CHEPS

CENTER FOR HEALTH ECONOMICS & POLICY STUDIES



INSIDE:

Cutting-Edge Public Policy Research in the Time of COVID-19



LETTER FROM THE DIRECTOR

Dear Friends:

The Center for Health Economics and Policy Studies (CHEPS) is completing its third year in the midst of a global pandemic. And I have never been prouder of the perseverance, facility, and work ethic of our CHEPS team. This year has been extraordinarily productive; metrics of scholarly productivity and student success are at all-time highs. Our partners at the Troesh Family Foundation, the Charles Koch Foundation, San Diego State University, and the University of California San Diego have been invaluable in supporting the Center and its students throughout this very challenging period.

Our groundbreaking research on the effects of COVID-19 mitigation policies — and the effects they have on social distancing, public health, and jobs — has garnered the attention of economists, state and federal policymakers, and the national news media.



Five important CHEPS working papers, all of which were co-authored by student affiliates, have been released by the National Bureau of Economic Research (NBER) and the Institute of Labor Economics (IZA). Several of these papers offer evidence-based policy advice on the efficacy of shelter-in-place orders and ask important questions such as: could judiciously implemented local stay-at-home orders achieve public health benefits at a lower cost than one-size-fits-all shutdown policies?

Included among the many research projects tackled by the CHEPS research team were:

- an exploration of the effect of California's first-in-the-nation shelter-in-place order on COVID-19 case growth and deaths;
- an examination of the impact of county shelter-in-place orders in Texas on COVID-19 case growth;
- an examination of whether the 2020 Black Lives Matter protests reignited COVID-19 in affected cities;
- an exploration of the impact of state anti-bullying laws on youth suicide behaviors;
- an examination of whether salary history bans in California affected the gender wage gap;
- studies estimating the impact of city gun buyback programs and gun-related homicides on firearm-related homicides;
- an examination of the impact of post-9/11 combat deployments in the Global War on Terror on subsequent domestic criminal activity by veterans;
- a study exploring the impact of traumatic health shocks on religiosity;
- a re-examination of whether minimum wage laws are effective in fighting poverty;
- a revised manuscript examining the effect of minimum wage increases on criminal behavior;
- a paper exploring whether marriage equality laws were effective at improving the mental health of U.S. high school students; and
- a study examining the impact of state e-cigarette taxes and traditional cigarette taxes on marijuana use.

These projects leverage the Center's focus on public policy analysis, its expertise in the economics of risky behaviors, and the career goals of our students who work on these projects.

The economic recession has imposed substantial costs on many San Diego State University students, limiting options for paid internships and economic consulting jobs commonly sought by our students. The opportunity to continue working at the Center, conducting research on some of the most important policy questions of our time, has been incredibly important to help them accumulate human capital when the economy emerges from the recession. The Center has been a family that our students can count on during this trying time.

Over the past three years, CHEPS has accomplished quite a number of impressive feats:

- 25 graduate and undergraduate students have received funding for research-related activities.
- 67 Research Seminars have been held by researchers visiting CHEPS from such institutions as Baylor University, the University of Notre Dame, Syracuse University, Cornell University, Texas A&M University, the University of North Carolina at Chapel Hill, the University of Colorado Boulder, the University of Kentucky, the University of Southern California, the University of California, Davis, Vanderbilt University, the University of Texas at Austin, Barnard College, Georgia State University, George Washington University, West Virginia University, and the University of Illinois at Chicago.
- 29 peer-reviewed publications have been achieved at high-quality economics, medical, and public policy journals such as the National Tax Journal, the Journal of the American Medical Association: Pediatrics, the Journal of Law and Economics, the American Journal of Health Economics, the Review of Economics and Statistics, the Journal of Health Economics, and the Journal of Applied Econometrics.
- 7 former M.A. Economics students have been accepted to Ph.D. programs at the University of California, Santa Barbara, Colorado State University, the University of Oregon, Fordham University, the University of California, Davis, and Université catholique de Louvain (Belgium).
- 21 working papers published by the National Bureau of Economic Research (NBER) and 12 working papers published by the Institute of Labor Economics (IZA).
- 34 academic research conferences and workshops at which CHEPS Affiliates have presented their cutting-edge scholarship.

We have also welcomed our first CHEPS postdoctoral fellow, Drew McNichols, who has been a first-rate role model and research mentor for our students.

This is a very exciting time for applied microeconomic research in CHEPS. I hope you will enjoy reading about our research projects and learning about our fabulous students. And I hope you will consider donating to the Center to help us recruit, train, and inspire the next generation of economic scholars.

Sincerely,

Joseph J. Sabia

Director of the Center for Health Economics

& Policy Studies (CHEPS)

Joseph J. Salia

Professor of Economics



This issue is dedicated to the Sabia family, in memory of Patrick Sabia (1937-2019)

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CURRENT CHEPS RESEARCH

DID CALIFORNIA'S SHELTER-IN-PLACE ORDER WORK? EVIDENCE ON STAY-AT-HOME BEHAVIOR AND COVID-19 CASES

The 2020 U.S. coronavirus outbreak is one of the most serious public health challenges in American history. The U.S. has seen more reported COVID-19 cases between January 1, 2020 and May 1, 2020 than reported polio cases between 1910 and 2010. The transmission of COVID-19 is presently believed to occur largely through exposure to respiratory droplets, usually emitted during coughing, sneezing, or nose-blowing, but may also occur through natural respiratory expulsion. The primary strategies suggested by governments worldwide to reduce the spread of COVID-19 have been frequent hand washing, mask-

wearing in public, and social distancing.

In contrast to many countries throughout the world, the authority to combat public health threats in the United States rests not with the Federal government, but largely with state and local officials. The primary state and local policy strategy to prevent the spread of coronavirus is the enactment of shelter-inplace orders (SIPOs), sometimes called "stay at home" orders. On the evening of March 19, Governor Gavin Newsom announced the nation's first statewide SIPO, earning immediate attention in the national news media. California Executive Order N-33-20 2020 stated:



"To protect public health, I as State Public Health Officer and Director of the California Department of Public Health order all individuals living in the State of California to stay home or at their place of residence except as needed to maintain continuity of operations of the federal critical infrastructure sectors..." (California Executive Order N-33-20 2020).

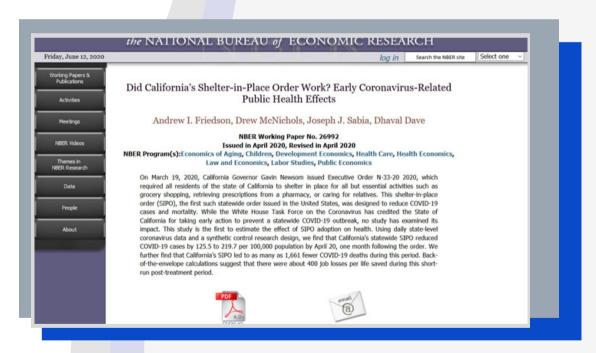
This statewide executive order required all California residents to remain in their homes for all but essential activities such as purchasing food or medicine, caring for others, exercise, or traveling for employment deemed essential. While grocery stores, pharmacies, restaurants providing takeout or delivery service, and other essential businesses were permitted to remain open, most other non-essential businesses were ordered closed. In addition, residents were advised to continue to maintain a six-foot distance with non-household members with whom they come in contact, and public gatherings of non-household members were strongly discouraged.

Violations of the SIPO were subject to a \$1,000 fine and up to 6 months of imprisonment, though enforcement most often occurred through social pressure and warnings for first offenses. State SIPOs appear to have had increased social distancing, with non-essential travel falling 40 to 60 percent following California's SIPO.

In issuing the SIPO, Governor Newsom implored residents of California "to meet this moment and flatten the curve together." Thus, an important policy rationale was not simply to curb the pandemic's growth in California, but also to delay its peak, allowing the state additional time to obtain the necessary ventilators, hospital beds, and medical staff in place to meet the surge in demand for services among those who test positive.

There are a number of important reasons to single out California's SIPO in studying its effects on COVID-19 infection and mortality. First, California was the first state to implement a statewide order, an important policy feature designed to prevent within-state spillovers of infectious disease across neighboring counties, cities, and townships with heterogeneous local orders. Second, California ranks 12 out of 51 states (including the District of Columbia) in population per square mile and 2 out of 51 in percent living in urbanized areas and urban clusters. The spread of coronavirus is exacerbated by increased population density, which generates greater opportunities for transmission among frequently interacting individuals. This makes California a location with a high potential for the rapid spread of the disease.

Third, California implemented its SIPO at a unique time: early in the cycle of an outbreak, when the rate of growth in observed coronavirus case rates was quite low relative to other states that ultimately implemented SIPOs. The average daily growth in confirmed coronavirus cases in the four days prior to SIPO enactment was 19.1 percent in California. No other SIPO-implementing state in the upper 25th percentile of the state population density or urbanicity distribution had an average daily coronavirus growth rate lower than California during this period. As a comparison, New York, which had the highest per-capita case rate in the nation throughout much of the outbreak, had an average daily coronavirus case growth rate of 39.5 percent in the four days prior to its enactment of a SIPO. In this context, California may provide a cleaner natural experiment in relation to later adopters, while also informing the efficacy of the decision to enact a SIPO early in the outbreak cycle. Finally, at this early stage of assessing the short-run public health effects of SIPOs, California has more days of post-treatment data than any other state, critical for analyzing the public health benefits of an epidemic with potentially exponential short-run contagion and lagged mortality effects.



While there is speculation by the White House Coronavirus Task Force that SIPOs have been effective at "bending the case curve," there is little rigorous empirical analysis of this question. This study is the first to examine early public health effects of a statewide SIPO. Co-authors Andrew Friedson (University of Colorado Denver), Drew McNichols (UCSD/SDSU), Joseph J. Sabia (SDSU), and Dhaval Dave (Bentley University) released an NBER working paper that is the first research to estimate the effect of SIPO adoption on public health. The study uses daily state-level coronavirus data and a synthetic control research design. They find that California's statewide SIPO reduced COVID-19 cases by 125.5 to 219.7 per 100,000 population by April 20, one month following the order. They also find that California's SIPO led to as many as 1,661 fewer COVID-19 deaths during this period. Their estimates suggest that there were about 400 job losses per life saved during this short-run post-treatment period.

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WHERE ARE STAY-AT-HOME ORDERS MOST EFFECTIVE? URBAN AND DENSELY POPULATED AREAS

As the number of COVID-19 cases started growing across the United States, state and local governments began implementing shelter-in-place orders (SIPOs). SIPOs are mandates that require citizens to stay at home except for essential activities, such as grocery shopping, exercising, and traveling for work. SIPOs are intended to slow the spread of the virus by limiting the amount of contact individuals have with others.

In a new NBER working paper (and IZA discussion paper), Dhaval Dave (Bentley University), Andrew Friedson (University of Colorado Denver), Kyutaro Matsuzawa (SDSU), and Joseph J. Sabia (SDSU) examine whether statewide SIPOs are effective in achieving their stated goals.

First, the authors use daily state-level data on social mobility, provided by SafeGraph, to examine the effect of SIPOs on social mobility. They find that statewide adoption of a SIPO is associated with a 5 to 10 percent increase in the rate at which individuals remained home full-time. This increase was largest the first week after the SIPO was adopted. Their findings suggest that SIPOs were effective, particularly in the short term, in encouraging residents to stay at home.



Next, the authors draw on COVID-19 case and mortality data to examine the health effects of SIPOs. They find robust evidence that SIPOs are associated with a reduction in COVID-19 cases, and that the negative effect is consistently increasing over time. Their estimates suggest that approximately three weeks following the adoption of a SIPO, cumulative COVID-19 cases fell by 44 percent, which corresponds to 2,510 fewer COVID-19 cases for the average SIPO-adopting state.

