perseverance (Koivisto and Hamari, 2019). Its use in encouraging safe and sustainable driving is also promising; however, its effects and efficiency in improving driver behavior are under-studied (Koivisto and Hamari, 2019). In this project we aim to measure what motivates drivers more in terms of safe driving, and compare the effects of gamification against legislations. We base our hypotheses on self-determination and deterrence theories. The results of our study will have important implications regarding effective methods to motivate safe driving and related legislation design.

References
Easton, P. (2015). "Tower insurance gamify safe-driving with new app | Stuff.co.nz." Retrieved from https://www.stuff.co.nz/technology/apps/68409205/tower-insurance-gamify-safe-driving-with-new-app
Koivisto, J. and J. Hamari. (2019). "The rise of motivational information systems: A review of gamification research." *International Journal of Information Management*, *45*, 191–210.
Telefonica. (2015). "Telefónica I+D launches Drivies, an application which encourages better driving and offers savings on car insurance | News Detail | News | Press Office | Telefónica." Retrieved from https://www.telefonica.com/en/web/press-office/-/telefonica-i-d-launches-drivies-an-application-which-encourages-better-driving-and-offers-savings-on-car-insurance
VivaDrive. (2019). "VivaDrive - Traditional and electric fleet management platform." Retrieved from https://vivadrive.io/
World Health Organization. (2018). *Global Status Report on Road Safety 2018: Summary*. Geneva. Retrieved from https://apps.who.int/iris/bitstream/handle/10665/277370/WHO-NMH-NVI-18.20-eng.pdf?ua=1