

UGM Students Win Potential Analysis Competition of High Speed Rail

Tuesday, 23 August 2016 WIB, By: Marwati



Students from Faculty of Engineering UGM successfully won first place in the *National Scientific Essay Contest* at the University of Tarumanegara on June 10, 2016. They successfully won the title after beating dozens of other teams from various universities in Indonesia. They are Dhirta Parera, Kemal Fardianto, and Yogi Andriyanto. All three of them are students of the Department of Civil and Environmental Engineering.

Dhirta said that in the competition participants were asked to submit a scientific paper entitled *Analysis of the Potential and Problems of High Speed Rail (HSR) for Jakarta-Bandung Route*. Then, the five best works were selected to present their papers in the final round. The five finalist are UGM, ITB, Tarumanegara University, Atma Jaya University, and the Krida Wacana University.

"In the final, we presented analysis that explains the potential loss incurring Indonesia-China High Speed Rail company due to the inability to attract passengers. We compare the advantages of each type of transportation in Jakarta-Bandung that already exist," he said, Tuesday (23/8), at the Faculty of Engineering.

Dhirta explained that car is still the main choice of transportation for Jakarta - Bandung road trip. At least 127,133 trips are made per day by private car, followed by public transportations which carry 13,000-14,000 passengers per day, a large bus carries fewer than 1,000 passengers per day, and Argo Parahyangan Train carries 2,000-2,500 passengers daily.

As to meet the investment value which is 72,5 trillion rupiah, the minimum number of passengers per day should reach at least 21,134 people. The figure is considered unrealistic to be achieved. In addition, the ticket price is rather expensive which is 200 thousand rupiah.

"Is it realistic that the train could attract that many passengers while there are other better alternatives? It would be difficult for people to switch to this transportation type," he explained.

Dhirta added, from the calculation of the value of investments that are spent by a consortium of state-owned enterprises, they will likely to lose money after the operation of fast trains.

The students also offer a solution to this problem by developing access and intermodal integration. One of them by connecting the train station with other public transport in the city, such as transit rapid bus, light rapid transit, and mass rapid transit. The other is traffic demand management for Cipularang highway. By implementing traffic demand management (TDM) at the Cipularang highway will reduce the use of private cars. The TDM mechanism that is proposed by the students is by raising tariffs for private car with passengers less than 4.

"This policy is estimated to affect private vehicle users to switch to the High Speed Rail," he concluded.

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