Information and Communication Technology and Firm Geographic Expansion

Xian Jiang †
Duke University

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Abstract
Information and communication technologies (ICT) can widen firms’ geographic span of control by reducing internal communication costs. Combining comprehensive establishment-level datasets with ownership linkages, geographic locations, and ICT usages, I document that US manufacturers have expanded geographically over the past three decades and that firms with more advanced technologies (i.e., Intranet) have larger geographic coverages. To estimate the effects of ICT on firms’ geographic span of control, I exploit a historic event in ICT developments in the United States: Internet privatization in the early 1990s. Results suggest that better access to ICT helped firms expand to more counties and that Internet privatization accounted for around 38% of the total increase in firms’ geographic coverage during 1995-2007. Using a model where firms endogenously adopt advanced technologies and choose multiple production locations, I estimate that the Internet privatization reduced the manufacturing price by 1.76%. The counterfactual analysis highlights the importance of multi-unit production in evaluating the benefits of ICT improvements. Compared to a trade-only model, a model with multi-unit firms predicts that efficiency gains are larger and more geographically dispersed.

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†Email: xian.jiang@duke.edu. Website: www.xian-jiang.com.