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## **THE INTELLECTUAL PROPERTY RIGHT AND FIRM SURVIVAL IN DIFFERENT GROWTH STAGES**

### **Abstract:**

As the ratio of intangible assets in firm's market value is increasing, the business strategy on knowledge assets including intellectual property rights is becoming the key factor determining firm's performance and survival.

This study empirically examines the impacts of IPR on the firm survival using 619,314 firm-year observations of South Korean manufacturing firms in 2000-2012, based on the assumption that those effects depend on the types, quantity, attributes of IPR and the growth stage and industries of a firm.

We find that one unit increase of patent stock, design and trademark in firms could reduce the hazard ratio by 0.9%, 10.3% and 13.6% respectively. As to the attributes of patents, one unit increase of the numbers of claims, IPC classification and the ratio of joint applied patent could reduce the hazard ratio by 0.4%, 2.1%, and 5.3% respectively.

And, in regard to the discriminative effects of those variables according to the growth stage of a business, the positive effect of the quantity of patent stock is decreasing and that of patent's quality is increasing as a firm grows.

### **Keywords:**

Intellectual Property Right, Firm Survival, Cox proportional hazard model, growth stage