

Tradable breakfast coupon economics experiment under the U-PASS program well underway

July 1-12, 2019, a research team headed by Prof. Wang Yacan and Dr. Geng Kexin from the School of Economics and Management of Beijing Jiaotong University and Prof. Erik Verhoef from Vrije Universiteit Amsterdam jointly designed and conducted a tradable permit economics experiment at our school. This experiment is one of the research projects under the program “Urban public administration and service innovation: new-type urban mobility management and policy” (U-PASS), funded by the National Natural Science Foundation of China (NSFC) and Joint Programming Initiative Urban Europe (JPI UE). In addition, the experiment received generous support from the CCYL committees of the School and BJTU, the logistics group and the security office of the school.

The tradable permit market mechanism allows participants to freely trade within the market by constraining the total quantity of permits, thus reasonable allocating scarce resources, intended to address the external problems caused by environmental pollution and also serving as one of the ways to resolve the traffic congestion problems. Most of the existing studies about travel tradable permits verify the effectiveness of permits through theoretical models. This study involves observing the actual travel choices of travelers under the tradable permit mechanism through field experiment and from the perspective of traveler behavior, and verifies the operability, understandability and market stability of tradable permits in alleviating urban traffic congestion, thus providing a point of reference for design of tradable permits in rush hours.



Picture 1. Prof. Wang Yacan guides the conduct of experiment onsite.



Picture 2. Students involved in the experiment collect breakfast.

This experiment will last for two weeks in total, involving 100 freshman and sophomore students from the School of Economics and Management. During the event, participants may collect breakfasts by presenting their breakfast coupons from 6:50 to 8:30 am each day, while capable to trade the breakfast coupons online using mobile APP at any time and place. The experimental results show that the tradable breakfast coupons can change the dining time choices of students and effectively reduce the dining population during peak hours by 20% ~ 30%, thus achieving the actual results of peak shaving to a certain extent. Students all expressed their interest in this experiment, adding that participation in this experiment allows them to gain a deeper understanding of the economics experimental methods and the behavioral economic theories.



Picture 3 Dr. Geng Kexin takes group photos with logistical personnel.

The U-PASS Program, started in March 2019, was bided for jointly by University of Leeds (ITS), Vrije Universiteit Amsterdam and the transport economy and management research team of BJTU. The program unfolds around research into urban public management and governance, service innovation and policy, traffic modeling and optimization and traffic behavior experiment and provides innovative approaches to urban transport service and policy design, new-type traffic experiment design and new-type traffic model development through cooperative urban traffic modeling analysis and empirical research, with a view to exploring the frontier issues of the urban transport sustainability from multiple perspectives by combining the present urban development practices and theoretical research.