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PROJECTS AS A CASE STUDY FOR SUCCESSFUL URBAN PLANNING**

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Anne Williams



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FROM THE EDITORS

Dear Readers,

We are delighted to present the 16th edition of the Public Purpose Journal. The Public Purpose is an academic journal led by graduate students in American University's School of Public Affairs. We strive to publish work that contributes to the literature of our disciplines. These papers reflect outstanding work on the topics of public policy, public administration, government, justice, law, criminology and terrorism studies. As a student run organization, we are grateful to the Graduate Student Council and the Dean's office for their support.

The papers published here show the range of important topics that our graduate students are tackling in their classes. From analyzing significant domestic policy issues, to reflecting on international events that have affected the global climate of democracy, the work of our students highlighted here show the great depth of issues American University students are passionate about.

As a school committed to public service excellence, we continue to strive for innovation in public policy and administration through learning experiences in and outside the classroom. The work of the Public Purpose Journal to showcase our student's work through a peer review process allows students to compliment their graduate education with co-curricular opportunities. We thank our student writers, editors, and production staff members for their hard work. Additionally, we thank our executive board members for their work behind-the-scenes and their dedication to the mission of the journal.

Sincerely,

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ABSTRACT

In 1993, Oklahoma City (OKC) introduced the Metropolitan Area Projects (MAPS), a successful sales-tax funded program to revitalize the city. MAPS 3 is the third wave of this program, funding several infrastructure projects including the OKC Convention Center and the Riversport Rapids whitewater rafting and kayaking center. MAPS 3 serves as a case study for a successful government revitalization project with effective community collaboration, bringing together citizens through community meetings and a citizen advisory board, businesses through robust support by the OKC Chamber of Commerce, and over two decades of city leadership. MAPS 3 was successful because of four key elements: 1) A one-percent sales tax that ensures efficiency and transparency; 2) Community engagement that generates support for the project initiatives; 3) A citizen advisory board that maximizes efficient flow and encourages representativeness and; 4) Public-private partnerships that allocate resources efficiently and involve the private sector in city development.

INTRODUCTION

Following an oil market crash in the 1980s, Oklahoma City (OKC) was unable to secure any major business investments and its downtown area was left downtrodden and dilapidated (“Chamber History,” 2013). After a failed bid for a United Airlines maintenance facility, then-mayor Ron Norick proposed that OKC invest in itself through the first MAPS project in 1993, beginning the city’s effort to transform the economically depressed city into a thriving hub of economic growth (Bassett, 2017). MAPS introduced a one-percent sales tax for five years to fund nine separate projects within the city, including the Bricktown Canal, the Indoor Sports Arena, and the trolley system. Through the five-year tax, OKC raised \$363 million, allowing for the debt-free construction of the proposed MAPS project (Beyer, 2016).

MAPS was so successful that the public voted to fund MAPS for Kids in 2001, a second iteration of the original program aimed at improving 70 public schools in and around OKC (MAPS For Kids, n.d.). In 2009, seeking to build on the momentum of the first two programs, Mayor Mick Cornett proposed—and the public approved—MAPS 3. MAPS 3 has raised \$777 million, almost double the amount the original MAPS raised in 1993, to fund eight public initiatives. These initiatives include a world-class whitewater rafting facility, a convention center, walking trails, and neighborhood senior centers (Beyer, 2016). One of the more unique MAPS 3 projects is OKC’s Riversport Rapids, a whitewater

rafting and kayaking center. The center was completed in 2016 and is run by The Oklahoma City Boathouse Foundation, a group dedicated to improving the waterfront and increasing tourism in OKC. OKC is the country’s only urban venue for whitewater and competition rowing, bringing a unique crowd to OKC (“Riversport Rapids,” n.d.). MAPS 3 also paved the way for OKC’s Downtown Convention Center, a project jointly funded by the government and Omni Hotels and projected to finish by 2018. Through this public-private relationship, the city administration wants to draw businesses and large-scale events to OKC, and develop a hospitality industry within the city’s downtown district (“About MAPS 3,” n.d.). Not driven solely by improving tourism and business, MAPS 3 also includes plans to support the city’s aging senior population through the creation of four different centers maintained by experienced senior wellness operating partners (“Senior Health,” n.d.).

This paper begins with a diagnosis of MAPS 3, describing its economic and political success in OKC. It then identifies four key best practices based on OKC’s methods and an in-depth discussion of OKC’s methods in these four areas. It then shows that the MAPS tax model is an efficient method of raising funds for community projects and infrastructure. This paper concludes with recommendations and implications for other cities that want to match its success.

DIAGNOSIS

MAPS 3, like MAPS and MAPS for Kids before it, is an economic and political success. Mayor Norick envisioned the first MAPS as “something to hold onto and rally around” (Chamber History, 2013), and the prosperity that the program brought to Oklahoma City has incentivized efforts to replicate and continue that success. MAPS 3 is a key part of a revitalization effort that has grown the population and landed OKC on numerous “best” lists. It has been named a “top city to launch a small business” by Inc. (Kaitlyn, 2017), one of the “top metros for wage growth” by Forbes (Strauss, 2016), and one of the “top cities rebounding from the Great Recession” by CNBC (Guzman, 2016). Further, between 2010 and 2015, OKC saw a 9.1 percent increase in its millennial population (Johnson, 2017). While these accolades and the statistics are an important barometer of MAPS’ success, the OKC citizens’ continued support is perhaps more important. A 2009 poll of community support for MAPS projects showed an 80 percent voter approval rating (Bassett, 2017). The city administration listened. In September 2017, OKC passed a 27-month sales tax extension to ensure the continuation and completion of MAPS 3, which included street resurfacing and other improvements (Crum & Felder, 2016). When MAPS 3 is debated, OKC citizens discuss which programs should be enacted, not whether the revenue should be raised to enact them (Bassett, 2017).

The city’s support for MAPS 3 parallels the robust political support for one of the project’s primary architects, Mayor Mick Cornett, who became mayor in 2004 (“Mayor,” n.d.). His incremental approach to the project, discussed more in the section “Community Engagement,” contributed to Cornett’s 2014 election to an unprecedented fourth term as mayor with nearly 66 percent of the vote (Thomas, 2014). Cornett has been showered with various honors, including being named by Governing Magazine as Public Official of the Year in 2010 (Governing Magazine, 2010) and highlighted by Politico Magazine as an innovative public official tackling obesity in a former top junk food city (Allen, 2015).

RECOMMENDATIONS AND ANALYSIS

The creation of MAPS 3 in 2009, and its continuation in 2017, constitute a public administration success. OKC's holistic approach to this initiative incorporated not only the managerial-driven, customer-focused ideas of New Public Management (NPM); the city also expertly applied a transparency-fueled political lens while ensuring the legality of the project (Rosenbloom, Kravchuck, & Clerkin, 2015). OKC's complete 360-degree understanding of effective administration brought OKC success in a space where other communities have failed. Whereas other cities had failed when funding large scale projects, such as improving public infrastructure, OKC proposed generating a steady stream of tax revenue before building. Without this cash flow already planned and coming in, revitalization projects can create decades-long debt, like Kansas City's, construction of an arena and entertainment district that cost it which cost the city roughly \$300 million (DeMause, 2015).

OKC spent over twenty years refining the MAPS model through the development of the original MAPS program and MAPS for Kids. This created an effective strategy for MAPS 3 comprised of four key elements:

1. Enact a one-percent sales tax to ensure efficiency and transparency;
2. Engage the community to generate support for the project initiatives;
3. Create a citizen advisory board to maximize efficient flow and encourage representativeness; and
4. Develop public-private partnerships to allocate resources efficiently and involve the private sector in city development.

One-Percent Sales Tax:

MAPS 3's successful one-percent sales tax was first conceived in the early 1990s. Mayor Norick, who served as mayor from 1988 to 1998, and a team of public administrators recognized that such a tax would allow them to raise several millions of dollars to fund a variety of projects without incurring debt or burdening OKC's population ("Chamber History," 2013). For every dollar spent in the city, there would be an additional penny charged, ensuring that project funds would slowly, but steadily, be generated (Rosenbloom et al., 2015). This slow generation allowed the city to stay below their "tax tolerance" (p. 271). When governments create or increase taxes, public administrators must be wary of too high a tax as "citizens are concerned that their taxes be used in the wisest, most effective ways" (p. 265). Beyond being an unobtrusive way to gain funds, the tax also benefited from its simplicity, making it easy to comprehend and re-implement.

Because the one-percent sales tax was easy to understand and there was rapid, debt-free development, the OKC administration ensured that its citizens drew the connection between the extra penny and the city's improvements. In other words, the tax system's simplicity meant that it could be easily understood by the public and efficiently implemented, a deft combination of the managerial and political approaches ("Metropolitan Area Projects," 2013). The one-percent sales tax, which found initial success with MAPS under Norick, continued to be an important revenue stream for MAPS for Kids and MAPS 3. While the simplicity and transparency of the one-percent sales tax were crucial to its overall recognition and appeal for MAPS 3, its initial passage for MAPS was in fact seen as a lifeline for the community. During the 1980s, OKC experienced a minor depression and, in an effort to jumpstart the economy, city leadership suggested the tax to a willing population. As one public administrator described it, "MAPS ... [was] like a rope – we thought this could be our way out."

The one-percent sales tax was challenged once. While MAPS and MAPS for Kids taxes listed all the proposed projects on the ballot as a single item, OKC changed the way the projects were presented on the 2009 ballot for MAPS 3. Concerns were raised that naming various projects in one proposed tax item violated the "single-subject rule" outlined in the Oklahoma Constitution which requires that legislation depict its focus and scope (Etus, 2009; Rosenbloom et al., 2015, p. 11). For MAPS 3, OKC's city council outlined the MAPS 3 project as capital improvements, rather than detailing each proposal (Etus, 2009). Despite this change, in August 2013 a team of attorneys wrote a letter to Mayor Cornett, insisting that MAPS 3 was unconstitutional based on the "single-subject" rule (Wells, 2013). The city reviewed the letter within the context of other cases and defended the 2009 ballot as constitutional based on the legal research the city had done in 2009, ensuring that the project continued and setting a standard for future taxes (Van Timmeren, 2013). There have been no challenges since.

Community Engagement

Community engagement and involvement was key to the successful passage and implementation of MAPS 3 in Oklahoma City. The MAPS programs have received a tremendous amount of public acclaim due to the OKC government's work to frame the project as a both an open discussion and collaboration between the public and the city administration. When Mayor Norick devised the first MAPS with a small team of advisors from the OKC Chamber of Commerce, the public had little involvement in the development and goals of the project. Through the use of press releases and civic engagement, Norick's team informed the public about the potentially controversial sales tax, what it was supposed to do, and how long it would last. This transparency helped Norick to gain the public's trust, which led to the vote and passage of the sales tax (Knapp, 2017).

Mayor Cornett took this transparency and approach a step further by allowing and encouraging direct civilian participation in the project's inception, development, and design. Cornett began the design for MAPS 3 by reaching out to the citizens of OKC and asking for their project development suggestions via social media and public meetings. After the tax was passed on the 2009 ballot, Cornett continued the involvement of citizens via an advisory board and subcommittees, discussed in more detail in the following section, "Citizen Advisory Board" ("Mayor," n.d.). In doing this, Cornett exercised an incremental model approach, wherein public administrators use the needs of their community or stakeholders to inform their decision making. This is done to make a project such as MAPS 3 as representative of the desires of the OKC populace as possible. By adopting this approach, Cornett facilitated greater public participation to develop and guide the project's development (Rosenbloom et al., 2015, p. 335).

The recent vote in September 2017 to continue MAPS 3's sales tax for another 27 months speaks volumes about the trust that has developed between public and administration through their collaboration on each iteration of MAPS (Crum & Felder, 2016). Beyond furthering the city's interests, components of MAPS 3, such as Cornett's formation of advisory boards and subcommittees, seem especially engineered towards developing a collaborative effort between the public and the city's administration. These strategies created a rock-solid foundation for the long-term success of a major public administration project like MAPS 3, and should be similarly utilized in future projects that Oklahoma City might pursue.

Citizen Advisory Board

MAPS 3 blends the political approach of inclusiveness and transparency with a collaborative NPM style best represented by the citizen advisory board. The advisory board speaks to the ideals of citizen empowerment, customer-driven missions, and the government “steering, not rowing” (Rosenbloom et al., 2015, p. 20). The subcommittees and advisory board have the ability to make their own decisions about project direction, such as selecting which construction contractors to utilize for the various projects, and offer community-driven ideas from public meetings that flow through the chain of command. This bottom-up approach, which empowers the public to act with government guidance, begins with the eight subcommittees made up of over 60 citizens, elaborated on in the next paragraph. (Kettl, 2009; “The City,” 2011). The subcommittees evaluate the finer details of the MAPS 3 projects and provide recommendations to the citizen advisory board. The citizen advisory board receives the recommendations and decides what projects to prioritize. After the citizen advisory finalizes a project plan, they share it with the city council for final approval (“The City,” 2011). The subcommittees, for example, are responsible for reviewing solicitations from contractors and making a final decision on who to refer up. The referral then moves up the chain and eventually makes its way to the city council for final approval. This clear chain of command allows for an efficient and transparent flow of information.

While the managerial approach is often depicted as a bureaucratic hierarchy used to coordinate project efforts, the representativeness of each city ward within the citizen advisory board adds a political angle to OKC NPM approach (Rosenbloom et al., 2015, p. 16). This can be seen through the 11-member citizen advisory board which is comprised of one representative from each of the eight city wards, two at-large members appointed by the mayor, and one member who serves on city council. Each of the eight members who represent their ward have an interest that is particular to their community area, which helps the board identify what areas of the city are to be the focus for the MAPS 3 project. The two members appointed by the mayor as well as the one city council member provide political influence to ensure that the city government has some clout within the decision making process. With each ward and political influence represented, the citizen advisory board illustrates a clear division of labor that accounts for the specialization of its members.

Public-Private Partnerships

MAPS 3 represents a bond of trust between the citizens of OKC and their government, cemented by the many public-private partnerships required for the success of the project. Public-private partnerships are contracted between public and private sector organizations to provide public services (“7 Keys to Success,” n.d.). OKC’s citizens and businesses are intimately involved in the decision-making process as well as the implementation of the work of MAPS 3. Citizen and business involvement is not limited to the Citizen Advisory Board discussed above but also occurs through the government’s ties with the OKC Chamber of Commerce. The transparency and vision this partnership offers to the citizens of OKC has led to the transformation of the city through government and private funds.

Because OKC never created a government office of economic development, the OKC government works more collaboratively with its Chamber of Commerce, a network of thousands of private businesses, than other cities (Beyer, 2016; “What We Do,” 2017). The Chamber lists economic development first on its “What We Do” website page,

touting their work to “attract new business and high-quality jobs to Oklahoma City” and to “promote retail development” within the city (“What We Do,” 2017). Their work has brought companies like Boeing and Paycom to the region, and through the Government Relations team, the Chamber has led reform in education and worker’s compensation. Among other responsibilities, the Chamber creates a preliminary list of potential MAPS projects and working with the Citizens Advisory Board to review and expand upon proposed ideas before they are approved by city council and put to a citizen vote (Beyer, 2016). The mayor and the Chamber work together frequently, even traveling to national retailer conventions together. Cornett has said that the business community “want[s] to create jobs, they want this community to grow. . . . and we work with them as well as any city in the country” (Fultonberg, 2017). This “tight relationship” is one that Mayor Mick Cornett says is “taken for granted by [Cornett and his] predecessors” (Beyer, 2016), but the public-private partnerships it inspires are critical to the success of the MAPS 3 program.

The OKC Boathouse Foundation, a nonprofit which funds and manages riverside attractions that include the new whitewater rafting facility, Riversport Rapids, is one MAPS 3 public-private partnership (Knopp, 2017). In an interview with Mike Knopp, executive director of the OKC Boathouse Foundation, he described how the original MAPS program invested government money in the revitalization and development of the Oklahoma River. This investment prompted the formation of the OKC Boathouse Foundation, which raised funds to build and manage the Chesapeake Boathouse as well as other boathouses and river attractions that Knopp and his fellow visionaries proposed should be built upon the river. The partnership between OKC and the OKC Boathouse Foundation is one of mutual investment in the city: The city provides the capital infusion through improvements to the riverfront and for the construction of the whitewater center and the OKC Boathouse Foundation uses private funds to build boat houses as well as develop and maintain the facilities while providing well-received programming. As OKC invests in infrastructure and public goods, the private sector steps up to invest in the facilities that bring people to the river. This shared sense of responsibility for the success of the river fosters the bond between the public and private sectors in OKC.

Knopp’s original vision to “activate” the renewed river through watersports continued to grow with the 2016 grand opening of Riversport Rapids, a state-of-the-art kayak center that provides an authentic whitewater experience to paddlers of all ages. Riversport Rapids is also a training site for the US Rowing and USA Kayak/Canoe Olympic and Paralympic teams and has put OKC on the map for these sports. In 2018, OKC will host the paddler industry’s official trade show, Paddlesport Retailer, a move the show made based on OKC’s new reputation and facilities (Lackmeyer, 2017; USOC Training Site”, 2018). Knopp foresees an earned revenue stream from the whitewater center developing in time which will subsidize operations and community outreach (Knopp, 2017). Knopp hopes that the OKC Boathouse Foundation’s work and accessible programming will continue to bring an intergenerational population to the river, bolstering the outdoor culture that has developed as corporations field rowing teams and senior centers bring seniors to paddle in the dragon boats. Knopp and the OKC Boathouse Foundation’s passion for rowing and vision for OKC, combined with the support of the MAPS 3 project, has brought a world-class facility to the Oklahoma River.

CONCLUSION

The success of MAPS 3 rests on the legacy of the previous MAPS projects and the integrated political-NPM approach Oklahoma City has developed over time. With citizens deeply involved in the work of MAPS 3, engaged even before the passage of the tax and throughout the process via the advisory board and public-private partnerships, the success of this simple, efficient tax was assured. As OKC looks to the future and ponders the possibility of a MAPS 4 (Crum & Felder, 2016), these tenets of the NPM, political, and legal approaches to manage projects effectively and legally, enable public participation, and ensure employee empowerment will guarantee future success. The MAPS programs have excited a growth in community pride that creates the momentum to keep OKC moving forward. Oklahoma City has spent the last two decades refining MAPS, creating a template for administrative success. This comprehensive strategy outlines compelling ideals of transparency, efficiency, representativeness, and community development which can inspire impactful project initiatives in other cities.

