

# [107] An analysis on rescheduling behavior using web-based reservation data of car sharing system

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## 1. Introduction

Needs for understand activity schedule

- Conventional activity diary only provide revealed patterns
- Computerized survey require significant participant's load
- Possibility of passive systems:

**Web-based reservation system!**

## 2. Objectives

Web-based reservation system of car sharing is used to investigate rescheduling behavior

- How often is activity rescheduled?
- What type of activity is rescheduled?
- What part of activity is changed?
- How many hours can be postponed?

## 3. Methods

Data: Logs of reservation requests of Kyoto Public-Car System in 2000

User ID, user name, request time, result of request, reason for rejection, origin depot, destination depot, check-out time, return time, purpose, etc.

Rescheduling was identified by a request which was made after rejected request

Models:

- Logit model of rescheduling type
- Regression of difference between original and re-requested check-out times

## 4. Results

Type of rescheduling by trip purpose

Purpose	Business	Shopping	Commute	Total
Sample size	456	206	165	1306
Re-request rate	<b>51%</b>	<b>53%</b>	<b>36%</b>	<b>49%</b>
<i>Change of</i>				
Start time	10%	10%	17%	10%
Return time	23%	28%	25%	23%
Dest. depot	5%	7%	7%	7%
Start & return	<b>37%</b>	<b>28%</b>	<b>26%</b>	<b>33%</b>
Start & dest.	3%	4%	1%	4%
Return & dest.	4%	8%	1%	5%
Start, return & dest.	7%	8%	1%	7%

Logit model of rescheduling type:

- Elderly has lower probability of changing destination depot
- Female has higher probability of changing start & return time
- Longer usage has higher probability of changing return time (shortening)

Change in start time

	%
More than 1 hr. earlier	4.2
More than 30 min earlier	3.1
Within 30 min	74.5
More than 30 min after	6.8
More than 1 hr. after	<b>11.4</b>
Sample size	385

Regression model of change in start time:

- Reservation requested well in advance has a larger change in start time

## 5. Conclusions

Logs of reservation system can provide information on rescheduling behavior to some extent with no additional survey cost