



The University of Oklahoma[®]

DEPARTMENT OF ECONOMICS

November 4, 2015

To Whom It May Concern:

I have been asked to write a letter of recommendation for Zexuan Liu who is applying for a faculty position in your department.

I have known Zexuan since his first year in graduate school when he took my Advanced Price and Welfare Theory course offered in the Ph.D. program of our department. He was an excellent student in that class. He performed consistently very well in exams and assignments and was among the top students. I am now a member of his dissertation committee and I have seen him evolve as a first rate researcher.

His research work is motivated by changes in the structure of, and policies surrounding the airline industry. In particular, his job market paper analyses the effect of the merger between US Airways and America West on market outcomes with a focus on measures of vertical differentiation such as arrival delays (affecting quality), number of destinations, routes and flights per route. He also considers the impact of the merger on a measure of horizontal differentiation exploring the departure time distribution. Zexuan and his co-authors use state of the art econometric techniques to produce a number of important findings. First, after merging, the carrier reduced the number of routes and destinations with non-stop service and reduced the number of flights per route having a likely adverse impact on passenger welfare. Then, as far as the distribution of scheduled departure times across carriers, he finds that flight gaps are more evenly distributed after the merger.

In a related paper, Zexuan sets out to test a theory linking decisions to move a product line within the product space to changes in profitability, breaking it down to market share effects and competition effects. He finds that with higher quality uncertainty, travelers do not view firms' flights as close substitutes even though their departure times may be close. This reduces competition intensity.

Finally, his last paper evaluates the policy effects of the Tarmac Delay Rule which reduced lengthy tarmac delays to protect consumers. Using regression discontinuity design, he showed that cancellation rates increased by 5% and the expansion of the rule to cover all airports led to the use of selective cancellation strategies to minimize disruptions.

Zexuan has developed great econometrics skills in his research. He is carefully analyzing his data using difference-in-difference approach, matching and quantile regression techniques,

regression discontinuity design and other appropriate tools to tackle these important issues in the most effective way.

I believe that Zexuan Liu has the motivation to succeed as a researcher in your program. Since I have been away for the past 2.5 years, I have limited knowledge about his performance in the classroom and I will let his main advisor speak to that. If you wish to further discuss my evaluation of Mr Liu please contact me at the NSF where I serve as a program director in Economics (703 292-7466) or via e-mail (georgiak@ou.edu).

Sincerely yours

Georgia Kosmopoulou

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