Nobuhiko Terui ∕ Professor ∕ Graduate School of Economics and Management

Profile

I was born in Sendai, and graduated from Tohoku University, Economics Department, and then entered the Graduate School of Economics, Tohoku University to obtain a PhD in economics in 1990. In my academic career, I first worked at Yamagata University as lecturer and associate professor. Then I joined Tohoku University, Faculty of Economics as associate professor, and have been working as a professor at the Graduate School of Economics and Management since 1998. In addition to the above, I was appointed as a visiting associate professor at the Institute of Statistical Mathematics, Department of Prediction and Control (1993-1995), and worked overseas at the University of Minnesota (Department of Economics, 1990-1991), Texas A&M University (Department of Statistics, 1991-1992), Erasmus University (Tinbergen Institute, 1995-1996, 2000), and Ohio State University (Fisher College of Business, 2003). In 1992, the 2nd Tjalling C. Koopmans Econometric Theory Prize was awarded to the research by Hosoya, Tsukuda and Terui.
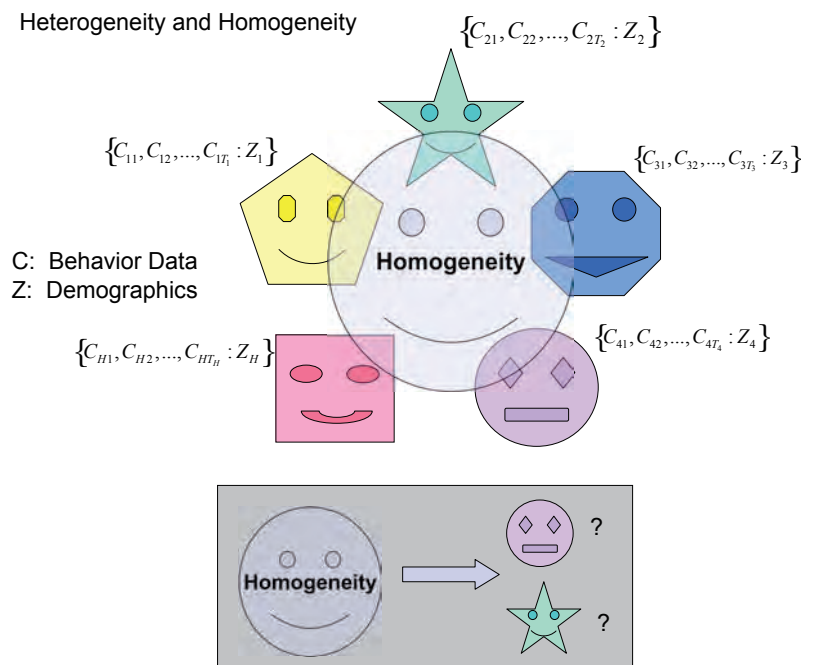
Research Activities

I have started the study of theoretical econometrics which investigate economic structure quantitatively, and now from the more micro viewpoint, I am doing research on the individual consumer and brand's behaviors to predict market performance by developing the modeling of them in marketing.

The present firms are automatically getting the consumer's purchase behavior data through POS or customer membership system and they are urged to analyze these data to extract useful knowledge from these large-scale data for efficient management.

"Customization" is a modern marketing practice which accommodates a consumer's taste and market response "One by One", and it operates marketing strategy efficiently customized to each consumer. Based on the large scale data on the market, I try to develop the model to predict an individual consumer's action for efficient management.

Figure : Estimation on Heterogeneous Consumer

Heterogeneity and Homogeneity

$\{C_{21}, C_{22}, ..., C_{2T_2} : Z_2\}$

$\{C_{11}, C_{12}, ..., C_{1T_1} : Z_1\}$

$\{C_{31}, C_{32}, ..., C_{3T_3} : Z_3\}$

C: Behavior Data
Z: Demographics

$\{C_{41}, C_{42}, ..., C_{4T_4} : Z_4\}$

$\{C_{H1}, C_{H2}, ..., C_{HT_H} : Z_H\}$

Message

In many developed countries, such as the United States and Japan, the weight of service industries compared with the manufacturing industry has increased up to about 60-70 percent of the gross domestic product (GDP). The high productivity of the manufacturing industry of Japan, represented in Toyota's KANBAN system, is widely recognized as at the top level in the world, but it is pointed out that the productivity of the service industry is still low compared with the U.S. and European countries.

Although it is necessary to maintain the comparative advantage in our country having no natural resources for manufacturing power, considering the change of industrial organization mentioned above, the pursuit of the higher productivity of service industries and the development of new service goods become very important.

Analyzing "information" accumulated with the development of information technology brings a very important meaning for this purpose. In order to extract the GOLD in the huge amount of extensive information, it demands specific knowledge or experience as background. As a compass for sailing "the open sea of information" in this meaning, I think the university has a mission to provide you with the extensive fundamental knowledge necessary for it.