

A Study on User Behavior for I Pass: Using Kaohsiung Mass Rapid
Transportation as an Example

吳玫瑩, 周菡葦, 翁永健, 余培元

Information Management

Computer Science and Informatics

meiying@chu.edu.tw

Abstract

I Pass, the electronic ticket used by Kaohsiung Mass Rapid Transportation (MRT) system, is a contactless electronic ticket developed on the basis of the RFID technology to increase convenience of this public transit system and ridership. When this technology was first introduced to Kaohsiung MRT, local citizens showed a lower level of acceptance of this technology. Therefore, in order to increase Kaohsiung citizens' acceptance of the electronic ticket, I Pass, we should first investigate their usage of this new technology.

In this paper, we adopt the Unified Theory of Acceptance and Use of Technology (UTAUT) to investigate Kaohsiung citizens' intention and behavior to use I Pass. The research structure comprised of six dimensions: Performance expectancy, Effort expectancy, Social influence, Facilitating conditions, Behavioral intention, and Use behavior. A questionnaire survey was conducted on citizens who used I Pass to ride the MRT system. The questionnaire quality was tested using various measures, and the relationships between dimensions and their strengths were explored using Structural Equation Modeling (SEM).

Results showed that the effort expectancy and social influence are latent variables that have significant and positive effects on behavioral intention; facilitating conditions and behavioral intention have significant and positive effects on use behavior. Through validation of this research, main factors affecting users' usage of I Pass were explored. The result could be a reference for Kaohsiung Rapid Transit Corporation(KRTC) on future development of I Pass.

Keyword : I Pass, MRT, Contactless electronic ticket, RFID, UTAUT