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The Political Framing of Public Policies: An Analysis of Act 10 in Wisconsin

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Introduction

What are the impacts of state policies at the local level? When the perceived effects of the state policies are different than the true local effects, this question becomes even more intriguing. Act 10 was landmark legislation that changed collective bargaining abilities of public sector unions in Wisconsin. The effects of state policies or federal policies at the local level has long been a question that has puzzled political scientists. When the policy maker does not control the implementation of a policy, the desired effects may not always align with the actual effects. A difference in perception versus intention helps explain the disconnect between policy makers and the people the policy impacts.

A nationally significant event like the implementation of Act 10 provides a convenient framework for an event study on the impacts of state policies at the local level when perceived effects may differ from the actual effects. Act 10 was believed by some to negatively impact teacher salaries and benefits, while others saw it simply as a means to balance the state budget. This dichotomy in beliefs sets the scene for an analysis of the state impacts at the local level. The perceived impacts seem to initially differ from the intended consequences of the legislation.

A survey was conducted of teachers from Wisconsin to determine their beliefs about Act 10. The results found that most teachers still have strong opinions on Act 10 and how it affected them. Years after the implementation of the policy surveying teachers allows for the effects of the policy to be seen according to teachers. Survey respondents believed that Act 10 negatively affected their salary; 75.80% mostly agreed that their salary was negatively impacted by Act 10. These responses can be analyzed using salary data to see if the perceived effects of Act 10 on teachers' salaries match the actual effects.

To analyze the effects of the policy further, this study will look at salaries of teachers in Wisconsin before and after Act 10 and compare them to another state that has not had sweeping legislation like Act 10. Missouri has not had legislation focusing on unions like Act 10. In fact, in 2007 the Missouri Supreme Court confirmed that collective bargaining applied to teachers. This comparison would allow for a difference in policy impact to be seen depending on the results of the salary comparisons. It is fair to say that there are differing opinions on the bill, and to fairly analyze the opinions, salaries in each state will be measured.

Initial empirical results differ between the perceived and actual effects of this study's participants. Upon empirical analysis of salaries in Wisconsin and Missouri, it was found that salaries in Wisconsin did not go down following Act 10 as was commonly believed among opponents of the legislation. This is an example of the perceived impacts of a state policy not matching the actual impacts of a policy at the local level. What the policy makers wanted, what the teachers believed, and what happened, were not consistent.

History of Act 10

Wisconsin has historically been a stronghold of organized labor. Labor unions in Wisconsin date back as far as the 19th century, when bricklayers and carpenters in Milwaukee defined themselves as an organized union as early as 1847.[1] Specifically, teachers' unions have had a prevalent presence in the state for some time. The state boasted well above the national average in union membership rates until 2014.

[1] Wisconsin Historical Society. "The Early Labor Movement in Wisconsin." *Wisconsin Historical Society.* https://www.wisconsinhistory.org/Records/Article/CS1709