There are several ways in which SIPOs could affect mortality. If SIPOs reduce the number of coronavirus cases, naturally the number of deaths due to COVID-19 would also decline. However, SIPOs may also have unintended consequences. They could affect the likelihood that infected patients choose to stay at home rather than seek out testing and other medical care. SIPOs may also impact the availability of resources for medical care, as public funds are being channeled towards enforcing the SIPO rather than carrying out research.

The major contribution of this paper is its examination of heterogenous treatment effects of SIPOs. First, the authors found evidence that SIPOs are effective at reducing coronavirus-related mortality when they were adopted early in the COVID-19 outbreak pandemic. They find that the reduction in COVID-19 cases was driven mainly by early adopting states, which were those states that adopted SIPOs prior to March 23. Second, their estimates suggest that the reductions tend to be larger in those states with higher population density. This result is consistent with the hypothesis that SIPOs are likely to generate greater health benefits when crowd-related contagion is avoided.

CHEPS DEEP DIVE: COLLECTING LOCAL COVID-19 POLICIES

In order to combat the rapid spread of COVID-19, governments throughout the world have implemented policy measures to encourage social distancing, on top of heightened requirements for sanitizing public spaces and encouraging frequent handwashing and mask-wearing. The most stringent measure that governments have implemented is the shelter-in-place order (SIPO), which requires residents to stay at home unless they are essential workers, or when conducting essential activities such as grocery shopping, exercising outdoors, or seeking medical treatment.

Prior to mandating SIPOs, many governments first enacted incremental measures. Most counties started with emergency declarations and then moved to non-essential business closure orders (NEBCO). A NEBCO mandates that those businesses where the public tends to congregate—such as bars, restaurants, movie theaters, and gyms—shut down temporarily. As the spread of the virus continued, governments began to close all "non-essential" businesses, including salons, retail spaces, and any other business not deemed necessary for day-to-day life during the crisis.

Unlike most countries, in the United States, the responsibility to enact quick measures in the face of emergencies lies primarily with the state and local governments and agencies. not with the Federal government. As such, in order to get a clear picture of what policies are most effective at combating COVID-19 in the United States, it is important to work from the local level up, as many counties and public health organizations were the first to approve and roll out social distancing measures.



To that end, the full team of research assistants at CHEPS dedicated the months of March and April to collecting the individual orders issued by each county government and local public health agencies, identifying a total of over 1,500 emergency declarations, non-essential business closures, and SIPOs.

The collected information on county-level policies will allow the Center to consider a wide variety of questions, including the effectiveness of each measure on combatting the spread of COVID-19, whether the timing of each type of order was impactful, as well as to help parse out any spillover effects that the enactment of a specific order in one county might have on surrounding areas. Due to the unique way that government responses are carried out in the United States, this dataset will be invaluable as more information and COVID-19 related data become available at the county level for a breadth of potential future research projects.

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SALARY HISTORY BANS AND THE GENDER PAY GAP

Does limiting information about previous salaries in the hiring process reduce gender pay inequality? New research by CHEPS affiliates, which was released by the National Bureau of Economic Research (NBER) suggests that the answer is yes.

During the 20th century, wage inequality across genders substantially improved. However, despite a continued increase in female college enrollment, this trend did not continue into the 21st century. The existing literature lacks consensus on the underlying drivers of the gender wage gap. Some explanations point to salary bargaining as a cause of this gap, while others claim differences in competitiveness is a driving reason for the gender pay gap. It is unclear what, if anything, federal, state, and municipal policymakers can do about the issue. A recent tool gaining popularity is the salary history ban.



Drew McNichols UCSD/SDSU CHEPS Postdoctoral Fellow

Cities and states have recently been adopting variations of salary history ban laws, which prohibit employers from asking about applicants' previous compensation. These laws attempt to reduce salary disparity across genders and address wage discrimination in multiple ways. First, past wage discrimination could be perpetuated when current compensation is based on a previous salary. Second, women are more likely to work in female-dominated industries, which pay less than male-dominated industries. The salary history question could be perpetuating the systemic undervaluation of women's work. Salary history ban laws could eliminate path-dependent compensation across multiple margins. Alternatively, salary history ban laws could have unintended consequences that cause employers to engage in more statistical discrimination.

This research was co-authored by Benjamin Hansen (W.E. Miner Professor of Economics, University of Oregon), and Drew McNichols (UCSD/SDSU). They find the gender earnings ratio increased by 1 percent in states with SHBs, and that these population-wide increases are driven by an increase of the gender earnings ratio for households where all children are over 5 years old, by workers over 35 years old, and are principally driven by those who have recently switched jobs.



THE IMPACT OF CIGARETTE TAXES ON YOUTH MARIJUANA USE

The effect of cigarette tax increases on youth marijuana use is ambiguous and has been the subject of intense public debate. Proponents of cigarette taxes argue that higher cigarette taxes could curb youth cigarette use, and if tobacco is a "gateway" drug, higher cigarette taxes could also deter marijuana use. On the other hand, opponents of higher cigarette taxes claim that many smokers are rationally addicted to tobacco and warn that higher prices will have unintended consequences, such as encouraging youths to substitute toward marijuana and other harder drugs.

Using 1991-2017 state and national Youth Risk Behavior Survey (YRBS), D. Mark Anderson (Montana State University), Kyutaro Matsuzawa (SDSU CHEPS Pre-doc affiliate), and Joseph J. Sabia (SDSU) use a natural experiment approach to examine the relationship between cigarette and marijuana use.



As a first stage estimate, the authors examine the relationship between cigarette taxes and youth cigarette use. Consistent with existing literature on this topic, they find that higher cigarette taxes do, indeed, curb teen cigarette use. Their estimates suggest that a one dollar increase in the cigarette tax is associated with a 3.4 percent reduction in the likelihood of smoking at least once in the past month, and a 6.7 percent reduction in the likelihood of smoking at least 20 days in the past month. They also find that the reduction in cigarette use is largest in the earlier period (1991-2005).

The authors findings failed to uncover evidence of whether cigarettes and marijuana are substitutes or complements among teenagers. Their findings provide no indication to suggest that teen marijuana use is sensitive to changes in the state cigarette tax. This null result holds for the sample period where cigarette taxes are observed to have the largest effect on teen cigarette use and across a number of demographic groups.

In addition to state cigarette taxes, the authors also examined the effect of medical and recreational marijuana laws on youth marijuana use. Similar to prior studies, they find that marijuana laws are associated with a reduction in youth marijuana use. This finding is consistent with the argument that marijuana laws make it harder for youths to obtain marijuana as legal dispensaries replace the black market.

Finally, as a preliminary analysis, the authors examined the impact of e-cigarette taxes. They are the first to study the effect of e-cigarette taxes on teen e-cigarette, traditional cigarette, and marijuana use. Their findings provide some evidence that e-cigarettes and marijuana might be complements among youths. They find that state implementation of e-cigarette taxes is associated with a decrease in e-cigarette use, as well as a 7% reduction in marijuana use among youths. However, the authors conclude that these findings need to be interpreted with caution since the results are based on limited post-treatment data and a few state policies.

This paper, forthcoming in the *National Tax Journal*, is published as a NBER working paper and IZA discussion paper.

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MARRIAGE EQUALITY LAWS AND SEXUALLY TRANSMITTED INFECTIONS

The growth in public acceptance of same-sex couples and support for marriage equality represents one of the most dramatic social changes in recent American history. Marriage equality started in 2003 with the Massachusetts Supreme Court ruling that it is illegal to deny marriage rights to same-sex couples and gradually, over a 12-year period, same-sex marriages became legal in all states either through court rulings, legislative action, or finally, via the United States Supreme Court judgment in *Obergefell v. Hodges*. Advocates of marriage equality laws (MEL) debated marriage equality through constitutional arguments- contending that MEL bans violated the "establishment clause" of the U.S. Constitution's 14th Amendment- as well as through evaluating the likely behavioral effects of MEL. Proponents of MEL argue that expanding the institution of marriage may increase commitment among same-sex couples and thus reduce risky sex, particularly for male homosexuals (Sullivan, 1995). Opponents of marriage argue that same-sex couples may change the institution of marriage by weakening the link between marriage and monogamy, and point to the conclusion that men who have sex with men have more sexual partners than men who have sex with women.

To test the competing arguments, this study estimates the effect of MEL on sexually transmitted diseases and HIV by extending the work of Dee (2008). Dee uses a panel of European countries to study the effect of legal recognition of same-sex partnerships on sexually transmitted infections (STIs). Dee uses both a two-way fixed effects model and Dynamic panel models and finds a decline in syphilis rates, a most common transmitter for men who have sex with men. The research that CHEPS affiliates are undertaking differs from Dee's in various ways. Most notably, the European nations and the United States are different in the level of access to healthcare the citizens have, social norm, and the legalization of MEL. Most European nations have universal healthcare and private insurance available supplementary, but in the United States, private health insurance dominates.



Secondly, domestic partnerships, although similar to marriage equality laws, deny the actual title of marriage, and could possibly affect social stigma. Third, the adoption of marriage equality laws occurred between 2004 and 2015, while Dee's study is between 1989-2003. In the years Dee studies, medicine was limited, and HIV was considered a death sentence; but with medical advances such as Highly Active Antiretroviral Therapy (HAART), the fatality rate for AIDS fell nearly 50%. Finally, the political processes in Europe and the United States differ. While the legalization of domestic partnerships in the European Nations occurred through political processes, in the United States, they were legalized by state and Federal Courts.

This project will use state-level data on STIs from the Centers for Disease Control and Prevention from the mid-late 1990s through 2018. The authors will examine several STIs, including syphilis, gonorrhea, and chlamydia. In addition, they will also study HIV. The findings from this study, which is still underway at the time of this writing, will make an important contribution to our understanding of how legal marriage rights affect sexual behavior and use of health services.

PRIDE AND PREJUDICE: DO LGBT PRIDE PARADES AFFECT HATE CRIMES?



In the early morning hours of June 28, 1969, a police raid took place at the Stonewall Inn in New York, sparking riots and a turn toward activism that would become the LGBT Pride movement we know today. In subsequent years, pride marches and celebrations across the nation were held to remember the injustices faced by the LGBT community and to push for a more equal standing in society. By 2019, every state and over 300 cities would host a Pride celebration, and the LGBT community has never been more accepted in the history of the nation.

While progress has been made, the LGBT community is still not accepted by many individuals and draws the ire of a number of communities across the United States. Objections to these pride celebrations are not uncommon. Sadly, crimes derived from hatred of the LGBT community still occur. The LGBT community is known to promote love and unity, but could we also see a spike in local hate crimes when a community hosts a pride celebration?

That is the question that CHEPS affiliates wish to answer. In an effort to gain insight around this question, affiliates are taking unprecedented measures to collect the necessary data. Currently, no database exists that catalogs every recent pride celebration in the United States. Headed by CHEPS affiliate Samuel Safford, each and every member of the team has dedicated time to searching through historical records and newspaper archives to catalog the exact date and location of every major pride celebration in the last 20 years. Upon completion, the researchers will use these data to analyze changes in hate crime rates in each locality.

In addition to this initial project, the Pride Database will serve as an important piece for future research on the LGBT community.

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MODERN WET LAWS: STUDYING LEGALIZATION OF ALCOHOL SALES IN TEXAS

Does access to alcohol increase crime? A substantial body of research has shown a strong positive correlation between the two, finding links between alcohol availability and both violent and property crime. However, the relationship between crime and alcohol accessibility does not necessarily reflect causality.

