THE EFFECTS OF ICT USE ON TIME PLANNING OF SOCIAL ACTIVITIES: THE EXPERIENCE IN METRO MANILA, PHILIPPINES

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Abstract:

The advent of information, communication and technologies (ICT) has permeated the daily life of many people in so many ways. For instance, the utilization of ICT enables to do more social activities in constant coordination. With the wider diffusion of ICT, social networks expand because of the ability to nurture networks that are more complex. Furthermore, travel is either induced, reduced, or substituted by the use of ICT.

When ICT use rarely existed, transport studies mainly analyzed the relationship of socio-demographic characteristics to the social activity participation and subsequently to travel. For example, Lu and Pas (1999) applied the structural equation model (SEM) to better capture and understand travel behavior. They revealed that travel behavior can be better explained by including the aspect of activity participation. They also found that a significant relationship between in-home and out-of-home activity participation exists.

Since the nascent of high technologies has been ubiquitously essential and inseparable to the daily activities mainly due to its extensive application that changes people’s lifestyle, new travel patterns are produced, which did not necessarily exist before ICT takes place. Wang and Law (2007) pointed out that ICT use is related to travel behavior and that the wide application of ICT probably leads to more, not less, travel arguing the statement of Mokhtarian (2003) on the substitution effect on travel. On the other hand, the study by Hjorthol (2008) revealed that there exists the correlation of short planning time and the use of mobile phone. Dijst (2006) suggested that the use of mobile phone fulfils the need for instantaneous social contacts. Furthermore, the studies considering the social network and travel patterns has been grown-up, primarily initiated by Axhausen (2003) suggesting that social network influences travel patterns. Recently, Carrasco et al (2006) proposed a methodology on collecting social network data and associated it
to the social activity-travel pattern. With the aforementioned studies, it is the motivation of this study to further include the relationship of ICT use to time planning and to social network in the analysis of travel behavior.

The objective of this study is to analyze the ICT use, in addition to socio-demographic characteristics, as to how it would change the travel behavior and the patterns of social activity participation. The study hypothesizes that the upsurge effect of ICT is undeniably emerging to society and infiltrating swiftly to the daily comings and goings. With reference to the study of Lu and Pas (1999), travel behavior is only affected by socio-demographic characteristics and activity participation. We show the conceptual structure of ICT use, social network, time planning, social activities and travel in Figure 1. The ICT use might significantly affect the time planning of social activities to the composition of social network of the people as well as to travel. Specifically, in Figure 1, the ICT use might have a negative relationship on the time planning horizon for participating social activities. The reason behind is that ICT has been so convenient and efficient to use and this may hold true across and even in countries with less ICT penetration.

To verify the hypothesis, a survey was conducted in the universities within Metro Manila, Philippines in 2007. This study would be pioneering for the developing countries, because most of the researches considering the effect of ICT were in the developed countries, like Switzerland, Canada and the USA. The targeted respondents of the survey were the participants from pre-selected universities, both state and private universities. There were 537 respondents gathered consisting of students, office staffs and professors. The survey questionnaires contain two parts: (1) main questionnaire and (2) name generator. The main questionnaire hopes to capture the patterns of social activities, the patterns of ICT use, as well as the time planning of activities by the respondents while the name generator elicits the number of social contacts, the relationships of social contacts to the respondent and the approximate distance of the social contacts.

![Figure 1 Hypothesis of the effects of ICT use](image-url)
The SEM has been applied for empirical testing of the hypothesis. Based on the empirical results, we find that ICT use strongly affects the structure of social network as well as on how the participation of social activities was being planned. For instance, planning time to visit friends is normally decided at any instant of time whereas planning time to attend social organization’s activity requires a much longer time. This result corresponds to the suggestions of Golob (2000) that cell phones, other portable computers, and communication devices have redefined our ability to plan or conduct business and dynamically schedule activities. More importantly, the results show that ICT use directly affects the travel behavior. We also find that the composition of social networks has significant effects on the participation of social activities: the respondent who has wider and larger batch of friends has higher possibility of participation in social activities.

In conclusion, the study revealed that there is a relationship between ICT use and the social network, both of which influence to travel behavior. The empirical results indicated that, aside from socio-demographic characteristics, it would be important to take note on the influx of ICT and the roles it portrays, particularly on time planning where it is capable to organize and reorganize activities, to the patterns of social activity participation and travel behavior. The data did not furnish the set of in-home activities but for further research endeavors to include this as well.

References:


