

## **Can the Development of Financial Technology Promote the Application of Industrial Robots in Enterprises? An Empirical Test Based on Manufacturing Enterprises in China**

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### **Abstract:**

Amidst the global shift towards intelligent and green manufacturing, industrial robots, as key enablers of advanced manufacturing, play a crucial role in boosting productivity and cutting resource use. This study empirically examines the relationship between FinTech development and industrial robot application using data from Chinese listed manufacturing firms (2011-2019). Findings finds that the development of regional FinTech significantly promotes the adoption of industrial robots, particularly in technology - intensive sectors, non - state - owned enterprises, firms with strong internal control, and Eastern China - based corporations. Furthermore, enterprises' financing constraint levels and the pace of social marketization progress exhibit a positive moderating effect on the relationship between FinTech development and industrial robot adoption level. The research provides empirical evidence for FinTech-enabled intelligent transformation in manufacturing, offering policy implications for deepening "technology-industry-finance" integration and optimizing resource allocation.