CHEPS researchers collected and coded over 80 years of local liquor election data and liquor license data, which was made available by the Texas Alcoholic Beverage Commission (TABC). There is wide variability in the local liquor policies that Texans have voted for or against throughout time, from legalizing all forms of alcohol, only certain types of alcohol, or prohibiting alcohol sales altogether. The gradual legalization of alcohol across Texas over time presents an excellent opportunity to examine the effect alcohol access has on crime within local jurisdictions. Specifically, Texas has 254 counties, and in 1986, the number of completely dry counties was 62; in 1995, that number was 53; in 2003, that number decreased to 51; and in 2018, the number of completely dry counties fell to five. However, the trend for the number of completely wet counties is moving in the opposite direction: in 2003, there were 35 completely wet counties and in 2018, there were 55 completely wet counties. Texas's "local option" elections for legalizing or prohibiting alcohol also provide Texans the opportunity to vote for which locations alcohol can be legally sold, whether it's only at bars and restaurants for on-premise consumption, only at liquor stores for off-premise consumption, or multiple combinations of locations for on- or off-premise consumption. The heterogeneity in types of alcohols and locations for purchase that voters can legalize in Texas provide a chance to examine not only how alcohol legalization in general affects crime but also how certain types of alcohol affect crime and whether sales of alcohol at bars and restaurants affect crime differently than take-home sales of alcohol from liquor and grocery stores.



"Local option" elections for legalizing or prohibiting alcohol in Texas occur at the county, city, or Justice of the Peace precinct levels. Many elections, particularly throughout the 1980s, happened at the precinct level, which are subdivisions of counties assigned to small claims courts whose boundaries can change over time. Currently, maps and data that would allow the researchers to accurately determine which precinct-level elections affected which cities and other communities in Texas are not available. CHEPS researchers are diligently pursuing information that would allow them to map Justice of the Peace precincts to cities throughout time. Without this knowledge, it is not possible to accurately estimate the effects that local alcohol access has on local crime. Although these data are not available, this project has provided invaluable experience for the researchers in data mining, mapping and visualization, and thorough research of state and local statutes.

ANTI-BULLYING LAWS AND YOUTH RISKY BEHAVIORS



During the 2016-2017 school year, nearly 20 percent of high-school students reported being victims of bullying on school property, while nearly 15 percent reported being targets of cyberbullying. To effectively combat bullying, federal policymakers and public health experts have recommended that it be treated as a public health concern requiring collaboration between schools, parents, and public health experts. Treating bullying as a public health issue is owed, in part, to the substantial body of public health scholarship that has suggested a causal relationship between bullying victimization and a wide set of risky health behaviors among youths. These studies often treat bullying victimization as being exogenous to unmeasured determinants of health, which could be potentially problematic since victims of bullying may not be randomly targeted by perpetrators. This makes it difficult to tease out the true causal effect of bullying on these behaviors.

This research by Alicia Marquez (SDSU) and Joseph J. Sabia (SDSU) circumvents the empirical challenge faced by the public health and epidemiological literature by exploiting geographical and temporal variation in state anti-bullying laws—a source of plausibly exogenous variation in bullying behavior. In an attempt to combat bullying in schools, all 50 states and the District of Columbia have enacted statewide anti-bullying laws (ABLs). In August of 2001, Colorado and Louisiana became the first states to enact an ABL and in April of 2015, Montana became the final state to enact an ABL. An ABL is defined as a state mandate that requires local school districts to implement anti-bullying policies. These mandates effectively raise the cost of bullying perpetration by requiring school districts to develop clear definitions and procedures for documenting, reporting, and resolving incidents of bullying, as well as training parents and faculty to identify bullying behaviors.

Using data drawn from the 1997-2017 National and State Youth Risky Behavior Surveys (YRBS) and a weighted difference-in-differences approach, the authors are able to examine the impact of state ABLs on a range of youth risky health behaviors, including binge drinking, tobacco cigarette use, marijuana consumption, risky sexual behavior, and body weight. First stage estimates show that state ABLs reduce bullying victimization by approximately 11 percent. However, the authors find little evidence that state ABL cause statistically significant changes in youth risky behaviors. Only for some historically marginalized youths, particularly LGBQ youth, is there some evidence of ABL-induced declines in some risky health behaviors. This suggests that, while ABLs were effective in reducing bullying victimization, their spillover into youth risky health behaviors is limited.

While this paper concludes that the public health benefits of reducing bullying victimization are likely overstated, it is not to suggest that the public health benefits of preventing bullying among youths do not exist. There is evidence that anti-bullying laws improve perceptions of school safety among youths (Sabia and Bass 2017) and reduce suicidal behaviors among vulnerable youths (Rees et al. 2020). These are important health benefits of reductions in bullying victimization that warrant future study.

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DO TOBACCO 21 LAWS WORK?

In response to the youth vaping epidemic, policymakers at all levels of government have been discussing strategies to limit tobacco consumption amongst young people. Examples of such policies include ecigarette taxes and bans on flavors, but one policy that has received a significant amount of attention has been "Tobacco 21" laws. The impact that these laws have on youth and adolescent tobacco consumption has been an ongoing research project with Ben Hansen (University of Oregon), Drew McNichols (UCSD/SDSU), Cal Bryan (SDSU), and Joseph J. Sabia (SDSU).

In April 2005, Needham, Massachusetts, became the first town in the United States to make the minimum legal purchasing age (MLPA) for tobacco to be 21 years old. Ever since Needham's enactment, policymakers across the country held discussions on the merits of using "Tobacco 21" policies to curb youth and adolescent tobacco consumption. The conversation surrounding this policy increased in momentum after 2016 when both Hawaii and California enacted "Tobacco 21" mandates; then, on December 20, 2019, when President Donald Trump signed the Tobacco to 21 Act into effect, this conversation moved into the national spotlight. This Act raised the MLPA for all types of tobacco to 21 years old across the United States.

Proponents of "Tobacco 21" mandates contend that they will not only reduce tobacco access amongst 18- to 20-yearolds, but that they also may dry up the social markets that those under 18 rely on for accessing tobacco (Ahmad 2005, Chen 2014). Their arguments assert that raising the tobacco purchasing age to 21 could reduce the ability of minors to falsely identify themselves as being of legal purchasing age (Delnovo and Steinberg 2013). Finally, proponents also argue that creating a common purchasing age for all forms of tobacco will reduce substitution between traditional cigarettes and e-cigarettes. Opponents argue that these mandates limit individuals' personal freedoms (Bergal 2017), could lead to a reduction in tax revenue (Bergal 2015), and could adversely affect profits of small business owners.



CHEPS affiliates, in collaboration with partnering researchers, are the first to evaluate the impact of California's "Tobacco 21" mandate, which was put into effect on June 9, 2016. The research utilizes population representative data in the California Health Interview Survey (CHIS), a health survey conducted by the UCLA Center for Health Policy Research. The researchers are also the first to estimate how a statewide "Tobacco 21" mandate could impact tobacco consumption for those under the age of 18, using the restricted teen supplement version of the CHIS. With these data, the CHEPS affiliates will employ a Regression Discontinuity Design before and after the policy change. Information on the survey respondent's age in months is provided, which allows the research team to evaluate discontinuities in rates of tobacco consumption in the months before and after the respondent's 18th birthday before the Tobacco 21 law (when 18-year-olds could legally purchase tobacco products) and after the Tobacco 21 law (when an 18-year-old could not legally purchase tobacco products). In addition, the authors will explore spillover effects of the Tobacco 21 law on minors who typically participate in the social market for cigarettes.

DID 2020 BLACK LIVES MATTER PROTESTS LEAD TO A RESURGENCE OF COVID-19?

Throughout the majority of 2020, the United States has battled a pandemic of the disease COVID-19. The spread of the disease in the U.S. was rapid and deadly: COVID-19 was confirmed to have infected over 1.7 million Americans and killed over 93.4 thousand Americans as of May 25, 2020 (Johns Hopkins University 2020). May 25, 2020 also saw one additional fatality of historical note: George Floyd, a 46-year-old black man, was killed by a member of the Minneapolis Police Department when an officer used his knee to pin Floyd's neck to the ground for over eight minutes. The death, which resulted in the officer being charged with murder, touched off a series of protests in cities around the United States, with protesters demanding policing reform.

These two national movements: the fight to contain COVID-19, and the Black Lives Matter protests for reform in law enforcement and for greater social equality, have espoused some tactics which appear to be in direct opposition to one another. Specifically, one of the main tactics for controlling the spread of COVID-19 is social distancing: avoiding large public gatherings, and maintaining at least 6 feet of distance between individuals. At the same time, protests, designed to galvanize public action for social justice, are by definition large public gatherings in which it is difficult to avoid close contact with others. This mismatch of tactics has drawn many in the public health community to speculate that the protest movement could lead to a surge in COVID-19 cases. On the other hand, other public health experts have made the argument that the goals of the protests may be worth the costs.



However, whether the Black Lives Matter protests actually caused an increase in the spread of COVID-19 is an open question. While the protests themselves were large gatherings that do not match well with social distancing guidelines, the protesting population is not the only one that may have a behavioral response. For example, other individuals who did not wish to participate in the protests, perhaps due to fear of violence from police clashes or general unrest, may have chosen to avoid public spaces while protests were underway. This could have an offsetting effect, increasing social distancing behavior in other parts of the population. The net effect, on both social distancing and on the spread of COVID-19 is thus an empirical question, and the focus of a new study by a team of CHEPS affiliates: Dhaval Dave (Bentley University), Andrew Friedson (University of Colorado Denver), Kyutaro Matsuzawa (SDSU), Joseph J. Sabia (SDSU), and Samuel Safford (SDSU).

Using anonymous cell phone tracking data from SafeGraph, Inc., as well as data on the local prevalence of COVID-19 from the Centers for Disease Control and Prevention, they demonstrate that cities which had protests saw an increase in social distancing behavior for the overall population relative to cities that did not. Likewise, cities that had protests saw no change, or even a slight decrease, in the growth of COVID-19 cases in the overall population relative to cities that did not. These results make an important contribution not only to the current discussion around policies for controlling the spread of disease, but also to the understanding of human behavior of the general population during periods of civil unrest.

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POST-9/11 COMBAT DEPLOYMENTS INCREASED CRIME AMONG VETERANS



Approximately 181,500 veterans are incarcerated in the United States, representing 8 percent of the prison and jail populations (Bureau of Justice Statistics 2015). Many are veterans of wars waged in the Global War on Terrorism (GWOT), launched in the wake of the September 11. 2001 attacks on the United States. Thirteen percent of currently incarcerated veterans served in the Afghanistan or Iraq conflicts and approximately 45,000 incarcerated veterans were exposed to combat during their war deployments. While the incarceration rate for veterans is nearly 10 percent lower than for civilians (968 per 100,000 veterans compared to 855 per 100,000 U.S. residents), a far greater share of incarcerated veterans has been sentenced for violent offenses (64 percent versus 48 percent). Surveys of post-9/11 veterans suggest that approximately onethird have exhibited non-job-related physical aggression and a further 11 percent engaged in "severe or lethal violence."

High-profile incidents of violence committed by post-9/11 veterans, including aggravated assaults (Simkins 2018) and mass shootings have permeated the national news media. The link between modern warfare and violence been tied to historically high rates of Post-Traumatic Stress Disorder (PTSD), Traumatic Brain Injury (TBI), and substance abuse among combat veterans deployed during GWOT.

This study, authored by Resul Cesur (University of Connecticut), Erdal Tekin (American University), and Joseph J. Sabia (SDSU) provides new evidence on the impact of modern warfare on crime among veterans. The authors exploit the administrative procedures by which senior commanders assign active-duty servicemembers to overseas deployments to estimate the causal impact of post-9/11 combat deployments on crime. Because U.S. Armed Forces Human Resources Command treats servicemen of identical military rank and occupation as perfect substitutes for the purposes of unit deployment assignments, the natural experiment we propose is able to mimic conditional random assignment.

