

The Hong Kong University of Science and Technology  
Dept of Information Systems, Business Statistics  
and Operations Management

Frontiers in Operations Management Workshop



**Set a Goal for Yourself:  
Model and a Field Experiment on a Gig Platform**  
by  
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**Date** : 3 December 2021 (Friday)  
**Time** : 4:30 - 5:00 PM  
**Venue** : Room G012, LSK Business Building, HKUST



**Abstract:** On-demand service platforms have its gig workers to use self-set nonbinding performance goals to regulate their effort and overcome potential self-control problems. To examine the effect of such self-goal setting mechanisms, we build a behavioral model, derive theoretic results and testable hypotheses, and conduct a field experiment on a large gig platform of food deliveries. The model incorporates the reference-dependent utility theory of goal setting into the two-self framework of self-control. Our model analysis finds that individual workers' optimal self-set goal may exhibit a spectrum of difficulty level, ranging from trivially to impossibly achievable, depending on their reference-dependent utility coefficients and their self-control cost; and that their effort is always higher with a properly set goal than the no-goal benchmark, although the difference is significant only when both the reference-dependent utility coefficients and the self-control cost are sufficiently large. Our experiment data confirms heterogeneous treatment effects: While the average treatment effect is insignificant, a causal tree algorithm identifies a sub-group of population whose effort significantly increases under the goal-setting treatments. Our study compares the two common types of performance metrics for goal setting, the number of completed orders versus the total revenue. Both our model and experiment data suggest that the two types of goals lead to equal effort improvement but different attainment probabilities. In particular, the goal attainment rate is lower in the revenue-goal treatment than the quantity-goal treatment because workers tend to set excessively high revenue goal. Our study demonstrates the efficacy and the limitations of self-goal setting mechanisms, and yields two important managerial implications. First, there exists a reasonably sized population for target marketing of the self-goal setting mechanisms; second, platforms would better encourage the use of order-quantity goals instead of revenue-goals for higher attainment rates.

**Bio:** Dr Xing Hu is an Associate Professor in the Area of Innovation and Information Management. Her expertise includes online retailing operations, such as dynamic pricing and logistics, revenue management, and sharing economy operations. Her research on these topics has been published in top-tier research journals including *Management Science*, *Operations Research*, and *Manufacturing and Service Operations Management*.

All interested are welcome!  
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