Towards understanding consumers' acceptance of location-based services in mobile applications

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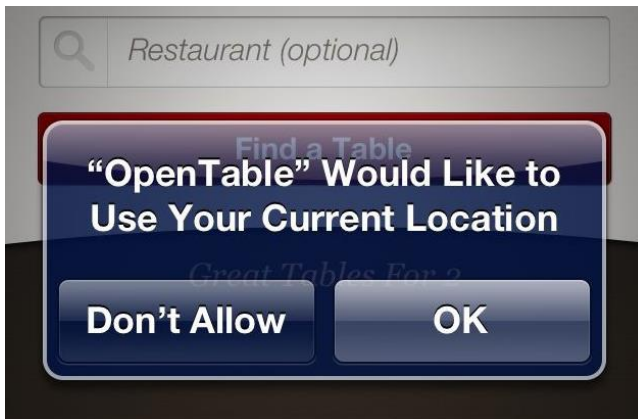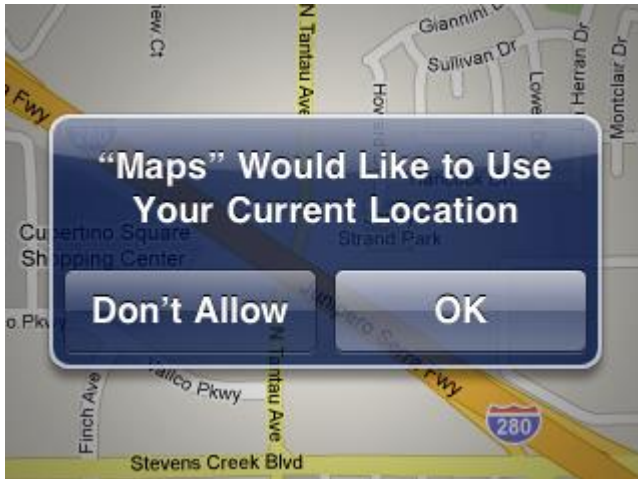Tanja Komarac, univ. spec. oec.

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Introduction

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Introduction

- permission-based nature of smartphones' location-based features

- *What drives consumers' acceptance of location-based services (LBS) in mobile applications?*

- the purpose of the paper: **to investigate the major drivers of consumers' intention to use and actual use of LBS in mobile applications**

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Location-specificity in mobile marketing

- mobile marketing: from communication to one-to-one marketing channel (Leppäniemi, Sinisalo, & Karjaluoto, 2006; Smutkupt, Krairit, & Esichaikul, 2010)

- properties of mobile devices that have marketing implications
  - portability/ubiquity, untethered/wireless feature, personalization, two-way communication, and **location-specificity** (Shankar & Balasubramanian, 2009; Smutkupt, Krairit, & Esichaikul, 2010)

- the emergence of LBS - services that depend on and are enhanced by positional information of the mobile device (Dhar & Varshney, 2011)
  - "Where am I?" queries; point of need information delivery; niche consumer applications; and industrial and corporate applications such as tracking services

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Location-specificity in mobile marketing

- location-based advertising (LBA); location-based couponing; location-based social networks; location as a part of the user experience…

- Who controls the location data? – the shift of power from network service providers to LBS providers (companies, brands)

- *location-based marketing* is **more advanced, intrusive and contextual form of mobile marketing** and if it is done correctly, it can provide customers with just-in-time, in-context, personalized marketing offers and services (Persaud and Azhar, 2012)

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Conceptual model of consumers' acceptance of location-based services in mobile applications

- current evidence is fragmented and lacks consistency to some extent

- the focal context of many past studies was location-based advertising as the most prominent marketing application of LBS in the 2000's (e.g. Pura, 2005; Bruner II & Kumar, 2007; Okazaki & Taylor, 2008; Unni & Harmon, 2007; Banerjee & Dholakia, 2008; Xu, Oh, & Teo, 2009; Xu, Luo, Carroll, & Rosson, 2011; Andrews, Drennan, & Russell-Bennet, 2012)

- review and extraction of the main drivers of acceptance from the existing literature in order to propose a parsimonious and robust framework for further examination

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Conceptual model of consumers' acceptance of location-based services in mobile applications

- main drivers of acceptance of LBS and location-based mobile marketing activities

   1. **perceived value** (Pura, 2005; Xu, Oh, & Teo, 2009; Xu, Luo, Carroll, & Rosson, 2011; Persaud & Azhar, 2012)

   2. **attitude** (Pura, 2005; Bruner II & Kumar, 2007; Xu, Oh, & Teo, 2009; Wells, Kleshinski, & Lau, 2012)

H1a: Perceived value of LBS in mobile applications is positively related to attitude towards LBS in mobile applications.

H1b: Perceived value of LBS in mobile applications is positively related to intention to use LBS in mobile applications.

H1c: Perceived value of LBS in mobile applications is positively related to actual use of LBS in mobile applications.

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  2. **attitude** (Pura, 2005; Bruner II & Kumar, 2007; Xu, Oh, & Teo, 2009; Wells, Kleshinski, & Lau, 2012)

H2a: Attitude towards LBS in mobile applications is positively related to intention to use LBS in mobile applications.

H2b: Attitude towards LBS in mobile applications is positively related to actual use of LBS in mobile applications.