Using data from the military module of the 2007-2008 National Longitudinal Study of Adolescent to Adult Health (Add Health) and the 2008 Department of Defense Survey of Health and Related Behaviors Among Active Duty Personnel (HRBS), they find that post-9/11 combat deployments substantially increased the risk of crime. Increases in violent crime appear largest for those who were exposed to enemy firefight during combat deployments. Furthermore, we document that combat exposure increases the probability that a veteran joins a gang, has trouble with military or civilian police, is arrested, and faces punishment under the Uniform Code of Military Justice (UCMJ). These effects are largest among enlisted servicemen under the age of 33.

The magnitudes of their estimates suggest that post-9/11 combat exposure generated substantial crime costs to society: approximately \$26.4 billion in additional costs for violent crime and \$315 million in costs for property crime (in 2018 dollars). Finally, the authors find that TBI and PTSD are likely mechanisms through which combat service increases crime.

DOES FEMALE SPORTS PARTICIPATION REDUCE CRIME? NEW EVIDENCE FROM TITLE IX

More than seven million American high school students participate in some form of a school-sponsored athletic program. Youth sports participation has been linked to important benefits for participants, including increased educational attainment, greater aspirations for post-secondary schooling, and improved labor market outcomes. Furthermore, advocates of youth sports programs claim that the benefits of playing sports extend beyond participants. A May 2018 White House Council of Economic Advisers report stated that youth sports programs enhance the "development of generalizable skills" that yield benefits not only for participants, but "for society as a whole." Additionally, The United Nations argues that youth sports programs serve an important peacekeeping role by deterring crime and curbing drug use.



There are a number of channels through which youth sports participation could reduce crime. Cognitive and non-cognitive skill development among athletes may facilitate human capital acquisition and improve labor market outcomes, resulting in higher opportunity costs of crime. In addition, sports-induced improvements in physical and mental health may result in less crime. Sports participation may also expose youths to positive mentoring, improve social networks, and broaden opportunities for post-secondary educational scholarships, each of which could reduce criminal activity. In a new working paper, Drew McNichols (UCSD/SDSU), Joseph J. Sabia (SDSU), and Gokhan Kumpas (University of New Hampshire) provide the first causal evidence on the impact of sports on crime. They exploit the introduction of Title IX, which required educational institutions to achieve greater gender parity in sports participation rates, to isolate the impact of female high school sports participation on female arrests. Using data from the 1980 to 2000 Uniform Crime Reports, their results show that increases in female sports participation induced by Title IX were associated with a significant decline in female arrests among affected cohorts of 25- to 39-year-olds. Estimates suggest a 10 percent increase in female high school sports participation induced by Title IX reduced total crime arrests among 25- to 39-year-old females by 0.0496 crimes per 1,000 population or 0.88 percent.

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CHEPS STUDENTS IN THE NBER AND IZA

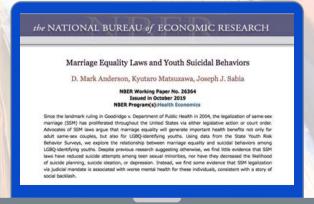
During the 2019 to 2020 school year, several working papers have been published featuring CHEPS students.

In a new National Bureau of Economic Research (NBER) and Institute of Labor Economics (IZA) working paper (forthcoming at *Journal of Law & Economics*), CHEPS pre-doc, Kyutaro Matsuzawa, along with D. Mark Anderson (Montana State University) and Joseph J. Sabia (SDSU) examine whether marriage equality laws reduce suicidal behaviors among LGBQ youths. Using Youth Risk Behavioral Survey (YBRS) data from 1999-2017, the authors find no evidence that same-sex marriage (SSM) laws reduced the likelihood of suicide attempts, suicide planning, suicide ideation, or depression. Instead, they find some evidence that SSM legalization through court order results in worse mental health among LGBQ youths, consistent with the story of social backlash.

In another paper using YRBS data, Gokhan Kumpas (Ph.D. student at the University of New Hampshire), Dan Rees (University of Colorado Denver), and Joseph J. Sabia (SDSU) examine the effect of state antibullying laws (ABLs) on youth mental health. They find that ABLs reduce bullying victimization, depression, and suicidal ideation, with the largest estimated effects for female teenagers and teenagers who identify as lesbian, gay, bisexual, or questioning. Their estimates suggest a 13-16 percent reduction in suicide rates among female youths, following the implementation of ABLs.

A new IZA discussion paper featuring Andrew Dickinson (Ph.D. student at the University of Oregon), Brandyn Churchill (Ph.D. student at Vanderbilt University), Taylor Mackay (Ph.D. student at UC Irvine) and Joseph J. Sabia (SDSU) examines the effect of state E-Verify policy on crime. They find that adoption of the E-Verify policy is associated with a 5 to 10 percent reduction in crimes committed by Hispanics, driven by universal E-Verify mandates that extend to private employers. They also find that E-Verify-induced increases in employment of low-skilled natives of Hispanic descent, and outmigration of younger Hispanics are important channels to this reduction.

Another new IZA discussion paper, which also focuses on crime, is conducted by Zach Fone (University of New Hampshire Ph.D. candidate), along with Andrew Friedson (University of Colorado Denver), Brandy Lipton (SDSU), and Joseph J. Sabia (SDSU). In this paper, Zach and his co-authors use data from the National Incident-Based Reporting System to examine the effect of the Affordable Care Act's Dependent Coverage Mandate (DCM) on crime among 19 to 25-year-olds. They find that DCM is associated with an 11 percent reduction in criminal incidents involving arrestees ages 19 to 25. This reduction is largely driven by a decrease in property crimes. Their primary mechanisms for the reduction in crime include: (i) declines in large out-of-pocket expenditures for health care, (ii) increased educational attainment, and (iii) increases in parent-adult child cohabitation. They conclude that DCM is associated with a reduction of \$3.1 billion per year in 2019 dollars based on per crime cost estimates.





SEMINAR SERIES

FALL 2019 SEMINAR SERIES



During the 2019 fall semester, CHEPS hosted 11 economists from outside of SDSU to present scholarly research on a variety of sub-fields including labor, health, education, and family economics. These external speakers came from a variety of research universities including Baylor University, University of Notre Dame, Syracuse University, Cornell University, Texas A&M University, University of North Carolina-Chapel Hill, University of Colorado Boulder, University of Kentucky, University of Southern California, University of California, Davis, and Vanderbilt University.

CHEPS affiliates, SDSU professors from various disciplines, and both undergraduate and graduate students attended the weekly seminars. The presentations helped acquaint students with different research projects and allowed professors from SDSU to network with faculty from other universities. Importantly, presenters met with CHEPS affiliates in small group sessions to discuss their research and academic experiences, as well as provide advice and insights about their future careers. Several of the visiting scholars discussed the benefits of economics and public policy Ph.D. programs with the students and gave advice on how to find the most suitable institution. For the student, these networking opportunities were invaluable.

The seminar series brought a number of interesting academics to SDSU's campus to present published papers, as well as working papers. A few of the seminars are outlined below.



Special thanks to Dr. Murugappa "Madhu" Madhavan for his generous support of the CHEPS Seminar Series

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To start the fall seminar series, Scott Cunningham, from Baylor University, presented a working paper titled "Craigslist Reduced Violence Against Women," which evaluated how the rollout of Craigslist's "erotic services" (ERS) from 2002 to 2010 affected violence against female sex workers. Dr. Cunningham and his co-authors found a 10-17 percent decline in the overall female homicide rate from the use of ERS. This reduction is caused by ERS inducing more street prostitution to move indoors and allowing sex workers to better screen clients.



In another seminar, Kasey Buckles, from the University of Notre Dame, presented a working paper titled "Fertility Trends in the United States, 1980-2017: The Role of Unintended Births." The U.S. fertility rate has been declining drastically and reached a historic low in 2017. This study used data from the National Center for Health Statistics to examine fertility by different demographic groups in order to examine trends in unintended births, and how these trends explain the recent decline in fertility from 2007 to 2016. Dr. Buckles and her co-authors found a 35 percent decline in fertility during this period, which can be explained by a reduction in unintended births to young women.

In another seminar, Jeff Weaver, from the University of Southern California, presented a working paper titled "Marriage Markets and the Rise of Dowry in India." This study explores the emergence of dowry and the development of the dowry market over time. Dr. Weaver and his co-authors used data on 70,000 marriages in India to test five prominent theories for the development of the dowry market, in which the proportion of marriages that included a dowry payment doubled and the mean real value of payments tripled between 1930 and 1975. Dr. Weaver finds support for only one of the five prominent theories, which is that the formation of the dowry market can be explained by changes in the distribution of groom quality.



SPRING 2020 SEMINAR SERIES

During the 2019-20 Academic Year, CHEPS hosted more than 15 seminars from external speakers, including 7 speakers in the Spring Semester. The speakers, being experts in their fields, presented on a range of topics including labor, health, education, and family economics. These economists came from a mix of institutional backgrounds, including research universities, such as West Virginia University, University of South Carolina, Georgia State University, UT-Austin, Barnard College, Vanderbilt University, University of California, Davis, University of Southern California, University of Kentucky, University of North Carolina-Chapel Hill, Texas A&M University, Cornell University, Syracuse University, University of Notre Dame, and Baylor University.



The Research Seminar Series brought a number of interesting working papers to campus. Many of the highlights are outlined below. To start the Spring semester CHEPS seminar series, Dr. Daniel Hamermesh from UT-Austin & Barnard College presented two papers, "Is Scholarly Refereeing Productive (at the Margin)?" and "O Youth and Beauty: Children's Looks and Cognitive Development," the latter a joint work with Dr. Rachel Gordon and Dr. Robert Crosnoe. The latter paper is an investigation of the link between early childhood attractiveness and future cognitive development of that child. They use 11 waves of the U.S. Study of Early Child Care and Youth Development to follow children from infancy to their

teenage years. Each child was given measures of looks by observers who watched videos of them at various ages. They find that those children with looks one standard deviation above the mean will attain an additional 0.4 years of schooling compared to the average looking individual.

In one of the final seminars prior to the unfortunate postponement of the series due to COVID-19, Dr. Orgul Ozturk presented "Hunger Pains? SNAP Timing and Emergency Room Visits," a joint work with Dr. Chad Cotti and Dr. John Gordanier. Their project "exploits linked administrative data on health care utilization and randomized food stamp receipt dates" to examine the link between food stamp receipt date and E.R. utilization. The researchers postulate that food insecurity could lead to increased E.R. utilization, thus upon receipt of SNAP benefits when food security is at its highest, the E.R. utilization could be minimized. They find that on the actual day of benefit receipt, E.R. utilization is 3.1 percent lower than expected, consistent with their hypothesis.

These weekly seminars were attended by CHEPS affiliates, which include professors from across disciplines, as well as undergraduate and graduate students. These events helped to expand the research interests of students and allowed economics professors at SDSU to network with faculty from other universities. Importantly, CHEPS affiliates were able to meet with presenters in small group sessions to discuss their research and academic experiences, as well as seek advice about their future careers. Several invited speakers discussed the relative quality of various economics Ph.D. programs with students and imparted advice on how to select the best match. These networking opportunities for students were invaluable.