DISCUSSION

This discussion compares important city characteristics, demographics, and layout to other metropolitan cities to show how other cities can learn from OKC's success. It begins by discussing how parts of MAPS can be implemented in other cities before examining the limitations of the program. It concludes with broader implications for cities wishing to emulate its success.

The one-percent sales tax implemented by OKC was certainly not a unique concept and could easily be applied elsewhere. According to the U.S Census Bureau, in 2016, OKC's population was around 640,000 with a density of 930 per square mile ("Quick Facts," 2016). The city, reaching 620.34 square miles, means more room to develop infrastructure, but also more infrastructure necessary to reach and connect to their population. Furthermore, each MAPS program has focused on a different area of the city, such as Bricktown, certain public schools, or the riverfront, resulting in drastic but segmented city improvements. In addition, each MAPS program requires around a decade to raise the necessary funds to begin building, a downside to a smaller population. The one-percent sales tax plan would thrive in high-density cities, such as Chicago.

As of 2016, Chicago had an estimated population of 2.7 million and a density of 12,000 people per square mile ("Population and Housing Unit Estimates," 2016). Roughly 234 square miles, a similar number of city revitalization projects would reach a larger portion of Chicago's population than OKC's. Additionally, Chicago's larger population would raise necessary funding far quicker than in OKC. Unfortunately, with a larger city comes significantly more roadblocks. Chicago's density also means a greater diversity of infrastructure needs and interests as well as an already high 10.25 percent tax burden on the population ("Chicago, Illinois Sales Tax Rate," 2018). Increasing tax may put pressure on members of a struggling population, however, the long term benefits of development may outweigh the short-term costs.

Other limitations to programs similar to MAPS 3 within other cities may include factors such as city layout. City layout, such as the direction in which the buildings are constructed, could create a limitation with consideration to a 180-degree growth pattern versus a 360-degree growth pattern. If OKC had not grown around the Oklahoma River in a 360-degree growth pattern, the Riversport Rapids whitewater rafting and kayaking center

may not have been prosperous. Had Oklahoma City grown in a linear pattern down the length of the Oklahoma River, the geographical layout of the city would have been different and potentially affected the MAPS 3 project. Other cities, depending on their growth pattern, natural resources, and geography may be constrained.

As far as defining the limitations in implementing a program such as MAPS, the particular economy of the region may not be an obstacle. On the contrary, projects such as this can be extremely beneficial for even the most limited local economy. A 2014 report found that "nearly \$5 billion in economic impact can be attributed to the original MAPS program" (Evans, Long, & Agee, 2014). Originally, OKC's economy was limited, based largely in oil market exports. Today, it is rich in numerous industry markets such as mining, construction, manufacturing, and trade sectors. The building of various attractions created tremendous benefits for the construction industry, which subsequently facilitated growth in other businesses. OKC currently sees an impact of approximately \$2.1 billion in direct spending from more than 7.5 million tourists who visit each year.

If there is one limitation posed by the economic impact of MAPS, it would be that the OKC economy has become heavily dependent on the benefits that it brought about,; such as tourism and new industries. OKC's Chamber of Commerce is designed to sustain the numerous interests that the city has accumulated resulting from the first MAPS. For example, an Economic Development team is used to continue attracting outside business interests, a Community Redevelopment division is used to keep the real-estate market profitable, and the Oklahoma City Convention and Visitors' Bureau is utilized to keep the tourism industry alive by finding new ways to promote the city as an ideal vacation spot ("Chamber History," 2013). MAPS brought about several new components that enabled OKC's economy to flourish, but it necessitated the maintenance of such developments which all cities that consider a similar project would need to consider.

As other cities look to OKC's model, leaders must engage the community, leveraging existing relationships and building new ones to foster the kinds of public-private partnerships upon which the MAPS 3 program relies. OKC leaders knew that business owners would engage with MAPS projects because of the OKC Chamber of Commerce's longstanding involvement in economic development. Other communities where there is more tension and less collaboration between local government and local business owners might need to expand on OKC's already robust plans for community engagement and transparent communication through the citizen advisory board model and effective leadership. MAPS 3 had the advantage of following the footsteps of previous successful programs, and was led by a popular and charismatic mayor. Communities embarking on innovative ventures will require similarly well-connected and trusted leaders to unite varied stakeholders to invest in new programming.

The simple structure and its success in OKC would doubtless help sell the one-percent sales tax to other communities hoping to replicate the success of MAPS 3, but if another city tried to implement a similar program, the tax's simplicity and transparency alone might not be enough to carry it through a voting process. As other cities contemplate revitalization and infrastructure projects in the vein of MAPS 3, visionaries must keep in mind not only the recommendations presented in this paper but also the context in which city leadership would employ them. Leaders must instill and engage with the guiding values of transparency, efficiency, representativeness, and community engagement through the bureaucracies and relationships that already exist in each city.

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TUNISIAN DEMOCRACY AND EGYPTIAN AUTHORITARIANISM: WHAT EXPLAINS THE DIFFERENCE?

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ABSTRACT

This article discusses two divergent cases within the Arab Spring: Tunisia and Egypt. In doing so, there is analysis of both states' paths toward democratization, where they faltered or succeeded, and why. Specifically, this paper synthesizes two ostensibly competing theories to strengthen an understanding of Tunisian and Egyptian politics. Tunisia and Egypt are similar cases. Their central difference revolves around the role and capabilities of security services. In Tunisia, where democracy was more successful, security services were less robust. In Egypt, conversely, security services were powerful enough to reverse democratic outcomes. This article concludes that security institutions interact with anti-state organizations, ultimately inhibiting or enabling democratic outcomes.

INTRODUCTION

While many initially viewed the Arab Spring as a hopeful and inevitable transition toward democracy, the realities of the revolutions in Tunisia, Egypt, and Syria dampen this optimism. Whereas Tunisia successfully democratized, Egypt and Syria did not. While Syria devolved into a violent civil war that still threatens Syria's status as a consolidated state, Egypt's de-evolution away from democracy was political (albeit violent). Focusing on Egypt and Tunisia, as they have similar demographics and grievances unlike Syria, this essay attempts to synthesize two explanations as to why Tunisia democratized and Egypt did not. Two possible explanations for the differences between Tunisia and Egypt concern the military and security apparati and the manifestation of social cleavages. The first theory states that the security services played a larger role in Egyptian politics than in Tunisia's. Because Tunisian politics were less securitized, the government lacked the will and means to maintain hegemony, whereas in Egypt, the security services could reverse democratic outcomes. The other main explanation is that the political and social cleavages in Egypt were not reflected in political outcomes, compared to Tunisia. As a result, Tunisians felt more comfortable with democratic outcomes than Egyptians because democratic outcomes better approximated the average voter.

Ultimately, this paper takes the position that while the role of the security services in Egypt and Tunisia influenced the progression of both revolutions, democracy failed in Egypt because Egyptian politics did not reflect the average voter enough for them to accept democracy as the legitimate and sole governing system. Alternatively, Tunisia better reflects

this paper's understanding of democracy. We can trace the determinants of these outcomes to the way in which the security services interacted with opposition movements.

DEFINITIONS

Three terms integral to this analysis are democracy, authoritarianism, and democratic consolidation. Tunisia and Egypt are both measured against these terms. If we imagine a continuum from (1) authoritarianism, (2) democracy, and (3) democratic consolidation, we can compare both Tunisia and Egypt to each of the three standards to form an accurate characterization of the way the two governments function.

This paper utilizes Huntington's (1998) definitions of authoritarianism and democracy. According to these definitions, a democracy is when a government's "most powerful collective decision makers are selected through fair, honest, and periodic elections in which candidates freely compete for votes and in which virtually all the adult population is eligible to vote," (Huntington, p. 7). This understanding of democracy supposes that the governed are congruent with the governors, which is evidenced by frequent, regular, and legitimate elections. Furthermore, in a democracy the population recognizes that their participation and beliefs are institutionalized via the political apparatus. A procedural definition of democracy is used because substantive definitions place demands on new democracies that cannot be met without a robust and effective bureaucracy capable of equitably distributing wealth. Moreover, substantive definitions are not necessarily designed for comparison and work better to understand a single case. A thin definition is thus more appropriate. Authoritarianism is defined as a system of government in which the procedural requirements of democracy are not met (Huntington, 1998, p. 7). Although one might leave room for hybrid regimes, this paper is concerned with the question of whether Tunisia and Egypt are democratic and assessing the extent of their levels of democracy. Although hybrid regimes are more democratic than a formally authoritarian regime, they are not entirely democratic and thus fall outside the scope of this paper.

Furthering Huntington's (1998) definition of democracy is Linz and Stepan's (1996) definition of democratic consolidation, which should be viewed as the teleological endpoint of democratic development. Linz and Stepan (1996) suppose any true consolidated democracy will meet three requirements reflecting Huntington's (1998) implication of cohesion between ruler and ruled. The first is behavioral, which demands that actors do not attempt to achieve their goals through non-democratic strategies like secession or authoritarianism. The second is attitudinal, wherein the population views democracy as the appropriate way to organize and govern collective life, even amid severe shocks to the "system." Third is constitutional, which tells us that the established (democratic) norms are the first and only solution for political conflict within the state, and that the robustness of institutionalized democracy de-incentivizes violating these norms. This definition also reflects the requisite cohesiveness between ruler(s) and ruled (Linz & Stepan, 1996, p. 15).

METHODOLOGY

This essay follows the Most Similar Systems Design (MSSD). MSSD asks the researcher to compare cases in which the units under analysis, in this case countries, are either homogeneous or similar enough for generalization. MSSD stipulates that the independent variables meet these criteria but produce different dependent variables. The onus is on the researcher to find the point of divergence between the cases under comparison (Mill, 1996, p. 455). A problem with applying MSSD in this research is considering a country as one unit

of analysis. When the unit of analysis is that large, the researcher needs to consider all the different variables that intervene to produce other variables that then produce the dependent variables. For example, a country's natural resources or history of conflict with their counterparts might be reflected in education. It is difficult, if not impossible, to account for all of this. Evidence collected and archived by IndexMundi (2017) demonstrates that Egypt and Tunisia share many of the same demographic characteristics and through this lens are fit for comparison.

Tunisia's age structure is as follows: 0-14 years (23%), 15-24 years (15%), 25-54 years (44.5%), with the remainder being ages 55 and up. Tunisia is a young country which is evidenced by 82.5% of the country being under the age of 54. Likewise, Egypt's age structure is as follows: 0-14 years (33%), 15-24 years (19%), 25-54 years (37%) with the remainder being ages 55 and up. The percentage of Egypt's population under 55 is 89%, which is similar to Tunisia's. Egypt's median age is 23.8 whereas Tunisia's is 32.4, suggesting that Tunisia and Egypt are demographically young. Literacy rates (defined as the % of the population over 15 that can read and write) in Tunisia are 81.8% and in Egypt are 73.8%.¹

Egypt and Tunisia both, and the Middle East in general, are in the midst of major demographic shifts in which the general population is increasingly younger and better educated. Simultaneously, the population is underemployed or unemployed, denied marriage, and alienated from "success." This demographic is increasingly clued in to their political, social, and economic realities but in the case of Tunisia, denied legitimate political channels to self-advocate (before the revolution) and in Egypt, continue to be denied these opportunities (Singerman, 2007, p. 6). The concept of "waithood" is integral to understanding the central grievances of the protesters. Essentially waithood states that, to be successful, one must marry. But in order to marry, a man needs a job and their family needs money, a seemingly unattainable feat post-1970's Neoliberal transitions. However, until one is married, full access to social and political life is blocked, which alienates and atomizes society (Singerman, 2007, pp. 6-8).

As the data and theory demonstrate, both Egypt and Tunisian youth have serious grievances that drove them to protest. The social movement literature stipulates that protests emerge due to a synthesis of three theories: (1) grievance theory which explains that when protests occur a person identifies a disconnect between what they believe they are owed and what they receive; (2) efficacy theory which demonstrates that whereas everyone has their perceived slights, protest only occurs when the necessary resources are available to protest and when political opportunities are available; and (3) identity theory, which states that protest occurs when individuals perceive that members of their group are oppressed and in need of help (Stekelenburg & Klandermans, 2013, pp. 2-7). The following sections detail how these three theories worked in tandem and why they produced different outcomes.

CASE SELECTION

Tunisia

Of the two cases explored in this paper, Tunisia better reflects Linz and Stepan's (1996) definition of a consolidated democracy. Although only time can tell if Tunisia will demonstrate the same robustness of other consolidated democracies. The reasons should be traced to Tunisia's founding ideology and politics. These explain Tunisia's creation as a modern state and how Tunisian security services manifested differently than Egypt's.

¹ Tunisia and Egyptian male literacy rates are 89.6% and 82.2% respectively, whereas their female literacy rates 74.2% and 65.4% respectively.

To reiterate, this paper takes the position that we cannot disassociate the common explanations for the differences between Tunisia and Egypt. The role of the security apparatus, however, interacts with the methods of agitation and the avenues toward politics. Tunisia's security services, relative to Egypt's, were less developed, less political, and played less of a role in social and political life (Ware, 1985, p. 37). Independent Tunisia's first leader, Habib Bourguiba, took great pains to separate the security apparatus from the political realities of governance. The Tunisian military, for example, did not have a political wing and the officer and enlisted corps were not allowed a political association. Moreover, the security services were denied a role of suppression in times of dissent, this duty was reserved for a separate gendarmerie. By splitting the roles of the security apparatus, Bourguiba disempowered those institutions and agencies, leaving them ill equipped to defeat a popular uprising (Ware, 1985, p. 37). Bourguiba understood the role of the Tunisian military to be the defenders of Tunisian nationalism, rather than a tool for his own purposes. Bourguiba limited the size of the military as well as the quantity and sophistication of its armaments to disband other centers of power and concentrate power into his own fold (Ware, 1985, pp. 38-41).

Bourguiba held particular political views that influenced the functions of the Tunisian security services. In sum, these views dictated that the government should be a coalition of different associations all consenting to secular nationalist rule. The role of the military and security services in this regard was to ensure the stability of this political coalition. Whereas in states outside of this purview the military might have seen the weaknesses of a ruling class and expanded its power by supplanting the government with its own representatives, the role of the military was non-political insofar as it was to be a tool of the government rather than a counterpart to the party (Ware, 1985, p. 38). In other words, the military was a dedicated servant to the political state, rather than an actor outside of the political state.

The roots of the tension between state and society should be traced to the neoliberal transitions of the 1970s. Neoliberalism should be understood as a structural adjustment to a protectionist economic model (Bogaert, 2013, p. 217). Social programs are commercialized and government spending is corralled by newfound fiscal discipline. Industry is deregulated and labor is subordinated to capital, typically in the dismantling or elimination of labor unions (Bogaert, 2013, p. 217). A common example of neoliberalism would be the privatization of the post-office. Whereas the postal service might have been a government utility, it would now be a for-profit organization. For many countries in the Arab world, neoliberalism meant a break with the past. Whereas the social contract once revolved around the classic rentierist model of the purchasing loyalty in exchange for generous social programs, breaking this social contract meant that the population became alienated from the state. A state's coercive security apparatus would determine the state response to the population's reactionary outburst (Bogaert, 2013, p. 215).

Tunisia's experience with neoliberalism is typically referred to as the Tunisian "Miracle" by proponents, but in reality, this movement stratified and concentrated wealth into the hands of a small bourgeois and increased state power vis-a-vis the demos (Tsourapas, 2013, p. 24). While the "miracle" narrative was produced to maintain consent, or a semblance of consent, to the neoliberal process, the realities reflected a consistent subordination of labor to capital. The economic reform facilitated increasing youth unemployment, unequal economic growth, and placed further strain on a diminished welfare system (Tsourapas, 2013, p. 28). Social movement theorists would identify this breakage as

the central grievance.

Bellin (2004) tells us that the robustness of a regime's coercive apparatus determine the resiliency of that very regime. This process is linked to four variables: (1) fiscal health of the security establishment, (2) international support, (3) the level of institutionalization of the security apparatus, and (4) the level of popular mobilization (Bellin, 2004, pp. 144-6). Due to the role of the security apparatus in Tunisia the variables one through three indicate that the Tunisian security apparatus would be less robust than their Egyptian counterparts. This leaves room for capital's traditional counterweight, labor, to offer firm opposition to the state.

Tunisia has a robust history of labor unions and workers groups. This is evidenced by a brief history of strikes (Beinin, 2016, p. 72):

Year	Number of Strikes	Number of Strikers
1996	300	27,751
1997	305	35,683
1998	277	28,160
1999	308	31,989
2000	411	35,886
2001	380	38,242
2002	345	33,386
2003	395	46,893
2004	391	44,637
2005	466	78,953
2006	392	115,443
2007	382	98,210

To handle the frequency and intensity of the strikes, the Tunisian polity followed the traditional tripartite corporatist model in which the state moderated between labor and capital (Beinin, 2016, p. 74). This meant that for labor to effectively campaign on behalf of workers a network of activists and effective political representatives was required. Ultimately, the labor network provided an organized and effective counterpart to Islamist movements within Tunisia. Because labor was able to mobilize during the Arab Spring, alongside their anti-state Islamist counterparts, Bellin's (2004) fourth variable for an unresponsive security apparatus was met. The Tunisian pro-democracy movement was on its way to genuine reform without the latent threat of reversion.

Downs (1957) tells us that the goal for political parties in a competitive system is to maximize their votes. This assumes rationality, and that the best way to maximize votes is to attract the median voter (Downs, 1957, pp. 114-5). In uncompetitive elections (i.e. elections that are otherwise fair but one party is clearly more representative of the voting population), parties do not have to moderate their views because they better reflect the

voting tendencies of the majority of voters. Although Downs (1957) specifically speaks about a two-party system, the central idea of parties as rational actors is consistent across systems. During constitutional deliberation, which requires more than a simple majority, is especially prescient.

