

*The Hong Kong Polytechnic University*  
*Department of Logistics and Maritime Studies*  
*Research Seminar*

## **ICT and Third-Party Information Providers: A Randomized Field Experiment**

by

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**Time: 11:00am - 12:00nn**

**Venue: M104, Li Ka Shing Tower**

**The Hong Kong Polytechnic University**

**(Conducted in English)**

### **Abstract:**

In this paper, I study whether having a third-party information provider complements existing information and communication technology (ICT) infrastructures and further increases supply chain efficiency. Specifically, I examine eBay's export promotion program (EPP) of integrating the service from a third-party firm to its ecommerce platform to handle international shipping and customs clearance for enrolled sellers. In the experiment used for identification, 20% of eBay sellers selected randomly were offered the opportunity of early enrollments in this program. The intent-to-treat (ITT) estimates show that the program caused a 2.7% increase in exports on eBay. The effect occurred exclusively on the extensive margin of export, and from small and medium sellers. Subsequently, I show that the reduction in supply chain barriers is

through a reduction in export entry cost, not through changes in demand or variable cost. Finally, I show that the program caused a 1% rise in product variety, an increase in marketplace quality, and an increase in competition in foreign markets. These findings have two implications: Managerially, I showed that eBay's business model of integrating the service from an information provider further increases supply chain efficiency and is profitable. For policy implications, my results suggest that, besides investing in new ICT infrastructure, government should consider subsidizing firms that provide market information using existing technologies; additionally, this strategy resonates with the growing number of policies aiming at the growth of small and medium-sized enterprises (SME).

**Bio:**

Xiang Hui is a Ph.D. candidate in the department of economics at the Ohio State University. Previously, he graduated *summa cum laude* from Indiana University-Bloomington with a B.S. in mathematics. His research focuses on understanding how information technology impacts supply chains and information systems. Mr. Hui has presented his research at national and international conferences, including the ZEW Conference on ICT.

Mr. Hui's job market paper, which he plans to submit to *Management Science*, studies whether having a third-party information provider complements the existing information and communication technology (ICT) infrastructure and further increases supply chain efficiency using a randomized field experiment on eBay. Mr. Hui's other paper (forthcoming at *Management Science*) shows that quality management in the form of buyer warranty complements the existing reputation system and increases marketplace efficiency on eBay.

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**All are welcome!**