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CONFERENCES

2019 WESTERN ECONOMIC ASSOCIATION INTERNATIONAL

On July 1, 2019, CHEPS director, Joseph J. Sabia, organized a session for the Western Economic Association International (WEAI) Conference, which took place in San Francisco. The session, titled "Economics of Risky Behaviors," featured four CHEPS affiliates, who had the opportunity to showcase their scholarship. Toshio Ferrazares, from the University of California, Santa Barbara (UCSB), presented their joint working paper with D. Mark Anderson and Joseph J. Sabia, titled "Do Gun Buybacks Backfire?" The University of New Hampshire's (UNH) Gokhan Kumpas shared his new research, "Anti-Bullying Laws and Suicidal Behaviors Among Teenagers," alongside Dan Rees and Joseph J. Sabia. Andrew Dickinson presented his joint paper with Brandyn Churchill, Taylor Mackay, and Joseph J. Sabia on "The Effect of E-Verify Mandates on Crime." And lastly, Kyutaro Matsuzawa shared his paper, "Marriage Equality Laws and Youth Mental Health." The experience at the WEAI Conference was Dickinson and Matsuzawa's first conference presentations. At first, Matsuzawa "was really nervous because WEAI was the first conference I've ever attended. However, I was glad that I presented my paper in front of many scholars because it was a great stepping stone to achieving my dream of becoming an economist. WEAI helped me learn about exciting research! I thank Dr. Sabia and CHEPS for giving me this wonderful opportunity."

In addition to giving presentations themselves, these CHEPS affiliates took advantage of the opportunities to attend conference sessions on health, labor, and environmental economics, helping them learn about new and exciting research being carried out by other scholars. The conference also provided great networking opportunities. Dickinson stated, "I was glad I attended WEAI because I got the opportunity to meet with students and professors from the University of Oregon to talk about Oregon's Ph.D. program before I started my first year there."



2019 APPAM CONFERENCE

This academic year, CHEPS student affiliates Cal Bryan, Gokhan Kumpas, Kyutaro Matsuzawa, Samuel Safford, and Tam Nguyen attended the 41st annual Association for Public Policy Analysis and Management (APPAM) Conference in Denver, Colorado from November 7 to 9, 2019. This multidisciplinary research conference attracts some of the highest quality research on a wide variety of important, current, and emerging policy and management issues. A handful of CHEPS research projects received attention at the conference. Gokhan Kumpas presented his research, joint with CHEPS director Joseph J. Sabia, titled "More Sports, Less Crime? Evidence from Title IX," as well as another paper coauthored with Joseph J. Sabia and Dan Rees (University of Colorado Denver) titled "The Effect of Anti-Bullying Laws on Youth Suicide." During the Saturday poster session, Calvin Bryan, Kyutaro Matsuzawa, and Samuel Safford presented CHEPS working papers titled "The Effect of E-Verify Mandates on Crime" and "Do Gun Buyback Programs Misfire?"

One significant benefit for the students attending the conference is the experience of presenting and discussing academic research, as well as providing them a forum in which they can observe cutting-edge research topics that students are passionate about. This year the master's students had the privilege of being able to attend the Ph.D. program fair, where they received an opportunity to network with professors, advisors, and students at Public Policy Ph.D. programs across the country. The student affiliates are grateful for being provided with resources to attend such an insightful research symposium



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2020 EASTERN ECONOMIC ASSOCIATION MEETINGS



From February 27 to March 1, 2020, CHEPS Director, Dr. Joseph J. Sabia, and CHEPS student affiliates (Drew McNichols, Kyutaro Matsuzawa, Tam Nguyen, Zach Fone, Brandyn Churchill, Alicia Marquez, and Colin Anderson) attended the 46th annual Eastern Economic Association meetings (EEA) in Boston, MA. The EEA attracts economic scholars from across the country to present cutting-edge research from a wide range of fields, including, but not limited to, health, education, labor, public, and environmental economics.

A highlight of the 2020 EEA for the Center was a CSWEP-sponsored session titled "Public Policy, Risky Behaviors, and Vulnerable Population," which was chaired and organized by Dr. Joseph J. Sabia. This was a fantastic opportunity for CHEPS student affiliates to present their research. Kyutaro Matsuzawa, a pre-doctoral student at CHEPS, presented joint research with Dr. Mark Anderson of Montana State University and Dr. Joseph J. Sabia on the impact of marriage equality laws on youth suicidal behaviors. The authors find that same sex marriage legalization via judicial mandate is associated with declining mental health among LGBQ youths. Drew McNichols, a joint postdoctoral research fellow at CHEPS and the University of California San Diego, presented work, co-authored with Dr. Benjamin Hansen of the University of Oregon, examining the California salary history ban and the persistence of the gender wage gap. They find that California's female-to-male earnings ratio increased from 0.77 to 0.81 after the adoption of a statewide salary history ban. Zach Fone, a Ph.D. candidate at the University of New Hampshire, presented his work on spillover effects of alcohol sales at college football games, finding that alcohol sales have little impact on game day violent crime. Lastly, Brandyn Churchill, a Ph.D. candidate at Vanderbilt University, presented joint work that he is carrying out with Ph.D. candidate Andrew Dickinson from the University of Oregon, Ph.D. candidate Taylor Mackay from the University of California, Irvine, and Dr. Joseph J. Sabia, on the effects of state E-Verify mandates on crime, finding that state E-Verify laws are associated with a 7 percent decline in Hispanic property crime. Discussants Bryce Stanley, Laura Argys, Joseph J. Sabia, and Dhaval Dave offered valuable feedback to the authors.

The 2020 EEA's proved to be a valuable experience to all who attended, providing exposure to extraordinary scholarship and networking opportunities for CHEPS affiliates.

CHEPS MEETINGS

WEEKLY R.A. MEETINGS



Being a research assistant for CHEPS offers many invaluable learning opportunities. The research assistants learn how to carry out research projects independently, have opportunities to attend academic conferences, and are exposed to cutting-edge research at weekly seminars. One of the most valuable benefits of working at CHEPS is the weekly meeting the students have with Dr. Sabia. This regular, one-on-one interaction with an experienced academic is unique outside of Ph.D. programs and is instrumental in helping students navigate the process of building connections and relationships with their future peers and mentors.

Each week, those working on each project give status updates to the director and their fellow students, addressing any progress, issues, or questions that might arise during the research process. These ongoing conversations allow all of the master's students to receive support from Dr. Sabia on their own research, while also benefitting from hearing how other students are carrying out their work. The conversation is invaluable in helping students to begin to understand the ebbs and flows of research and develop the perseverance required to be a successful researcher.

Through these meetings, the student affiliates become acutely aware of the necessary qualities and attitudes needed to carry out research while also gaining clarity on how their individual projects and personal research interests will advance. All this will, no doubt, be incredibly valuable as the student affiliates prepare to enter the next stage of their life—be it pursuing a Ph.D. or entering industry.

These meetings have also been crucial in developing a sense of camaraderie among the research assistants at CHEPS. These ongoing conversations develop a sense of collectiveness in which everyone is interested in and concerned about all of the projects that the student affiliates are working on, not just their own. Furthermore, this sense of comradeship also manifests itself in everyone helping one another in their educational and professional aspirations. These meetings have played an invaluable role in making those associated with CHEPS feel like a family.

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STATA BOOTCAMP 2019

CHEPS held its annual summer Stata Bootcamp in August of 2019. The 4-day bootcamp was aimed at familiarizing the incoming student affiliates with Stata, the most commonly used statistical package in applied microeconomics. The bootcamp was led by San Diego State University (SDSU) alumni and University of New Hampshire doctoral student. Tam Nguyen. The student affiliates that attended the bootcamp were Melinda Mueller, Samuel Safford, Isaac Bauman, Cameron Milani, Jim Curry, and Colin Anderson. The bootcamp prepared the students to conduct CHEPS-related research as well as graduate-level econometrics.



The students were introduced to various Stata commands, focusing on those that are often used in conducting empirical studies in applied microeconomics, such as pooling data from public sources, reading data into Stata, creating new variables, transforming datasets, combining different datasets, generating different visualizations, and performing statistical analyses.

The bootcamp aimed to develop careful coding skills. One of the main messages of the training was "doing it right," rather than "doing it quickly." The bootcamp explored common mistakes one might make with Stata commands, and the student affiliates learned how to avoid them. Students were taught to double and triple check their work before moving on to another code. Careful coding is a fundamental component of carrying out good econometrics research.

The bootcamp familiarized the student affiliates with different public datasets that have been used in current and past CHEPS projects. Some examples of the datasets include the Behavioral Risk Factor Surveillance System (BRFSS), Current Population Survey (CPS), the American Community Survey (ACS), the Integrated Public Use Microdata Series (IPUMS), the General Social Survey (GSS), the Uniform Crime Reports (UCR), and the Surveillance, Epidemiology, and End Results Program (SEER) data. In addition to using these datasets, the students developed the habit of looking at codebooks when using survey data to create new variables.

Following the Stata Bootcamp, an empirical project was assigned, so the affiliates could have an opportunity to apply the various Stata commands learned throughout the four days. The final project consisted of a replication of the paper "The Impact of Health Insurance on Preventative Care and Health Behaviors: Evidence from the First Two Years of the ACA Medicaid Expansion" (Simon, Soni, & Cawley 2017). The students worked in small groups to complete the replication project. After carrying out the replication project, they presented their results the following week.

CHEPS looks forward to the upcoming Stata Bootcamp for 2020!

PH.D. BOUND CHEPS GRADS

CALVIN BRYAN

What motivated you to become involved as a researcher with the Center for Health Economics & Policy Studies?

Before entering the M.A. program at San Diego State University, I had spent the previous three years working as a forest ranger and ski instructor. Needless to say, I did not have very much exposure to economic or policy research. When I learned about the work being done at the Center, I knew that CHEPS would provide me with a unique opportunity to gain firsthand experience carrying out research, and the possibility to learn from other scholars in the field. Since I wanted to eventually apply to Ph.D. programs, I knew this was an opportunity I couldn't pass up.

What are the most important skills you acquired?

One of the most useful skills I developed was project management. I came to see the central role project management played in all of the phases of an economic/policy research idea: the development of an interesting question, the identification and implementation of a plausible research method, and the evaluation of your results. Another crucial skill I developed was navigating large datasets and approaching any econometric analysis with a careful eye.

What will you remember most about your experiences as a graduate student here?

More than anything else, I will remember all the opportunities the economics department at SDSU provided me. I will fondly remember taking classes on econometrics, microeconomics, and public economics, getting my hands dirty with data research as an R.A. at CHEPS, and receiving the opportunity to teach the principles of macroeconomics class to undergraduates. I feel like I got a sense of what the workload of a Ph.D. student could be like in the graduate program at SDSU.

How did your experiences here aid you in your choice of a Ph.D. program?

Having an opportunity to receive advice from seminar speakers played an important role in selecting a Ph.D. program. Not only did these academics provide helpful insights around what



factors we should be looking for in a program, but they also were able to provide guidance on what programs to look at based on my research interests. Additionally, the seminar series provided me with exposure to a wide range of economic and policy research, helping me to see what types of research I was truly most passionate about.

During your time in CHEPS, you met with a lot of researchers from our Seminar Series. Who was your favorite, and why?

My favorite seminar during my time in CHEPS was conducted by Delia Furtado from the University of Connecticut, titled "Do Immigrant Inflows Improve Quality of Care in Nursing Homes?" In her research, Dr. Furtado used Census and ACS data to find that larger immigrant inflows to an area had no effect on wages of registered nurses. She then used data from the Long-Term Care Focus Project to find that areas

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with larger immigrant shares observe a reduction in falls and other quality of care measures. While there were many fascinating seminars throughout my CHEPS experience, this was one of the first ones to really grab my attention because of the compelling question and intriguing results. I also was fortunate enough to see research presented by Professor Furtado at the 2018 Southern Economic Association meetings, and hope to see more research presented by her in the future!

What advice do you have for future CHEPS graduate affiliates?

Never hesitate to ask questions. Dr. Sabia is always willing to talk about research ideas, the seminar speakers can answer questions about the Ph.D. application process, and the professors at SDSU are very helpful in seeking out career opportunities. All of these are avenues to get useful answers to any questions someone may have.

