The Signaling Effect of Online Numerical Information on Customers' Decision Making about Reservations

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Background

○ Information asymmetry on hospitality product websites (Chen & Schwartz, 2007. 2008, 2009)

○ up-to-date online reservation mechanism signals scarcity and social proof to buyers

○ Cialdini's principles of social influence (1984)

  ○ **Social Proof** – People will do things that they see other people are doing.

  ○ **Scarcity** – Perceived scarcity will generate demand. For example, saying offers are available for a "limited time only" encourages sales.

Subjective Norm

- Theory of Planned Behavior (TPB) introduces Subjective Norm as a antecedent of certain activity (or purchase).

- Ajzen (1985, 1991) suggested TPB in which individual's decision making process is explained by attitude, subjective norm, perceived behavioral control, and behavioral intention.

- Subjective norm refers to the perception of social pressure to perform or not to perform the target behavior (Ajzen, 1985, 1991; Han, Lee, & Lee, 2011; Han, Hsu, & Sheu, 2010; Lee, Song, Bendle, Kim, & Han, 2012).

- Subjective norm among people can have an influence on the intention to behave certain activities (Perugini & Bagozzi, 2001, 2004; Song, Lee, Norman, & Han, 2012).

Research Question

Numerical information like the number of people viewing the hotel's website and the number of people who have booked lodging at the hotel, once available to OTA users, is expected to have an impact on their reservation decisions.

2x2 Experimental Design

- Independent variables:
  - the number of people currently viewing
  - the number of people who booked (in the past 24 hours)
- Dependent variable: Customers' binomial reservation decisions (i.e., yes or no)

	Many people currently viewing	Few people currently viewing
Many people booked	Treatment 1	Treatment 2
Few people booked	Treatment 3	Treatment 4

HYPOTHESES

- H1: The more people who are viewing the same hotel web page that the buyer is viewing, the more likely it is that the buyer will make the reservation.

- H2: The greater the number of people who have booked the same hotel that the buyer is viewing, the more likely it is that the buyer will make a reservation.

- H3: The cross-signaling effect of current event (i.e., the number of people viewing) is bigger than the past event (i.e., the number of people who have booked).

SAMPLING

The sample size of 500 will be recruited from the Amazon's Mechanical Turk (MTurk), an integrated participant compensation system that allows a large participant pool. Findings (Buhrmester, Kwang, & Gosling, 2011) indicate that MTurk can be used to obtain high-quality data inexpensively and rapidly.

To be continued...

Analysis

- After descriptive analysis, SEM will be employed with the suggestion of Anderson and Gerbing's (1988) two-step approach.
  - A measurement model for perceived value will be estimated using confirmatory factor analysis.
  - And then structural relationships among constructs will be estimated.
  - Robust maximum likelihood method will be employed, because binary variables are more likely to give rise to a multivariate non-normal distribution.

Analysis

- Goodness-of-fit
  - NFI, NNFI, CFI, RMSEA will be considered on behalf of χ^2
- Validity & Reliability
  - Convergent Validity
    - Average variance extracted (AVE) and Composite Reliability (CR) should be greater than .5 and .7 respectively (Anderson & Gerbing, 1988; Hair, Black, Babin, & Anderson, 2010).
  - Discriminant Validity
    - All AVEs should be greater than their corresponding squared correlation (Fornell & Larcker, 1981).
  - Internal Consistency
    - Cronbach's alpha should be above than .7 (Nunnally & Bernstein, 1994).

EXPECTED IMPLICATION

- Explain the subjective norm mechanism, in which signals have an influence on the booking behavior.

- Verify the effect of signals on the booking behavior from a consumer perspective.