A Study on Insurance Policy and Rating Plan of Autonomous Vehicles

Autonomous vehicles that can operate without the (human) control of a steering wheel and accelerator pedal are expected to be commercialized in the period leading up to and following 2030. Automotive manufacturers including Google, Tesla, Volvo, and Hyundai have already begun test drives on public roads in preparation for the commercialization of these autonomous vehicles. Unfortunately, some accidents have occurred during these initial tests, and as a result, consumers have reportedly shown little to no willingness or intention of purchasing such vehicles until a proven safety record has been established and their safety can be guaranteed.

If self-driving vehicles are successfully commercialized, many positive social impacts can be anticipated, such as an increased level of traffic efficiency, a decrease in the number of car accidents, and enhanced transportation mobility—especially for vulnerable people like the elderly and disabled. In turn, this move toward autonomous vehicles would affect the insurance industry, particularly in the case of automobile insurance due to the expected sharp reduction in traffic accidents. The result would be a drop in the magnitude of premiums for automobiles and long term savings insurance. In contrast, cyber insurance and product liability insurance would be augmented. The overall impact on the insurance industry will ultimately be influenced by changes in liability theory and in the agents that would be held accountable depending on the level of automation driving that is achieved.

We suggest that the liability regime and insurance system respond and be prepared for the upcoming commercialization of autonomous vehicles. Initially, there is no problem in applying the current liability regime for partially autonomous cars. However, once fully automated vehicles are commercially available, it will be indispensable to make changes in applying liability from third liability insurance to no-fault
insurance. Ultimately, insurance policies and rating plans will have to be modified so that they appropriately reflect the risk and hazard of self-driving vehicles. In particular, rating plans should be changed from a driver based rating system to an autonomous driving system and must take into account the unique risk of each car.

This report seeks to provide useful information on international issues regarding the commercialization of autonomous vehicles as well as a discussion about the necessary responses insurance systems in several countries including the USA, Japan, and U.K are taking. Lastly, this paper demonstrates the future direction of the insurance system and its application methods in Korea in response to the common using of autonomous vehicles.