During the constitution drafting process in Tunisia and since its ratification, Tunisian politics has reflected Downs' (1957) paradigm. During the ratification process of the constitution, Tunisia's main Islamist party, Ennahda, moderated their stances on social issues to compromise with other secular parties (Marks, 2014, p. 2). This paper asserts that the reasons for Ennahda's moderation were driven by the fact that they had an effective counterpart that forced moderation. The military and other security apparati in Tunisia were unable to dismantle or disorganize labor opposition because they lacked the will and the means to do so. This meant that most if not all Tunisians would have a genuine representation in the political process because Ennahda was faced by parties capable of effectively aggregating and articulating opposing views.

Tunisia's mirroring of Linz and Stepan's (1996) and Huntington's (1998) standards of congruence and cohesiveness is best evidenced by the agreements made by the parties and how that might interact with society. Local actors, especially secularists and labor organizers, critiqued the constitution as flawed and alleged that Ennahda had dominated the drafting process (Marks, 2014, p. 4). Yet, the constitution was ultimately ratified as Ennahda eased their grip on the process. In 2003, non-regime parties such as Ennahda and Ettakatol met and concluded that the differences between them were less important compared to creating a tyranny free Tunisia (Marks, 2014, p. 11). Whereas the easy explanation for Ennahda's moderation would be that they valued a procedurally democratic and organized Tunisia over an anarchic or authoritarian Tunisia, this does little to highlight causal mechanisms. Applying Downs' (1957) view of the party as a rational actor helps us to understand why Ennahda moderated in the face of genuine competition. This moderation should be traced to the inability of the coercive apparati to diffuse labor as a threat to capital's hegemony. Congruence between the people and the new government is demonstrated by 2011's voter turnout rate of 86.4%, a staggeringly high number (IDEA, 2017).² In failing to prevent avenues of participation for the entire width of Tunisian political views, the state ultimately secured Tunisian democracy. Ennahda's moderation in the face of genuine competition, and the inclusiveness of Tunisian politics, represents a view that state society relations are highly cohesive.

Egypt

This section investigates Egypt's experience with neoliberalism and the authoritarian modality used to inhibit Egyptian democracy. Compared to Tunisia's experience with democratization, Egypt's is markedly more chaotic and of course less successful. The central reason for this should be identified as the different role of Egypt's security apparati and their interaction with society, and their suppression of labor. Suppressing labor meant the same avenues for participation that were found in Tunisia could not be found in Egypt. As a result, post-revolutionary Egyptian politics was less inclusive, explaining Egypt's failure to adopt the requisite cohesiveness for successful democracy.

Like Tunisia, the Egyptian social contract tacitly revolved around the exchange of generous social spending for political support. While in Egypt this was wrapped in the 2 Although this fell into the 60's in 2014, it is likely that was more of the post-revolution fervor dying off than a break in democratic cohesiveness.

Nasserist discourses, the state-society economic relations were fundamentally the same as in Tunisia. The differences between the two cases lie in the nature of Nasser's rise. Nasser was a military officer and as a result, his political and social connections revolved around the military. As any coup leader does, Nasser hollowed out certain hostile institutions and replaced them with his friendly (military) connections (Migdal, 1988, pp. 186-8). While Migdal's (1988) point might help explain the initial linkages between the state's political institutions and military ones, it does not entirely explain Egypt's history with socialism and why that might have translated to anger at Sadat's Neoliberal transition, otherwise known as Infitah.

Nasser also reorganized society along new economic lines, and produced a culture of personalistic socialism to manufacture consent. In 1952, Nasser pursued the Agrarian Reform Law, which diminished the power of landed elites and redistributed wealth and land to peasants (Cleveland & Bunton, 2017, p. 286). The 1962 Charter for National Action was presented to the Egyptian legislature to stipulate Egypt's new left-wing policies. The charter postulated Egypt's central role in the fight for Arab independence and autonomy and identified socialism as the method of agitation. The Arab Socialist Union (ASU) was formed to co-opt potentially dangerous labor movements into the state's political structure (Cleveland & Bunton, 2017, p. 296).

Another aspect of this reorganization was the nationalization of the Egyptian economy. The nationalized economy offered guarantees of state jobs to individuals who would otherwise have been unemployed. Education was also a priority. Between 1953 and 1970, enrollment in schools increased from 1.3 million to 3.6 million students. Nasser eliminated tuition fees at post-secondary institutions and opened several new, city based, universities (Cleveland & Bunton, 2017, pp. 297-9). One hardly needs to read Foucault to understand that this was not entirely altruistic and that power relations between state and society determined this relationship. The production and tangible application of Nasserism created a relationship predicated on the population genuinely buying into Nasserism and thus acquiescing to Nasser's hegemony.

Upon Sadat's replacement of Nasser, Egypt underwent a major economic reorientation called Infitah (The Opening). Whereas Nasserism held its legitimacy in its anti-colonial closed-door policies, Infitah represented a significant break with tradition (Weinbaum, 1985, p. 207). While the politics behind Infitah are beyond the scope of this paper, it mirrors the economic and social transitions of the Tunisian Miracle. Infitah marked the transition away from economic nationalism, which Sadat viewed as protectionist and unsustainable. Infitah would revitalize Egypt's private sector and involve market forces in determining economic and political policy. New incentives would be designed to attract foreign capital. Loans and tax laws would spur investment opportunities for domestic entrepreneurs and grant them access to foreign capital. Tariffs on imported equipment would be lifted, and agricultural producers gained tax advantages and were promised hassle free repatriation of profits (Weinbaum, 1985, pp. 210-11). In sum, labor was subordinated to capital.

Recall the circumstances of Nasser's coup, wherein the military replaced the polity. Coupled with Egypt's role in the Middle East (under Sadat) as a friend of the United States and thus a receiver of significant military aid, Egypt's military and other security apparati were better equipped than their Tunisian counterparts (Raj, 1980, p. 116). Because the Egyptian security services were better equipped and thus better reflect Bellin's (2004)

criteria of a robust coercive apparatus, they were able to effectively curtail labor unlike Tunisia. In Egypt, civil society was securitized--meaning that the security apparatus regulated and confined the assemblages of the general population (Tadros, 2011, p. 82). Security organizations utilize torture and force disappearances to dissuade opposition at targeted organizations (Tadros, 2011, pp. 82-3). This strategy undermines cohesive opposition and forces dissent into localized and individualized incidents.

The result is a securitization of civil society. Whereas in Tunisia a labor union might call for a general strike (as they famously did), no such nationwide movement was capable because the requisite networks simply did not exist--any type of opposition needed to be organic and bottom-up. Of course, the Muslim Brotherhood's success might show that this claim is not entirely possible, but the Muslim Brotherhood should also be viewed as an outlier. The Muslim Brotherhood had the benefit of over a hundred years of evading coercive security apparatus and a vast international network. During the days of the Washington Consensus, international labor was no longer the force it once was.

Due to the Egyptian Revolution's origins in Infitah, the grievances of protesters originally manifested in labor-oriented agitation (Beinin, 2016, p. 6). But, the state's coercive apparatus prevented this type of agitation to reach a country-wide scale (Bellin, 2004, p. 142). Opposition, thus, was less cohesive and increasingly decentralized and flexible. In essence, opposition reflected the subaltern's rage at the broken social contract rather than any singularly identifiable voice. Key to this process was Egypt's State Security Investigations Service (SSI), the Egyptian secret police (Tadros, 2011, p. 82). The SSI tortured and kidnapped dissidents and harassed technically legal organizations to keep them from fomenting any cohesive insurrection. The SSI could do this under the 1981 Emergency law, which grants emergency powers to the state and has been in effect since its passage (Tadros, 2011, p. 83). The tangible product of this policy is obvious, but what typically goes unsaid is the latent, atomizing, and alienating fear that this policy sows. The SSI is the proverbial panopticon in the prison yard.

During the Egyptian Revolution, the Muslim Brotherhood, who although different from Ennahda, serves the same role in this story, did not have a cohesive counterweight in labor. Opposition unaffiliated with the Muslim Brotherhood is best typified by an organization called Kefaya. Kefaya was the alternative to labor-centric protests. Although it was formally created in 2004, its origins can be traced as far back as Sadat (Shorbagy, 2007, pp. 175-8). Kefaya's name in English, "enough" is broad. This is specifically designed to attract the broadness of inarticulate alienation. "Enough" can mean anything to anyone. If one has a grievance toward the state, this is their perfect social movement. Kefaya's lack of specificity is demonstrative of the subaltern's grievances. A broad and complicated system enforced by coercive mechanisms is difficult to define and direct anger at. Reflecting their demographic, Kefaya remained open to those of all "political trends and ideologies" as well as formal party members (Shorbagy, 2007, p. 187). While Neoliberalism created the demographic for the Egyptian Revolution, the robustness of Egypt's authoritarian institutions meant that opposition was ill defined.

Once Egypt exited the transitology phase and entered the consolidation period, Kefaya's broad attractiveness ceased to function as a benefit. A party made up of all "political trends and ideologies" is a poor mechanism to articulate aggregated interests. The Muslim Brotherhood knew that they did not have a serious competitor in the first post-revolution election and did not have to moderate their position in the same way as Ennahda. Because

the Muslim Brotherhood swept the elections, many Egyptians did not have a representative in formal politics. The necessary cohesiveness for the consolidation process to begin was simply absent. There was little congruence between Egypt's great swaths of protesters and their representatives in the political world. The tacit congruence present in Tunisia did not exist in Egypt. Popular interests were not reflected by the Morsi government and protesters returned to the streets. Egypt then backslid into an authoritarian regime run by Sisi's military government.

DISCUSSION

Egypt and Tunisia are two of the most interesting cases of successful and unsuccessful democratization. The two countries are demographically similar and suffered from the same social, economic, and political tensions. Yet, crucial differences in the founding ideologies and circumstances of the two countries' postcolonial manifestations ultimately determined the relative democratic success in Tunisia and the failure in Egypt. Both Huntington (1998) and Linz and Stepan (1996) make clear the importance of respect and cohesiveness between state and society. This is a relationship that demands constant work and strong counter-weights. Evidently, this relationship needs to be manufactured. Tunisia was able to cement this relationship through a balance between secular labor and Ennahda organizations equitably representing the Egyptian population. Alternatively, Egypt failed because no such counterweights exist. It appears then, that the methods of political agitation can ultimately determine the typology of post-revolutionary state.

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THE ROLE OF THE MOTOR FUEL TAX AS AN ENVIRONMENTAL TAX AND CLIMATE CHANGE POLICY IN THE UNITED STATES

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ABSTRACT

This article examines the effectiveness of the motor fuel tax as an environmental tax, which penalizes the emission of greenhouse gases and its role in government policy to combat the effects of climate change. The examination of the motor fuel tax will focus primarily on the use and implementation of the tax at various levels of government within the United States and whether the tax is or potentially can be an efficient policy means of protecting against greenhouse gas emission and environmental harm for the benefit of society. Based on current evidence, it does not appear that the motor fuel tax being levied as an efficient tax.

INTRODUCTION

Gasoline and diesel-fueled vehicles, commonly used for transportation, create numerous problems in modern society. Widespread use of gasoline and diesel-fueled vehicles damages the roads, creates traffic congestion, pollutes the quality of the air, and produces greenhouse gases that contribute to climate change (Fisher, 2016, p. 548-555). With so many negative externalities generated by gasoline and diesel-fueled vehicles, it is justifiable for a government to tax vehicles for transportation to discourage their use and/or to generate revenue to pay for the damages caused by vehicles. Along with toll collections for some roads, the tax on motor fuel is one of the most widely used methods for a government to levy a fee for the use of gasoline or diesel-fueled vehicles for transportation.

Both the United States Federal Government and state governments use the motor fuel tax (MFT) as a means of charging drivers for the use of roads and discouraging traffic congestion, with the revenue primarily funding the maintenance of public roads. However, with increased concern about the environment and climate change, the MFT has acquired growing recognition as a Pigouvian tax to reduce pollution and the emission of greenhouse gases (Williams III, 2017, p. 67).

In light of increasingly grim reports on the long-term effects of climate change, driven by international agreements like the Paris Climate Accord, governments are seeking to heavily curb emissions of greenhouse gases that retain heat and contribute to climate change (United Nations, 2017). Although more robust greenhouse gas emission-reducing policies such as cap-and-trade systems and carbon taxes exist, the MFT is currently the most widely implemented form of environmental tax targeting emissions of greenhouse gases in the U.S.

and internationally (Williams III, 2017, p. 67). The United States Federal Government, every state government (including the District of Columbia), and nearly every industrialized country levy the decades old MFT (Fisher, 2016, p. 372-373). The MFT is also politically accepted since it targets various negative externalities, and its implementation has wide (if begrudging) public acceptance. Justifications for the MFT avoid public opposition to new government action to combat climate change because the MFT does not explicitly target greenhouse gas emissions, unlike the carbon tax (Watts, 2013).

The Motor Fuel Tax as an Environmental Tax versus Other Roles of the Tax

The MFT was not implemented as an environmental tax. Taxing gasoline fuel consumption was implemented decades before the development of any public consciousness of climate change. The federal and state governments applied the tax on the sale of motor fuel to place an indirect charge on vehicle usage to generate revenue for the maintenance and construction of public roads and highways (Williams III, 2017, p. 67). Despite the original intent of the tax, the MFT is actually better suited as an environmental consumption tax targeting greenhouse gas emissions rather than an excise tax aimed at traffic congestion or damage to roads from heavy vehicle use. MFTs can change consumer behavior, reducing the prevalence of negative externalities, but it is not the most efficient from a policy perspective. The MFT does not reliably generate revenue from the use of public roads or highways. Because the tax is applied during the sale of fuel, the MFT can lack geographic coverage, and drivers can purchase fuel from stations along roads they do not frequently drive, which may also result in a different locality collecting the tax revenue. Collecting road tolls or taxing drivers based on vehicle miles travelled tends to be much more effective methods of charging driver for the specific use of roads (Fisher, 2016, p. 548-555). The MFT potentially enables governments to levy a charge for routine damage to public roads since larger vehicles, which require greater amounts of fuel, tend to do more damage to roads than smaller vehicles. However, this advantage is moot if the revenue from the tax is not collected by the locality maintaining the road (Fisher, 2016, p. 548-555).

The MFT is also comparatively ineffective as a tax on traffic congestion. The MFT price is uniformly set within local jurisdictions. To discourage drivers from entering congested areas, the government would have to adjust the price of the MFT in different areas at times of high traffic congestion to create an incentive to use less congested roads. Even if regular congestion adjustments to the tax price were implemented, the MFT still only affects drivers when they purchase fuel, so the drivers could simply purchase fuel when there is less traffic congestion, largely avoiding the impact of the tax. Combating traffic congestion is better served by other means, such as road tolls that only take effect at moments of high traffic congestion (Fisher, 2016, p. 548-555; Margolis, 1987, p. 44).

Unlike road use and traffic congestion, the purchase and consumption of motor fuel is directly tied to emissions of greenhouse gases. Vehicle greenhouse gas emissions are produced from vehicles' use of gasoline and diesel fuel. The size of the burden of the MFT on a given driver directly corresponds with the emission of greenhouse gases from that driver's vehicle (Williams III, 2017, p. 67-68). The harm caused by greenhouse gases is functionally global; the location where the tax is collected is less significant because emissions are universal across all localities, although, which jurisdiction collects the revenue from the

tax is important for determining the added value of the use of revenue. Accordingly, a change in driver behavior to consume less gasoline or diesel fuel results in less harm being done to society through negative externalities created by the driver's vehicle like the emission of greenhouse gases (Fisher, 2016, p. 372-375).

However, it is important to note that the effect of the MFT will not always be proportional to changes to the tax. The inconsistent proportionality is partially due to the fact that the behavior change created from an increased penalty through raising the MFT will not be uniform for every consumer. Consumers who simply drive vehicles less often will reduce the harm to society more significantly than consumers who respond by purchasing more fuel-efficient vehicles and continuing to drive with the same frequency. Unfortunately, many drivers are not able to reduce their frequency of driving as a means of transportation past a certain point. Increasing the MFT beyond this point will either fail to further change consumer behavior to reduce driving or cause people to drive less at the expense of a practice that would add more societal value than the preventing harm through the tax (Williams III, 2017, p. 67-68).

Ultimately, the MFT carries the same potential drawbacks inherent to any consumption tax. As long as the MFT is levied at an efficient rate, it will be an effective environmental tax, reducing greenhouse gas emissions and more directly impacting climate change.

Efficiency

To maximize societal benefit from the MFT, the price of the tax must be set at an efficient amount to both properly change consumer behavior and sustainably generate revenue to further address the negative externalities created by the use of vehicles. As stated previously, there are diminishing returns on the added benefit from increasing the value. R. H. Coase established in *The Problem of Social Cost* that a Pigouvian tax price that is set too high on the basis of damage from negative externalities will actually be more damaging to society by creating economic inefficiencies (1960, p. 32-34). The value gained from penalizing the harmful externalities created by gasoline and diesel-fueled vehicles does not increase at a consistent rate. The value will eventually decrease the overall societal value of the tax if it is made too austere past the point of efficiency. Correspondingly, a MFT price that is set below the efficiency point also fails to be fully effective as a sufficient policy response to the negative externalities.

Parry and Small calculated an optimal tax rate for the MFT in the United States based on the costs of the following negative externalities: traffic congestion, traffic accidents, and pollution (including the effects of climate change) calculated at median cost of \$25 per metric ton of carbon dioxide (2005, p.1279). Parry and Small also take into account the price elasticity of demand for gasoline for American consumers specifically. They estimate that the optimal U.S. MFT price would be approximately 1.01 dollars per gallon (in 2000 dollars), which contributes a societal welfare benefit of roughly 7.4 percent of pre-tax fuel expenditures (2005, p.1279). It should be noted that Parry and Small's estimated optimal tax rate was calculated with the assumption that the revenue generated from the MFT would be used to finance labor tax reductions, and therefore the estimated optimal tax rate would

increase or decrease if the revenue from the tax was instead used for public spending of greater or lesser additional societal value, respectively (2005, p.1279).

