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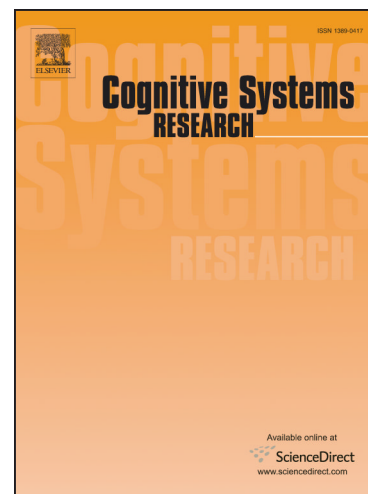
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# Intellectual Property Protection, Technological Innovation and Enterprise Value —An Empirical Study on Panel Data of 80 Advanced manufacturing SMEs

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**Abstract:** Study the role of intellectual property protection in advanced manufacturing SMEs. Is it to protect the growth of advanced manufacturing SMEs, or to inhibit the growth of SMEs in advanced manufacturing? the paper brings the medium variable – technological innovation to explore acting paths of intellectual property protection in enterprises' value improvement. Through analysis of panel data of 80 SMEs of advanced manufacture collected during the period from 2013 to 2015, Research results show that as for SMEs of advanced manufacture, the inverted-U relationship still exists in the influences brought by intellectual property protection to enterprise values. Meanwhile, U-shaped relations exist between intellectual property protection and technological innovation. Increase of technological innovation investment can promote increase of enterprise values.

**Keywords:** intellectual property; enterprise values; technological innovation

## 1. Introduction

SMEs play an important role in global innovation of advanced manufacture technologies. 80% of American technological innovation is sourced from SMEs. 65% of German SMEs have conducted R & D activities. Professional R & D departments are set in 40% of SMEs. Per capita innovation achievements in SMEs of the EU are twice those of large corporations. Promotion of innovation ability of SMEs and cultivation of hidden champion enterprises have become a key link to achieve transformation from “Chinese manufacture” to “Chinese creation”. As for SMEs of advanced manufacture, intellectual properties play an important role as a core intangible asset as it can motivate enterprises to increase R & D investment and keep innovation advantages. Wu Wei (2017) research shows that intellectual property protection is conducive to the development of advanced manufacturing[1]. However, Ma Zhongfa(2018) research shows that the public domain of intellectual property rights is facing the expansion of intellectual property rights and the erosion of public ownership[2]. Academic circles focus on the relationship between intellectual property rights and technological innovation and enterprise value promotion. The academic circle researches intellectual property protection, enterprise values and technological values mainly in the following aspects. As believed by Patricia (2015), through technological innovation, an enterprise can reduce the production cost, strengthen the market competitiveness and enhance the probability. Based on empirical analysis results of medical and electronic industries[3]. Hirschey (2012) found significant positive correlation between the R & D investment, R & D intensity and the enterprise values[4]. Relations between intellectual property protection and technological innovation. As believed by Li Chuntao (2015) selected data of over 20,000 enterprises in 61 countries as the research object and found that enterprises' innovative investment can be motivated by intellectual property protection[5]. Through empirical research, Li Ping (2013) and Dang Guoying (2016) found the inverted-U relation between intellectual property protection and technological innovation[6,7]. Li Wei (2016) verified that the leverage effect brought by intellectual property protection to enterprises' technological innovation in 2012 was doubled in comparison with 2002[8]. Among domestic and foreign scholars' researches on the relations between intellectual property protection, technological innovation and enterprise values, there are overall analyses based on the whole industry as well as those targeted at a specific industry. However, there is no analysis aiming at the special target – SMEs of advanced manufacture. SMEs play an important role in China's national economy and social development and also play a significant role in supporting the innovation-driven strategies. Hence, the paper will take panel data of SMEs of advanced manufacture as the sample, introduce the medium variable – technological innovation based on their innovation-oriented mission and research acting paths of intellectual properties on enterprise values.

## 2. Methodology

### 2.1 Theories and Hypotheses

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