

# Quality and Entry Deterrence on Two-sided Market Platform

Ning-Yao Pai, Yung-Ming Li, and Chi-Chun Lo  
email: krissy.pai@msa.hinet.net, yml@mail.nctu.edu.tw,  
cclo@faculty.nctu.edu.tw

Institute of Information Management, National Chiao Tung University, Hsinchu 300,  
Taiwan

**Abstract.** In this paper, we aim to contribute to the effort of proposing the model to analyse platform quality competing strategy. We consider the models of two scenarios of two-sided market platforms: one is the monopolistic two-sided market platform, and the other is the incumbent market platform facing a potential entry competitor. There are three strategies (blockade, deter or accommodate the entrant) for the incumbent platform on entry deterrence. We found the quality level threshold (minimum/maximum quality level that would deter/accommodate the entrant) for the incumbent to make a choice on competitive strategies. A two-sided market is two sets of participants interact through a platform and the decisions of each set of participants affects the outcomes of the other set of participants. The two sets of participants do not link themselves directly, instead, the market platform acts as an intermediary of the networks that enables the two sets of participants to transact and interact with each other. The features of the two-sided market do not like traditional markets. The platform provides services on both sides, while an increase in the number of participants will increase the value of the other side of the participants. For the network externality effect, demand for a product or service will create more demand, such as more products on a platform induces more demand for the platform. Competition on platform are distinguished as inside competition and outside competition. Inside competition happens within the same platform. For instance, the different sellers compete for a consumer on shopping site. Outside competition happens when the platforms compete to get the two sides of user groups to use their platform, this kind of competition take place between the platforms themselves. A two-sided market can be found in many intermediaries, such as e-shopping site composed of sellers and buyers and the sharing economy platforms for housing (hosts and renters) and transportation (drivers and passengers). In this paper, from the two-sided market platform aspect, we aim to contribute to the effort of proposing the model to analyse platform quality competing strategy.