This paper examines the prevalence and effect of referee own-nationality favoritism in Champions League soccer. Even though the Union of European Football Associations had the best referees in Europe for Champions League matches, these officials exhibit their preference for players from their own country. Champions League referees make approximately 0.43 more beneficial calls per game for players who share their nationality than players from other countries. This referee own-nationality bias makes a team’s domestic players—who can never be from the same country as the referee—relatively less valuable during Champions League matches. Unlike other forms of labor discrimination, referee discrimination is not evident in investigations of compensation differentials, but instead affects players’ salaries by impacting on field performance.

**The Impact of MBL Player Injuries on Team Performance & Player Valuation**
By Max Flignor (Mark Kanazawa, Advisor)

This paper examines the effect that player injuries have had on team performance in MLB and how teams have evaluated injuries in response. After reviewing previous literature on MLB production functions and relevant economic theory on professional sports leagues and stochastic production, this paper uses basic econometric tests to add injuries into accepted models of team performance and player compensation. The tests find that days lost to injury are significant when regressed alongside player salaries and player statistics. Additionally, the tests find that for every day lost a hitter can expect about an $18,000 decrease in median contract amount offered and a pitcher can expect about a $21,000 decrease in amount offered. After calculating the marginal revenue product of injuries, the models indicate that teams have discounted players with injury histories more than injuries have hurt their revenues. Final tests indicate that certain teams have attempted to exploit this inefficiency but many have not.

**Skill Spills: A Cross-Skill Group Analysis on Wage Spillovers of Good Jobs**
By Robert Kossa (Jenny Bourne, Advisor)

In this paper, I analyze how the industrial composition of cities can have an impact on local wages. Using Public Use Microdata Samples, I construct a measure for the level of “good jobs” in the city for both educated and uneducated skill groups. I test the impact of both unskilled and skilled good jobs on the wages of skilled and unskilled workers in their respective cities. I test several theories related to the local wage determination such as agglomeration of skills and search and bargaining. I find both positive and significant wage spillovers from both skill groups, impacting both skill groups. I also find that the search and bargaining model can explain spillovers from unskilled good jobs. Finally, I find support for agglomeration of skills and high human capital concentrations have an equal effect on the marginal productivities of labor for everyone, regardless of skill group.

**How Efficient is the Art Market? An Analysis of Art Market Efficiency and its Evolution Across Time in Comparison with the Stock and Housing Markets**
By Lindsey Main (Ben Keefer, Advisor)

This paper analyzes the efficiency of the art market and its evolution across time in comparison with the stock and housing markets through the lens of market dynamics from 1875-1945, 1945-2013, and 1875-2013. While art market efficiency has been explored in the literature, it has not been considered in a comparison with the stock and housing markets. Over both short and long investment horizons, we find evidence that the art market is becoming more efficient after World War II. In particular, for autoregression in art market returns, we find evidence that the art market is inefficient and mean reverting over short horizons before 1945 but efficient and non-mean reverting after 1945. We speculate that the globalization of the art market and fundamental changes in asset return processes that occurred due to the resolution of the uncertainties of the 1930s and 1940s explain this shift. In an OLS comparison of art, stock, and housing dynamics, we find evidence that the art market may be inefficient over long horizons before 1945 due to lagged relationships as it shares with the housing market but less inefficient over long horizons after 1945 due to “irrationally exuberant” behavior it may share with the stock market.

**Is Offshoring a Driver of Wage Polarization in Manufacturing Industries? Contrary Evidence from Current Population Surveys**
By Emil Murathanoglu (Jenny Bourne, Advisor)

As offshoring becomes increasingly prevalent in the U.S., understanding its effects on wage distribution is of great policy importance. I pair individual-level manufacturing worker data from the Current Population Survey from 2000 to 2008 with industry-level productivity and offshoring variables to explore these effects in manufacturing industries. In particular, I test whether offshoring is associated with wage polarisation. I find that a 10-point increase in percentage of workers offshored is associated with (1) median wage increases of 0.1 and 0.4 percent for workers with advanced and college education respectively; and (2) median wage decreases of 0.9, 1.3 and 2.3 percent for workers with some college, high school and below-high school education. As these findings contradict earlier works that suggest offshoring is a driver of wage polarization, I further discuss whether the relationship between wage distribution and offshoring can differ between manufacture and service sectors.

**Examining the “Hot Hand” Effect in the MLB Gambling Market**
By Danny O’Neill (Mark Kanazawa, Advisor)

In this study, we examine the idea that the winning and losing streaks of Major League Baseball teams systematically alter Las Vegas betting odds. The “hot hand” effect, as defined in our study, states that any team currently riding a winning (losing) streak will continue to win (lose) in their ensuing games. As our models show, bettors appear to believe that away team streaks exemplify this hot hand effect and that these teams will continue on their respective “hot” or “cold” streaks whereas home teams show the opposite effect with regard to streaks and that current home winning or losing streaks are more likely to reverse. Implications from this study of gambling behavior can often times translate to other areas of behavioral economics, specifically related to stock price projections and other trend-related analyses influenced by human bias.

