Tax Deduction and Firm R&D Expenditure
--Evidence from China's R&D Expense Super Tax Deduction policy

Abstract:

This paper tests the effects of R&D Expense Super Tax Deduction Policy (STDP) on firms' R&D expenditure in China. The STDP allows firms to enjoy a 150% deduction of the qualified R&D expenses from its taxable income. It is one of the most important innovation policies in China to stimulate firms' R&D and innovation. Two provinces, Jiangsu and Zhejiang, implemented the policy in 2006, whereas other provinces including those similar to Jiangsu and Zhejiang did not until 2008. We exploit this quasi-experiment and employ Diff-in-Diffs (DID) strategies to estimate the effects of the policy, using firm-level panel data in 2005 and 2007. We find that the STDP significantly stimulated firms' R&D investment, increasing firms' R&D expenditure by an upper bound of 12.7%-19% for private firms and 22.4%-26.1% for foreign firms, suggesting an R&D cost elasticity of 0.516-0.771 for the former and 0.909-1.06 for the latter. We also find the policy significantly increases firms' new product value. The results are robust to different estimating strategies including simple DID estimation, P-Score Matching DID and Coarsened Exact Matching DID.

Keywords: Super tax deduction; R&D expenditure; Matching difference-in-differences

JEL Classifications: O31, O38, H25