

Research Statement

My main research goal is to produce objective evidence that can inform policy related to US labor and agri-food issues. As I progressed through my educational journey, my research focused on three main topics: competition between low-skilled immigrant and US-born (native) workers, labor supply constraints in US agricultural production, and the transformation of developing economies. The thread that ties my research together is my interest in low-skilled labor migration. My current research efforts are aimed at examining the implications of a declining farm labor supply and finding solutions to the problem.

I initially gained an interest in labor economics after working in the construction industry and witnessing a massive influx of immigrant labor. That experience taught me that labor issues are core to the entire conduct of business and play a major role in determining the distribution of economic gains. Once I became involved in economic research as an undergraduate student, I wanted to study how immigration impacts the earnings and employment opportunities of native construction workers. Working under the supervision of Professor Giovanni Peri, I wrote a thesis on the topic, which helped me earn “highest honors” when I received my Bachelor’s degree in economics at UC Davis. I continued to develop this line of research in graduate school with my advisor Professor Pierre Mérel, where we conducted a (forthcoming) study that examines the impact of immigration in low-skilled sectors of the economy. Our study finds that immigration creates relatively large negative short-run impacts on the employment and earnings of native workers in several low-skilled sectors.

As I progressed in the PhD program at UC Davis, I also worked as a short-term consultant for the World Bank to help organize “The Future of Work in Agriculture” conference in Washington DC. The conference brought together researchers from all over the world to examine the role that the agri-food sector can play in global poverty reduction, economic growth, and food security. After the conference, I collaborated with J. Edward Taylor (UC Davis) and Luc Christiaensen (World Bank), which led to a recently published article in the journal *Food Policy* that explores the conference topic. We conclude that developing regions must make investments that boost labor productivity and create off-farm employment opportunities to facilitate poverty reduction and long-run economic growth. Moreover, we find that technological advancements could help reduce reliance upon immigrant farm labor in developed countries. That collaborative research effort evolved into another co-authored project I recently completed, a (forthcoming) chapter in the *Handbook of Agricultural Economics* that documents the evolution of agricultural labor markets in developing and developed economies across the globe.

In addition to conducting agricultural labor research in a global context, I also developed a strong interest in domestic farm labor issues. Recent studies have found empirical evidence of farm labor shortages in the US, and others have discovered a long-run negative trend in the historically abundant supply of farmworkers. To investigate the prevalence of farm labor shortages, I forged a partnership with the California Farm Bureau Federation (CFBF) to conduct an online survey

of farmers in 2019. Over 1000 California farmers responded to our survey, with 56% percent reporting that they were unable to hire all the workers they wanted to at some point during the previous five years.¹ A declining farm labor supply could reduce the nation's access to safe and healthy produce, increase food prices, and cause farmers to suffer significant economic losses, yet few studies have examined the implications of this phenomenon. My job market paper helps fill a gap in the farm labor literature by quantifying the extent to which changes in the farm labor supply affect the production and value of hand-harvested fruit and vegetable (FV) crops using a rich set of production, employment, and weather data from California counties. My findings suggest that the declining farm labor supply could have economically significant impacts on labor-intensive crop production and farm revenue, but it is unlikely to devastate the aggregate production of FV crops in the near future.

Recently, I have had the privilege of working as a postdoctoral research scholar with Timothy Richards at Arizona State University, who has pushed me to pursue farm labor economics from a structural perspective. Our ongoing research efforts aim to examine a range of policy and market solutions to the farm labor shortage problem through a new analytical framework that models agricultural labor markets as imperfectly competitive. Currently, we are working on a project that examines the spillover effects of the H-2A visa program's minimum wage (the Adverse Effect Wage Rate) on the labor market outcomes of domestic farmworkers using a structural dynamic job search model.² We are also in the beginning stages of a project that will test whether imperfect competition in agricultural labor markets can explain why farmworkers invest in non-farm human capital and exit the farm labor force. In addition to the projects discussed above, I have co-authored six outreach publications, four peer-reviewed articles, one (forthcoming) book chapter, and a USDA-ERS Economic Information Bulletin (under review), all related to farm labor and immigration issues.

Moving forward, I envision my research efforts continuing to investigate and explore solutions to America's farm labor supply problems. As a PhD student at UC Davis, I co-authored several grant proposals that netted over \$150,000 for research related to farm labor scarcity. To help fund my research agenda moving forward, I will continue to seek out new grant funding sources. I am aware of grant opportunities through the USDA and NIFA that could provide future support. Currently I am listed as co-PI on an AFRI grant proposal (under review) with Timothy Richards that, if funded, will provide support to help me continue working on the research outlined above.

¹The results of our survey were presented to the US Congress by the CFBF in 2019. Farmers reported using a variety of adjustment mechanisms to deal with labor shortages, including the adoption of labor-saving technologies, changes in the crop mix, and increased use of the H-2A visa program. Our survey received national media attention and was featured in local television news broadcasts and newspapers (see <https://www.zachrutledge.com/farm-survey.html>). We are currently in the process of preparing a new, related survey that will focus on farm labor supply issues related to the COVID-19 pandemic.

²The H-2A visa program allows US agricultural employers to recruit foreign workers on a temporary basis when there are domestic farm labor shortages. H-2A workers must be paid a minimum wage, called the Adverse Effect Wage Rate, which is supposed to help reduce downward pressure on domestic farm wages.