

“Specification and Estimation of Network Formation and Network Interaction Models with the Exponential Probability Distribution”

(in English)

Date: 21 November 2014 (Friday)

Time: 4:30 pm - 6 pm

Venue: WYL314, Dorothy Y. L. Wong Building

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Abstract:

In this paper, we model network formation and network interactions under a unified framework. The key feature of our model is to allow individuals to respond to incentives stemming from interaction benefits on certain activities when choosing friends (network links). There are two advantages of this modeling approach: first, one can evaluate whether incentives from certain interactions are important factors for friendship formation or not. Second, possible friendship selection bias on network interactions can be corrected as the network formation is explicitly modeled. This proposed model is applied to American high school students' friendship networks in the Add Health dataset. From two activity variables which are considered in the paper -- students' GPAs and smoking frequencies, we find a significant incentive effect from GPA, but not from smoking, on friendship formation. These results suggest that the benefit of interactions from academic learning is an important factor for forming friendships, while the joy of smoking together is not. However, from the perspective of network interactions, both GPA and smoking frequency are subject to significant positive peer effects.

Biography:

Prof. Chih-Sheng Hsieh obtained his Ph.D. of Economics from the Ohio State University at 2013 and now is an assistant professor in the department of Economics at CUHK.

His research interests include labor economics, health economics, and social networks. He has published papers in Journal of Applied Econometrics, Journal of Financial Econometrics, and Academia Economic papers.