

The Incentives of Patent-ownership Fragmentation of Standard-setting Organizations: Theory and Empirical Evidence*

Xiao Fu, Guofu Tan, and Jin Wang[†]

April 25, 2019

Abstract

The design of many technology products is based on standards that require the use of complementary patents. This paper studies standard-setting process in the presence of competition between standards. We show that standard-setting organizations can have incentives to soften competition through fragmenting patent ownership. Nevertheless, the degree of patent-ownership fragmentation is lessened when competition becomes more intense. Network effects in standard adoption and the level of compatibility among standards can also affect the incentives to fragment patent ownership. Empirically we find a positive relationship between the extent to which an SSO is oriented to technology developers and the degree of fragmentation in patent ownership, which is consistent with the theoretical predictions.

Keywords and phrases: Standard-setting Organization, Standard Competition, Standard-essential Patent, Patent-ownership fragmentation

JEL classification codes: D2; L4; L13; L15; O3

*We are very thankful to Ping Lin, Junjie Zhou, Laura Doval, and Haojun Yu for their detailed advices. We have benefitted from comments by seminar participants at USC, Fudan University, Xiamen University, Shanghai University of Finance and Economics, and Lingnan University, as well as conference participants at 2017 HOC.

[†]**Fu:** School of Management, Fudan University, fuxiao@fudan.edu.cn; **Tan:** Department of Economics, University of Southern California, guofutan@usc.edu; **Wang:** Department of Economics, Kansas State University, jinw@ksu.edu.