Geo-conquesting: Competitive Locational Targeting of Mobile Promotions

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Geo-conquesting

- Mobile platforms have enabled a new form of competitive targeting called geo-conquesting.

- Sending coupons or information to potential customers near a competitor’s business.
Targeting customers near a competitive location

Focal firm’s location
Growing Popularity

Percent of Geo-Precise Campaigns Using Geo-Conquesting

<table>
<thead>
<tr>
<th>Q1 2013</th>
<th>Q2 2013</th>
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</thead>
<tbody>
<tr>
<td>22%</td>
<td>32%</td>
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</tbody>
</table>

Top Mobile Ad Categories (Q2 2013)
1. Financial Services/Insurance
2. Telecommunications
3. Restaurants
4. Retail
5. Auto

Top Geo-Conquesting Ad Categories (Q2 2013)
1. Restaurants
2. Retail
3. Financial Services/Insurance
4. Travel
5. Gas & Convenience

Source: xAd Mobile Location Insights Q2 2013
Highly Effective?

- Geo-conquering delivered high coupon redemption:
  - Dunkin’: 3.6%
  - Dept. store: 2%

- Need an experiment to isolate targeting effects
saturation effects

low targeting value

threshold effects

Focal  Neutral  Competitive
Predictions

• Competitive locational targeting works!
  – Show by varying location and timing

• Switching costs shift reservation values
  – Concave discount sensitivity near focal firm
  – Convex discount sensitivity near competitor
Our Empirical Setting: Movie Tickets

- Demand is context-sensitive
- Differentiated mainly by location
- No resale or storage
- Sensitive to promotions
- High fixed costs
Experimental Design

3

• Targeting 3 locations
  – Near the focal retailer
  – Near a competitor’s location
  – Similarly trafficked neutral location

• Offer timing: now or same time next week

• Random assignment of promotion depth
  – e.g. 20%, 40%, 60% discount
Selection on other factors?
Similar customer characteristics

Focal Location
Neutral Location
Competitive Location

2.4 miles (4 km)
Experimental Design

- Targeting 3 locations
  - Near the focal retailer
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- Offer timing: now or same time next week

- Random assignment of promotion depth
  - e.g. 20%, 40%, 60% discount
Experimental Design

3 • Targeting 3 locations
  – Near the focal retailer
  – Near a competitor’s location
  – Similarly trafficked neutral location

× 2 • Offer timing: now or same time next week

× 3 • Random assignment of promotion depth
  – e.g. 20%, 40%, 60% discount
To buy a voucher for general admission to any of today's 2D showings at *** Theater at a 40% discount, follow this link: http://bit.ly/1e2jyg!

Hell yeah!
Experimental Design

3 • Targeting 3 locations
   – Near the focal retailer
   – Near a competitor’s location
   – Similarly trafficked neutral location

× 2 • Offer timing: now or same time next week

× 3 • Random assignment of promotion depth
   – e.g. 20%, 40%, 60% discount

N = 1,000 per cell (18,000 total)
Purchase Rate

Low Medium High

Non-targeted (control) Targeted (treatment)

Focal Neutral Competitive
J-shaped Response to Location

- Purchase Rate
- Targeting Effect on Purchase Rate
Discount Response Curves

Competitive targeting: higher marginal effects for deep discounts
Revenue Maximizing Discounts

Estimates monetary value of locational targeting
Promotional Elasticities

Targeting Effect on Purchase Rate

<table>
<thead>
<tr>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1.7</td>
<td>-2.0</td>
<td>-2.3*</td>
</tr>
</tbody>
</table>

Promotional Elasticities

<table>
<thead>
<tr>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>-3.2*</td>
<td>-2.2*</td>
<td>-0.2</td>
</tr>
</tbody>
</table>
## Testing for Concavity/Convexity

<table>
<thead>
<tr>
<th></th>
<th>Focal</th>
<th>Competitive</th>
<th>Neutral</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High</strong></td>
<td>8.9%</td>
<td>5.1%</td>
<td>3.2%</td>
</tr>
<tr>
<td><strong>Medium</strong></td>
<td>8.2%</td>
<td>2.0%</td>
<td>1.4%</td>
</tr>
<tr>
<td><strong>Low</strong></td>
<td>3.1%</td>
<td>1.2%</td>
<td>0.7%</td>
</tr>
<tr>
<td><strong>High – Medium</strong></td>
<td>0.7%</td>
<td>3.1%**</td>
<td>1.8%**</td>
</tr>
<tr>
<td><strong>Medium – Low</strong></td>
<td>5.1%**</td>
<td>0.8%</td>
<td>0.7%</td>
</tr>
<tr>
<td><strong>Diff-in-diff</strong></td>
<td>–4.4%**</td>
<td>2.3%*</td>
<td>1.1%</td>
</tr>
<tr>
<td><strong>Diff-in-diff-in-diff</strong></td>
<td>6.7%**</td>
<td></td>
<td></td>
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Limitations and Extensions

• Strategic response
  – Competitive response
  – Customer response

• Effectiveness in other categories?
  – Context very important (retail, restaurants)
  – Need multivariate design
Conclusions

• Investigates an emerging tactic using mobile
  – Attribution to locational targeting
  – Effective third-degree price discrimination

• Indication of mobile’s impact on competition
  – Incentive to go on offensive
  – Testing and measurement offline