

SPRING 2017 METRANS RESEARCH SEMINAR

*Friday, February 10, 2017
12:00 PM to 1:30 PM*

USC – RGL 308 (Ralph and Goldy Lewis Hall)

RSVP to Nicole Guo at

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Dense Enough To Be Brilliant: Patents, Urbanization, and Transportation in Nineteenth Century America

*Presented by **Elisabeth Perlman***

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Abstract

This paper examines the geographic distribution of patenting in the nineteenth century United States as it evolves in response to transportation improvements. I find a robust, statistically significant, and positive effect of increases in local transportation access on patenting. Over the twenty years following the arrival of the railroad in a county, the number of patents per capita doubles. I explore two possible mechanisms behind this increase: a) inventors responded to larger markets afforded by transportation improvements; or b) transportation improved information flows making investors more productive. I find little evidence that patenting responded positively to increased market access per se, but that local access still matters. Using digitized texts of patents, I measure whether any given patent mentions a previous, novel technology within a particular time frame. I find little evidence that the speed of arrival of these new ideas is related to transportation improvements. These results suggest that access to local transportation lowers the effective cost of patenting by forming a nexus around which local agglomerations occur.

Elisabeth Ruth Perlman, Ph.D., is an Economist for the U.S. Census Bureau's Center for Economic Studies. She received her Ph.D. in Economics from Boston University in 2016, and her B.A. in Physics and Economics from Carleton College in 2006. Her research interests include economic history, innovation, labor economics, urban & regional economics, and automated textual analysis, with a particular overall interest in the effects of changing information networks. Before earning her Ph.D., she was a research assistant at the Federal Reserve Board.



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