

# Xin Zhang

## Office Contact Information

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## Contact Information

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## EDUCATION

### Doctoral Studies

<i>Ph.D. in Economics</i> , Toulouse School of Economics	2021–2026 (expected)
<i>Visiting Scholar</i> , Northwestern University, Department of Economics	Jan–Apr 2025

### Prior Education

<i>M.Sc. in Economic Theory and Econometrics</i> , Toulouse School of Economics	2019–2021
<i>B.Sc. in Economics and Management</i> , Zhongnan University of Economics and Law	2015–2019

## REFERENCES

### Pierre Dubois

Toulouse School of Economics  
pierre.dubois@tse-fr.eu

### Isis Durrmeyer

Toulouse School of Economics  
isis.durrmeyer@tse-fr.eu

### Thierry Magnac

Toulouse School of Economics  
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## RESEARCH INTERESTS

**Primary field:** Industrial Organization

**Secondary fields:** Health Economics, Food Economics

## TEACHING EXPERIENCE

### Teaching Assistant

Toulouse School of Economics	
Game Theory, Master	2022, 2023, 2024
Intermediate Econometrics, Master	2024
Introductory Econometrics, Undergraduate	2024
Empirical Industrial Organization, Master	2023
Industrial Organization, Undergraduate	2023

## OTHER POSITIONS

<b>Research Assistant</b> to Isis Durrmeyer, Toulouse School of Economics	2022
<b>Research Assistant</b> to Mathias Reynaert, Toulouse School of Economics	2021, 2020
<b>Research Assistant</b> to Jie Shuai, Zhongnan University of Economics and Law	2016–2018
<b>Intern</b> at Guotai Junan Securities, Wuhan	2017

## AWARDS AND FELLOWSHIPS

Mobility grant, Toulouse School of Economics	2025
Doctoral fellowship, Toulouse School of Economics	2019–2026
Student research award, Zhongnan University of Economics and Law	2019

## WORKING PAPER

**Patent Challenge and Generic Entry** - Job market paper  
with Hanlin Zhao

Secondary patents, covering incremental innovations such as formulations or methods of use rather than core active ingredients, are increasingly employed by brand-name firms to prolong effective exclusivity, defer generic competition, and sustain high prices. A key policy response, the Hatch–Waxman Act attempts to counteract this behavior by granting 180 days of marketing exclusivity to the first successful generic challenger, thereby rewarding challenges to these patents. This study evaluates how this policy shapes generic firms’ decisions to initiate such Paragraph IV (PIV) challenges. We develop a two-stage structural model that endogenizes patent challenge decisions and use moment inequalities to estimate the fixed costs of generic entries. We evaluate counterfactual policies that vary exclusivity lengths and fixed costs. Our results show that the current 180-day exclusivity increases PIV challenges by about 4%. Extending exclusivity is more effective and practical than reducing fixed costs, and it substantially encourages generic entries in previously unchallenged markets: 2-year exclusivity raises the challenge rate to 15.38%. The effective exclusivity length is heterogeneous across therapeutic classes. For example, achieving a 20% challenge rate would require roughly two years of exclusivity for antimicrobials, whereas blood products or genitourinary drugs would require less than one year. **Tax**

### **Exemption for Feminine Sanitary Products: Evidence from the U.S Market**

Feminine sanitary products are essential for women; however, unlike other necessities that are tax-exempt, they are often subject to taxation. This paper employs a Difference-in-Difference approach to examine the impact of repealing a 6.75% tax on sanitary products in the U.S. market. The results show that prices fell by 5.3%, indicating an incomplete pass-through of the tax exemption. Nevertheless, the repeal did not significantly improve affordability once consumers’ substitution from smaller to larger pack sizes is taken into account. Furthermore, we evaluate policy options using a constant expenditure model to compare the tax repeal with four alternative interventions. We find that providing low-income consumers with a \$2 coupon offers the greatest improvement in product access, albeit at the cost of higher overall prices.

## WORK IN PROGRESS

**Consumer Demand with Unobserved Stockpiling and Intertemporal Price Discrimination**  
with Pierre Dubois and Thierry Magnac

## **Prescribing Behavior in Medical Deserts**

with Philippe Choné, Pierre Dubois and Lionel Wilner

## **PRESENTATIONS**

**2025** TSE Empirical Micro Workshop, IO Lunch Seminar at Northwestern University, Brown Bag Seminar at Kellogg School of Management

**2024** TSE IO Workshop, EEE Luchon workshop

**2023** TSE IO Workshop

**2017** CES Annual Conference, China

## **OTHER ACTIVITIES**

**Service:** Mentor, Women in Economics Mentorship Program, TSE (2022–2023);

Co-organizer, TSE IO Workshop (2023–2024) and IO Reading Group (2024–2025)

## **OTHER INFORMATION**

**Software:** Matlab, Stata, R, Python, SAS

**Languages:** English (fluent), French (intermediate, B1), Mandarin (native)

**Citizenship:** China