West and Williams calculated a slightly higher optimal U.S. MFT rate of 1.12 dollars per gallon (in 2000 dollars) using Parry and Small's findings on the basis of a predicted increase in household labor supply as an externality of increased gasoline prices (West & Williams III, 2007, p.608-610; West & Williams III, 2004, p.550-554; Williams III, 2017, p. 67-68). West and Williams' estimated optimal tax rate would be about 1.55 dollars per gallon (2015 dollars) (West & Williams III, 2007, p.608-610; West & Williams III, 2004, p.550-554; Williams III, 2017, p. 67-68).

In comparison to the estimated optimal MFT rates put forth by Parry and Small and West and Williams, the federal U.S. MFT rate is 0.184 dollars per gallons as of 2017. Pennsylvania has the highest MFT rate at 0.593 dollars per gallon as of 2017. Therefore the highest combined state and federal MFT rate in the U.S. is approximately 0.7770 dollars per gallon, which is well below the estimated optimal tax rate (American Petroleum Institute, 2017).

When Parry and Small's estimates are adjusted for 2015 dollars, the added welfare value highest combined federal and state MFT rate appear to be roughly on par with or approaching the added value of Parry and Small's estimated naïve tax rate of 1.76 dollars per gallon (2005, p. 1284). The naïve tax rate was based on simply adding together the cost of the negative externalities and disregarding fiscal interactions to create a poorly-conceived, overly burdensome high MFT rate for comparison purposes as an example of an extremely inefficient tax rate (Parry & Small, 2005, p.1284; Williams III, 2017, p.68). The combined state and federal MFT rate theoretically generates a similar added societal welfare value as the naïve tax rate, but it is an excessively low tax rate rather than an excessively high tax rate (Parry & Small, 2005, p.1284). The combined state and federal MFT rate is currently highly inefficient in added societal value at the far, low end of the optimal tax rate spectrum.

The inefficiency of MFT rates in the U.S. is alarmingly low, given that the combined federal and Pennsylvania tax rate of 0.7770 dollars per gallon is the highest MFT. The average combined U.S. state and federal MFT rate is approximately 0.5173 dollars per gallon as of 2017. Alaska is at the extreme low end with a combined U.S. federal and state MFT rate of approximately 0.3061 dollars per gallon as of 2017 (state rate alone is roughly 0.1221 dollars per gallon) (American Petroleum Institute, 2017). These low values suggest that the U.S. is falling well short of efficiently utilizing the MFT for societal benefit through either revenue collected or changes in consumer behavior. Currently, the MFT is far too low to be as effective as it could be as a policy tool and a means of acquiring revenue for government services. From a public policy perspective, the MFT should be increased appropriately to play a more effective role as an environmental and consumption tax.

Distributional Effects

The MFT is an inherently regressive tax, like many other excise taxes, for which the burden of the tax is shifted onto the consumer at the sale of gasoline or diesel fuel. Households with lower income that are dependent on driving gasoline or diesel-fueled

vehicles for transportation tend to spend larger percentages of their household budgets on gasoline than households with higher income. The tax is more burdensome on people with lower income (Williams III, 2017, p. 68). This is partially because household spending on the purchase of fuel for motor vehicles generally tends to be inelastic, although there are some exceptions across household income levels.

The relative household budget share for the purchase of motor fuel does not hold completely for lower income households along the income distribution, unlike expectations for the purchase of other energy goods. The lowest income households are not affected by changes in the price of gasoline or diesel fuel because they tend not to own or drive gasoline or diesel-fueled vehicles, and thus are not penalized by the MFT raising the price of gasoline and diesel (Williams III, 2017, p. 68-69).

Although the trend for a larger relative share of spending on fuel amongst lower income households is more consistent for the rest of the income distribution, the demand for motor fuel tends to be more elastic for lower income households than the demand for motor fuel for higher income households, limiting the regressiveness of the tax. Changes in consumer behavior to drive less frequently or to use less fuel (by using other forms of transportation, carpooling, or just avoiding unnecessary driving) reduces the tax burden on lower income households. West finds that elasticity of demand for motor fuel was highest for the lowest income decile (a tenth of the examined population), and the demand for motor fuel also tended to be elastic for higher income deciles, but the demand for gasoline fuel for the two highest income deciles was more elastic than the demand for third and fourth-highest income deciles (2004, 749-752). Accordingly, the burden of the MFT amongst the lower-income households (i.e. the five-lowest income deciles) appears to be progressive, while the tax burden amongst the higher income households (i.e. the five-highest income deciles) appears to be regressive. The burden of the MFT is also relatively flat across the second decile through the eighth decile (the second-lowest income decile through the third-highest income decile), suggesting the tax burden on households across the income distribution does not vary significantly except amongst the lowest and highest income households. The MFT burden appears to be greatest for middle income households, although the burden of the tax is still regressive overall in West's findings (2004, 749-751).

While the effects somewhat offset the distribution of the burden towards lower-income households of the MFT, the impact of the tax remains inherently regressive despite these considerations. West and Williams find that the increase in the MFT to the efficient optimal tax rate would still most heavily burden the second-lowest income quintile at 3.01 percent of annual expenditures and impose the lowest burden on the highest income quintile at 1.60 percent of annual expenditures (2004, p. 550-554). The burden for the highest income quintile is also significantly lower relative to the lowest four income quintiles, which appear to be more flat and tight-grouped in their burden estimates (West & Williams III, 2004, p. 550-554).

Similarly, Teixidó and Verde find the MFT (as well as the carbon tax) to be highly regressive. Teixidó and Verde calculated the relative burden of the tax based on households' ability-to-pay while taking into account wealth-adjusted household income alongside

household income and total expenditures (2017, p.114-117). The relative burden of the MFT does not change significantly when wealth-adjusted income is considered for lower income households, but higher income households show a more significant decrease in the tax burden compared to measures based on income or total expenditures. The burden of the MFT consistently increases as household income decreases, without the variation in the change of the tax burden within groupings of lower income households that appears in estimates that rely on total expenditures or income (Teixidó and Verde, 2017, p.114-117). If the wealth-adjusted estimates of the MFT burden are more accurate measures than the estimates based on total expenditures used by Parry and Small and West and Williams, the estimated optimal MFT rate mentioned previously may be inaccurate and the correct efficient tax rate may actually be lower. The MFT will unavoidably have a regressive burden because consumption taxes are almost always inherently regressive. However, the regressiveness of the MFT can be offset by how the revenue generated from the tax is used.

Use of Revenue

The revenue from MFTs is most commonly used for the maintenance of public roads and highways. Although the MFT does not perfectly target the use of the roads, maintenance is a logical use of the revenue. If the MFT is applied more effectively as an environmental tax or even just as a general consumption tax, then the revenue collected could fund related policies meant to encourage the use or development of more fuel-efficient transportation or other means of counteracting the effects of climate change, adding to the environment-related social benefit of the tax. Increasing the MFT rate would likely generate enough revenue to fully fund the maintenance of public roads, so alternative uses of the tax revenue could be applied without removing necessary funding from public roads if the MFT is utilized as an efficient environmental tax (Parry & Small, 2005, p. 1284).

The MFT revenue could be used to counteract the regressive effects of the tax by reducing the cost for consumers to switch to alternative means of transportation, either by subsidizing public transportation or fuel-efficient vehicles. Either option would also increase the overall environmental benefit to society by further reducing the use of gasoline and diesel vehicles. The MFT revenue could accomplish this by either funding the construction or maintenance of a public transportation system such as a rail or bus system or by subsidizing the purchase and sale of fuel-efficient vehicles or electric or alternative fuel vehicles.

The revenue could support a public transportation system by subsidizing usage fee, which would simultaneously offset some of the penalty of the MFT on lower income households. However, subsidizing public transportation systems accordingly may require more revenue than the increase in MFT rate can efficiently provide. The size of the subsidy per person who uses public transportation necessary to make it sufficiently accessible to counteract the regressive impact of the MFT would likely have to be greater than the per person fee charged for using public transportation, especially for rail transportation (Fisher, 2016, p. 555-556). Using the tax revenue to subsidize public transportation to the point that it can be an accessible and equal alternative to driving gasoline and diesel-fueled vehicles is highly problematic because of the high amount of funding necessary, and thus it is probably an

inefficient use of revenue.

Funding assistance to replace older vehicles with newer, more fuel-efficient vehicles would be a less costly use of MFT revenue. Newer, gasoline-fueled vehicles are more fuel efficient than their older counterparts because of improvements in technology and the increasing strictness of the Federal Government Corporate Average Fuel Economy (CAFE) standards. The changes made by vehicle manufacturers to meet government requirements increase the price of vehicles, especially larger vehicles that are inherently less fuel efficient, making it more difficult for lower income households to replace less fuel-efficient vehicles with new, fuel-efficient vehicles. Although subsidies for the purchase of newer fuel efficient vehicles could make it more accessible for lower income households to replace older cars that use more fuel, a simple subsidy for the purchase of newer vehicles would actually yield less environmental benefit overall and be more regressive, benefiting higher income households more than lower income households. This effect occurs because higher income households tend to purchase more vehicles more frequently and own more vehicles at a time than lower income households. Higher income households would have more opportunities to receive the benefit of the subsidy than lower income households, and therefore the purchase of newer vehicles would not necessarily lead to the consumption of less gasoline and diesel fuel. Including a requisite of disposal of an old vehicle for the subsidy to purchase a newer, more fuel-efficient car might correct these problems and make the subsidy progressive. The requisite would ensure that the purchase of a newer vehicle removes a significantly less fuel-efficient vehicle from usage and that the subsidy is not being used simply for the purchase of surplus vehicles (West, 2004, p. 751-754). If some form of subsidy funded by the MFT revenue is carefully designed to help lower income households replace older, less fuel-efficient vehicles with newer vehicles, it will add to the overall benefit of the MFT as environmental policy and mitigate some of the regressive effect of the tax, incentivizing lower income households to consume less fuel when they drive.

Political Feasibility

Tax increases rarely enjoy enthusiastic support; Americans in particular have a reputation of being hostile toward taxes. Accordingly, politicians do not like having to justify the implementation of new taxes on their constituents, which is one major difficulty for implementing new environmental taxes, such as the carbon tax in the United States and in other industrialized countries. By contrast, the MFT sidesteps the acceptance issue since it already has public participation as a user charge for driving vehicles, largely because it has been in place for several years. Although the carbon tax or other environmental taxes may be more effective in covering a wider scope of greenhouse gas emissions and environmental damage, from a political perspective, it is easier for a government to build upon the existing administrative infrastructure to accomplish environmental policy goals (Gawande, 2009). Public acceptance may become even more important as a public backlash to climate change policies appears to be developing in many industrialized countries, including the U.S. The MFT may not be as effective as other specific environmental taxes, but it will be more politically feasible for the federal or state governments to justify and apply the MFT to policy goals related to pollution and greenhouse gas emissions.

While the current MFT has administrative infrastructure for enforcement in place and does not require public acceptance, the tax rate still needs to be greatly increased from current prices to be an effective environmental tax, for which it is difficult to gain public support. The fact that the MFT is currently regressive does not help generate public support for a rate increase. Unsurprisingly, many American politicians have repeatedly shied away from the prospect of raising the MFT rate (Kaplowitz & McCright, 2015, p. 380). However, it is possible to work around the public aversion to a tax hike by generating public support on the basis of the use of the tax revenue. Kaplowitz and McCright found that public support and acceptance for larger increases in the MFT rate rose when proposals for the tax rate increase included possible uses of the tax revenue (2015, p. 379-380). On average, people supported a rate increase of 0.32 dollars per gallon and would accept an increase of 0.53 dollars per gallon when the proposals included plans for how to use the excess revenue. These plans included a tax rebate to offset the regressive impact of the tax, funding the maintenance of transportation infrastructure, and funding fuel-efficient transportation. In the absence of revenue spending plans, only a rate increase of .10 dollars per gallon was supported (Kaplowitz & McCright, 2015, p. 379-380). The rate increase of 0.53 dollars per gallon still falls short of the efficient MFT rate, determined by Parry and Small and West and Williams, but it would nonetheless significantly improve the efficiency of the tax and, in many states, would more than double the current MFT rate (Parry & Small, 2005, p.1283-1284; West & Williams III, 2007, p. 608-610, American Petroleum Institute, 2017). Support from wide varieties of political interest groups with lobbying and campaigning abilities may also increase when the use of the revenue is central to the justification for the tax rate increase (Watt, 2013). Even disregarding the benefit from the use of the revenue, Kaplowitz and McCright estimate a MFT rate increase of 0.53 dollars per gallons could create an added benefit of an 11 to 14 percent reduction in the consumption of gasoline in the long term (2015, p. 380-381). The estimated environmental benefit will likely be greater if the revenue is used to fund incentives to use or develop more fuel efficient transportation, for which there is significant public support.

Justifying an increase in the MFT rate by the use of revenue likely offers enough leeway in public support and acceptance to establish a MFT rate that is a reasonably effective environmental policy tool and is politically feasible. However, raising the MFT rate to an optimal efficiency depends on the strength of the public support or opposition. Despite this obstacle, the current failure to implement a carbon tax or another major environmental tax suggests that the MFT is probably the most politically feasible and most effective environmental tax for the government to utilize as a policy tool (Williams III, 2017, p. 67).

Policy Impact

The exact impact of increasing the MFT is difficult to predict, particularly regarding changes in consumer behavior. Tiezzi and Verde find that responses to increases in gasoline fuel prices are flawed predictors of consumer behavior regarding MFT increases. People tend to react differently when the price of motor fuel rises as a result of a tax increase as opposed to other causes (2016, p. 84-87). People are more likely to change their behavior more

significantly in response to a MFT increase than in response to a simple rise in fuel prices, meaning that demand for motor fuel is more elastic for tax price increases (Tiezzi & Verde, 2016, p. 84-87). Li et al. suggest that the discrepancy in the change in consumer behavior may occur because people expect MFT increases to have a more permanent effect on the price of motor fuel, while other changes in price may be viewed as more likely to continue to fluctuate, so consumers will react more cautiously (2014, p. 322-327). Both Li et al. and Tiezzi and Verde indicate that tax increases may also be more salient to households as a result of news media coverage of tax increases, so households will be more likely to change their behavior simply because they are more aware that there is a change in price of the good (Li et al., 2014, p. 322-327; Tiezzi & Verde, 2016, p. 86-87).. Tiezzi and Verde additionally propose that people's aversions to taxes may cause consumers to react more strongly to tax increases because they have stronger emotions regarding tax increases than other price increases (2016, p. 86-87).

Tiezzi and Verde depict that a stronger consumer response to MFT increases compared to other price changes impacts important policy implications (2016, p. 82-87). First, raising the MFT rate may cause a greater change in the targeted consumer behavior than expected, implying that the efficient rate for reducing the consumption of gasoline may actually be a lower rate than the rate that was previously predicted. Second, the tax will ultimately generate less revenue than expected because people changed their behavior to consume less gas at a more significant rate, which worryingly affects the use of revenue aspect of the MFT as a policy (Tiezzi & Verde, 2016, p. 82-87).

Consumer reactions aside, the MFT is still an effective tax for addressing pollution and climate change externalities created by gasoline or diesel-fueled vehicles, and may have a more significant impact on reducing greenhouse gas emissions from vehicles than previously estimated. The implementation of a MFT increase must be done cautiously so as to not overestimate the efficient tax rate and create an excess burden; although, the tax rates in the U.S. are already so low there is some leeway for error. The likelihood of the MFT generating revenue must also be considered because it will determine the ability of that revenue to offset the regressive effect of the tax and fund other environmental energy policy goals. An efficient MFT will provide added social value as an environmental tax despite the problems raised, but the tax ultimately has a regressive impact that should be mitigated.

The MFT is clearly a useful tool for governments at the state and federal level to enact environmental protection goals by taxing drivers for creating pollution and greenhouse gases through the use of gasoline and diesel-fueled vehicles. However, the current MFT price is too low to be effectively utilized to benefit society (Williams III, 2017, p.67-68).

CONCLUSION

The MFT has the potential to be a very useful and effective environmental policy tool, but its current implementation in the United States does not fulfill that role. Although the optimal tax rate estimated by Parry and Small and West and Williams may leave out some factors, it clearly demonstrates that the state and federal tax rates are too low for the MFT to function as a consumption tax (Parry & Small, 2005, p. 1283-1284; West & Williams, 2007, p. 608-610). The MFT is limited in scope to use of motor vehicles,

unlike the carbon tax, but the MFT can be implemented as an environmental tax much more easily and quickly than more recently developed forms of environmental and climate change taxes. Even within its limited applicability to gasoline and diesel-fueled vehicles, the MFT still targets one of the largest sources of greenhouse gas emissions, but it is a largely unexplored and unutilized strategy for government climate change policy. The federal and state governments should at least double the current MFT rate, both to generate revenue and to be an effective environmental policy; and in doing so, will not push the tax beyond the limits of public support. Use of the increased tax revenue for additional energy-efficiency policies will further the environmental benefit of the tax. The MFT could relatively easily be an effective consumption tax limiting greenhouse gas emission, but the tax rate is not nearly high enough anywhere in the United States to realize this potential benefit.

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PUBLIC-SECTOR UNIONS UNDER SIEGE

Robert Lyons

ABSTRACT

Since the Great Recession of 2008, politicians in cash-strapped and debt-ridden states have increasingly promulgated the idea that public-sector unions are to blame for states' budget woes. Traditionally, public-sector unions have been able to rely on Democrats to shield them from aggressive Republican efforts to limit or eliminate them. However, legislative and executive actions taken in recent years have shown that this traditional political paradigm may no longer hold true. Debt woes have made scapegoating and targeting public-sector unions a bipartisan affair. The mechanisms through which public-sector unions have become embattled institutions can be classified into four categories: managerial, political, legal, and fiscal. In many ways, each of the mechanisms acts not alone, but in concert with the others. This article maps out the major mechanisms used within each of the four categories and maps how these disparate mechanisms have come together to put public-sector unions in an insecure position among politicians and the public.

