## Survival of Innovation with Endogenous Appropriability

Taro Akiyama

Faculty of Economics, Yokohama National University, 79-4 Tokiwadai, Hodogaya, Yokohama 240-8501, Japan.

Yuichi Furukawa\*

School of Economics, Chukyo University, 101-2 Yagoto-honmachi, Showa, Nagoya 466-8666, Japan

## Abstract

We study endogenous survival of innovation firms against imitation activities and its macroeconomic consequences in a dynamic general equilibrium model. We model survival of innovations by assuming that firms strategically control appropriability regimes for their products through investing in copy protection activities. The analysis shows that there is an inverted U-shaped relationship between the strength of intellectual property protection and the innovation rate across international markets. It also shows that there is U-shaped relationship between the efficiency of copy protection technology and the innovation rate. These results suggest that innovation is maximized at moderate strength of intellectual property protection and at the polar cases with very efficient and very inefficient copy protection technology.

JEL classification: F43, O30

*Keywords*: Appropriability, innovation, copy protection, intellectual property rights; intellectual monopoly

<sup>\*</sup>Corresponding author. Email: you.furukawa@gmail.com (Y. Furukawa)