

# RESEARCH STATEMENT

YING LIN

The focus of my primary research concerns the economic problems that fall within the field of Industrial Organization in the coffee industry and the aviation sector. My job market paper studies the economic impacts in the U.S. brew-at-home coffee market associated with the introduction and growing presence of single-cup coffee brew technology in 2012. My other two papers focus on the U.S. airline industry examining the pricing strategies and market mechanisms of airline pass-through behavior in response to the substantial crude oil price reduction since mid-2014. I also have a working project that studies the network effects of Starbucks coffee shops on the sales of packaged ground coffee products sold in retail stores.

## **How Much Do Consumers Value Single-cup Coffee Brew Technology? Assessing Market Impacts of Single-cup Brew Technology on the U.S. Brew-at-home Coffee Market (with Philip Gayle)**

In my job market paper, we first examine consumer valuation on their coffee consumption experiences between using single-cup brew technology and traditional auto-drip brew method using a random coefficients logit demand model. Results suggest that on average, a typical consumer is willing to pay up to \$2.52 extra per fluid ounce to consume freshly brewed coffee with single-cup technology and this estimate increases with consumer income levels. Second, a counterfactual experiment by removing consumer preference for coffee brew technologies predicts that demand and profitability for traditional auto-drip brew coffee products increase by 3.88% and 4.6% respectively, on average. Last, a typical consumer is predicted to have net gains from consuming one fluid ounce of brewed coffee by 2% with the introduction of single-cup coffee brew technology. This paper contributes to both a few studies that focus on the single-cup coffee segment and literature that examine the economic effects of newly introduced products or technology.

## **Cost Pass-through in Commercial Aviation (with Philip Gayle)**

This paper maintains tight connections between economic theory and empirical analysis. It begins with a simple theoretical model of air travel demand following Shubik-Levitan formulation and Bertrand-Nash firm competition to study the market channels through which changes in crude oil price translate into changes in airfares. A reduced-form regression is performed to empirically test the pass-through relationship predicted by the theoretical model. Consistent with the theoretical predictions, the empirical results suggest that for a 10% increase (decrease) in crude oil price, airfares are likely to increase (decrease) by 0.61%~0.77% on average and the size of the pass-through increases with market competitiveness and decreases with market distance.

## **An Empirical Analysis of Incomplete Cost Pass-through in Commercial Aviation Using Nested Logit Model (with Philip Gayle)**

This paper extends the reduced-form analysis from the previous one and examines the market channels of price transmission from crude oil price to airfares using a structural approach. Results

suggest an incomplete pass-through rate of  $0.02 \sim 0.03$  on average, considering demand-side and supply-side market channels. Simulations by decomposing the demand-side and supply-side pass-through channels suggest the dominance of supply-side market channel. The pass-through estimate is also affected by airlines' jet fuel hedging decisions and decreases with both market distance and elasticity of passenger demand. This paper contributes to literature by modeling and estimating the price transmission through both demand-side and supply-side market channels, which no previous work covers, to the best of our knowledge.

### **To What Extent the Presence of Starbucks Coffee Shop(s) Influences the Sales of Packaged Ground Coffee Products in Retail Stores? (with Philip Gayle and Jin Wang)**

I am currently working with Dr. Philip Gayle and Dr. Jin Wang on a project that examines how the presence of Starbucks coffee shops influences the product competition between Starbucks branded and non-Starbucks branded packaged ground coffee sold in retail stores. We have some preliminary results suggesting that the presence of Starbucks coffee shops is likely to increase consumers' marginal utilities from purchasing Starbucks branded packaged ground coffee products and decrease consumers' marginal utilities from purchasing non-Starbucks branded packaged ground coffee products sold in retail stores. We are currently doing some robustness checks. Next, we plan to use a counterfactual experiment to simulate changes in the presence of Starbucks coffee shops and examine how it affects the sales of coffee products in retail stores.

### **Future Research Agenda**

Going forward, I first expect to complete my current working project that studies the potential impacts of the presence of Starbucks coffee shops on the sales of packaged ground coffee products sold in retail stores. Second, I plan to extend my job market research by looking at whether or not other vertical relationships between coffee manufacturers and retailers play a role in influencing the extent to which classic auto-drip brew ground coffee products sales, prices, and profitability are affected by the introduction and growing presence of single-cup coffee brew technology.