

# Xingliang Ma

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## SUMMARY OF QUALIFICATION:

- Strong analytical skills with PhD in economics and solid research experiences;
- Hands-on experiences in credit risk modeling, fixed income, and model validation.

## EDUCATION

### UNIVERSITY OF WISCONSIN - MADISON

Madison, WI

#### **Ph.D. Agricultural & Applied Economics**

2011

Dissertation: Essays on Structural Demand Estimation and Dynamic Adoption with Bayesian Learning:  
Application to the U.S. Seed Industry

### FUDAN UNIVERSITY

Shanghai, China

#### **M.A. Economics**

2006

### JILIN UNIVERSITY

Changchun, China

#### **B.S. Economics**

2003

## PROFESSIONAL EXPERIENCES

### **Model Validation Senior, Freddie Mac, April 2015 – present**

- **Private Labeling Securities (PLS)**
  - Build challenger models that achieved better performances than the submitted model;
  - Complete the whole review process, including estimation, simulation, back test and benchmark, independently.
  - Construct separate databases and write SQL queries to facilitate the model review;
  - Rewrote some of the R packages in C/C++ that achieved at least 10 folds of performance improvement;
  - Program extensively in R and Python; Parallel computing; familiar with a variety of programming paradigms such as objective-oriented programming, functional programming, and procedural programming etc.
  - Above & Beyond Reward after three months onboard for excellent performance in the review work.
- **T-Deal model**
  - Guide other team members to complete the model review collectively;
  - Involved in reviewing the capital model and the securitization process.

### **Associate Research Fellow, International Food Policy Research Institute, January 2012 – March 2015**

- **Econometric modeling & economic research**  
Publish research papers by proposing innovative research ideas and sophisticated econometric methods;
- **Pakistan project lead**  
Project design, planning, training, and implementation in Pakistan.

### **Research Assistant, University of Wisconsin - Madison, August 2006 – December 2011**

- **Dynamic Adoption of Genetically Modified Crops in the US**  
Dynamic Programming; Bayesian Learning; Structural estimation; Fortran 90 and Python;
- **Structural Demand Estimation of Differential Products**  
Generalized Method of Moments (GMM) estimation; MATLAB;
- **Survival Analysis on Product Lifecycle in the Market**  
Extended Cox Proportional Hazards model; STATA;
- **Statistical Regression in R**  
Regression analysis, linear models, model selection, etc., in R; Classes taken from the Department of Statistics.

## VOLUNTEER EXPERIENCES

- Designate Security Administrator (DSA), UNIX system maintaining, Freddie Mac, 2015-present
- Representative of Associate Research Fellows, International Food Policy Research Institute, 2013-2014

## ADDITIONAL INFORMATION

- Computing: R, MATLAB, Fortran, Python, SAS, STATA, Excel/VBA, Access, UNIX
- Languages: English (fluent), Chinese (native)

## PUBLICATIONS

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1. **Ma, X.**, M. Smale, D. J. Spielman, P. Zambrano, H. Nazli, and F. Zaidi. 2016. “A question of integrity: Variants of Bt cotton, pesticides, and productivity in Pakistan.” *Journal of Agricultural Economics* (accepted, forthcoming).
2. **Ma, X.**, and G. Shi. 2015. “A Dynamic Adoption Model with Bayesian Learning: An Application to U.S. Soybean Farmers.” *Agricultural Economics*, 46 (1): 25–38. (Code: [https://github.com/equusprobus/Dynamic\\_Adoption](https://github.com/equusprobus/Dynamic_Adoption))
3. **Ma, X.**, and G. Shi. 2013. “GM vs. Non-GM: A Survival Analysis of U.S. Corn Hybrids.” *Agricultural and Resource Economics Review*, 42(3):542-560.
4. Spielman, D.J., and **X. Ma**. 2016. “Private Sector Incentives and the Diffusion of Agricultural Technology: Evidence from Developing Countries.” *Journal of Development Studies*, 52 (5): 696-717.
5. Spielman, D.J., H. Nazli, **X. Ma**, P. Zambrano, and F. Zaidi. 2015. Technological opportunity, regulatory uncertainty, and Bt cotton in Pakistan. *AgBioForum*, 18(1), 98-112.
6. Spielman, D.J., D.Z. Zeng, and **X. Ma**. 2014. “Clusters, Innovation Systems and Biotechnology in Developing-Country Agriculture.” In *Handbook on Agriculture, Biotechnology and Development*, edited by S. Smyth, D. Castle, and P. Phillips. Surrey, UK: Edward Elgar Publishing.

## CONFERENCE PRESENTATIONS

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1. “Effect of Prices, Traits and Market Structure on Corn Seeding Density”, Selected Paper, *American Agricultural Economics Association (AAEA) Annual Meeting*, Milwaukee, WI, July 2009
2. “GM vs. Non-GM: A Survival Analysis of Hybrid Seed Corn in the US”, Selected Poster, *AAEA Annual Meeting*, Denver, CO, July 2010
3. “A Structural Estimation of the Demand for Corn Seed in the US”, Selected Poster, *AAEA Annual Meeting*, Denver, CO, July 2010
4. “A Dynamic Adoption Model with Bayesian Learning: Application to the U.S. Soybean Market”, Selected Paper, *AAEA Annual Meeting*, Pittsburgh, July 2011
5. “A Dynamic Adoption Model with Bayesian Learning: Application to the U.S. Soybean Market” (revised), Selected Paper, *American Economic Association (AEA) Annual Meeting*, San Diego, January 2013
6. “Private Sector Incentives and the Diffusion of Agricultural Technology: Evidence from Developing Countries”, Selected Paper, *NC-1034 conference on Biotechnology Trade and Transfer*, Arizona, March 2013
7. “Private Sector Incentives and the Diffusion of Agricultural Technology: Evidence from Developing Countries”, Selected Poster, *AAEA Annual Meeting*, Washington DC, August 2013
8. “Information efficiency in a lemons market: Evidence from Bt cotton seed market in Pakistan”, Selected Paper, *AAEA Annual Meeting*, Minneapolis, MN, July 2014
9. “The role of social network in an imperfect market for agricultural technology products: Evidence on Bt cotton adoption in Pakistan”, Selected Paper, *AAEA Annual Meeting*, Minneapolis, MN, July 2014
10. “A question of integrity: Variants of Bt cotton, pesticides, and productivity in Pakistan”, Selected Paper, *AAEA Annual Meeting*, Boston, MA, July 2016