Preliminary Study of Malaysian Eco-friendly Car Selection by using Analytic Hierarchy Process

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ABSTRACT

As the global community is moving towards the usage of a cleaner technology, automotive industry has enforced the car to be produced to become environmentally friendly, or eco-friendly. Malaysia aims to produce 200,000 electric vehicles (EV) by the year 2020 but this effort might be halted due to the fact of electric vehicle's sales which is not really promising for the time being. This paper attempts to investigate the current preference of Malaysian to buy their car, and whether they really need to buy the eco-friendly car. An Analytic Hierarchy Process (AHP) model for Malaysian eco-friendly car selection is developed by this research which involves group judgment of 22 respondents. The result indicates that safety is the highest priority for the Malaysian to buy cars, followed by fuel economy, services, performance, affordable price, emission and design. Two of the criteria which are closely related with eco-friendly factor which are fuel economy is ranked at 2nd whereas emission is ranked at 6th. This concludes that Malaysian still consider eco-friendly factor, which also justify the selection of AHP model for the best eco-friendly car to be Nissan Leaf (2016), followed by Mercedez Benz C350e (2016), Hyundai Ionic HEV (2017), BMW i8 eDrive (2017) and Toyota Camry Hybrid.

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