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Self-driving vehicles generate enthusiasm, concerns worldwide

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Google's self-driving car

Despite safety concerns about equipment failure, a majority of drivers on three continents have high expectations for autonomous vehicles.

"Recent advances in autonomous vehicle technology have helped bring self-driving vehicles to the forefront of public interest," said Brandon Schoettle of the University of Michigan Transportation Research Institute. "Self-driving vehicles are commonly envisioned to be the

ultimate, full embodiment of connected-vehicle technology, an area that is currently the focus of several large research projects and government support."

Building on an earlier study on public opinion regarding self-driving vehicles in the U.S., Great Britain and Australia, Schoettle and UMTRI colleague Michael Sivak expanded their survey to include more than 1,700 respondents in India, China and Japan.

They found that about 87 percent of respondents in China and 84 percent in India have positive views regarding autonomous and self-driving vehicles, compared to 62 percent in Australia, 56 percent in the U.S., 52 percent in the U.K. and 43 percent in Japan. Half of the Japanese respondents were neutral, while the U.S. registered the highest percentage of negative views (16 percent) among the six countries.

According to the study, more than 80 percent of respondents in China, India and Japan believe that self-driving vehicles would reduce both the number and severity of crashes, compared to roughly 70 percent in the U.S., U.K. and Australia.

The Chinese and Indians are also more optimistic that autonomous technology would lead to less traffic congestion (72 percent of respondents in both countries agree) and shorter travel times (74 percent in India, 68 percent in China). On the other hand, 56 percent of Japanese respondents and less than 50 percent in the U.S., U.K. and Australia believe it would ease congestion. Likewise, less than 50 percent of respondents in those countries agree that it would shorten travel times.

Although more respondents in China and India expressed favorable views regarding the benefits of self-driving cars, the two countries differ when it comes to concerns about riding in a completely autonomous vehicle. About 79 percent of Indians said they would be very or

moderately concerned, compared to 49 percent of Chinese. Among the other countries, the results were 67 percent for the U.S., 57 percent for both Australia and the U.K., and 52 percent for Japan.

Chinese and Indian respondents were more concerned about equipment failures, system and vehicle security (from hackers), data privacy (location and destination tracking), and interacting with pedestrians and bicycles than those in the study's other countries. Nonetheless, much higher percentages of Chinese (96 percent) and Indians (95 percent) are at least slightly interested in owning a self-driving vehicle, compared to those in Japan (77 percent), Australia (68 percent), the U.S. (66 percent) and the U.K. (63 percent).

"Respondents in the six countries surveyed, while expressing high levels of concern about riding in vehicles equipped with this technology, mostly feel positive about self-driving vehicles, have optimistic expectations of the benefits and generally desire self-driving vehicle technology," Schoettle said.

Provided by University of Michigan