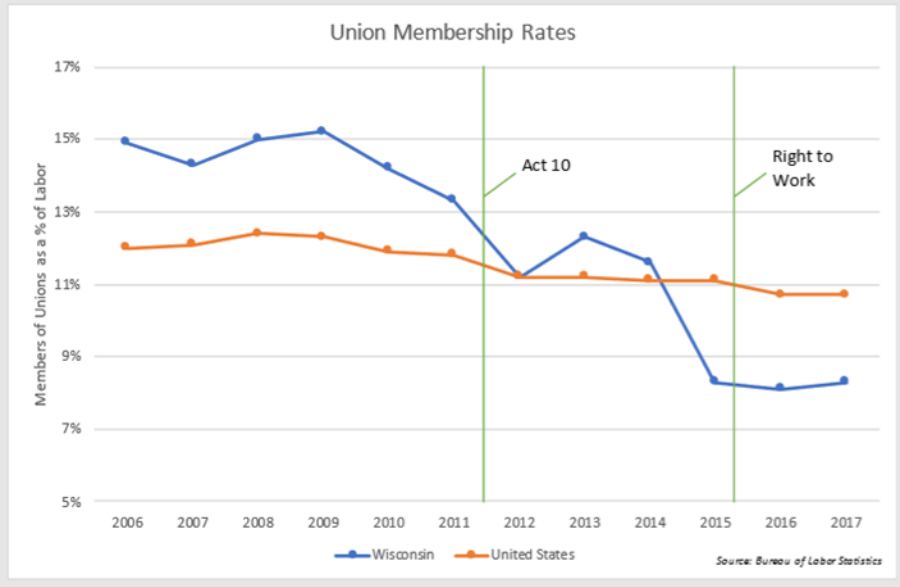

Figure 1. Union membership was above the national average in Wisconsin, but on the decline in Wisconsin prior to Act 10

As seen in Figure 1, union membership was above average, but on the decline prior to Act 10 according to The Bureau of Labor Statistics, and did not drop below the national average until three years after Act 10.

Prior to Act 10 unions had higher membership, offered benefits that exceeded most in the nation, and seemed to boast significant political clout. Teachers paid roughly 6% of their healthcare premiums and very little into their pensions. The Journal Sentinel cited that Wisconsin teachers were receiving the 4th highest benefits in the nation at $1,145 per pupil, 50% above the national average.[2] Then came Act 10 which would bring sweeping changes to many of the things that unions believed could never be changed.

[2] Umhoefer, Dave. "For Unions in Wisconsin, a Fast and Hard Fall since Act 10 | Journal Sentinel - Jsonline.com." 2018. https://projects.jsonline.com/news/2016/11/27/for-unions-in-wisconsin-fast-and-hard-fall-since-act-10.html (February 11, 2018).

Act 10, or as Governor Scott Walker coined it, the "Budget Repair Bill", brought about massive changes to collective bargaining, benefit structures, Medicaid, and debt structuring in Wisconsin. The office of the Governor first stated in a press release that the state was facing an immediate $137 million deficit and a projected $3.6 billion budget shortfall.[3] The bi-annual budget process in Wisconsin requires balanced budgets per Section 5 of Article VIII of the State Constitution. Furthermore, the State Constitution requires that the deficit incurred prior to Governor Walker taking office under the previous budget, be fixed immediately, stating that, "If the imbalance occurs in the second fiscal year of a biennium, the adjustment has to be made in the first fiscal year of the next biennial budget." Therefore, immediate action to fix the budget was Constitutionally required.[4] An initial impact seen from the bill was that 1,500 public workers received notices they would be laid off to correct the deficit. Those notices were rescinded as of the passage of the bill on March 11th.[5]

The most controversial portion of the legislation was regarding the changes to collective bargaining and employee compensation. There were also changes to debt restructuring and Medicaid to help balance the budget, but those were not seen as the main attack by opponents of the bill. The bill made significant changes to collective bargaining, prohibiting wages from increasing above a cap based on the Consumer Price Index unless approved by a referendum.

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[3] The Office of the Governor. 2011. "Emergency measure is needed to balance the state budget and give government the tools to manage during economic crisis." *The Office of the Governor.* https://walker.wi.gov/press-releases/governor-walker-introduces-budget-repair.

[4] Pugh, Christa. 2017. "Informational Paper 74." *Wisconsin Legislative Fiscal Bureau.* https://docs.legis.wisconsin.gov/misc/lfb/informational_papers/january_2017/0074_state_general_fund_balanced_budget_requirements_informational_paper_74.pdf

[5] Condon, Stephanie. 2011. "Wisconsin Gov. Scott Walker signs anti-unions bill – but Democrats say they're the political victors." *CBS.* https://www.cbsnews.com/news/wisconsin-gov-scott-walker-signs-anti-union-bill-but-democrats-say-theyre-the-political-victors/

Collective bargaining units (e.g., unions) would be allowed, but would require a yearly vote to maintain certification and to receive the benefits of a collective bargaining unit. These units also came with the caveat that teachers where these organizations remained, were no longer required to pay dues. The specific monetary changes from the legislation were that state employees would be required to pay 12.6% of the average cost of premiums and the current premiums would have to be cut by at least 5%. This cutting of premiums would no longer allow the Wisconsin Education Association Council (WEAC) to keep their own insurance company locked into business through their contract negotiations.[6] This change to health insurance premiums was also to be compensated by the Department of Employee Trust Funds which was authorized to use $28 million of excess balance to reduce these costs.[7] Wisconsin Retirement System also estimated that following Act 10 teachers would now pay 5.8% into their pension plans.