INTRODUCTION

In the modern age, public-sector unions are an embattled and vulnerable institution occupying a precarious position in the public opinion realm. Simultaneously lauded for their protection of public employees and scapegoated for their burden on governmental budgets, the public-sector union is no stranger to divergent viewpoints. Since the Great Recession of the late 2000s, certain politicians dealing with budgetary woes have promoted the former over the latter. From a traditional perspective, one might expect Republicans to be aggressive towards public-sector unions and Democrats to be more defensive of them. However, legislative and executive actions taken in recent years have shown that the traditional political paradigm may no longer hold true. Scapegoating public-sector unions is now a somewhat bipartisan affair and to understand who is doing the targeting and why, it is important to analyze the current situation through managerial, political, legal, and fiscal factors.

Status of Public-Sector Unions¹

Since 1983, overall union membership in the United States has declined from 17.7 to 14.6 million workers - a rate of 20.1 to 10.7 percent of the workforce. A breakdown of this data shows that the public-sector "...union membership rate (34.4 percent) [is] more than five times higher than that of private-sector workers (6.4 percent)" (U.S. Bureau of

Labor Statistics [BLS], 2017). Of the total 7.1 million public-sector union workers, those "...in education, training, and library occupations and in protective service occupations had the highest unionization rates (34.6 percent and 34.5 percent, respectively)" (BLS, 2017). However, from state-to-state, membership numbers and rates vary as widely as organizing and collective bargaining rights do. A lack of overarching federal legislation addressing public-sector unions is a product of both possible constitutional limitations and a legislative failure to coordinate and target legislative efforts due to legislators wishing to preserve the independence and control of their region's policies and processes. Thus, each state has great discretion to both curtail or empower their public-sector unions. For example, the gutting of public-sector collective bargaining rights in Wisconsin has led to a precipitous decline in public-sector unionization rates in the state from 50 percent of government workers in March of 2011, to only 36 percent by the end of 2012 (McCartin, 2013, p. 57). Yet in California, the state sees great benefit in strong, healthy public-sector unions and has vigorously defended its collective bargaining laws even before the 2016 Supreme Court in *Friedrichs v. California Teachers Association* (Garden, 2016). So the health, size, and impact of public-sector unionism cannot truly be quantified at the national level but must instead be looked at as a unique phenomenon in each state (Ricucci, 2011, p. 205).

FACTORS

Political

Politics permeates almost every level of interaction between public-sector unions, managers, and elected/appointed officials. Public-sector unions and unions favor Democrats, their traditional protectors, over Republicans. Since public-sector unions now comprise much of the traditional labor movement's strength, they are viewed as key contributors to the Democratic Party (Krinsky, 2013, p. 1105). Public-sector unions often boast about fundraising participation levels exceeding 80 percent of all members and their ability to organize grass roots voting blocs (Marlow, 1996, p. 3). So when Republican governors, Republican-controlled statehouses, and conservative advocacy groups like the American Legislative Executive Council (ALEC) hinder the ability of public-sector unions to raise funds, they see it as defunding the opposition.

While public-sector unions continue to be relatively strong, they differ from their private sector counterparts in their level of political engagement and vulnerability because "...politics exerts direct influences on the determination of employment conditions in the public sector" (Katz, 2013, p. 1035). Politicians, managers, and unions "spend significant time and resources trying to influence public opinion or public officials through lobbying or elections" (Katz, 2013, p. 1035). Specifically at risk is the bargaining power of public-sector unions, which can be denied by statute or by right-to-work laws. In instances when collective bargaining is not directly limited, its effectiveness can still be greatly reduced by voter-pushed tax cuts. Tax revenues play a role similar to that of profits in the private sector. Any reduction in the tax revenues of government means less flexibility and ability in negotiations, not a favorable circumstance for public-sector unions (Katz, 2013, p. 1034). As government revenue and dues-paying membership declines, often due in part to ruinous jurisdictional competition or rather "races to the bottom" in terms of both tax cuts and anti-union laws, it becomes harder for public-sector unions to work within the politics of the current system.

¹ All data in this section is from 2016 unless otherwise indicated.

Managerial

Public-sector unions are often characterized as obstacles to efficiency and effectiveness in government. These "...politicians speak of the need to 'modernize' the civil service and make it more efficient [and] they complain of lethargic public organizations that need revitalizing" (Brewer, 2016, p. 175). Oftentimes, this lethargy is blamed on the monopolies in service delivery that government entities enjoy and the tenure status of their public-sector employees. Reforms are thus presented with a great sense of urgency but these reformers "...often have ulterior motives for enacting reforms that promise greater economy and efficiency" (Brewer, 2016, p. 179). Starting in the 1980s with the New Public Management movement, "...political leaders often [saw] civil service reorganization as a means of enhancing their political and ideological agendas" which meant greater control over government bureaucracies (Brewer, 2016, p. 172). The elimination of traditional civil service merit system protections such as "career-appointment" status and equal pay combined with a reduction of public-sector union power creates a modern system of patronage where accountability to politicians and responsiveness to policy preferences is of the utmost priority (Brewer, 2016, p. 173). Regardless of party, strong majorities will seek the elimination of civil service merit system protections in order to make government employees and policies more responsive to their will. When any majority party foresees a loss of political control, they are more likely to incorporate civil service merit system protections to insulate their appointees and interests (McGrath, 2013, p. 647). Thus, the implementation of reforms (with little to no empirical data to support their enactment) can be a bipartisan tool through which government bureaucracy and public-sector unions are controlled.

An outgrowth of the efforts undertaken in New Public Management is "New Public Governance," or the privatization and marketization of government services. A unique example of this trend was Michigan's 2013 attempt to contract out food services at its state prisons and thus avoid paying unionized government workers. Unfortunately, these private vendors served rat-chewed and maggot-infested food to prisoners and in early 2018, it was announced that food service would be returned to government employees (Pyke, 2018). However, the contracting out of public services remains a means by which to circumvent public-sector unions but in doing so, government becomes fragmented, the discretion and influence of public service professionals is reduced, and government service delivery capacity and monitoring ability is "hallowed out" (i.e. unable to meet demand or monitor contractors) (Dickinson, 2016, p. 42).

Essentially, what is often overlooked or downplayed is "Transactions Cost Theory" which finds that transaction costs like contract monitoring or bidding processes oftentimes outweigh any public delivery costs (Johnston & Romzek, 2010, p. 6). Certainly, marketization and privatization of government services plays well with the public, an unfortunate effect of media/partisan-determined public agendas in a representative government, but contracting with autonomous entities creates a new form of governance, one without actual governance or accountability by voters (Dickinson, 2016, p. 43). Public-sector unions, some more than others, get in the way of these privatization efforts simply by existing. In some cases, these unions are squeezed from both sides of the aisle. For example, "...among the biggest targets of [public school] reform efforts are teachers' unions, which get in the way of privatization, vouchers, and charter school expansion. [These are] all items on conservatives' education agenda, but also often on the agenda of 'reformers' among Democrats, which makes teachers' unions more vulnerable and lower-hanging fruit"

(Krinsky, 2013, p. 1105). Persecution of public-sector unions via privatization is not a partisan affair; dependent on the circumstances and public opinion, it can be a rare instance of bipartisanship.

Legal

Since the 1950s and 60s, public-sector unions have expanded their rights and abilities state-by-state, creating a patchwork of state laws and case law. With no overarching national law or court decision, the legal scope of public-sector unionization and collective bargaining is solely the domain of the states, and localities where allowed (Sanes & Schmitt, 2014, p. 3). While the status of public-sector union abilities and rights varies from state-to-state, the legal arguments used by the opponents of these unions remain essentially the same. However, these arguments are oftentimes rooted in fiscal concerns and have developed over time. The earliest legal arguments against public-sector unionization "...[alleged] that public-sector collective bargaining would compromise the very sovereignty of government, allowing unions to usurp a share of the government's powers" and paralyze government service delivery with a never-ending cycle of strikes (McCartin, 2013, p. 55). Much of this argumentation stemmed from class struggles of the period along with the idea that "no man can serve two masters" (i.e. the government and a public-sector union) (Lichtenstein, 2013, p. 198). During the 1980s, the compromised sovereignty argument was largely eclipsed by the Right-to-Work movement. Advocates of this movement argued that "any contracts that required government workers to pay for the cost of collective bargaining were an infringement on workers' rights to freely associate" (McCartin, 2013, p. 55). While opponents of public-sector unions still use both the compromised sovereignty and Right-to-Work arguments, neither argument is sufficient on its own any longer. Indeed, these legal contentions, along with managerial and political concerns, have all been subsumed by fiscal arguments... which are the greatest threat to public-sector unions.

Fiscal

Chicago Mayor Rahm Emmanuel once advised other elected officials to "never allow a crisis to go to waste" (Lichtenstein, 2013, p. 197). In 2008, the collapse of the housing market and subsequent recession provided the crisis that anti-public-sector union forces had long sought. While the use of a "fiscal crisis as a bludgeon to beat unionized public workers is nothing new," it took on a new edge when combined with growing state deficits and a Republican sweep of statehouses nationwide in the 2010s (Krinsky, 2013, p. 1107). From the Great Recession emerged a new, four-part narrative, that (1) public-sector unionism had made government too expensive, that (2) public-sector unions were not so-much subverting the sovereignty of the state, but were instead sustaining a strong and intrusive state, that (3) public-sector union pensions were bankrupting state budgets and that (4) public-sector union employees now constituted a new "privileged" or "elite" class of citizen (Lichtenstein, 2013, p. 198). Using these accusations, and "...emphasizing, and in some cases manipulating, the red ink flowing through so many state budgets, [governors in states like Wisconsin, New Jersey, Indiana, Ohio, and Iowa] leveraged the crisis to strike a body blow at... public-sector unions" (Lichtenstein, 2013, p. 197).

Of these four claims, each one blames government employees, and specifically public-sector unions, for increased government expenditures and debt. Those in support of these claims also believe that the collective bargaining process promotes unsustainable rent-

seeking behavior. As a result, public sector unions can contribute financial resources and support to electing the same politicians with which they will eventually bargain (Krinsky, 2013, p. 1088). This would mean that “public-sector unions are both the animators and beneficiaries of a wages-and-benefits machine that enriches them at the expense of the public at large” (i.e. engaging in rent-seeking behavior by passing “excessive” wage increases to taxpayers through raising taxes or using monopoly powers to “unnecessarily” expand government services) (Krinsky, 2013, p. 1109). Those opposed to public sector unions also believe that government employees now constitute an “elite, privileged class” built on the backs of “overburdened taxpayers” (McCartin, 2013, p. 56). Promotion of beliefs such as this can instigate distrust among the classes of society. Yet, data and circumstances show these claims to not be true.

Government employment and service delivery has not been unsustainably growing; in fact, “between 1979 and 2009, state and local public-sector employment has remained at just about 14.5 percent of the entire workforce.” Furthermore, “compensation as a share of state budgets has actually declined over the last 20 years, with little evidence of a gap between unionized and nonunion states” (Lichtenstein, 2013, p. 206). Compared to the private sector over the last 40 years, “the highest public-sector wage premium on record is still smaller than the lowest private-sector premium” (Rosenfeld, 2014, p. 45). These government workers are not overcompensated and studies have found that they are instead undercompensated by anywhere from 6.3 percent to 3.7 percent depending on what factors are controlled (Keefe, 2010, p. 12). Public-sector workers have not contributed to government bloat, they, for example, have merely been put in the unfortunate position of getting in the way of libertarian-type efforts to privatize public goods and services like education and infrastructure.

At greater risk for public-sector unions is their healthcare, pensions, and other post-retirement benefits (OPEBs), which have been portrayed as extravagant and unworkable. “In recent years, fights over benefit cuts have truly been bipartisan affairs [and since] benefits packages among government employees are often quite substantial, [this makes] them an obvious target during economic downturns” (Rosenfeld, 2014, p. 54). Going after these benefits packages and pensions can be risky for politicians. Yet the possibility of these cuts remains attractive to politicians on both sides of the aisle who are seeking out ways to address state debt loads. However, public-sector employee benefits, OPEBs, and pensions are not the true cause of state debt woes.

Instead, the debt troubles of the states are a direct consequence of the Great Recession. The Great Recession began a steep decline in state government tax collections with a decrease of over \$65.8 billion in 2009 and an additional \$14.3 billion in 2010. Such declines were attributable to massive job loss, the housing market collapse, and unwise tax cuts (Weingarten, 2011). Thus, deficits are not the result of pensions and benefits plans, but of economic circumstances outside of public-sector union control or influence (Lichtenstein, 2013, p. 206). Additionally, pension contributions on average only account for three percent of state budgets. Furthermore, “in 2008, 7.7 million retired state and local government workers received pensions. Their average benefit was \$22,653 [and] that equates to about \$435 a week. Most of that money [wasn't] even on the taxpayers' dimes [since] taxpayers [only] pay for about 14 percent of public retirement benefits” (Weingarten, 2011). Combine this with the fact that “public-sector employees earn less on average than their private sector counterparts with similar qualifications” (including all their health and pension benefits). For

example, public-sector union educators, on average, suffer a -19.5 percent wage gap when compared with occupations in the public-sector requiring similar educational attainment. This gap worsens for non-union educators whose wage gap stands at -25.5 percent (Allegretto & Mishel, 2016). When evidence like this is taken into consideration, it quickly becomes clear that the deficit problem is not truly the fault of public-sector unions and government employees.

CONCLUSION

Public-sector unions have remained relatively strong in comparison to their private-sector counterparts, but their strength is limited by their vulnerability to executive decisions and legislative actions. Since their inception and especially since the Great Recession, public-sector unions (and collective bargaining rights) have been curtailed and assailed under the guise of the above four main factors and concerns with such policy failures as government service monopolies and bureaucratic supply. Regardless of their political affiliation, politicians have found it easy and convenient to blame budget woes and deficits on public-sector unions. Such scapegoating will continue until public-sector unions are able to win or at least achieve parity in the battle for public opinion mainly through showing that transactions costs more often than not outweigh government service delivery costs. and Until such time as states broaden their tax bases and adequately recover from the Great Recession, public-sector unions will continue to be scapegoated by budget-reducing politicians and by those seeking to marketize and privatize public-sector services.

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THE IMPACT OF WELFARE POLICY SHIFTS ON POVERTY AND WORK RATES

Henry Watson

ABSTRACT

The purpose of this analysis is to examine the impact of two aspects of the Temporary Assistance for Needy Families (TANF) policy: sanctions for noncompliance with work requirements, and magnitude of the welfare benefit. The current debate questions whether welfare benefits reduce employment among their recipients, and whether strict work requirements for these programs are necessary. Over the last decade, several states made significant changes to their TANF rules. This study examines Colorado, which significantly increased its maximum benefits over the span of one year, as well as Kansas, which strengthened its work requirements and sanctions. Synthetic controls and difference-in-differences estimation take advantage of sudden policy changes in individual states, using them to create natural experiments. This analysis suggests that increasing welfare benefits reduces poverty but also reduces work participation, while increased sanctions appear to have no effect on poverty rates and an unclear effect on work participation.

BACKGROUND

Work-Related Sanctions

Work requirements are a pressing issue shaping modern welfare policy, with governmental and nongovernmental actors debating the merit of applying those requirements to Medicaid and affordable housing programs. A comprehensive analysis of past random assignment studies analyzing work requirements by the left-leaning Center on Budget and Policy Priorities found that, overall, work requirements did not result in long-term stable employment, and did not reduce poverty at the individual level (Pavetti, 2016). However, the full report on MDRC's National Evaluation of Welfare-to-Work Strategies, which also used random assignment, does note positive effects for employment-focused programs, although those effects did fade after two years (Freedman et al., 2000). Gains to employment and earnings were modest, but statistically significant for most of the programs studied (Freedman et al., 2000). One program, Portland, had especially strong outcomes to both employment and earnings, even after five years, likely due to the rigor of its welfare-to-work program, experienced staff, and strong economy (Freedman et al., 2000).

The MDRC study specifically discusses sanctions, quoted here:

Sanctions or threat of sanctions may also encourage some enrollees to complete employment-related activities, thereby strengthening the program's "treatment" effect. (Program administrators often state that this is the primary goal of imposing sanctions.) Programs that impose sanctions frequently may also encourage enrollees to leave welfare sooner, perhaps by taking a job that they would not have otherwise accepted, or even to forgo welfare without employment (Freedman et. al, 2000, p. 44).

The results from the random-assignment studies carried out by MDRC did not show a clear relationship between level of sanctioning and participation in program activities, although they do note that programs with a moderate level of sanctions seemed to achieve the best results (Freeman et. al, 2000). The researchers find that programs with especially low levels of enforcement seem to yield low program participation (Freedman et. al, 2000). Work programs had mixed results on employment rates, with the outcomes varying greatly by site. For those still receiving AFDC benefits, the impact of being in the work program ranged from a 1.6 percentage point decrease in employment rates to a 2.7 percentage point increase in employment rates (average of positive 0.81). The impact on employment rates for those no longer on AFDC (leavers) ranged from a 0.7 percentage point decrease to a 9.3 percentage point increase (average of positive 3.29). Most programs had little to no effect on poverty (Freedman et. al, 2000).

A separate study conducted by the Urban Institute in 2006 using SIPP data found that "as the duration of the most severe sanction increases, mothers' deep poverty increases, although the effect is marginally statistically significant at the 10 percent level" (McKernan and Ratcliffe, 2006, p. 20) The magnitude of their finding was that increasing the length of the sanction from "one month" or "until compliance" to a permanent sanction increased deep poverty rate of mothers by 1.4 percentage points, or 15.9 percent (McKernan and Ratcliffe, 2006, p. 20).

Welfare Benefits

The debate over welfare benefits is fairly intuitive: more generous benefits raise the incomes of those who receive them, but some argue that high benefits also create a disincentive for work, discouraging recipients from becoming self-sufficient and permanently improving their financial position. High benefits could even lower earned income to such an extent that increasing benefits decreases total incomes. The Cato Institute claimed in 2013 that "the current welfare system provides such a high level of benefits that it acts as a disincentive for work" (Tanner and Hughes, 2013, p. 1). This analysis was criticized by the Center on Budget and Policy Priorities, who noted that welfare shouldn't discourage work, particularly because benefits are not immediately lost simply because an individual or family gains employment (Pavetti and Parrott, 2013).

