

Forthcoming in
IEEE Transactions on Engineering Management

Green Process Innovation and Financial Performance in Emerging Economies: Moderating Effects of Absorptive Capacity and Green Subsidies

by
Xuemei Xie, Jiage Huo, Guoyou Qi, Kevin Zhu

Abstract:

Being “green” is socially desirable yet whether it pays to be “green” is unclear. This question has become more important to manufacturing industries as environmental concerns are escalating, particularly in emerging economies. We examine the effects of green process innovation on the financial performance of manufacturing industries with a focus on the moderating effects of government subsidies vs. industries’ own absorptive capability. Using sulfur dioxide emissions as an environmental index, we establish a dynamic model using 10 years panel data from 28 industries in China where environmental concerns have been severe and government subsidies have been commonly believed to be instrumental. The results show that clean technologies and end-of-pipe technologies are positively related to financial performance at the industry level, thus it pays to be “green”. Furthermore, strong absorptive capacity tends to *enhance* this relationship, but surprisingly green subsidies turn out to *weaken* this relationship. We also find the effects are different between clean technologies and end-of-pipe technologies, which leads to finer-grained insights into these two types of technologies and their adoption. We conclude that manufacturing industries can benefit more from green process innovation by leveraging on their internal absorptive capability, as opposed to relying on external government subsidies as commonly believed. Our findings provide finer-grained insights on the benefits of green process innovation, and shed light on the study of green process innovation in other emerging economies.

Keywords:

Green process innovation; Financial performance; Green subsidies; Absorptive capacity; Emerging economies