Mobile Targeting

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Background
Uniqueness of Mobile Technology

- Mobile Portability = Real-time Targeting
- GPS, Wi-Fi, Bluetooth, iBeacon = Geo-Targeting
- Geo-Targeting + Temporal Targeting
(1) How do timing and location in combination affect mobile sales?

(2) What are the underlying mechanisms for these effects?
Contextual Marketing Theory

• Efforts to influence purchases must be context dependent
  – Portability enables ubiquitous reach and time-sensitive offerings

? Temporal & spatial boundaries may interactively impact behavior
  • Decision to attend event is function of event time and place
  • Ex: web usage contexts affect revisit intentions

Field Experiment

• Large, randomized field experiment
  • Text messages promoting movie tickets
  • Users had not previously purchased mobile tickets
  • Large city in China
• Single movie promoted
• Sent to 12,265 mobiles
To enjoy a movie showing this Saturday at 4:00 pm for a reduced price, download this online ticket app to purchase your movie tickets and select your seat.
Variables

- **Dependent**
  - Mobile targeting effectiveness: ticket purchase via **new app**

- **Independent**
  - Temporal targeting
  - Geo-targeting
Defining Temporal Targeting

- Messages sent at 2 pm
  - 2 hours (Sat.), 26 hours (Fri.), 50 hours (Thurs.) before movie
  - Movie time: 4 pm, Saturday
Defining Geo-Targeting

- Messages sent to mobiles located at
  - **Near** distances: < 200 meters (from the movie theater)
  - **Medium** distances: 200 meters < x > 500 meters
  - **Far** distances: 500 meters < x > 2km
Random Sampling by Location

Oversampling of Near distance

Undersampling of Far Distance

Cinema
Control Variables

• Theater (A, B, C, D)
• Rate plan types
• MOU (minutes used monthly)
• ARPU (monthly bill)
• SMS (amount of text messages sent and received)
• Traffic (amount of data usage)
Response Rate

• 901 of 12,265 users downloaded app and bought tickets
  = 7.35%

• Mobile click rates in Asia:
  = 0.42%

eMarketer 2012
Evidence: Temporal Targeting

Mean purchase for same-day messages:

- Higher than one-day prior
  $\chi^2 = 9.53, p < .01$

- Higher than two-day prior
  $\chi^2 = 14.68, p < .01$
Evidence: Geo-Targeting

Mean purchase for proximal distances:

- Higher than moderate distances
  \[\chi^2 = 9.20, \ p < .01\]
- Higher than far distances
  \[\chi^2 = 18.33, \ p < .01\]
Geo- and Temporal Targeting Combined

Estimated Marginal Means

Time

Falsification
Test Support
Additional Results: Customer Scenarios

- Messages sent to mobiles located in
  - Residential districts
  - Shopping districts
  - Financial districts
Geo-Targeting on same day is most effective for shoppers vs. others ($\chi^2=5.12 \& 19.07, p = .01$)

Geo-Targeting’s effect diminishes over time

U-shape for far distances is robust across segments
Geo- and Temporal Targeting Takeaway

- Mobile targeting by location and time

![Effectiveness vs Time Graphs](image)

- Customer context matters
THANK YOU!

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