Title: Notching R&D Investment with Corporate Income Tax Cuts in China

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Abstract: Governments around the world encourage R&D investment based on the belief that economic growth is highly dependent on innovation. However, there is scant evidence that tax incentives have large effects on investment or that these incentives affect firm-level growth and productivity. This paper leverages a novel link between administrative tax data and survey data from Chinese firms to analyze the effects of the InnoCom program, a large fiscal incentive for R&D investment in the form of a corporate income tax cut. The program creates a notch, or jump, in the after-tax firm value as qualifying firms face a preferential average tax rate if a firm’s R&D intensity, defined as R&D over sales, exceeds a given threshold. This sharp incentive varies over time and across firm characteristics. We exploit this policy variation to implement a cross-sectional “bunching” estimator that is novel in the R&D literature, to analyze potential evasion responses, and to estimate a panel model where the tax reforms serve as instruments that identify the effect of R&D investment on firm productivity and profitability. We find that this program led a large number of firms locate at the qualifying R&D intensity threshold, implying a tax elasticity of R&D investment between 0.44 and 0.55, depending on firm size. We find that roughly 50% of this response is due to evasion and that the effect of R&D on firm profitability varies greatly by firm size with an average elasticity of TFP to R&D investment of about .06.