Teachers and teachers' unions predicted the effects of the legislation to be extremely negative for teachers across the state. The polarization of the topic led to two very different perceived effects of the legislation. Some saw the legislation as a way for the taxpayers to take back control from unions who were using political clout, fundraising ability, and organizational abilities to elect school board members who they would later bargain their contracts with. Union members believed the political clout of their unions was significantly harmed and would be forever. They further believed the legislation removed many of the uses of being part of a union. The reasoning behind the specific effects on unions was that there would be a long-lasting

[6]Umhoefer, Dave."For Unions in Wisconsin, a Fast and Hard Fall since Act 10 | Journal Sentinel - Jsonline.com." https://projects.jsonline.com/news/2016/11/27/for-unions-in-wisconsin-fast-and-hard-fall-since-act-10.html (February 11, 2018).

[7]The Office of the Governor. 2011. "Emergency measure is needed to balance the state budget and give government the tools to manage during economic crisis." *The Office of the Governor*. https://walker.wi.gov/press-releases/governor-walker-introduces-budget-repair.

impact to solve budget issues. This is why union members believed there to be a long-lasting negative impact on their ability to have power and use it efficiently. Furthermore, teachers said they would see significant decreases in their take-home pay, as well as little to no representation because of the weakening of unions. Overall, teachers believed that the policy was going to have incredibly negative impacts on them from their pay to their class size to their sick time. Teachers also believed that nobody would want to teach in the state and the entire sector would no longer be appealing.

Along with teachers, Democrats in the state assembly strongly opposed the bill immediately following its release. Knowing the bill would easily be passed by a majority Republican legislature, some fled the state to avoid a vote on the matter. By leaving the state, the bill could not be voted on because Wisconsin legislature rules require a quorum for voting on legislation with spending stipulations. The governor could enforce the legal obligation of the Democrats to vote by a police order; however, Governor Walker could not send state police across state lines to physically bring the Democrats to vote. Additionally, Republicans took steps to try and coerce Democrats back to the state such as, requiring Democrats to pay out of pocket to make copies in their offices and fining them up to $100 a day. Ultimately, Republicans altered spending portions of the legislation so a quorum was not needed to vote on the legislation under Wisconsin's legislative rules.

Immediately following the February 11th announcement of the landmark legislation teachers took to the streets to protect their unions. Doctors wrote sick notes so teachers could be out of school, students walked out of classes in defense of their teachers, and over 100,000 protestors filled the capital for weeks. This legislation was viewed by teachers and Democrats as a direct attack on teachers and unions. Furthering the feelings of attack, the legislation did not

apply to other public-sector unions such as fire-fighters and police officers. The anger following passage of the bill culminated in a recall petition of the governor; it gained enough signatures to initiate a special election, which ultimately ended in a recall election that gained national attention and was won by Governor Walker (the only time in U.S. history an incumbent governor had won a recall election).

This history of Act 10 is vital to grasp an understanding of why the topic is such a hot-button issue in Wisconsin. Now seven years following Act 10, we have data available to analyze the impacts the policy may have had at the local level. Some initial studies analyzed the aggregate benefits or disadvantages to districts and taxpayers, but none analyzed teachers specifically. The MacIver Institute and EducationNext showed that districts such as the Appleton Area School District saved $3.1 million by opening up their healthcare plans to options besides the expensive collectively bargained benefits prior to Act 10. Similarly, Hudson saw $1.1 million saved and Madison saw $10 million saved.[8] Politicians also claimed to see the benefits. Mayor Jim Schmitt of Green Bay says the plan saved taxpayers time, because, "the focus of managing the city's 1,000 employees was away from debating a union contract." He further claimed the residents of Brown County had saved $118 million in pension payments by employees. [9]

In addressing the concern that no teachers would want to teach in Wisconsin following Act 10, CNN offered some supporting evidence. CNN found that 10.5% of teachers left the

[8]D'Andrea, Christian. 2013. "Limits on Collective Bargaining." *Education Next*. http://educationnext.org/limits-on-collective-bargaining/ (October 17, 2017).

