

Utilization of Vehicle Routing Big Data for National Road Policy

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Summary

1. Traffic volume and traffic speed are key indicators considered when formulating a road policy, and the reliability of these data on volume and speed of traffic determines the effectiveness of following road policy.

- Traffic volumes are minimally or can hardly be captured at non-highway roads and are generally measured once a year.

2. Where Vehicle Routing Big Data which widely collects and aggregates information on vehicle's position and time history, however, such data are rarely utilized.

- Navigation data are utilized mostly to draw traffic communication information, whereas electronic operated recording services are utilized only for the purpose of driver safety education.

- U.S INRIX produces various new type of data through Vehicle Routing Big Data which weren't given from pre-existing transportation data and sells it to public sectors where subject data plays integral role in policy making process.

3. Vehicle Routing Big Data complements technical and spatial limitations of pre-existing traffic data.

- Analysis on characteristics of road usage, traffic flows and driver behaviors that weren't viable from pre-existing data conditions are made available by the application of Vehicle Routing Big Data in which the geographical scope of data collection is vast enough to capture data from regions where it was not covered beforehand.

Policy Implications

1) To strengthen government supports to enhance the utilization of Vehicle Routing Big Data at the policy level

- The Government should play a leading role in resolving institutional and technical constraints from early stage to aid efficient collection, liaison, and utilization of data in order to ensure sample size that is appropriate.

2) To utilize Vehicle Routing Big Data for evaluating road functions

- Vehicle Routing Big Data overcomes limitations of pre-existing data and makes evaluation on road functions feasible by its extensive data provision of origin and destination location by vehicle types, vehicle driving path, and transit time which all these data could also be distributed while categorized into designated routes and specific sections of choice.

3) To utilize Vehicle Routing Big Data for selecting roads for strategic road management

- With continuous budget constraints, investment efficiency should be strengthened by choosing key roads as targets of strategic road management and as Vehicle Routing Big Data already collects nationwide information which makes evaluation on road functions feasible, roads for strategic management can be easily selected with given data.