



## Analysis of External Environmental Factors Which Affect the Development of Ride-sharing Platform Based on ISM model, Examples of DiDi

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## Research Highlights

This paper mainly uses Interpretative Structural Modeling Method (ISM) model to clarify external environmental factors which affect the development of ride-sharing platforms, and to understand their hierarchy and importance. There will be a 5 layers ISM diagram for the external environmental factors, from the diagram, one of the significant conclusion is that the users of ride-sharing platforms pay more attention to the problem of security than people think, and this is where ride-sharing companies ignore.

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## Research Objectives

Ride-sharing is one of the biggest hot pot of sharing economy, as a ride-sharing platform, Uber has become the leading enterprise in the sharing economy. But in China, Uber didn't pay attention to localization for the users, quickly, was replaced by DiDi. Now DiDi has been the biggest ride-sharing platform in China, but in the second half of 2018, several serious security problems happened, two young women were raped and killed by DiDi drivers, the entire ride-sharing platform has been seriously doubted. From Uber was replaced by DiDi to entire ride-sharing industry was seriously doubted, people will ask what is the external environmental factors which affect the development of ride-sharing platforms? And what is the most important? What is the less important? This paper will try to answer those questions.

## Methodology

This paper mainly uses Interpretative Structural Modeling Method (ISM) model, which decompose the complex system into several subsystem elements, and use people's practical experience and knowledge as well as the help of the computer to finally form a multi-level hierarchical structural model, to clarify external environmental factors which affect the development of ride-sharing platforms, and to understand their hierarchy and importance.





## Results

According to ISM model, there will be 5 layers for the external environmental factors which affect the development of ride-sharing platforms, the top layer which is the most important is L5, it contains “core technology and support”, “industrial economic strength” and “industry policies and laws and regulations”; the L4 layer is “industry management level (especially security management)” and “internet technology implementation (especially passenger safety technology)”; L3 layer is “industry size”, “infrastructure”, “credit mechanism” and “smartphone payment problem”; L2 layer is “industry attribute”, “change in travel mode”, “population density”, “the willing of car owners participate in ride-sharing” and “user responsibility”; L1 layer is the target “the development of ride-sharing platforms”.

## Findings

The users of ride-sharing platforms pay more attention to the problem of security than they think, and this is where ride-sharing companies ignore, Ride-sharing companies must increase investment in safety technology and management practices.

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