[9] MacIver Institute. "It's Working Wisconsin." *2017*. http://www.maciverinstitute.com/its-working-wisconsin/ (October 31, 2017).

sector following 2010-2011, which was up from 6.4% the year prior. [10] However, this result is contradicted by a study from Wisconsin Policy Forum which found that teacher retention is not attributable to Act 10. Instead the study found that districts have been able to replace teachers lost, but now struggle to retain young teachers. Furthermore, they claim that these fluctuations in teacher retention were not a result of Act 10 as they were on par with the national changes to the teaching industry.[11]

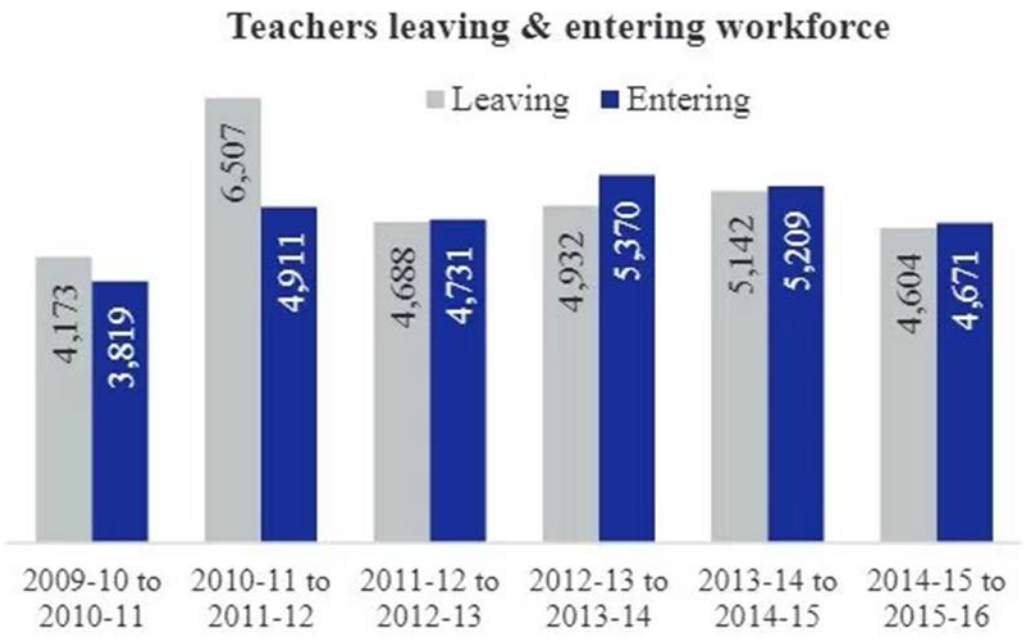

Figure 2. Wisconsin Policy Forum graph supports CNN claims, but WPF suggests these fit national trends and were not a result of Act 10.

[10] "Here's What Happened to Teachers after Wisconsin Gutted Its Unions - Nov. 17, 2017." http://money.cnn.com/2017/11/17/news/economy/wisconsin-act-10-teachers/index.html (March 30, 2018).

[11] Wisconsin Taxpayers Alliance. 2018. "Wisconsin's Teacher Workforce: Trends in supply and turnover." *Wisconsin Taxpayers Alliance.* http://wistax.org/publication/wisconsins-teacher-workforce-trends-in-supply-and-turnover.

The history and deeply polarized beliefs on Act 10 make this an extremely interesting topic to many Wisconsinites. Union members, taxpayers, concerned citizens, and academics alike all have a vested interest in answering some questions about Act 10. The academic literature surrounding the topic which closely analyzes laws that impact unions, how unions operate, and benefits or disadvantages to unions, is much broader than the precise topic of this paper.

