Forward-looking Behaviour and Goal Progress in Loyalty Programs

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This paper considers how consumers value future incentives as they progress towards goal in "do X steps, get Y reward" style loyalty programs, and the consequential impact of these goals and incentives in program design. Common empirical models of dynamic choices consider consumer time preferences to be time consistent, but the behavioral literature such as goal gradient and costly goal pursuit suggests intertemporal substitution varies with the distance to the goal. Using a large scale field experiment in the hotel industry, wherein subjects are randomly assigned a do X get Y loyalty program offer, we estimate intertemporal substitution that varies with the steps to the program goal. We then use these estimates as input to create more productive reward programs.

The data, provided by the InterContinental Hotels Group (IHG), comprise transaction-level customer panel data, where the experimental treatment cells vary the loyalty program design characteristics (e.g., the hurdle rate (stays) necessary to attain the reward – do X steps – and the reward points – get Y reward). The data cover the stays of about thirty five thousand loyalty program members in the United States for over more than a year. The use of the experiment enables us to remove person and time confounds (such as targeting and seasonality) when measuring the effect of these programs on hotel stays. The use of a loyalty program context enables us to ascertain how consumers tradeoff current effort against future reward, because reward points affect the future return but not current utility of a hotel stay.

Using these data, preliminary results show both acceleration and deceleration amongst the participants on their progress toward the loyalty program goal. Customers' likelihood of stays accelerate as they accumulate more points, consistent with the goal gradient literature. However, for higher hurdle rates we observe a pattern wherein the consumers' progress toward goal first accelerates, and then decelerates.

We next fit two categories of behavioral models to the data. One category is a standard model of forward looking behavior. The other category allows for more flexible time preferences. Specifically, we compare the goal gradient theories to the standard dynamic choice model. We conclude by discussing the implications for loyalty program design under the different theories.