Enabling Mobile-IoT Driven Marketing with High Resolution Analytic Models

Edward Ho¹ and Alexander Ilic²

¹Department of Management, Technology and Economics, ETH Zurich
²Institute of Technology Management, University of St. Gallen

Motivation
The ubiquity of Mobile IoT – ex. Smartphones - enables personalized and timely (i.e. “high resolution”) marketing for physical grocery retailing. This is more effective than applying the same marketing policy to all customers [1]

Analytical and methodological challenges remain in
• Identifying customer groups for personalization and for  
• Evaluating the profitability of customers, within a high resolution grocery retailing marketing context [2]

Step 1: Estimate Variety Seeking of Customers
• Past research identified variety seekers as a high value group; they are most likely to respond to offers & recommendations
• Using retailer loyalty card transaction data, we derived a model for measuring variety seeking behavior based on his purchases in individual categories
• A retailer can make targeted offers and recommendations in categories where a customer seeks variety; our model also reveals after how many products would someone seek variety

Step 2: Employ Mobile IoT Marketing
• Smartphones allow physical grocery retailers to target customers’ variety seeking preferences with recommendations and offers
• Since space limited on phone, focus on select categories
• Select categories where customers seek variety

Step 3: Evaluate Results using CLV Models
• We developed a method that would allow physical retailers to evaluate the effectiveness of their marketing strategies
• The choice of customer long-term value (CLV) as the evaluation metric allows retailers to determine which customers would give the best return on their marketing investment

Conclusion
• Physical grocery retailers can now go beyond mass marketing, and make offers/recommendations in product categories of interest to individual customers via Mobile IoT
• Our contribution showed how to uncover which categories are of interest to individual customers, and provide methods for evaluating customers’ future profitability at the level of product categories

Outlook
• Improved model integrating customer usage of the app, in addition to the current estimation from in-store purchases
• Field test of ideas and concepts with physical grocery retailers

Which categories to promote if a customer’s variety seeking is: …

<table>
<thead>
<tr>
<th>Overall</th>
<th>Mixed</th>
<th>Low Overall</th>
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<tbody>
<tr>
<td>All, priority to high variety seeking</td>
<td>Only categories where variety seeking is high</td>
<td>None</td>
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CLV ($ in Response to Discounts Uptake Computed Up Until the nth-Quarter

Wasted discount

Beneficial discount

References

Contacts
Edward Ho, eho@ethz.ch
Alexander Ilic, alexander.ilic@unisg.ch
Auto-ID Labs Website: autoidlabs.ch