Literature

The literature on local effects of state policies, how unions organize, changes in union membership over time, the benefits of unions, laws that have affected unions, and the impact unions have locally is rather expansive. While this body of literature and research covers all these topics individually, the field lacks a cohesive piece comparing perceived and actual effects of state policies. There is a general lack of substantial research in the field regarding Act 10 itself and how the framing of the debate may have impacted perceived effects. This piece however, will analyze the perceived effects locally of a policy versus the actual effects, and how the framing of a state policy in the public sphere can drastically change how people view the policy even if the actual effects do not align with the perceived effects.

Looking at the effects of state policies on localities can be a building block for looking at perceived local effect and actual local effect. Fuhrman and Elmore demonstrated that state policies do not cause significant changes at the local level because the implementers have the majority of control over how the policy is put into place.[12] Furthermore, these policies may not

[12] Fuhrman, Susan H., and Richard F. Elmore. 1990. "Understanding Local Control in the Wake of State Education Reform." *Educational Evaluation and Policy Analysis* 12(1): 82–96.

even be effectively being measured as McDermott finds that these state policies are often measured by broad indicators which do not typically do justice to the policies or accurately measure their effects.[13] Another problem with policies coming from larger forms of government is demonstrated by Marsh and Wohlstetter, who find that government policies written to impact local levels, do not necessarily fully reflect all local laws already in place which creates a division between what the policies are intended to do and what they will actually do.[14] Often times these state policies come with preconceived notions, especially on a partisan level. Edward's findings demonstrated that often government policies that impact a specific group can lead to a self-fulfilling prophecy which can create an organizational crisis.[15]

Understanding how unions organize and why they organize, is important when analyzing the impacts a policy will have on them. According to Hannaway and Rotherham, unions are crucial because "collective bargaining shapes the way public schools are organized, financed, staffed, and operated. Understanding collective bargaining in education and its impact on the day-to-day life of schools is critical to designing and implementing reforms that will successfully raise student achievement."[16] That being said, when policies impact those uses, Salancik and Pfeffer found that unions will band together to either change their political environment or they

[13] McDermott, Kathryn A. 2003. "What Causes Variation in States' Accountability Policies?" *Peabody Journal of Education* 78(4): 153–76.

[14] Marsh, Julie A., and Priscilla Wohlstetter. 2013. "Recent Trends in Intergovernmental Relations: The Resurgence of Local Actors in Education Policy." *Educational Researcher* 42(5): 276–83.

[15] John C. Edwards. 2001. "Self-Fulfilling Prophecy and Escalating Commitment: Fuel for the Waco Fire." *The Journal of Applied Behavioral Science* 37(3): 343–60.

[16] Hannaway, Jane, and Andrew Rotherham. 2010. *Collective Bargaing in Education: Negotiating Change in Today's Schools*. Cambridge, Massachusetts: Harvard Education Press.

will form interorganizational groups to absorb potential policy impacts.[17] Trejo's research showed that unions do not hold as much political clout as Salancik and Pfeffer might argue, but they do work as a strong collective cost saving measure.[18] Strunk and Grissom take a different approach, arguing that stronger unions do hold government control, not because of their political clout, but because of their ability to create stronger collective bargaining agreements (CBAs) which leave little to no room for government policies. This means the amount of meaningful choices or impacts policies and administrators can have are minimal. On the flip side this literature also found that weak unions lead to administrators having the majority of control over their districts.[19]

Unions seem to organize well and initially there seems to be great upside to memberships; however, research has found that membership fluctuates greatly over time. In 1974, 1 in 4 workers were members of a union, public or private. As of 2004, only 8.2% of private employees were union members. Public union membership had fallen to 37.1%.[20] Ichniowski and Zax found similar results regarding the decline in union membership and explained that he believes it is because of "substantial reductions in union membership due to right-to-work laws. Free riders, rather than anti-union sentiments, are probably responsible."[21]

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[17] Salancik, Gerald R., and Jeffrey Pfeffer. *The External Control of Organizations: A Resource Dependence Perspective*. Stanford University Press, 2003, p. 336, www.sup.org/books/title/?id=5889 (April 10, 2018).

[18] Trejo, Stephen J. 1991. "Public Sector Unions and Municipal Employment." *Industrial and Labor Relations Review* 45(1): 166–180.

[19] