

Research Trends and Results

Analysis of Relation between Trend of Social Economy and Index of Road Traffic

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1. Introduction

Traffic volume is measured by vehicle sensors placed at fixed observation points. In recent years, the technology to deal with these data has progressed and the possibility of utilizing these data has widened. In this research, on the base of road transportation data such as continuously observed data of traffic volume and probe data of general vehicles recently accumulated and so on, we tried to grasp the social economic trends. If we can read social economic trends through road transportation data, from the viewpoint of immediacy of gaining data, it will become possible to widely supply profitable information to society.

2. Relation with Economy

About business climate, we analyze the relation between continuously observed data of traffic volume and index of business conditions and each index consisting this. In this analysis, we focus on if the index of traffic volume goes in front of business climate, correspond with it or come after it. We also focus on how we should handle the data of traffic volume to use it adequately.

3. Relation with Tourism

We are analyzing the relation between tourism and continuously observed traffic volume. Tourism is a local industry in the trend of social economy. As the index concerning tourism, there is a statistical investigation of incoming tourists. According to “Universal Standard Concerning with Statistics of Incoming Tourists (2009, 12, Ministry of Tourism)” it is arranged within 5 months and announced in the cycle of quarter. Comparing with these statistics, the cost is low because road traffic data is not observed by manpower, and quick summing is possible in short term or short time zone because of all time observation. It could be used for the trend prospect in numbers of tourists until the announcement of precise statistics. We analyze the

relation between traffic volume and the number of incoming tourists at the targets of some sightseeing places. Considering the characteristics of the district such as the relation between the locations of continuously observation points and sightseeing places, the influence of common traffic inside the sightseeing place and main transportation of tourists, we are to pick up sightseeing places that enables to grasp the trend of tourist’s number through road traffic data.

4. Influence of Snowfall

In the regions with snow coverage and low temperature, snowfall during the winter season has a large influence on local economy and daily lives. By removing the snow, they try to lessen the influence, however, the profits gained by removing the snow has not been measured properly. There are the regular observation traffic data at every observation point whenever it’s snowfall or not. Together with the weather data, such as the depth of snowfall, the relation between the situation of the road face and the traffic data at the observation points can be found. Moreover, using probe car data, there is a possibility that we can find more details in the relation between the road face situation and the traffic data on the road network. In our research, using this method, we try to analysis an estimate of the profits of snow removing.

5. Conclusion

Road transportation data such as continuously observed traffic volume has been used in the phase of infrastructure maintenance and management. However, utilizing in the phase of social economy for wider supply of information is to be researched hereafter. We plan to announce the results of analyzing what we have introduced here at any time.