Personality Traits in Supply Chain Contracting

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Abstract

In this paper we study the correlation between a decision-making lab experiment on a simple supply chain setting and several personality traits of the decision makers which are measured using out-of-experiment surveys. Our experiment is based on a single manufacturer – single retailer supply chain where the retailer faces random consumer demand for a perishable product and the manufacturer determines the contract parameters. We consider three different contract settings; namely wholesale price, buyback and revenue sharing contracts. We investigate the effects of self-esteem, regret aversion, risk aversion, loss aversion, and fairness concerns on manufacturer's pricing decisions and retailer's order quantity decisions. Despite the small sample sizes of the experiment our findings indicate that there is evidence for correlation between these personality traits and the contracting decisions of the subjects.

Keywords
Behavioral Operations, Supply Chain Management, Newsvendor Model, Personality Traits.

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Biographies
Ümmühan Akbay is an Assistant Professor at Management department of Işık University, İstanbul, Turkey. She received her Ph.D. in Industrial Engineering from Sabancı University. She holds an M.Phil degree in Operations Research from Columbia University Graduate School of Business and a B.Sc. degree in Industrial Engineering from Bilkent University. She was a visiting professor at the Industrial Engineering program, Özyeğin University between 2017-2020. Her research interests include behavioral operations management, behavioral and experimental economics, supply chain management, game theory, decision analysis, energy markets, healthcare operations management and revenue management.

Murat Kaya is currently working as an assistant professor at the Industrial Engineering Program of Sabancı University, Istanbul, Turkey. He received his BSc degree in industrial engineering from the Middle East Technical University (METU), Ankara, Turkey and his M.S. and Ph.D. degrees in Management Science and Engineering (MS&E) from Stanford University. During his Ph.D. study, Dr. Kaya has worked for several projects at Hewlett Packard Research Laboratories in Palo Alto, USA. Dr. Kaya's research is concerned with strategic decision analysis in supply chains. Having worked with traditional supply chains in apparel, FMCG, automotive and pharma industries, Dr. Kaya's recent interest is directed towards applied decision & optimization problems in energy supply chains. His research has been supported by an EC Marie Curie International Reintegration Grant (IRG). At Sabancı University, Dr. Kaya has been the academic director of the Energy Technologies and Management (ETM) graduate program since 2018. He served as the Vice Dean of the Faculty of Engineering and Natural Sciences (FENS) between 2019-2020. Dr. Kaya is also affiliated with Sabancı University Istanbul International Center for Energy and Climate (IICEC). He is a recipient of numerous teaching awards of the University.