**The Relationship between Parent and Child Occupational Safety and Health Risk Levels in the African American Community**
By Emily Pollard (Jenny Bourne, Advisor)

This paper explores the relationship between parent and child occupational safety and health risk levels in the African American community. Using data from the National Survey of Black Americans, 1979-1980, and from the Bureau of Labor Statistics, I regress child occupational safety and health risk level on parent occupational safety and health risk level. While I find no statistically significant relationship between mother and child risk levels, I do find a statistically significant positive relationship between father and child risk levels. I then test to see if the educational mobility of the respondent affects this relationship. I regress differences in child and father risk levels on differences in child and father education levels. I find that the attainment of a college degree by respondents is correlated with having a lower risk level than one’s father.

**Extreme Weather Events and Time Allocation to Labor: Potential Impacts of Climate Change on the Labor Market**
By Morgan Richmond (Jenny Bourne, Advisor)

In this paper, I examine the effects of climate change on American allocation of time to labor using econometric models that employ exogenous variation in the occurrence of extreme weather events. I use data from the 2011 to 2014 American Time Use Survey, supplemented with daily reports of extreme weather events (excessive heat, flash floods, hurricanes, storm surges, and tropical storms) from the National Climatic Data Center. I find significant reductions in minutes allocated to labor in sectors that are highly exposed to climate conditions in the week after an extreme weather event occurs in the workers’ state. Incidence of heat exposure, storm surge, or a tropical storm in the state of a high-exposure worker in the week preceding the day in question reduces average time worked by 54, 38, and 7 minutes respectively. As climate change induced extreme weather events increase in intensity and frequency, it will be important to understand how labor supply reacts in order to accurately estimate damages incurred by climate change on the U.S. economy.

**Establishing the Over-Under: Examining Pay, Performance, and the Determinants of Being Over or Underpaid in the NFL**
By Emily Starr (Jenny Bourne, Advisor)

This paper studies pay and performance for National Football League players. A model for calculating the marginal revenue product of NFL quarterbacks, running backs, wide receivers, tight ends, and kickers is presented and used to determine to what degree players are over- or underpaid. Various determinants of how players are paid relative to their marginal revenue product are identified. My empirical results are consistent with the assertion that NFL teams have monopsony power and the determinants of relative pay identified are consistent with the human capital theory of investment and models of wage determination in this labor markets like the NFL.

**Educational Mismatch, Wage Levels, and Wage Growth: A Longitudinal Analysis of the U.S. Labor Markets**
By Agnes Tse (Jenny Bourne, Advisor)

This paper examines the effect of educational mismatch upon wage levels and wage growth. The empirical analysis, based on cross-sectional and longitudinal data from the National Longitudinal Survey of Youth 1997 (NLSY97) from 2006 to 2013, suggest that overeducated workers earn about 5 to 7 percent less, and undereducated workers earn more than matched workers with the same amount of education. I test the human capital compensation hypothesis by using the fixed effects model to control for unobserved heterogeneity. This study does not find any evidence to support the career mobility hypothesis that the rate of wage growth is higher among overeducated workers. I conclude that overeducated workers are penalized by a lower starting wage that is not recovered.

**The Effect of Mega-Events on Housing Prices**
By Erika Tyagi (Mark Kanazawa, Advisor)

This research estimates the impact of the 2012 Summer Olympics on housing prices in London using a semi-logarithmic hedonic model and a difference-in-difference approach. The model finds that housing prices in the London borough that hosted the Olympics increased by 5.5 percent after the bid was announced by 6.6 and 10.9 percent after the event took place. Not all five host boroughs saw a uniform effect; Newham—the borough that contains most of the Olympic Park—saw a decline in housing prices after the event between 3.7 and 5.1 percent. This research also highlights the importance of considering how crime and supply conditions are included in hedonic pricing models.

**Country Risk During the Great Recession: Does Financial Development Matter?**
By Jianxiong Yu (Ben Keefer, Advisor)

This paper examines the relationship between a country’s systemic risk and its financial development. To measure systemic risk, we first compute the country beta (based on CAPM) for each country during the Great Recession (December 2007 to June 2009) for a wide sample set of 23 advanced and emerging economies. We then examine whether variables capturing a country’s financial development significantly predict the country’s beta during the financial crisis. We further test whether financial development predicts systemic risk in the equity markets of advanced and emerging economies differently. In this paper, we generally fail to find evidence that financial development significantly predicts beta for either advanced or emerging economies during the Great Recession. This finding may provide evidence against the conjecture that the scale of financial system is largely responsible for the Great Recession.