

Effect of Covid-19 lockdown on mobility and traffic accidents in Malaysia

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ABSTRACT

With the rapid spread of the coronavirus (COVID-19), the Malaysian government implemented a series of lockdown measures to break the chain of COVID-19 within the community. The lockdown measures were separated into three phases, namely movement control order (MCO), conditional movement control order (CMCO), and recovery movement control order (RMCO). Due to limited research conducted, this paper aims to investigate the effect of COVID-19 lockdown on mobility and traffic accidents in Malaysia. Quantitative data were collected from the internet and the government agency. They were analysed through descriptive and inferential statistics. Descriptive statistics were used to analyse the changes in mobility and the number of traffic accidents in different aspects. Meanwhile, inferential statistics such as simple regression analysis were applied to validate the relationship between mobility and the number of accidents. The results were presented using graphical and tabular methods. The findings show that the mobility dropped by 64% on average during MCO compared to a baseline value computed during the pre-lockdown period. The reduction in mobility during CMCO and RMCO was 40% and 15%, respectively. Next, the regression analysis reveals a strong positive relationship between mobility and the number of traffic accidents. Hence, the reduction in traffic accidents can be concluded as an impact of COVID-19 lockdown. The reduction in the number of accidents during the three lockdown periods was: MCO (73%), CMCO (46%), and RMCO (19%), compared to the average of 2015-2019. Besides, it was found that the reduction in the number of traffic accidents was greater than the reduction in mobility during the lockdown periods. This suggests that traffic reduction has a multiplicative effect on road safety. Moreover, the findings reveal that the reduction in severe and fatal accidents was greater than the reduction in mobility. This suggests a positive effect of COVID-19 lockdown on the severity of traffic accidents. This study provides an insight into the effect of COVID-19 lockdown on traffic patterns in Malaysia. It also provides important implications for traffic management.

KEYWORDS

COVID-19; Traffic accidents; Mobility; Traffic management

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