What are your future plans and goals?

Next year I plan to attend Colorado State University to pursue a Ph.D. in Agricultural & Natural Resource Economics, hopefully researching topics related to wildland fire mitigation. After finishing my degree, my goal is to start a career in academia.

How has CHEPS helped you with your goals so far?

The Center has helped me in achieving my career goals in more ways than I could list in a brief bio, but the way it has assisted me the most has been through exposing me to a wide array of research. Between attending multiple conferences, engaging in dozens of research seminars, getting hands-on experience with policy analysis, and interacting with researchers from across the country, CHEPS has exponentially increased the number of doors open for me.



SAMUEL SAFFORD

What motivated you to become involved as a researcher with the Center for Health Economics & Policy Studies?

CHEPS offers master's students the unique opportunity to experience the full breadth of the research process—from brainstorming an initial research question, to data collection, modeling, and constructing an academic article worthy of peer review. While my initial motivation when entering the M.A. program was not to continue to a Ph.D., I pursued a position at CHEPS in order to experience the side of economics that I was least familiar with—applied research. I can say with certainty that it was my work with CHEPS and Dr. Sabia that has fostered my interest in pursuing research on topics I feel are important and deserve attention.

What are the most important skills you acquired?

In addition to the advanced coding and datacollection work that I have been able to conduct at CHEPS, my work on various projects has built a greater understanding and intuition of how to approach questions, both in the research process and outside of academia. When combined together, these skills have constructed a solid foundation on which to pursue further independent and collaborative research.

What will you remember most about your experiences as a graduate student here?

My work in both the master's program and with CHEPS helped awaken a sense of academic curiosity that I hadn't developed in my undergraduate studies. The clarity I have for my path forward is what I am most grateful for, and I will forever be thankful for the experiences that the program and CHEPS have provided.

During your time in CHEPS, you met with a lot of researchers from our Seminar Series. Who was your favorite, and why?

Of all of the researchers I have met, I would say that Dr. Sarah Hamersma from Syracuse University was my favorite. Dr. Hamersma's meeting with the master's students was one of the most comfortable, enlightening conversations to date. She greeted us each by name, asked follow-up questions to get to know us better, and answered all of our questions about academia, doctoral programs, and Syracuse's Public Administration Ph.D. openly and honestly. Her seminar presentation on her paper "SNAP Access and Young Adults' Educational Engagement" was also extremely interesting, and was a great example of how a research project develops from the initial stage of data gathering to the construction of a working paper.

What advice do you have for future CHEPS graduate affiliates?

I would tell them to foster friendships with their peers, as they will be their companions through projects, finals, presentations, and are all potential future co-authors. I would also tell them to take advantage of the unique experience we are offered by having access to Dr. Sabia, who has an amazing amount of experience and knowledge of the research process and applied microeconomics.

What are your future plans and goals?

I plan to work as a pre-doctoral research assistant and chief of staff for Dr. Sabia at the Center during the 2020–21 academic year. I will assist with current projects, pursue my own ideas with the mentors I have met at SDSU, and apply to Ph.D. programs in Sociology, Demography, and Public Policy.

How has CHEPS helped you with your goals so far?

The foundational knowledge and skill that CHEPS has offered me is the most important experience of my graduate studies so far. My exposure to a wide range of topics, my one-on-one interaction with

experienced academics, and my conversations and collaboration with Dr. Sabia on research topics of my own have all helped steer me towards a hopefully bright future in academia.

KYUTARO MATSUZAWA

What motivated you to become involved as a researcher with the Center for Health Economics & Policy Studies?

I have always wanted to go to a Ph.D. program in applied microeconomics; however, I wanted to gain more confidence with my research skills before applying. I decided to take this position because I wanted to work more closely with Dr. Sabia in the field of applied microeconomics, get mentoring on how to become a better researcher and get to co-author with Dr. Sabia on several projects. I believed these would allhelp me boost my research skills and make me more confident as a researcher.



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What are the most important skills you acquired?

I learned how to work with data. I learned how to code variables, as well as to spot coding errors and data discrepancies. I also learned how to come up with research ideas, such as what is the appropriate policy, model, and data to use to answer a specific research question. Lastly, I learned how to network with other economists in a professional manner, specifically, how to pitch my ideas and get their feedback.

What are your future plans and goals?

Starting in the fall of 2020, I will be attending the University of Oregon in pursuit of my Ph.D. Upon completion of my Ph.D., I aim to enter academia to pursue my passion for conducting research on complicated health behaviors and public policy using economic and econometric models as well as teaching new concepts to students.

How has CHEPS helped you with your goals so far?

Co-authoring with Dr. Sabia in the field of health economics helped me with my goals in many ways. First, it helped me recognize that my interest lies in health economics and public policy. Secondly, it confirmed my desire to conduct research and generate new ideas and concepts. Finally, it helped me gain more confidence in my abilities as a researcher; I now feel more assured that I can finish my dissertation and obtain my Ph.D.

What will you remember most about your experiences as a pre-doc here?

Meeting with the seminar speakers is one thing I will never forget. Every speaker gave me great suggestions about Ph.D. programs. Many of them helped me find the right Ph.D. program to apply to, provided suggestions on how to become a strong applicant, and shed light on how to prepare for the first year of my Ph.D. program. The seminar speakers also helped me understand what the job market is like, what being in academia is like, and how to manage my time efficiently. This advice definitely helped me with all my professional aspirations.

How did your experiences here aid you in your choice of a Ph.D. program?

CHEPS gave me the opportunity to attend the Association of Public Policy Analysis and Management (APPAM). At APPAM, I got to meet Dr. Ben Hansen, a graduate coordinator at the University of Oregon, who I admire as a researcher. After talking to Dr. Hansen about the Ph.D. program at Oregon, I gained interest in applying to the program. One I was accepted, I was able to talk to Drew McNichols, a post-doc at CHEPS who recently graduated from Oregon, and Andrew Dickinson, a colleague of mine at CHEPS who currently attends Oregon, about their experiences. They both spoke highly about the program and convinced me to accept my offer.

During your time in CHEPS, you met with a lot of researchers from our Seminar Series. Who was your favorite, and why?

One of my favorite speakers was Dr. Jason Lindo from Texas A&M University. He was a nice person and was giving me great feedback on the project I was working on. Furthermore, the paper that he presented, which found unexpected results, was fascinating and helped me understand why economic research is so interesting.

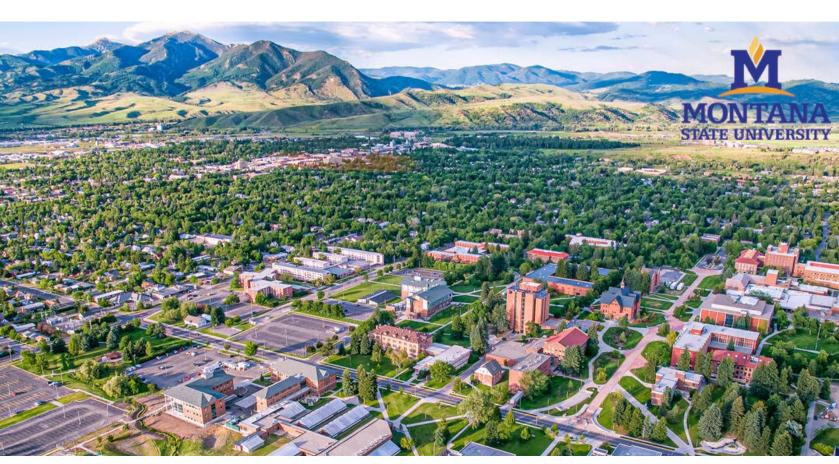
What advice do you have for future CHEPS graduate affiliates?

Future CHEPS graduate affiliates are very fortunate to become a part of CHEPS, especially if they intend to go to a Ph.D. program. Dr. Sabia is a great resource, and he will definitely help his students gain more skills in becoming better researchers. I highly recommend that everyone take advantage of the opportunity to work with Dr. Sabia and always listen to the advice he gives.

CHEPS PH.D. AFFILIATE TO BEGIN POSTDOCTORAL FELLOWSHIP

Zach Fone earned his Ph.D. in Economics from the University of New Hampshire in May of 2020. He is an applied microeconomist, with his dissertation focused on the potential spillovers to crime from policy interventions. In his job market paper (co-authored with CHEPS Director Dr. Joseph J. Sabia, CHEPS Faculty Affiliate, Dr. Brandy Lipton, and Dr. Andrew Friedson), Zach studies the spillover effects to crime from the Affordable Care Act's Dependent Coverage Mandate (DCM). He finds that the DCM led to reductions in arrests among the age group targeted by the policy (19- to 25year-olds), as compared to their slightly older peers who do not qualify (27- to 29-year-olds). The declines in crime appear to be driven by reductions in large out-ofpocket health care spending, increased educational attainment, and increased parent-adult child cohabitation. This summer, Zach will start a two-year postdoctoral position at the Initiative for Regulation and Applied Economic Analysis (IRAEA) at Montana State University.





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NEWS FROM ECONOMICS

Greetings from the SDSU Department of Economics. This past semester has certainly presented a unique set of challenges with the rapid movement to fully online instruction. I am truly proud of how well our faculty, staff, and students have adapted to the changes imposed by the COVID-19 pandemic. Our faculty had two weeks to convert their courses to an online modality, a process that usually takes months of planning and preparation. Our administrative and advising staff have gone above and beyond to facilitate this transition, from ordering special equipment to help with online instruction, to connecting faculty with appropriate campus resources, to helping students with compassion and professionalism. Reading through comments from student evaluations, I was struck by how often our faculty were referenced as providing a source of stability and guidance in our student's lives. While we certainly made some mistakes along the way, I know that we



as a department have gotten stronger from this experience and are better equipped to handle whatever the world throws at us in the future.

Even while dealing with the challenges of 2020, our faculty have continued to produce excellent research. Presented below are a few examples of the kind of policy-oriented research from our faculty that align with the mission of CHEPS:

- Ryan Abman and Clark Lundberg published "Does Free Trade Increase Deforestation? The Effects of Regional Trade Agreements" in the *Journal of the Association of Environmental and Resource Economists*. This study considers one unintended consequence of free trade agreements: deforestation. After a country enters into a free trade agreement, we tend to see higher rates of deforestation, an important environmental consideration when evaluating the pros and cons of such agreements.
- Ron Shadbegian has a series of studies examining the negative health effects of even minor exposure to lead during childhood. A recent publication looking at North Carolina data found that even low levels of childhood exposure are associated with lower scores on reading and math tests. Another study uses the switch by NASCAR from leaded to unleaded fuel and finds evidence that this led to a decrease in low birthweight children (based off distance to tracks where races are held).
- My own work with Ryan Abman on the effects of border walls on crime was recently featured as a Cato
 Institute Policy Brief. We look at the expansion of border wall construction along the US-Mexico
 border following the passage of the 2006 Secure Fence Act. We find little impact of border walls on
 crime, with any crime reductions being driven by the short-run economic stimulus of building border
 walls.

These are just a few examples of the high-quality research emerging out of the department. Our faculty have certainly benefited from our relationship with CHEPS in terms of the excellent lecture series, providing Economics M.A. students with advanced research training, and faculty research support. I look forward to expanding and improving upon our relationship in the future.

Best regards, *Hisham Foad, Ph.D.*Associate Professor and Chair, Department of Economics, San Diego State University

FACULTY AFFILIATE SPOTLIGHT

RYAN ABMAN



In the last two decades, the total number of global migrants has increased by nearly 50% to 258 million. In response to this increase, many countries hosting migrants have focused on increasing border security and regulating migration. In the United States, home to around 50 million migrants, increased border security has been a key focus of the Trump administration. Between 2004 and 2017, the U.S. Customs and Border Patrol's enacted budget increased from \$6.0 to \$14.3 billion, a 138% increase. Since the passage of the 2006 Secure Fence Act, a key element of efforts to increase border enforcement has been the construction of a wall along the U.S.-Mexico border.

