

Management Research FRONTIERS

A National Science
Foundation scholar studies
human factors affecting the
supply chain environment.



Dr. Özalp Özer, associate professor of operations management, was awarded a \$280,000 National Science Foundation GOALI grant to further his research on trust and trustworthiness and its impact on managerial decisions, particularly those related to forecast information sharing and pricing management.

Grant Opportunities for Academic Liaison with Industry — GOALI — is an NSF program that encourages university-industry partnerships by providing funds or fellowships to support an eclectic mix of relationships.

Dr. Özer, who has extensive experience working with industrial partners, such as Hewlett-Packard and Ericsson, received the grant last year and has been conducting research in this area for about three years. He hopes his research will help develop a new model to design business contracts that include considerations of trust, non-pecuniary issues and human emotions.

Behavioral Factors Affecting Cooperation

TRUST IN FORECAST INFORMATION SHARING

By Dr. Özalp Özer, Yanchong Zheng and Dr. Kay-Yut Chen

We investigate the problem of a supplier soliciting private forecast information from a manufacturer who has an incentive to inflate her forecast in a costless, non-binding and non-verifiable communication known as "cheap talk." We show that the only equilibrium, predicted by the standard game theory, is an uninformative equilibrium in which the manufacturer's report is independent of her private forecast, and the supplier does not use the report in making a decision. However, results from human-subject experiments strongly reject this uninformative equilibrium, which assumes economic agents are selfish and care only about pecuniary payoffs. We determine that trust induces cooperation in forecast information sharing in the absence of reputation-building mechanisms and complex con-

tracts. In addition, we show that trust and cooperation are affected more by risk or vulnerability associated with trusting actions than by uncertainty in the supply chain. To explain and better understand the behavioral regularities, we develop an analytical model to incorporate trust in the game-theoretic model of cheap-talk communication. The new model accurately predicts human response to changes in the supply chain environment and gives a good fit of the data. Estimation of the model indicates significant levels of trust and trustworthiness. We identify and quantify the behavioral reason why cheap talk under wholesale-price contract can be effective in forecast information sharing. We also determine that repeated interactions enhance trust and cooperation in forecast information sharing. We conclude with a discussion on how trusting behavior alters a firm's forecast management and contracting strategy. ❖



Dr. Özalp Özer