The Urban Institute study cited in the section above found that "[a] \$100 increase in states' monthly maximum benefit is found to reduce the deep poverty rate of children by 2.0 percentage points" (McKernan and Ratcliffe, 2006, p. 19). However, the same study found that "higher monthly welfare benefits lead to higher poverty rates", speculatively due to effects on labor supply and earned income, a finding in line with a paper by Gundersen and Ziliak (2004) (McKernan and Ratcliffe, 2006, p. 21). This is an important finding for state and federal policymakers, and merits an updated analysis.

Research Question and Hypotheses

The core research question of this paper is: what are the impacts of different welfare policies and regulations within the United States? More specifically:

Do harsher and/or permanent sanctions for noncompliance impact work participation among TANF recipients, and what is the consequence to poverty alleviation? and

Do higher maximum benefits help lift more families out of poverty, and what is the consequence to work participation?

There are four hypotheses:

Hypothesis 1: Implementing sanctions that retract benefits permanently will lead to higher work participation and higher earned income among recipients of cash assistance.

Hypothesis 2: Implementing sanctions that retract benefits permanently will increase poverty as more individuals are sanctioned or leave welfare without achieving stable employment.

Hypothesis 3: Higher maximum benefits will have a negative impact on employment and earnings due to a decreased incentive to secure non-TANF income.

Hypothesis 4: Higher maximum benefits will lead to decreased poverty rates as the higher benefits will raise more individuals above the poverty line.

DATA

This analysis makes use of American Community Survey microdata to create a traditional difference-in-differences regression model. This dataset is publicly available, includes individual-level survey response data, and allows for cross-tabulations and variable analysis that traditional ACS data would not allow for. The population of individuals receiving TANF assistance can be roughly identified using the “INCWELFR” variable, which identifies the amount of income an individual received from various public assistance programs. The model also includes the following variables: sex, age, race, health insurance, educational attainment, employment status, weeks worked in the past year, wage and salary income, and total income (including cash transfers) as a percentage of poverty.

The synthetic control portion of the analysis uses administrative data of work participation rates from the US Department of Health and Human Services (HHS). However, this data is only publicly available aggregated at the state level. The HHS data functions well for the synthetic control method, the design of which is well-suited to use states as the unit of analysis, and doesn't rely on standard deviations to make estimates and test significance.

Data on changes in welfare policy are sourced from the Urban Institute's Welfare Rules Database, which provides a comprehensive set of tables on state TANF policy which are published in July of each year.

Descriptive Statistics

A simple bivariate analysis can show the association between welfare policies and outcomes. This analysis is necessarily incomplete, however, because the assignment of sanction and benefit policies is endogenous. Other factors which are related to both welfare policy and employment/poverty, such as local economic conditions, political culture, and state budgetary health will bias the results. For example, states with low workforce participation due to a lack of job opportunities in the state may impose harsher

sanctions, drawing a false relationship between harsh sanctions and low work rates. Or a state experiencing generally high poverty may raise their welfare benefits, drawing a false relationship between high benefits and high poverty.

Table 1 shows a summary of sanction policies across 43 states and DC, and how their average outcomes differ. Certain states are not included because they do not have one consistent sanction or benefit policy. Averages are calculated without weighting for state population. Keeping in mind that these policies are assigned endogenously, there does not appear to be a clear trend between the length of the worst-case sanction, and outcomes related to employment or the poverty rate. This table shows that states with a permanent sanction have participation rates in work-related activities that are 4.5 percentage points lower than states that only sanction benefits until recipients are in compliance again. The summary data also shows that, on average, permanent sanction states have poverty rates that are 1.5 percentage points higher than states that sanction until compliance.

Table 1:

Length of Worst-Case Work-Related Sanction	Number of states	Percent of Work-Eligible Individuals Participating in Work-Related Activities	Average hours worked in unsubsidized employment among those participating	Average State Poverty rate	Average State Deep poverty rate (<.5 poverty)
Until Compliance	7	57.7%	24.63	9.15%	3.57%
1-3 Months	10	51.73%	25.00	9.77%	4.10%
6 Months	3	50.70%	25.33	12.10%	5.18%
12 Months	3	50.84%	28.57	11.53%	4.80%
Must Reapply	14	44.00%	25.49	9.87%	3.94%
Permanent	7	53.19%	25.04	10.65%	4.35%

The results of simple bivariate regressions using maximum welfare benefits as the independent variable are shown in Table 2 below. The effects on employment and earnings are not significant, which pushes back against Hypothesis 3, and the effects on poverty are significant and in the expected direction, which provides some support for Hypothesis 4. As stated previously, however, the potential for omitted bias and reverse causality is clear. The coefficient on the state poverty rate indicates that each additional dollar in maximum welfare benefits is associated with a poverty rate that is .11 percentage points lower. In other words, \$100 additional dollars in maximum welfare benefits is associated with a poverty rate that is 1.1 percentage points lower, which is substantial, given that the national poverty rate was 13.5 percent based on 2015 Census estimates.

Table 2:

Dependent variable of Bivariate	Coefficient on Max Benefit	t-value
Percent of work-eligible TANF recipients participating in work-related activities	0.00019	1.26
Average weekly hours spent working in unsubsidized employment among work-participating TANF recipients	-.00383	-1.12
State poverty rate	-.00011	-6.29***
State deep poverty rate (<.5 poverty)	-.00005	-6.08***

METHODS: DIFFERENCE-IN-DIFFERENCES AND SYNTHETIC CONTROL ANALYSIS

One way to control for endogenous variation is to perform a difference-in-differences analysis comparing two similar groups, one that imposed a policy change, and one that did not. This type of analysis compares a treatment and a control group at two points in time: before the implementation of the treatment and after. Under the assumption that the two groups should follow similar trends absent any treatment, subtracting the second difference (pre and post for the control group) from the first difference (pre and post for the treatment group) determines a local average treatment effect. By comparing differences between a pre and post period, this method controls for global trends. For example, if poverty for all states went up over the study period, but the treatment state went up by less, it can be found that the treatment reduced poverty. Difference-in-differences makes the key assumption that, absent any policy differences, the trend in the control state is what would be expected in the treatment state. An important way to defend this assumption is to argue that trends in the outcome for the treatment and control group were similar before the forcing variable (the policy change).

The analysis that follows will examine policy changes in the states of Colorado and Kansas. In 2009, Colorado increased their maximum TANF benefit from \$356 to \$462. Kansas made several significant changes to its sanction policy for non-compliance with work requirements between 2011 and 2012. In 2011, the initial sanction for non-compliance was removal of the entire benefit until the recipient was in compliance. There was no difference between the initial sanction and the most severe (worst-case) sanction. In 2012, the initial sanction was hardened: the entire benefit would be removed for three months and the recipient had to be in compliance with requirements for two weeks for benefits to be returned. Also, a worst-case sanction was added wherein the recipient would be sanctioned for their entire benefit for 10 years. Kansas also began including upfront job requirements, shorter time limits on receipt of assistance, and shorter work exemptions for parents of infants. A new analysis by the Center on Budget and Policy Priorities, which focused on families who left cash assistance in the years after the policy shift, found no increase in work rates for families leaving assistance, and increases in earnings that were not substantial enough to lift families out of poverty (Mitchell and Pavetti, 2018, p. 1). However, this study is descriptive in nature, and does not compare Kansas to a control.

For both states, synthetic controls are first used to analyze state-level TANF

administrative data from HHS. The purpose of the synthetic control method is to generate an artificial group which is equal in expectation to the treatment group. This method attempts to solve the assumption that the treatment and control group would have followed similar trends absent treatment. Data are entered on the outcome variable for each state, as well as some independent predictors, which in this case included state unemployment, median household income, and the percent of residents receiving cash assistance. The software builds a synthetic state by weighting data from the pool of remaining states. This synthetic state will match the treatment state on the outcome variable of interest (given the independent predictors) as closely as possible up to the year before the first year of treatment. The produced graph can then be evaluated to determine whether the treatment state diverged significantly from its synthetic control after the treatment year, and if it did so in the expected direction. If the treatment state diverges from its equal-in-expectation synthetic state, it would suggest that the policy change made a difference.

The next stage of the analysis is a more traditional difference-in-differences regression model using American Community Survey microdata. The theoretic model is as follows:

$$Outcome_i = \beta_0 + \beta_1 Treatment_i + \beta_2 Post_i + \beta_3 (Treatment * Post)_i + \beta_4 X_i + \epsilon_i$$

Where “Treatment” is a flag for whether the state is the treatment state; “Post” is a flag for whether the year is after the year the policy went into effect; and the interaction between “Treatment” and “Post” yields the overall impact of the policy, i.e. the difference in differences. The dummy for the treatment state controls for fixed differences between the two states, and the dummy for the post-treatment period controls for conditions that change for both states over time. The “X” term represents a vector of covariates, specifically a white/non-white dummy, a health coverage dummy, an ordinal measure of education, sex, and age. In the ACS microdata dataset, to achieve a sufficient sample of individuals receiving cash benefits, the state is used as the geographic area of analysis, and the state of interest is chosen based on which states were used to construct the synthetic control.

**COLORADO – INCREASE IN MAXIMUM TANF BENEFITS
Synthetic Control**

Figures 1 and 2 below explore the state-level administrative data using a synthetic control. Functionally, these graphs compare Colorado’s data to a weighted average of states (the synthetic control) which was selected based on how closely it tracked Colorado on the dependent variable before the policy change in 2009. Along with the dependent variable, the software considers several independent variables: the general unemployment rate, median household income, and the percent of individuals with cash assistance. States that made changes to their welfare policies at similar times are excluded from the pool of states that can be used to construct the synthetic control.

Practically, the synthetic control can be thought of as “expected values” for Colorado based on data on the other states. Figure 1 shows us that Colorado’s poverty rate did not rise in 2009 as much as would be expected based on the synthetic control, and in fact remained consistently below the synthetic control until 2016, despite tracking almost perfectly before the policy change. However, the magnitude is fairly small; the difference between treatment and control was .49 percentage points in 2009. This might suggest a modest, negative effect on the poverty rate from raising TANF benefits, in line with

Hypothesis 4. The effects on work seem dramatic, but also inconsistent. The graph for Colorado shows a large initial increase in the percentage of work-eligible TANF individuals participating in work, followed by a precipitous decrease until 2016. Meanwhile, the synthetic control shows a gradual increase over the same time period. In 2009, Colorado was 8 percentage points above its synthetic control for work participation, but in 2012, it was 11 percentage points below. This might suggest that raising benefits has a strong, negative impact on work rates among TANF recipients in the long-run, which is in line with Hypothesis 3, but the initial positive impact on work requirements makes this relationship somewhat ambiguous.

To test the statistical significance of a synthetic control analysis, “placebo” tests are run where every other state in the pool also has a synthetic control model run, with the treatment year set the same. Then, the magnitude of the “treatment effect” for each of the placebo states is tested against the magnitude effect for our state of interest (Colorado). In this case, seven other states recorded differences between their poverty level in 2009 and their synthetic control’s poverty level in 2009 that were more negative than Colorado’s. Thirty-one states recorded differences that were less negative than Colorado’s, or positive. The remaining states were dropped because they either made some change to their welfare policy between 2008 and 2009, or the synthetic control model could not be successfully run. One popular method of quantifying the placebo test is to compare “RMSPE ratios”, or “Root Mean Squared Prediction Error” ratios (Johnson, 2013). In this method, root-mean-squared “errors” between the observed values and the values for the synthetic control are calculated for each year, and the ratio between the Root Mean Squared Prediction Errors in the pre and post periods is calculated. Because the synthetic control model should create an accurate reflection of the observed values in the pre-period, before allowing for divergence due to treatment effect in the post-period, error values for the pre-period should be close to zero if the synthetic control is a good match, and error values for the post-period should be high if the policy change had an impact, meaning higher values of the RMSPE ratio is better. Among states with a negative effect in 2009 and 2010, eight states had a higher RMSPE ratio than Colorado. What all of this suggests is that it is somewhat unlikely (approximately a 20% chance) that an effect size similar to or greater than Colorado’s may have been randomly observed in a state that made no adjustments to its welfare policy, making the result marginally significant. Although the work effects are extremely unusual for Colorado, and thus difficult to interpret, both the high value in 2009 and low value in 2012 would be considered statistically significant under this method. While several placebo states have larger treatment effects in the same direction in those two years, Colorado achieves an extremely large RMSPE ratio because the other states with large effect sizes had poor pre-treatment fit.

Another way of running a placebo test is to change the treatment year in the model, and see if a similar effect is identified regardless. Colorado appears to pass this placebo test. If the treatment year is changed to 2008 (one year before the actual treatment effect), the difference in treatment in 2008 is only .13 percentage points, just a quarter of the effect size observed when the treatment year is correctly set to 2009. This implies that the year of 2009 did represent an unusual shift in poverty for Colorado, which provides an argument in favor of the significance of the treatment effect on poverty.

Difference-in-Differences Model

The synthetic control model, when modeling for poverty rates, leaned heavily

on the state of Wisconsin; it was given 84.7% of the weight for the “synthetic Colorado”. One way to explore the results further is to run a traditional difference-in-differences model between Colorado and Wisconsin using the full ACS data. The results show that the change in overall poverty rate is statistically significant, while effects on work are unclear, mainly because the sample size for individuals receiving public assistance is quite small. The coefficient on poverty rate for the estimator for the diff-in-diff treatment effect is -.0093, which can be interpreted as Colorado’s poverty rate rising by about one percentage point less than Wisconsin’s over the time period 2008 – 2010, holding constant state, year, race, health insurance, education level, sex, and age. This may seem like a small effect size, but consider that the mean increase in poverty for Wisconsin from 2008 was 2.7 percentage points (10.33 to 13.07). Colorado’s difference-in-differences represents a 34% reduction in that increase.

Measuring work-related outcomes using this data has serious limitations. The sample of individuals who reported receiving public assistance income in the past year is very small, which raises standard errors and makes statistical significance difficult to prove, and the ACS does not differentiate TANF from other forms of cash public assistance such as Supplemental Security Income (SSI). Given that, the results do not show statistically significant outcomes on any of the work-related variables, including wage and welfare income combined, wage income, employment rates, and a categorical variable for the number of weeks worked in the past year.

KANSAS – INCREASE IN LENGTH OF WORST-CASE WORK-RELATED SANCTION Synthetic Control

Kansas’ results for the synthetic control show no apparent impact of the policy change on the overall poverty rate, and a negative impact on work rates among work-eligible TANF recipients. As can be seen in Figure 3, Kansas’ poverty rate tracks well with its synthetic control both before and after the policy change, indicating that increasing the length of the worst-case work-related sanction had no real impact in comparison to expected values. The results for work participation can be seen in Figure 4. As is shown by the divergence between Kansas and its synthetic control before the policy change, the synthetic control method was less successful at estimating a comparable synthetic match. This means the results should be interpreted with caution. What is shown is that Kansas showed a negative change in work participation in the year of its policy change, while its synthetic control saw an uptick. However, the graph seems to show that Kansas is re-converging with its synthetic control, and is trending upwards, although these long-term effects cannot be necessarily be attributed to the policy change. The difference-in-differences is -12.9 percentage points for the period 2011 – 2013. The conclusion that can be drawn from this particular analysis is that increasing the length of sanctions may actually have some negative impacts on work participation. The reason for this is unclear; one possibility is discouragement.

The immediate, negative work effect appears to be significant. No placebo state had a larger negative treatment effect than Kansas in 2012, suggesting a statistically significant result. Only five of the placebo states (out of a total of 40) with negative treatment effects in 2012 and 2013 also had a higher RMSPE ratio than Kansas. One reason some states achieved a higher RMSPE ratio is that Kansas had an unusually high pre-treatment RMSPE, which gives slightly less confidence in the results because the initial fit with the synthetic control was somewhat poor. The synthetic control was unable to obtain a perfect match in

the pre-period of 2009-2011, as evidenced in Figure 4. The other placebo test, which uses an alternate treatment year to see if an effect still emerges, also suggests significance. Changing the treatment year in the equation to 2011 only shows a treatment effect of .06 percentage points in that year, which suggests that the specific treatment year of 2012 is significant.

Difference-in-Differences Model

The state weighted most heavily for Kansas' synthetic control, when measuring trends in poverty, is Nebraska, at 64.2% of the weight. The results of the difference-in-differences model, however, are not statistically significant. The effect on poverty rate is actually similar in magnitude to Colorado (-.007), but the variance is higher, which precludes statistical significance. This matches the result of the synthetic control method (no effect). If the window is widened to 2010-2014, the effect actually reverses direction (.002), highlighting the lack of a clear relationship. The effect sizes are also not significant with relation to the work outcomes, although the direction of the coefficients appears to be positive for total income and income from wages. There appears to be effectively no impact on employment or hours worked for this sample.

Conclusion and Proposals for Moving Forward

Of the initial hypotheses, support is found for #3 and #4: that higher benefits will depress employment, and that higher benefits will reduce poverty. The key finding of this analysis is that increasing welfare benefits appears to reduce poverty, an effect that was marginally significant in placebo tests for the synthetic control method, and highly significant in the traditional diff-in-diff regression between the states of Colorado and Wisconsin. The synthetic control method also suggests a long-term negative effect on work participation from increasing benefits, although that effect is muddled by the short-term increase in work participation. The traditional diff-in-diff regression shows positive impacts on total income, wage income, employment, and weeks worked, but none of those coefficients are statistically significant.

Both the synthetic control method and the traditional diff-in-diff suggested that increasing the duration of sanctions has neither a positive nor negative impact on the poverty rate. The two analytical methods are in conflict regarding work: the synthetic control method suggests that Kansas' hardening of sanctions decreased work rates among work-eligible TANF recipients, at statistically significant levels, while the traditional diff-in-diff using ACS data found positive but statistically insignificant differences with respect to total income, earned income, employment, and number of weeks worked among recipients of public assistance.

The policy implication is that increasing welfare benefits, while overall a net positive in the goal of reducing poverty, may depress work participation in the long-run. However, the results are ambiguous as to whether or not increasing the length of sanctions is the answer. Perhaps work supports, training, and subsidized employment would be more effective. These results are largely in line with the broader literature on this subject.

