

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

Seminar Announcement

***An Analytical and Empirical Analysis of the Relationship Between  
Embedded Economic Systems and Performance of Virtual Worlds***

by

***Professor Byungjoon YOO***

***Graduate School of Business  
Seoul National University***

**Date: 25 June 2009 (Thursday)**

**Time: 2:30 pm – 4:00 pm**

**Venue: Room 4379, ISOM Conference Room (L17/18)**

~~~~~ All interested are welcome ~~~~~

**Abstract**

The success of 'Second Life' and 'World of Warcraft' shows the popularity of virtual worlds and reveals the embedded economic system in them. While a large number of players interact with each other in virtual worlds, an interesting phenomenon in virtual worlds is that players voluntarily create their own economy that involves trading virtual items or game money for real money, and this real money trading itself has become a several billion dollar business. In this study, we analyze the economic impacts of such trading of virtual properties, and the management strategy of the virtual economy (game) operators by using a two-period game theoretic model between game players and the game operator. We find that real-money trading benefits game operators, and there exists an optimal amount in terms of the supply of game items to maximize the profit of the game operator. Moreover, we find that the income disparity in real worlds can be reduced when real-money trading is allowed. Empirical analysis with data from popular virtual worlds also confirms our findings that real-money trading benefits game operators.

Moreover, we also find that the playtime and trading price of game items have a positive relationship. With these results, our study indicates the strategic decision variables of online businesses with a virtual economic system are quite different from their counterparts in offline.

Keywords: Virtual economy, virtual worlds, real-money trading embedded economic systems

**Biography**

Yoo, Byungjoon is working for Graduate School of Business at Seoul National University as an assistant professor. Before he joined Seoul National University, he worked at Korea University and Hong Kong University of Science and Technology. He received a Ph.D. in Information Systems from Carnegie Mellon University. His research interests are on B2B e-commerce, online auctions and pricing strategies of digital goods such as software products and online games. He has published on these topics in journals such as Management Science, Journal of Management Information Systems, and Decision Support Systems. He has consulting experiences with Korea Stock Exchange, Korea Game Industry Agency and other companies.