While the costs of such infrastructure investments are known (and economically significant), the benefits of border wall expansion are difficult to quantify. Proposed benefits by proponents of border wall expansion can be

classified in terms of labor market effects (wage and employment effects on native populations from reduced migration), public expenditure effects (changes in public program spending from changes in migrant flows), and effects on crime and safety. Beyond the labor market effects of border walls, recent public discourse has focused on the crime and safety effects of these barriers, especially after President Trump made the unsubstantiated claim that the border wall had greatly reduced crime in the city of El Paso during his State of the Union address in 2019. While there is no shortage of opinions on crime in border regions, there is little rigorous empirical evidence on the potential impact of border infrastructure on local crime.

Our paper addresses this gap in the literature and in the political discourse. We examine the unprecedented expansion of border infrastructure built along the U.S.-Mexico border following the passage of the 2006 Secure Fence Act on county-level property and violent crime rates. In order to overcome differences in both crime rate levels and trends in border counties (compared to non-border counties) prior to 2006, we utilize synthetic control matching to assess the effect of constructing a border wall on crime across twelve border counties. Overall, we find construction of border fencing has no appreciable effects on either property or violent crime rates. The two cases of crime declines we observe occur during the construction phase and do not persist after construction is completed. After construction is completed, there is no evidence of a long run decline in crime rates.

From our synthetic weights, we create matched panels to test whether changes in crime rates correspond to the timing and extent of barrier completion. Across a variety of specifications, we find no reduction in property crimes as a function of barrier construction. While we do observe declines in violent crime rates, these actually precede construction, rather than follow it. After a barrier is built, we find no evidence of sustained declines in either property or violent crime rates.

Taken together, we conclude that the post-2006 border wall expansion did not lead to sustained crime reductions in border counties.

AUDREY BECK

The Impact of Residing in a Gang Territory on Birth Outcomes

Gang violence remains an ongoing crisis in many communities across the United States. In a paper entitled, "The Impact of Residing in a Gang Territory on Birth Outcomes: Evidence from Los Angeles" with colleagues Brian Finch (USC), Kyla Thomas (USC), and Joseph Gibbons (SDSU), we assess the potential association of gang-occupied neighborhoods with birth outcomes. Adverse birth outcomes, including low birth weight, preterm birth, and small for gestational stage, serve as a 'barometer' of population health, denoting both poor conditions for human development as well as future public health concerns. We draw upon 1) Los Angeles County Vital Statistics Birth Records (2008-2012), 2) GIS information on gang territory boundaries, 3) LA city geocoded crime data, and 4) the 2010 U.S. Census and 2006-2010 American Community Survey. We find an



association between gang-occupied neighborhoods and adverse birth outcomes; however, this association is largely explained by other neighborhood socio-demographic characteristics, crime notwithstanding. We also find that gangland neighborhoods tend to exacerbate the effects of crime for all birth outcomes, but only significantly so for small-for-gestational age births. Lastly, gang co-residence, crime, and other neighborhood demographics explain a substantial portion of socio-economic and racial/ethnic disparities in adverse birth outcomes.





HAO FE

Since May 2019, I have been focusing on two research projects. The first project examines how crime and neighborhood economic activities influence each other. The second project investigates local export spillovers in China. The following is the abstract of the second project.

There is a considerable amount of uncertainty when firms export to new foreign markets. To reduce the uncertainty, firms usually learn from the exports of other firms that are geographically close (Koenig et al. 2010; Silvente and Giménez 2007). A key challenge of studying learning from neighboring firms is how to define "neighbors." Previous studies consider firms located in the same city or country as neighbors assuming learning takes place at the city or country level (Fernandes and Tang 2014 and He and Lugovskyy 2018). This paper investigates firms' learning at

a much finer geographical level. Using transaction-level Chinese customs data, we study the effect of a newly formed seller-destination route on other neighboring firms' likelihood of exporting similar products to the same destination. To address the identification concern that firms sort into geographical locations, we implement an identification strategy assuming firms do not sort within a small geographical level on the basis of factors that influence export decisions (Bayer et al. 2008). We find evidence of significant learning among neighboring firms. The estimated effect is stronger when firms are in the same registered type (e.g., foreign, private, state-owned).

This paper makes two main contributions to the literature. First, we apply a research design that has been widely used in urban economics to identify the causal effect of firms' learning behavior on international trade. In the empirical trade literature, the estimated effects of learning from neighbors tend to be correlations rather than causations. Second, our detailed transaction-level data allow us to further explore various heterogeneous effects of learning from neighbors in terms of firm size, firm type, products exported, and so on.

A key identification challenge to the estimation of the impact of learning from neighboring firms lies in the nonrandom sorting of firms into geographical locations and the likely presence of unobserved firm and location attributes. The resulting correlation in unobservables among firms can cause serious bias in the estimation. To solve this problem, previous studies include an exhaustive set of fixed effects to control for as many unobservables as possible (e.g., Fernandes and Tang 2014). This paper applies an innovative empirical design developed by Bayer et al. (2008). The design builds on the intuition that firms may sort into city districts but are less likely to sort into neighborhoods. In particular, we compare outcomes for firms that reside in the same versus nearby neighborhoods. The key identifying assumption is that there is no neighborhood-level correlation in unobservables among firms located in the same neighborhood, after taking into account the broader city district reference group.



ROGER FRANTZ

My next book is tentatively titled *Speaking of Behavioral Economics*. It extends what I wrote about in my book which was published last November, *The Beginnings of Behavioral Economics* (BBE). In BBE, I wrote about behavioral economics before Kahneman and Tversky, before 1974. Kahneman and Tversky is the beginning of "modern" or "new" behavioral economics, and the beginning of the behavioral revolution. I wrote about economists (and others) who are called "old" behavioral economics, or first generation behavioral economics, people such as Herbert Simon, Gorge Katona, Harvey Leibenstein. In *Speaking of Behavioral Economics*, I am writing about economists and others who wrote about the same topics as do modern behavioral economists. In some sense, modern behavioral economics is "old wine in new bottles." The people I write



about in this book include Adam Smith, Bentham, John Rae, Jevons, Frank Fetter, Irving Fisher, Pigou, Ralph Hawtrey, J. M. Clark, Frank Knight, and Tibor Scitovsky. I expect to complete this book sometime in 2021.

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SHOSHANA GROSSBARD

Spouses' income association and inequality: A non-linear perspective

Shoshana Grossbard (San Diego State University, HCEO, and IZA), Lucia Mangiavacchi (University of Perugia, Italy, and IZA), William Nilsson (University of the Balearic Islands, Spain), and Luca Piccoli (University of Trento, Italy, and IZA)



We analyze the association between spouses' incomes using a rank-rank specification that takes non-linearities along both spouses' income distribution into account. We also document that the relationships between income and labor force participation and income and couple formation are non-linear. Using simulations, we then analyze how changes in spouses' rank-dependence structure, labor force participation, and couple formation contribute to the upsurge of income inequality in the U.S between 1973 and 2013. We find that an increased tendency towards positive sorting contributed substantially to the rise in inequality among dual-earner couples, but contributed little to overall inequality across households. When considering all households, the factor accounting most for the increased inequality during this period is an increased tendency for individual men and women to remain single.



YANG LIANG

Less Pain, More Gain? The Effect of Export Expansion on Workplace Safety

The expansion of international trade had a profound influence on the U.S. economy during the last decade. In my regards, the impact of trade competition on the U.S. labor market has been widely studied. Both fundamental trade theories and empirical findings suggest that import competition reduces manufacturing employment (import: Autor et al. 2013, Acemoglu et al. 2016) and export expansion creates new jobs (export: Feenstra et al. 2019, Liang 2019). However, it is less clear how trade expansion affects the wellbeing of workers. This study focuses on worker injuries, which are prevalent and expansive. The U.S. workers experience about 2.8 million workplace injuries annually (BLS, 2019). These injuries are costly for both workers and firms: the wage and productivity losses, medical expenditures, and administrative expenses amounted to 206 billion dollars annually (National Safety Council, 2015). The manufacturing workers have long been suffering from higher than national average workplace injury rates. This study evaluates the effect of export performance on the workplace injuries among U.S. manufacturing workers.

Theoretically, the effect of export expansion on workplace safety is ambiguous. On one hand, export expansion creates a positive demand shock, which might allow the firms to provide more resources facilitating workplace safety. On the other hand, the increase in demand might lead to higher work intensity and longer working hours, which might worsen workplace safety.



To correct for endogeneity in estimating the causal impact of exports on injuries, we need an instrument that is correlated with an establishment's increase in exports but is not correlated with the establishment's decision on injury settings. Thus, we create an instrumental variable that captures demand shocks to U.S. exports generated by emerging economies' liberalization. Those include shocks to U.S. exports to trading partners in each product and contain rich variation across different markets and across products. Finally, depending on the stability of the regional specialization patterns in the U.S. manufacturing sector, we follow the literature (Autor et al. 2013...) and use initial industrial employment compositions to create regional export exposures at the commuting zone level.

We construct the analysis sample by matching an establishment-level panel dataset on injury rates to commuting zone level U.S. export performance measures. The main outcome is the number of workplace injuries per 100 employees, obtained from a data initiative of the Occupational Safety and Health Administration (OSHA). From 1996 to 2011, the OSHA Data Initiative (ODI) surveyed the injury case rate of about 80,000 establishments per year in manufacturing and other industries with high average injury rate. An unbalanced panel is created through linking observations across years based on establishment name and street address. Our analysis sample covers about 521,000 establishment-year observations on about 15,000 unique establishments over 16 years.

We find export expansion reduced workplace injuries significantly. Our preferred model with 2SLS and establishment fixed effects shows that a \$1,000 increase in U.S. exports per worker decreased the total injury case rates by a significant 0.05%. The effect persisted five years after the export expansion. The effect is more salient among establishments with high injury rates, suggesting that export expansion also reduced the inequality of working conditions in the manufacturing sector.

We tested a few possible mechanisms through which export expansions might contribute to safer workplace for manufacturing workers. First, we find export expansions are associated with higher capital stock and equipment investment. These new technologies might facilitate both the production and workplace safety. Second, we find export expansions are associated with fewer employee complaints on working conditions and fewer violations on workplace safety and health standards. The improvement in working conditions might be achieved through better compliance of regulations. Lastly, we find export expansion has small and insignificant impact on working hours, suggesting that the results are unlikely to be driven by a change of work intensity.

To our knowledge, this study provides the first evidence on the impact of export on worker safety in the U.S. During the analysis period from 1996 to 2011, the U.S. export increased from 625 billion dollars to 1,482 billion dollars, representing a more than 100 percent increase. Our results suggest that the export expansion is associated with an annual reduction of about 5,000 injuries among manufacturing workers. The median estimate on value of a statistical injury is \$69,393 (Viscusi and Aldy 2003). Thus, the reduction in injuries would imply a decrease in related costs of more than 300 million dollars.



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Networks and Trade

There is mounting uncertainty when firms export to new foreign markets. To reduce the uncertainty, firms usually learn from other firms that are geographically close (Koenig et al. 2010, Silvente and Giménez 2007). A key challenge of studying learning from neighboring firms is how to define "neighbors." Previous studies consider firms located in the same city or country as neighbors, assuming learning takes place at the city or country level (Fernandes and Tang 2014, He and Lugovskyy 2018). This paper investigates how the "learning" happens at a much finer geographical level. Geocoding firms in the Chinese Firm Transaction Data, we study the effect of a newly formed seller-market route on other neighboring firms' likelihood to export to the same market. The granular geodata allows us to utilize the variation from comparing firms that are located in nearby places while controlling for a sophisticated set of fixed effects. Our preliminary results show that establishing a newly formed seller-market route makes the other firms located in the same neighborhood 33% more likely to export to the same market.



