# Lixia Ren

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Division of Social Science

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*Affiliation*

Postdoctoral Associate, New York University Abu Dhabi

*Education*

**University of Notre Dame** 2019 – 2024
*Ph.D. Economics* *Notre Dame, IN, the United States*
**Peking University** 2016 – 2019
*M.A. Economics* *Beijing, China*
**University of International Business and Economics** 2010 – 2014
*B.A. Management* *Beijing, China*

*Research Interests*

Development Economics, International Economics

*Working Papers*

**Transportation, Electricity, and the Birth of New Firms**
*Abstract:* Electricity and roads are common elements of Big Push industrialization policies. However, the role of electricity and roads or any combined effect of infrastructure investments in local firm creation is not well understood. Using detailed data and exogenous variation in the expansion of the road and electricity network in Tibet from 2000 to 2020, this paper shows their causal impact on local firm creation. I find that access to reliable roads alone decreases the number of new firms created each year. This negative effect is driven by counties closer to the capital city and suffer from firm loss due to the agglomeration effect. The addition of access to reliable electricity, however, increases the number of new firms rapidly.

**A Model of Transportation, Electricity and Private Investments**
*Abstract:* I develop a stylized two-sector (Agriculture and Non-Agriculture) model that incorporates the role of subsistence agriculture, transportation cost, and electricity in two sectors. Technology improvements from electrification and logistic improvements from better roads would result in labor flow from agriculture to non-agricultural sectors. I show that a firm expands its employment in response to a lower transportation or electricity cost. In addition, the number of firms in the non-agriculture sector also increases. I further predict that given a large enough transportation cost and a large enough agriculture sector, the number of firms in the non-agriculture sector increases when the transportation or electricity cost is lower, and the magnitude of this increase is even larger when there are improvements in both infrastructure.

**The Impacts of Roads on Structural Transformation and Businesses**, with Joseph P. Kaboski, Jianyu Lu, and Wei Qian
*Abstract:* This paper examines the impact of roads on structural transformation and business composition theoretically and empirically. We develop a two-sector model of regional trade with

endogenous firm entry that highlights two opposing forces. *Ceteris paribus* lower trade costs in non-agriculture lead to fewer firms, but cheaper agricultural imports releases labor from local agricultural production leading to more firms. Using major highway programs in India and China, we find results broadly consistent with the theory, with declines in the number of businesses where structural transformation is weak, and increases where it is strong.

*Work in Progress*

**Foreign-Region Investments and Structural Transformation: Evidence from Partner Assistance in China**

*Research and Teaching Experience*

**Research Assistant to Victoria Barone**
*University of Notre Dame* — *September 2023–Present*

**Enterprise Survey on Transportation and Electrification**
*Independently organized and conducted in Tibet, China* — *Summer 2023*

**Research Assistant to Taryn Dinkelman**
*University of Notre Dame* — *2020–2023*

**Teaching Assistant to Kirk Doran**
*University of Nore Dame* — *Spring 2023*

**Teaching Statistics for Economics Tutorial**
*University of Notre Dame* — *Fall 2022*

**Research Assistant to John Firth**
*University of Notre Dame* — *Spring 2021*

**Research Assistant to Timothy Dunne**
*University of Notre Dame* — *Spring 2019*

**Enterprise Survey for Industrial Parks in Africa**
*Investigator (Ethiopia and Nigeria)* — *August 2018*

**Enterprise Survey for Innovation and Entrepreneurship in China**
*Investigator (Henan and Gansu Province)* — *July 2017 and 2018*

**Enterprise Survey on Structural Transformation in Tibet**
*Investigator (Tibet)* — *June 2016*

**China Family Panel Studies**
*Investigator (Shanghai)* — *June 2014*

*Research Funds and Grants*

**Graduate Student Research Award (GSRA), ISLA, ND** — Summer 2023
*Amount: $4,000*

**Graduate School Professional Development Awards (GSPDA), ISLA, ND** — Summer 2023
*Amount: $1,500*

**Liu Institute Grant, Liu Institute of Asia and Asian Studies, ND** — Summer 2023
*Amount: $1,500*

*Skills/Traits*

**Language:** English (fluent), Mandarin (Native)
**Software:** Stata, Latex, Julia, Matlab
**Programming Language:** C++, Java, SQL