Can green manufacturing achieve the win-win solution between economic growth and environmental improvement? – A Chinese context study

Abstract

The progress of industrialization is accompanied with environmental degradation and developing countries are facing the dilemma between economic growth and environmental protection currently. According to EKC theory, environmental quality will get improved when income exceeds a threshold value. While during this process, different effects work, among which the technological advance play an important role in the abatement effect. In this research green manufacturing is proposed as a win-win solution to deal with the dilemma between economic growth and environmental improvement in China. Green manufacturing is defined as a process or system which has a minimal, non-existent, or negative impact on the environment. It can reduce the negative externalities by industrial production on environment without decreasing the profits. And it does not refer to several typical industries. The advanced process and systems that can be applied in all the industries to eliminate their negative externalities on environment. Existing research about the impact and driving factors of green manufacturing mainly focus on firm level, investigating the influence on economic and environmental performance by green manufacturing and different kinds of driving factors, including localities, organizational attributes and different stakeholders’ forces. This research attempt to find the economic and environmental impact of green manufacturing on regional development, and also make a case study to understand the current situation of green manufacturing implementation in China, and make effective policy implications.

The proposal is organized as followed. Chapter 1 is the introduction of this research, by introducing the research background firstly, and then proposing the research questions and significance. Chapter 2 is literature review. Firstly, it investigate the economy and environment debate from economic theory and introduce the historical evidence of economic growth and environmental degradation based on EKC. Then it reviews the concepts of green manufacturing, its effects and driving factors. Above these, a discussion is involved to find the research gaps. Chapter 3 is the research design. The whole research is designed as macro level and micro level analysis, with the former a quantitative analysis and the latter a case study. Chapter 4 introduces the methodologies intended to employ and the research schedule. Mixed-methods will be involved in this research, including descriptive analysis, regression, case study, content analysis and so on.

Keywords: green manufacturing; economic growth; EKC; environmental governance; China