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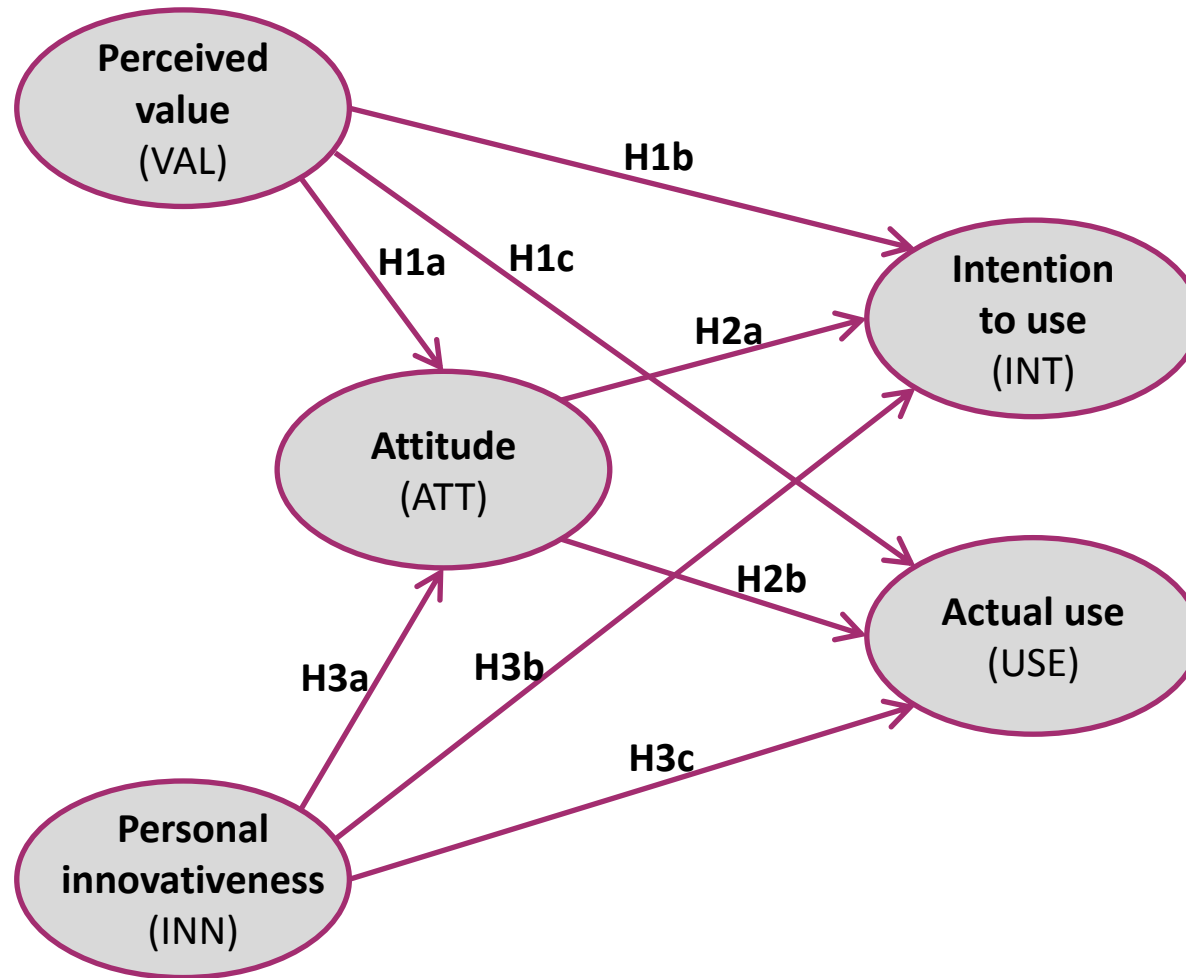
  3. **personal innovativeness** (Xu, Luo, Carroll, & Rosson, 2011; Gao, Rohm, Sultan, & Pagani, 2013)

H3a: Personal innovativeness is positively related to attitude towards LBS in mobile applications.

H3b: Personal innovativeness is positively related to intentions to use LBS in mobile applications.

H3c: Personal innovativeness is positively related to actual use of LBS in mobile applications.

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Methodology

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Methodology

- convenience sample (snowball sampling) of 254 respondents (online survey)
  - 64% women
  - age structure: 18-24 (56%), 25-34 (27%), 35-44 (11%), 45-54 (4%), and 55+ (2%)
  - students (57%); employed business professionals (39%); others (4%)

- variance-based structural equations modeling by means of SmartPLS 2.0 (Ringle, Wende, & Will, 2005)

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Results – assessments of the measurement model

	AVE	Composite Reliability	Cronbach Alpha
ATT - Attitude towards LBS in mobile applications (6 items)	0,774667	0,953666	0,941366
INN – Personal innovativeness (3 items)	0,770791	0,909807	0,852460
INT - Intentions to use (4 items)	0,824567	0,949449	0,928680
USE - Actual use of LBS in mobile applications (1 item)	1,000000	1,000000	1,000000
VAL - Perceived value of LBS in mobile applications (5 items)	0,719158	0,927502	0,902191

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Results – assessments of the measurement model

	ATT	INN	INT	USE	VAL
ATT	0,880				
INN	0,336	0,878			
INT	0,742	0,361	0,908		
USE	0,418	0,344	0,591	1,000	
VAL	0,765	0,242	0,691	0,371	0,848

Note: The squared root of AVE is depicted along the diagonal of the correlational matrix.

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Results – structural model

*** significant at 99% level; * significant at 90% level

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Results – structural model

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Conclusions and future research propositions

- perceived value, attitude and personal innovativeness determine intentions to use and actual use of LBS in mobile applications

- perceived value and personal innovativeness have an indirect effect on intentions to use via attitude

- perceived value and personal innovativeness very well explain attitude towards LBS in mobile applications

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Conclusions and future research propositions

- in future research, the proposed model should be extended

  - **better understanding of the perceived value** (e.g. perceived benefits vs. perceived sacrifices)

  - **additional drivers of acceptance** (e.g. brand trust)

  - **moderators** (e.g. demographics, smartphone use experience, privacy concerns…)

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