These results should be taken as motivation to pursue further research on this important topic, as the policy conclusions are not yet entirely clear. The suitability of other publicly available datasets, such as the Current Population Survey (CPS) and the Survey of Income and Program Participation (SIPP), should be explored, but rich, administrative microdata would allow for more extensive analyses than are allowed by publicly available datasets. Ideally, a panel dataset of TANF recipients would allow for individual fixed effects that control for all variables, observable and unobservable, that are constant over time for

the same person. A panel dataset also has the advantage of tracking a consistent group of individuals, even if they leave welfare. Other aspects of welfare rules which are not covered in this study, such as eligibility criteria, could also influence outcomes. Also, external validity could be enhanced by extending the analysis to more states. One of the limitations of this study is that it is unknown if the relationship between benefits (or sanctions) and the outcome variables is strictly linear. Benefits and sanctions may have diminishing returns at a certain point.

The gold standard, however, would be a randomized control trial that assign one group to higher benefits or harsher sanctions, while the other group maintains the status quo. The groups could be observed over the course of a year to determine whether the policy changes had any effect. When assignment is random, all factors other than treatment status will be distributed equally between participants in the different groups, and the treatment and control groups will be equal in expectation. This is the best way to ensure internal validity of the results. However, running such an experiment would be expensive, and possibly impractical, as randomly assigning some families to higher benefits could be seen as inequitable. Nonetheless, an RCT is by far the most valid method of establishing a causal effect.

Figure 1

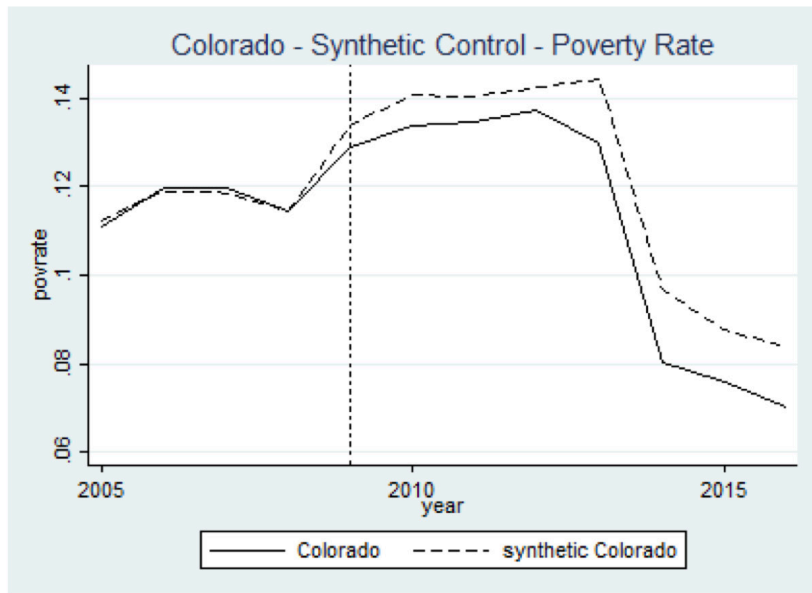


Figure 3

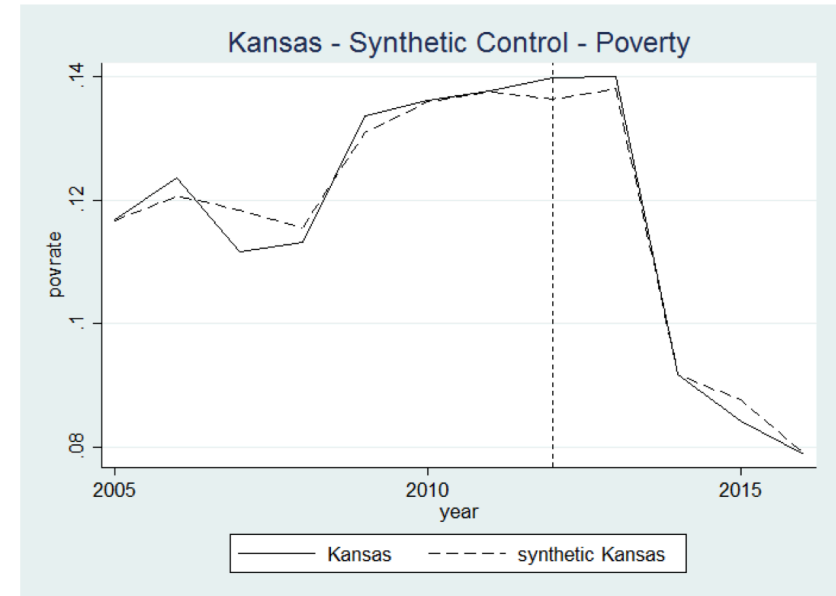


Figure 2

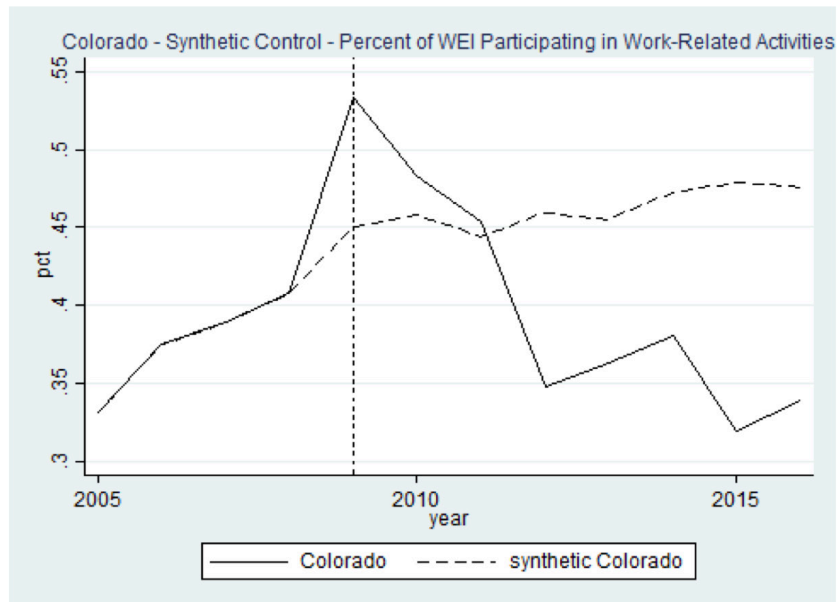


Figure 4

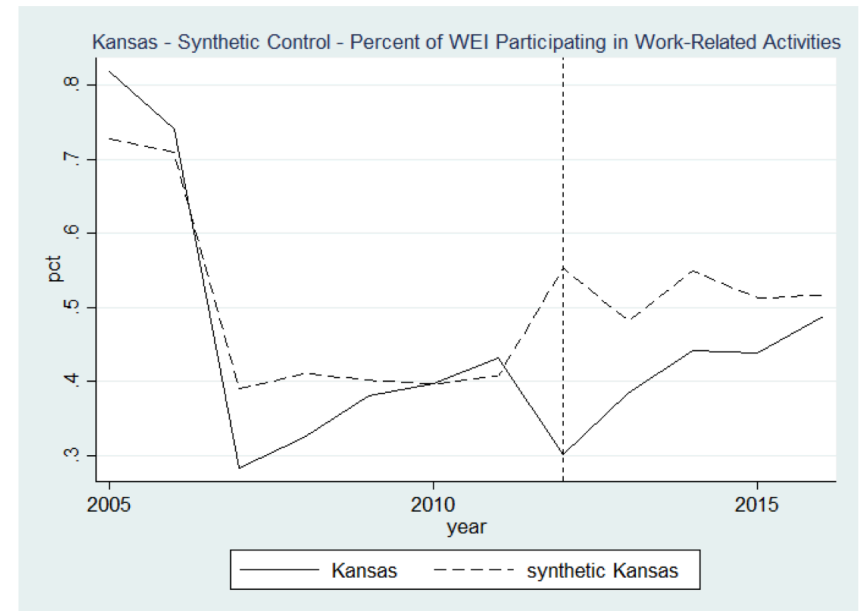


Figure 6

Diff-in-diff Colorado (Treatment) and Wisconsin (Control), 2008-2010					
	povertyrate	inctot	incwage	employdu m	wkswork2
colorado	0.000 (0.003)	-885.198 (1,163.016)	-517.791 (1,153.787)	-0.048 (0.058)	-0.339 (0.263)
post2008	0.024 (0.002)***	23.912 (1,081.292)	-18.487 (1,074.886)	-0.113 (0.047)**	-0.299 (0.215)
diff_in_diff_CO	-0.009 (0.003)***	1,004.394 (1,439.326)	655.337 (1,425.511)	0.019 (0.070)	0.141 (0.311)
racwhit	-0.113 (0.003)***	2,087.524 (751.720)***	2,246.474 (734.027)***	0.133 (0.047)***	0.297 (0.200)
hcovany	-0.130 (0.003)***	451.223 (1,348.775)	357.405 (1,309.740)	0.098 (0.048)**	0.380 (0.202)*
educ	-0.011 (0.000)***	1,626.721 (212.683)***	1,463.407 (210.333)***	0.019 (0.008)**	0.056 (0.036)
sex	0.029 (0.002)***	-4,900.270 (826.091)***	-4,487.504 (822.381)***	0.068 (0.034)**	-0.012 (0.141)
age	-0.001 (0.000)***	-106.260 (17.586)***	-114.428 (17.105)***	0.002 (0.001)*	0.012 (0.005)**
_cons	0.399 (0.005)***	6,749.114 (2,675.328)**	4,723.130 (2,605.053)*	0.343 (0.099)***	2.699 (0.429)***
R ²	0.06	0.10	0.09	0.05	0.03
N	323,378	2,665	2,665	1,225	1,229

* p<0.1; ** p<0.05; *** p<0.01

Figure 7

Diff-in-diff Kansas (Treatment) and Nebraska (Control), 2011-2013					
	povertyrate	inctot	incwage	employdu m	wkswork2
kansas	0.015 (0.005)***	-306.140 (1,338.719)	-582.772 (1,271.372)	0.048 (0.089)	-0.304 (0.341)
post2011	0.004 (0.004)	-677.512 (1,426.629)	214.021 (1,330.435)	0.053 (0.084)	0.222 (0.325)
diff_in_diff_KS	-0.007 (0.006)	2,926.516 (1,841.152)	1,818.023 (1,744.905)	-0.084 (0.110)	-0.105 (0.432)
racwhit	-0.089 (0.006)***	38.953 (1,222.090)	811.793 (1,117.505)	0.070 (0.068)	0.254 (0.277)
hcovany	-0.164 (0.005)***	1,848.640 (1,268.602)	1,425.305 (1,168.197)	0.210 (0.060)***	0.047 (0.257)
educ	-0.011 (0.000)***	1,499.697 (251.470)***	1,230.760 (255.131)***	0.011 (0.012)	0.066 (0.056)
sex	0.031 (0.003)***	-5,784.781 (1,227.259)***	-5,401.436 (1,184.360)***	-0.063 (0.050)	0.144 (0.212)
age	-0.001 (0.000)***	-34.233 (23.839)	-52.688 (22.517)**	0.004 (0.002)*	0.017 (0.008)**
_cons	0.431 (0.008)***	4,171.025 (3,100.624)	3,143.388 (2,968.356)	0.234 (0.149)	2.459 (0.632)***
R ²	0.07	0.09	0.07	0.05	0.03
N	143,923	1,443	1,443	696	712

* p<0.1; ** p<0.05; *** p<0.01

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THE AMERICANS WITH DISABILITIES ACT AMMENDMENT ACT OF 2008 AND THE PERSISTANT GAP IN UNEMPLOYMENT RATES

Anna Williams

ABSTRACT

In the United States, people with disabilities have disproportionately higher rates of unemployment than people without disabilities. In this paper, I examine the effects of the Americans with Disabilities Act Amendments Act (ADAAA) of 2008 on unemployment rates of people with disabilities. Survey data collected from the American Community Survey (ACS) is used to investigate the effects of the ADAAA on unemployment rates. The findings indicate that following the ADAAA's implementation, the gap in unemployment rates increased by approximately 2.3 percentage points compared to the year prior to the enactment of the ADAAA. However, the effects of the ADAAA and the Great Recession (2007-2012) are difficult, if not impossible, to parse out. It is clear that post-Great Recession, the unemployment gap has increased. Although the unemployment gap has decreased in recent years, as of 2017 this gap remains at a higher level than pre-Great Recession levels.

INTRODUCTION

Employment, for many, is more than a means to achieve material wellbeing. It often fosters a sense of community, a time for social interaction, a means for contributing to society, and a sense of identity and purpose. However, unemployment is far more pervasive for certain populations than others. A disproportionate number of people with disabilities are unable to find employment. According to 2016 American Community Survey estimates, while the non-disabled population experienced a national unemployment rate of 4.9 percent, America's disabled population experienced an unemployment rate of 12.4 percent. In prior years, especially during the Great Recession, this gap was even larger. In 2011, unemployment rates between the disabled and non-disabled population reached a peak difference of 10.5 percentage points, with national unemployment rates for the non-disabled population at 8.9 percent and the disabled population's unemployment rate at 19.4 percent. Simultaneously, between the years of 2008 and 2016, the disabled population increased by approximately 1.7 million according to American Community Survey estimates. While people with disabilities experience significant barriers to employment, explicit and implicit biases create additional barriers that drive even higher rates of unemployment, underemployment, and job loss (Honey et al., 2014).

Medical and technological advances have vastly improved the ability for people with

disabilities to participate in the workforce (Sevak et al., 2015). Such advances have improved living conditions for people with disabilities and have given organizations the tools to assist all of their employees maximize their productivity. Despite this however, a large employment gap persists between people with disabilities and those without (see Figure 1). At times, the unemployment rate of those with disabilities has more than doubled that of those without disabilities. These significant gaps in unemployment are recognized as being fueled in part by discriminatory hiring practices and employers' unwillingness to accommodate people with disabilities (Fogg et al, 2010).

Americans with Disabilities Act (ADA) (1990) & Americans with Disabilities Act Amendments Act (ADAAA) (2008)

When Congress passed the Americans with Disabilities Act (ADA) in 1990, it became the "first comprehensive civil rights law addressing the needs of people with disabilities, prohibiting discrimination in employment, public services, public accommodations, and telecommunications" with a goal of "establish[ing] a clear and comprehensive prohibition of discrimination on the basis of disability" (Equal Employment Opportunity Commission [EEOC], 1990).

Despite the intentions of Congress, court rulings began limiting the ADA and its desired protections. Multiple Supreme Court rulings effectively "narrowed the broad scope of protection intended to be afforded by the ADA, thus eliminating protection for many individuals whom Congress intended to protect" (EEOC, 2008). As a result, "lower courts have incorrectly found in individual cases that people with a range of substantially limiting impairments are not people with disabilities" (EEOC, 2008). In response, Congress enacted the Americans with Disabilities Act Amendments Act (ADAAA) of 2008. The ADAAA's primary purpose is to "carry out the ADA's objectives of providing 'a clear and comprehensive national mandate for the elimination of discrimination' and 'clear, strong, consistent, enforceable standards addressing discrimination' by reinstating a broad scope of protection to be available under the ADA" (EEOC, 2008).

The ADAAA expanded on the ADA by further clarifying, and thus broadening, its definition of the term disability.¹ The ADAAA expanded on ADA's definition, "a physical or mental impairment that substantially limits one or more major life activities" by expanding on the definitional language of "major life activity" (EEOC, 2008). In broadening the definition of a qualifying disability, the ADAAA made it easier for people to demonstrate to employers their qualification as a disabled person. The ADAAA affords people with disabilities the legal protection that the ADA was originally designed to provide. This paper seeks to explore if these legal changes to the ADA have significantly improved employment outcomes for disabled people in the United States.

LITERATURE REVIEW

The term disability is applied to a number of people with a wide range of impairments, from relatively minor to very severe disabilities. It encompasses both physical and mental disabilities and covers people who have been disabled since birth as well as those who have become disabled with age. While generalizing disabilities for purposes of

¹ The full definition of a disability, under the ADA of 1990 and ADAAA of 2008 is: "with respect to an individual— (A) a physical or mental impairment that substantially limits one or more major life activities of such individual; (B) a record of such an impairment; or (C) being regarded as having such an impairment.

legal protection is necessary, it is important to bear in mind that everyone experiences their disability differently. Additionally, there is a gradual but persistent change in the prevalence of some disabilities. While all categorized disabilities, except for hearing, have increased from 2008 to 2016, cognitive and independent living disabilities have increased the most (by 1.24 million and 0.88 million people, respectively). The most common disability recorded is an ambulatory disability,² affecting approximately 10.1 million people in 2016.

Unemployment rates also vary based on demographics. Sevak (et al., 2015) found that among working-age people with disabilities, Hispanics are more likely to be employed than non-Hispanics, Asians more likely than Whites, and Whites more likely than African Americans. Disabled women are more likely to be employed than men. The most striking difference in employment rates is associated with education, with “the gap between people with and without disabilities consistently declin[ing] with greater educational attainment” (Sevak et al., 2015, p. 86) While Sevak and his colleagues were unable to draw conclusions on causality, they speculated that differential access to vocational rehabilitation and employment supports may contribute to these differences. Likewise, Fogg et al. (2010) found that “[t]he young and less educated are markedly disenfranchised, and the vocational benefits of maturity and higher education offer fewer protections to [people with disabilities]” (p. 201). However, Sevak et al. (2015) also noted that higher levels of education may indicate: a later age at which they became disabled, a less severe disability, or access to many supports.

Livermore and Honeycutt (2015) examined the effects of the recession on unemployment rates among people with and without disabilities. They found that people with disabilities “were disproportionately affected by the loss of blue-collar and goods-producing jobs” during the recession (p. 76). While the Great Recession officially ended in 2009, its effects on unemployment among the disabled have had a lasting effect. Figure 1 indicates that the gap in unemployment continued to increase after the Great Recession and did not begin to decrease until 2012. Livermore and Honeycutt found that “statistics up to 3 years after the official end of the recession suggest people with disability experienced little improvement in their economic well-being relative to the calendar year immediately after the end of the recession” (p. 76).

