

## Research Statement

My primary research agenda revolves around the study of worker productivity and skill acquisition. Specifically, I am interested in three areas: contracts and incentivizing employee effort, youth acquisition of skills and human capital, and the impact of college major choice on employment and earnings. Additionally, I have research interests in health, focusing on the opioid epidemic.

Understanding the use of labor contracts for incentivizing employee effort is a central question in labor economics. My work looks at the potential for moral hazard to arise in the setting of multi-year contracts with guaranteed salary. If certain conditions are met, such as exerting effort is costly for the employee, and the employer faces a cost to monitoring the employee, the employee may shirk. I use Major League Baseball player data to study this issue, as performance and contract information are readily available, multi-year contracts are commonly given, and salary is guaranteed. The challenge in identifying how the number of years remaining on a contract impacts performance is that there is positive selection into multi-year contracts. In my paper “New Evidence in the Study of Shirking in Major League Baseball”, I use an individual fixed-effects specification to address this selection. This allows for the control of time invariant player characteristics, like innate ability, which influence selection into multi-year contracts. While I find evidence of a negative relationship between years remaining on a contract and performance, I take further steps to show that this is due to shirking. For example, I exploit sources of heterogeneity within and across players to identify situations where shirking is more likely, and present empirical evidence consistent with shirking. This paper is under review at the *Journal of Productivity Analysis*. I’m currently working on a follow-up paper entitled “It’s a Party in the MLB: Shirking Between Games in Major League Baseball” which looks to test whether players shirk in between-game preparation. Using difference-in-difference and triple difference regressions, I find that increases in years remaining on a player’s contract lead to diminished performance when playing on short rest, and that this difference is driven by games played in “party” cities. I’ve also looked at how a related contract component, the contract option, impacts performance. Contract options usually take the form of an additional year of labor contract that can become guaranteed at the discretion of one or both parties. I again use the setting of Major League Baseball, where the most common type of option is a club option, which allows the firm to extend the player’s contract by one or more years at a preset salary but awards a buyout if the option is not exercised. Team should exercise these options if the player’s predicted value exceeds the option salary. As such, effort is disincentivized as the player cannot reap the benefits of strong performance and receives a buyout if the option is not executed. This paper is published in the *Atlantic Economic Journal*.

In the area of youth acquisition of skills and human capital, I’ve worked with Dr. Alicia Sasser Modestino on a multi-year evaluation of the Boston Summer Youth Employment Program (SYEP), funded by the William T. Grant Foundation. As early work experience is believed to be a tool that can enhance later employment outcomes, summer job experience for youth can play a role in the development of cognitive and non-cognitive human capital. While

the literature on impacts of SYEPs is still growing, early evaluations of such programs have found impacts on criminal justice and academic outcomes. Using a randomized-control trial, we analyze the impact of the Boston SYEP on short and long-term outcomes for youth participants which allows us to shed light on the program's potential mechanisms. Our first paper focuses on short-term behavioral outcomes that occur during the summer of participation, measured by a pre/post survey. Two complementary approaches are used to identify impacts. For participants, a pre/post comparison is used to identify changes across the summer. As youth undergo other changes during the summer, we compare post-survey outcomes for participants and non-participants. We find that participant youth show improvement in non-cognitive skills, community engagement, academic aspirations, and job readiness skills relative to the control group. This paper is published in *Evaluation and Program Planning*. Our second paper looks at the impact of the Boston SYEP on academic outcomes including attendance, course failures, standardized test scores, and high school graduation using administrative school records provided by the Massachusetts Department of Elementary and Secondary Education. Summer employment may impact academic outcomes through multiple channels, including soft skills development on the job, like organization and being on time, and motivation to work hard due to increased academic aspirations. This paper is currently under review at *Education Finance and Policy*.

I am also interested in the returns to education more broadly. Currently I'm working on a paper with Neil Alper and Gregory Wassall exploring the role of arts majors in entrepreneurship and innovation. Using American Community Survey data, we find that arts majors are disproportionately self-employed, working in entrepreneurial occupations, and working in copyright and trademark intensive industries. We plan to submit this work to the *Journal of Cultural Economics*. One of my dissertation chapters looked at returns to completing an undergraduate double major. Completing a double major could lead to increased earnings either through the accumulation of additional human capital or by providing a positive signal to employers. Consistent with other papers in the literature, I find a small, positive return to double majoring. Further, I explore heterogeneity in the return along a number of dimensions including major composition. I'm currently working on this paper and plan to submit it to a journal.

Lastly, I am interested in the prescribing of opioids, with a focus on opioids with anti-addictive properties. With a team of researchers at Northeastern University, I have a forthcoming paper in the *American Journal of Drug and Alcohol Abuse* entitled "Patterns of Buprenorphine/Naloxone Prescribing: An Analysis of Claims Data from Massachusetts". This class of drugs, opioids with anti-addictive properties that can be prescribed on an outpatient basis, are being prescribe at an increasing rate in Massachusetts. We also present evidence that suggests that while most individuals being prescribed these drugs have opioid use disorder, physicians also appear to be prescribing these drugs in a preventive fashion to those with pain conditions who may have a proclivity toward developing opioid dependence.