BRANDY LIPTON

Medicaid Benefit Generosity and Labor Market
Outcomes: Evidence from Medicaid Adult Vision Benefits

While poor vision has the potential to decrease workplace productivity, little is known about the actual connection between access to vision correction and worker behavior. Michel Boudreaux (University of Maryland) and Brandy Lipton (San Diego State University) examined state-level changes to Medicaid's coverage of eye exams and glasses for adult enrollees during 2001–2012. Adults with these benefits tend to visit the eye doctor more often and have better vision. The researchers wanted to know if vision benefits also meant better employment outcomes for workers.



They found that coverage of these services increases an enrollee's typical weekly hours worked by about 6%, increases full-time work, and helps enrollees obtain new jobs that require more highly compensated skills. These findings are driven by adults who were already working, as the study did not find evidence that vision benefits increased the number of enrollees that had a job.

Why does vision coverage matter? Coverage of eye exams and glasses may affect work activity for several reasons. According to the team, "Our study finds that coverage of these services is associated with an increase in commuting to work by car, suggesting that easing transportation barriers may be an important benefit of these policies." A related interesting finding is that effects were also largest among drivers and people with other transportation occupations, which may be because good vision is particularly important for this group.

The results suggest that these relatively low-cost services can have large economic benefits. Recent policy debates have considered how to increase work activity among Medicaid enrollees, with several states experimenting with work requirements as a condition of program eligibility. The findings of this research suggest that access to health services may alleviate work-limiting impairments and enable enrollees to more fully pursue their work-related goals.

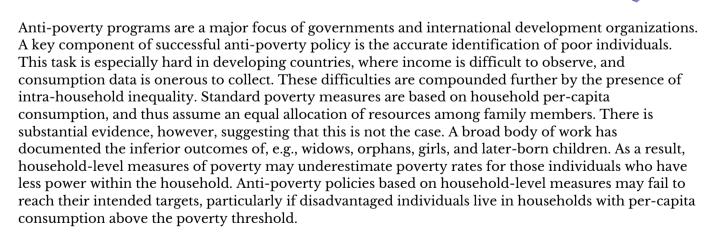
Read the study in the *Journal of Human Resources*, "Medicaid Benefit Generosity and Labor Market Outcomes: Evidence from Medicaid Adult Vision Benefits," by Michel Boudreaux (University of Maryland–College Park) and Brandy Lipton (San Diego State University).

INTRODUCING JAKE PENGLASE

Jake Penglase received his Ph.D. from Boston College in 2018. After doing a post-doc at the University of Bordeaux in France, and a brief stint as a consultant for Analysis Group in Boston, he has joined the Economics Department at SDSU, starting this fall. His work attempts to better understand the inner workings of the household: How is consumption allocated within the family? How do divorce laws affect women's bargaining power within the household? What is the extent of consumption sharing across children within the household? These questions are fundamental to measuring economic wellbeing, but are difficult to answer since the household is in many ways a black box to economists; data is typically collected at the household level, and concepts like bargaining power and consumption sharing are not observable.

Sharing the Pie: Undernutrition, Intra-household Allocation, and Poverty

Jake Penglase, Rossella Calvi, and Caitlin Brown



This paper assesses the scope of such poverty mistargeting. Using data from the Bangladesh Integrated Household Survey and a structural model of intra-household consumption allocation, we provide estimates of individual consumption that account for intra-household inequality. We verify the validity of these estimates by comparing them to established measures of individual deprivation. Relative to household per-capita consumption (which assumes resources are allocated equally within the Household), our structural estimates of individual consumption align more closely with anthropometric

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indicators and other measures of nutrition. We document pervasive evidence of intra-household consumption inequality in Bangladeshi families and show that poverty-targeting based on household-level consumption misses a significant fraction of poor individuals: in our sample, one-third of individuals with estimated levels of consumption below the World Bank's extreme poverty line are in fact classified as non-poor based on household per-capita consumption.

This paper makes several key contributions. The first is to document the existence and quantify the degree of intra-household inequality in Bangladesh along several dimensions of individual well-being, including nutrition, health outcomes, and consumption. The second contribution is to compute individual-level poverty rates for Bangladesh that account for the unequal allocation of goods within the household. Finally, we develop an approach to identify the fraction of total household expenditure that is devoted to each household member in the context of a collective household framework.

UCSD AFFILIATES SPOTLIGHT

JEFFREY CLEMENS

Demand Shocks, Procurement Policies, and the Nature of Medical Innovation: Evidence from Wartime Prosthetic Device Patents

Jeffrey Clemens, Parker Rogers

NBER Working Paper No. 26679 (January 2020)

We analyze wartime prosthetic device patents to investigate how procurement policy affects the cost, quality, and quantity of medical innovation. Analyzing whether inventions emphasize cost and/or quality requires generating new data. We do this by first hand-coding the economic traits emphasized in 1,200 patent documents. We then train a machine learning algorithm and apply the trained models to a century's worth of medical and mechanical patents that form our analysis sample. In our analysis of these new data, we find that the relatively stingy, fixed-price contracts of the Civil War era led inventors to focus broadly on reducing costs, while the



less cost-conscious procurement contracts of World War I did not. We provide a conceptual framework that highlights the economic forces that drive this key finding. We also find that inventors emphasized dimensions of product quality (e.g., a prosthetic's appearance or comfort) that aligned with differences in buyers' preferences across wars. Finally, we find that the Civil War and World War I procurement shocks led to substantial increases in the quantity of prosthetic device patenting relative to patenting in other medical and mechanical technology classes. We conclude that procurement environments can significantly shape the scientific problems with which inventors engage, including the choice to innovate on quality or cost.

CONNOR REDPATH

Connor Redpath graduated with a B.Sc. in Mathematics and Economics (summa cum laude and with Honors) from Fordham University in 2017. He is currently a Ph.D. student in the Economics Department at the University of California San Diego. His research is in applied economics (labor, public) with specific interest in health, education, and household economics.

Does Marriage Affect Who You Partner With?

Marriage laws are government policy relating to child rearing, asset division upon divorce, tax brackets, pensions, and more. Primarily, marriage is a legal contract allowing couples to specialize and jointly invest in children, or something else they both enjoy. Of course, unmarried cohabiting couples can also specialize and invest in children; however, the division of assets upon divorce allows married couples to specialize and invest more. This aspect of marriage implies that couples with greater assets or productivity have more to gain from marriage than those who do not.



Since the turn of the millennium, same-sex marriage became legal in all 50 states. By 2011, Connecticut, District of Columbia, Iowa, Massachusetts, New Hampshire, New York, and Vermont had legalized same-sex marriage. These states are the "control" group in the study because they have no policy changes from 2011. Notably on June 25, 2015 the Supreme Court decision on Obergefell v Hodges legalized same-sex marriage in Alabama, Arkansas, Georgia, Kansas, Kentucky, Louisiana, Michigan, Mississippi, Missouri, Nebraska, North Dakota, Ohio, Tennessee, Texas, and South Dakota. These states are the "treatment" group in the study because they experienced no policy change from 2011 until 2015, when they experienced a one-time forced permanent policy change.

Using data from the American Community Survey (U.S. Census), two outcomes are measured: difference between each partner's years of education, and the correlation between partners' years of education. Education is used instead of wealth, income, or productivity because wealth and income usually change in response to getting married and productivity is hard to measure, whereas years of education is typically determined prior to marriage.

Indeed, the study finds access to legal marriage decreases the difference between partner's years of education and increases the correlation between partners' years of education. This suggests that legal marriage, as a policy, causes partners to increasingly assort (or pair-up) according to years of education. Increased assorting on education directly impacts household income and wealth inequality as well as intergenerational mobility, both topics of ever-growing social debate and political importance.



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MEET OUR M.A. AFFILIATES



JOSH BARFUSS

Josh Barfuss received a B.A. in Economics and B.S. in Statistics from San Diego State University (SDSU). He is continuing his education at SDSU by joining the M.A. in Economics program. His interests primarily include environmental economics, game theory, econometrics, and macroeconomics. Following the completion of his M.A., he would like to continue his education and earn a Ph.D. in economics to teach in academia.



MATT BRAAKSMA

Matt Braaksma graduated from Eastern Washington University with a B.A. in Accounting and a minor in Economics. He is a candidate for an M.A. degree at San Diego State University. After completion of the M.A. program, he hopes to pursue a Ph.D. in Economics. His interests include natural resource economics, economic development, and public policy.



JAMES CURRY

James completed his undergraduate studies at California State University, San Marcos, where he earned a B.A. in Economics. He is currently an M.A. candidate in Economics at San Diego State University, where he is interested in pursuing econometrics, game theory, and behavioral economics. Upon completion of the M.A. program, he plans to pursue a Ph.D. in the interest of teaching at the university level.



ERIC HEUMANN

Eric Heumann graduated from Pennsylvania State University with a B.S. in Economics in 2019. His research interests include labor and consumer economics, public economics, and the impact of public policy on health and crime.



RUSELL LEONARD

Russell Leonard graduated from the University of Colorado Boulder in 2019 with a B.A. in Economics and Philosophy. He is currently pursuing an M.A. in Economics at San Diego State University. His research interests include environmental economics, econometrics, and behavioral economics.











REBECCA MARGOLIT

Rebecca Margolit graduated from the University of California, Davis, in 2015 with a B.S. in Managerial Economics and a minor in Communications. Directly following, she worked for several years as a Senior Disability Benefits Specialist at Unum in Glendale, CA, where she gained an in-depth knowledge of the insurance industry and risk management. Now, she is a first-year student in the SDSU Economics M.A. program. She has many interests, including health economics and policy, development economics, and econometrics. She hopes to eventually pursue a Ph.D. in economics in order to conduct research regarding the economic and behavioral impact of disability insurance on those with disabilities.

ALICIA MARQUEZ

Alicia Marquez received her B.S. degree in Environmental Science with a minor in Economics from San Diego State University. Following graduation, she plans to pursue a Ph.D. in Economics. Her specific interests include natural resource economics, health economics, and public policy.

CAMERON MILANI

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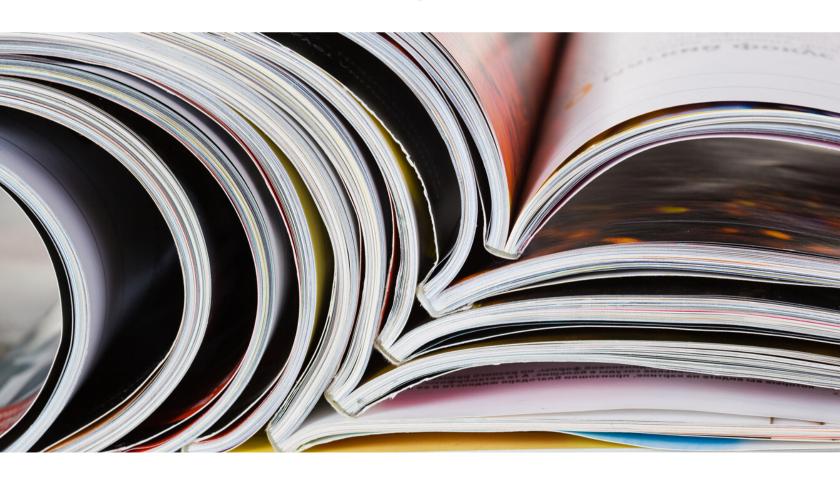
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