

Incentives and Gaming in a Nonlinear Compensation Scheme: Evidence from North American Auto Dealership Transaction Data *

Hideo Owan

Graduate School of International Management, Aoyama Gakuin University

Tsuyoshi Tsuru

Institute of Economic Research, Hitotsubashi University

Katsuhito Uehara

Institute of Economic Research, Hitotsubashi University

April 10, 2009

Abstract

This paper examines the incentive effect of a discontinuous and nonlinear compensation scheme, using the transaction data provided by two North American auto dealerships. Under the nonlinear scheme, a salesperson's expected daily commission revenue critically depends on his position in the pay schedule on the day. We find that a measure of varying incentive intensity has a positive effect on the distribution of daily sales, suggesting that salespeople adjust their effort levels in response to the intensity of the incentive. Furthermore, incentive intensity has a negative impact on the dealership's gross profit rate, suggesting that employees are gaming the system by lowering the prices they offer customers in order to achieve more sales and larger commissions. Our study shows that there is a cost associated with a discontinuous non-linear pay scheme, which is prevalent in the industry, and raises the question of why many firms use such a form of contract.

JEL Classification M12,M5,J31,J33

*We thank Kathryn Shaw, Takao Kato and other participants at the 2009 Trans-Pacific Labor Seminar for their helpful comments.