Maestas et al. (2015) investigated the impact of the Great Recession on US Social Security Insurance (SSI) applicants. While SSI applicants increased by 28 percent between 2007 and 2010, they found that one quarter of this increase can be attributed to poor economic conditions. They also found that most new applicants were denied benefits, although they may later receive benefits upon reapplying. This finding suggests that in times of economic downturn, more people apply for disability benefits than would have otherwise. Furthermore, Autor and Dugan (2003) argue that an increased supply of Disability Insurance (DI) has resulted in low-skilled workers disproportionately exiting the labor force. As wages decrease, individuals have greater incentives to claim to be disabled.

However, O’Brien (2013) argues that as economic conditions become less stable, individuals are also more likely to self-identify as having a disability. He found this to be true both for individuals who are unemployed and for those who are employed and therefore are ineligible for some types of disability assistance. This indicates that individuals may not be claiming to have a disability to take advantage of a system, but because they truly identify as having a disability. O’Brien recognizes that an increase in individuals self-reporting as disabled at times of economic downturn could be a result of individuals preemptively

2 The ACS defines individuals with ambulatory disabilities as those who responded “yes” when asked if they had “serious difficulty walking or climbing stairs.”

reporting because they have a pessimistic outlook on future employment. However, he responds to this claim with the finding that increased self-reporting as disabled is consistent across levels of education and are not specific to those who are more vulnerable to job loss.

When compared to the United States, Australia tends to be similar in development and demographics. Honey et al. (2014) found a large disparity between Australia’s disabled and non-disabled young adults. Using eight years of data from the survey of Household Income and Labour Dynamics in Australia, which surveys approximately 7,500 households a year, the authors found that of those surveyed with a disability, 47.1% were unemployed compared to only 26.8% of those without a disability. While part-time work was about equal (26.2% to 30.0%, respectively), only 26.1% of disabled young adults held a full-time job, compared to 43.1% of those without a disability. Additionally, they found large differences in transitions between jobs, with a much larger percent of disabled young adults remaining unemployed (70% compared to 55% for non-disabled), and a much higher percent of those who are disabled with jobs transitioning to unemployment.

DATA

To understand national trends in unemployment rates among America’s disabled populations, I used data from the United States Census Bureau’s American Community Survey (ACS) county-level estimates. The ACS is a large national survey conducted throughout each year collecting demographic, economic, and housing data, including estimates on disability status and employment rates. The ACS collected data for 820 of the nation’s approximately 3,000 counties.³ Each year, the ACS samples approximately 3.5 million addresses from the 50 states, the District of Columbia, and Puerto Rico.⁴ Data is collected over the internet, phone, mail, and personal visits (U.S. Census Bureau, 2013).

In 2008, the ACS changed its survey questions to better identify individuals with disabilities (see Figures 2 and 3 for 2007 and 2008 ACS survey questions related to disability). This resulted in a sizable decrease in the number of individuals categorized by the U.S. Census Bureau as disabled. Figure 4 demonstrates that the total number of disabilities dropped from approximately 22.5 million in 2007 to 18.5 million in 2008. As Brault (2009) points out, this difference should not be understood as a large drop in the number of people with disabilities. Rather, it should be attributed to the change in ACS survey questions.

Figure 4 shows that although reporting measures changed, there is a steady increase in people with disabilities from 18.5 million in 2008 to 20.2 million in 2016. When this data is broken down by categories of disability, the disability types driving this increase become clear (see Figure 5). One cause of these increases may be the aging population in the United States. It may also be the result of an increase in the number of individuals who self-identify as having a disability as a result of an economic downturn.

Those individuals defined by the ACS as having a disability are not identical to those who are protected under the ADAAA. While both the ACS and ADAAA have, in part, a shared definition of disability as those who have a “physical or mental impairment that substantially limits one or more major life activities,” ACS responses do not determine ADAAA protection. Because of the expanded definition of disability under the ADAAA, which aims to “favor...broad coverage of individuals to the maximum extent permitted by the terms of the ADA,” some individuals who are not considered disabled according to ACS

3 The ACS provides one-year estimates for geographic areas with populations of 65,000 or more. By excluding data from counties with smaller populations, selection bias is introduced

4 Puerto Rico is not included in this study.

surveys are afforded the protection of the ADAAA. Additionally, when employers provide accommodations to employees with disabilities, medical documentation justifying the need for an accommodation is often required. For ACS survey respondents who self-identify as disabled, no such medical documentation is required. Thus, although this study measures disability using ACS data to understand changes in unemployment rates among disabled people, because those defined by the ACS may not be identical to those covered by the ADAAA, the ACS is not a perfect dataset for capturing the employment rates of people with disabilities. Furthermore, endogeneity between the implementation of the ADAAA and ACS respondents is likely minimal at most. Survey responses have no bearing on whether an individual is covered under the ADAAA.

DESIGN

To understand the relationship between the ADAAA and differences in unemployment rates among people with disabilities and people without disabilities, ACS estimates of county-level unemployment rates of disabled and non-disabled populations were used for each year from 2008 to 2016. A basic regression equation was initially used to understand the relationship between the ADAAA and unemployment rate disparities.

Equation 1

$$\text{Difference in Percent Unemployed}_i = \beta_0 + \beta_1\text{ADAAA}_i + \beta_2\text{Year}_i + \epsilon_i$$

Because the ADAAA is intended to protect those with disabilities, for each additional year after the ADAAA went into effect, a decrease in the difference in the percent unemployed between those with disabilities and those without would be expected. We would expect that as awareness and understanding of the ADAAA increases, conditions for people with disabilities in the workforce would improve and discriminatory hiring practices would decline.

To account for this variation across counties, an equation was used to account for unobservable county-level factors by using county-level fixed effects.

Equation 2

$$\text{Difference in Percent Unemployed}_{it} = \beta_0 + \beta_1\text{ADAAA}_{it} + \beta_2\text{County}_i + \dots + \beta_N\text{County}_i + \epsilon_{it}$$

Using fixed effects at the county level allows for county-level controls for both observable factors (i.e. level of education, household income, and overall unemployment rate), and for unobservable factors (such as attitudes toward hiring people with disabilities and understanding of and adherence to the ADAAA).

Finally, an equation was used to account for the Great Recession. Because of the large spike in unemployment, a dummy variable for the Great Recession is used for the years 2008 and 2009 to capture changes in the difference in unemployment rates between people with and without disabilities for these years.

Equation 3

$$\text{Difference in Percent Unemployed}_i = \beta_0 + \beta_1\text{ADAAA}_i + \beta_2\text{Year}_i + \beta_3\text{Recession}_i + \epsilon_i$$

By using each of these equations, we can better understand the effect of the ADAAA on the disabled labor force, relative to labor force participants without disabilities.

RESULTS

Based on the output of these three equations, the ADAAA has not shown significant improvements in employment outcomes among people with disabilities. Rather than decrease the gap in unemployment rates between people with and without disabilities, the unemployment gap was exacerbated between the years 2008 and 2016. Regardless of the regression used (see Table 1), it is found that after the implementation of the ADAAA in January 2009, there has been a statistically significant increase in the unemployment gap between people with and without disabilities.

Equation 2 is perhaps the most reliable measure due to its ability to control for county-level variation. This equation shows that after the ADAAA was implemented the gap in unemployment between people with disabilities and those without was 2.28 percentage points higher than in the year 2008, prior to the ADAAA's implementation. Whereas Equation 1 shows similar results, but with a higher percentage point gap in unemployment rates of 3.55, holding constant the variable for year. However, similar to Figure 1, this regression also shows that the gap in unemployment rates is decreasing from one year to the next by about 0.28 percentage points a year, holding constant the variable for ADAAA. Likewise, Equation 3 shows a statistically significant finding that the gap in unemployment is 2.03 percentage points higher after the implementation for the ADAAA, holding constant the variable for the Great Recession.

Table 1. Regression Results

VARIABLES	(1) Basic Regression	(2) Fixed Effects	(3) Great Recession
ADAAA	3.549*** (0.275)	2.282*** (0.235)	2.030*** (0.318)
Great Recession			-0.288 (0.262)
Year	-0.282*** (0.0357)		
Constant	572.1*** (71.75)	6.580*** (0.221)	6.867*** (0.330)
Observations	6,813	6,813	6,813
R-squared	0.022	0.015	0.013
Number of county1		757	

Robust standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

DISCUSSION

The results show that rather than improve employment outcomes for people with disabilities, employment outcomes for people with disabilities worsened in the years following the implementation of the ADAAA. While the unemployment rate among people without disabilities has dropped to levels lower than what they were at in 2008, the difference in unemployment remained larger in 2016 than it was in 2008. These findings support the conclusion that the ADAAA has not effectively provided people with disabilities protections in obtaining and maintaining employment.

While the ADAAA may not have initiated drastic changes in employment for

people with disabilities, it may have resulted in a gradual reduction to the employment gap as shown in decreasing unemployment numbers following 2011. It appears that, especially when the nation is faced with financially difficult times such as the Great Recession, it becomes particularly difficult for people with disabilities to find and maintain employment, especially among those with lower levels of education (Livermore & Honeycutt, 2015).

Rather than write off this larger gap during the Great Recession as a side effect of the economic downturn, this demonstrates that there is an even greater need to address barriers to underemployment and unemployment of people with disabilities. When the economy is not faring well, those who are already the most vulnerable are most negatively impacted. Furthermore, the increase in the number of people self-identifying as having a disability must be explored further. Researchers should not only consider this phenomenon from a standpoint of its effect on U.S. social safety net programs. Future research should also consider the economic well-being and health outcomes related to the increasing disabled population.

LIMITATIONS

There are several limitations to this research design. While this study attempts to measure the effect of the ADAAA, the change in the ACS's questions regarding disability altered the estimates of the disabled population in the United States thus leaving only one year of data available prior to the ADAAA's implementation. Given this, a pre-treatment trend could not be established. Without a pre-treatment trend, it is impossible to compare the overall trends of unemployment before and after the ADAAA took effect. The ability to understand trends in unemployment gaps for previous recessions would paint a much fuller picture in understanding how the disabled workforce fared in the Great Recession compared to recessions past. It would also be important to understand the effect of the ADA in 1990 on employment rates among people with disabilities and compare outcomes. Another limitation to the dataset is that unemployment rates are measured at the county level and individual-level data are not used. This limits the ability to understand how variables such as disability type and demographic factors impact unemployment rates.

CONCLUSION

It may be that the ADAAA is not currently capable of significantly improving employment outcomes for people with disabilities on its own. It is worth asking if there are opportunities for stricter enforcement, broader awareness and understanding of the ADAAA across employers, and whether ADAAA compliance varies by geography. Questions also remain about individual-level or sector-wide employment levels among the disabled population to understand which groups benefit most from the ADAAA protections. There are also implications for additional training and job opportunities for people with disabilities and lower levels of education to improve job security in times of economic uncertainty.

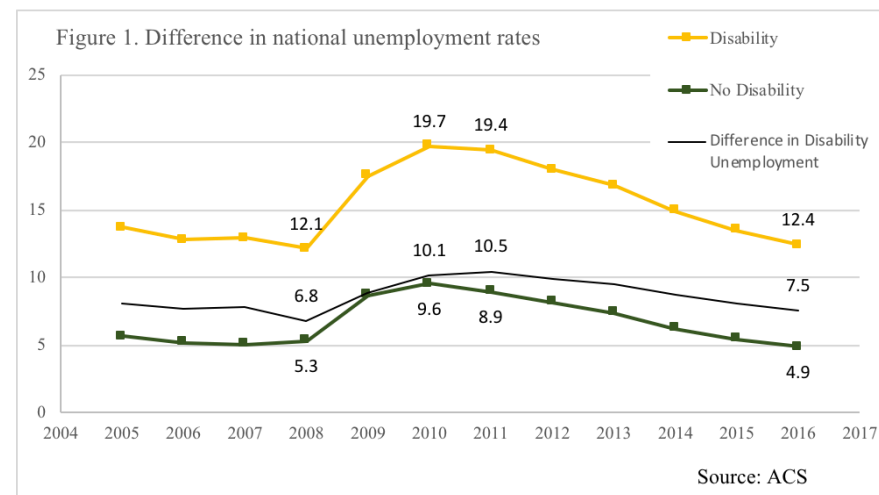


Figure 2: Disability questions from the 2007 ACS Questionnaire

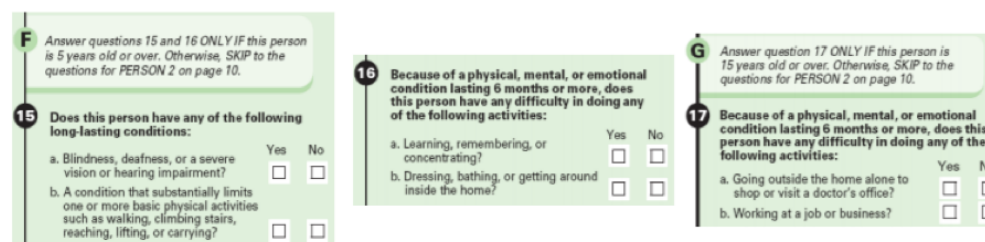


Figure 3: Disability questions from the 2003 ACS Questionnaire

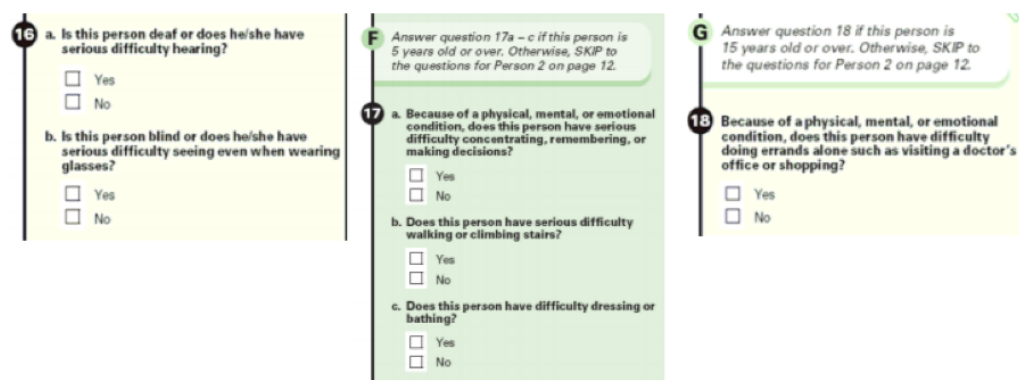
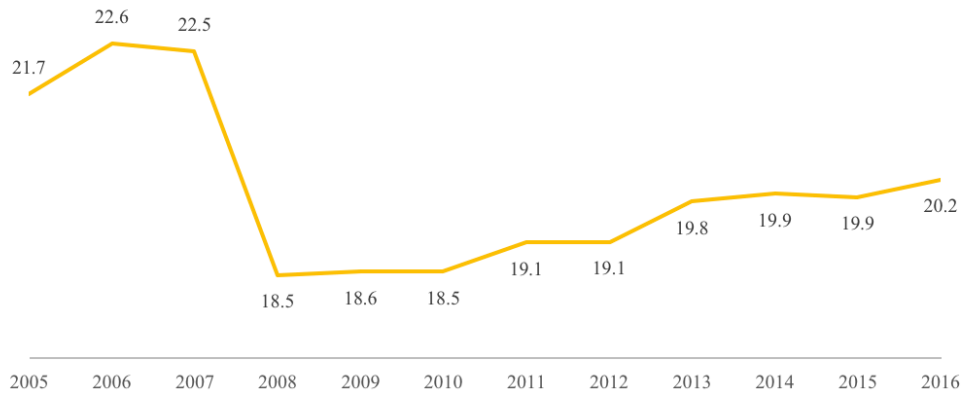
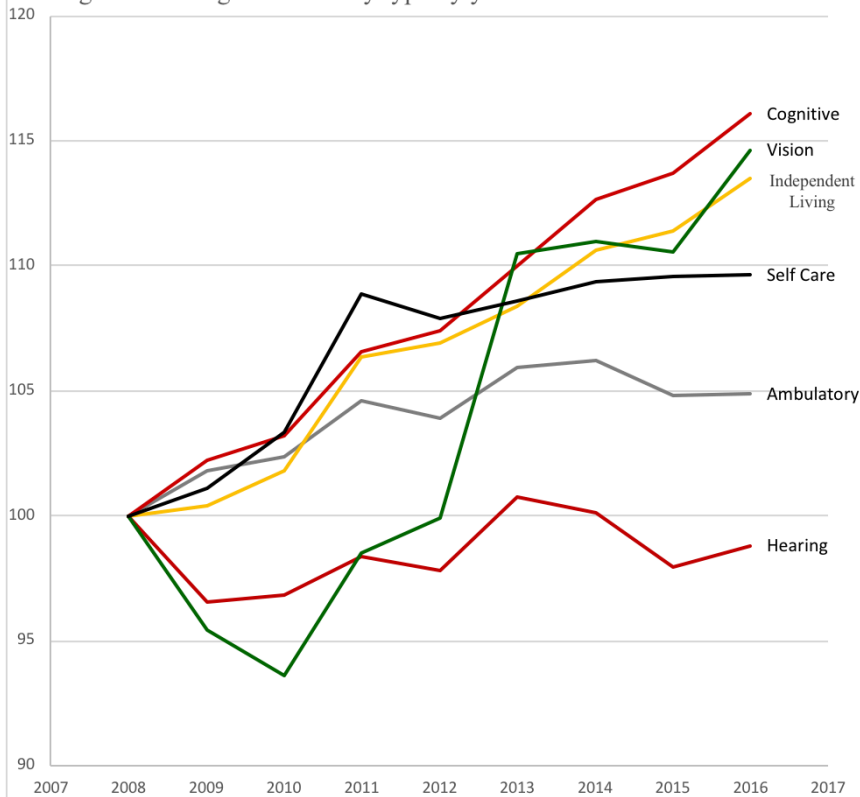


Figure 4. National Population Reporting a Disability (in millions)



Source: ACS

Figure 5. Change in disability type by year: 2008-2016



Source: ACS

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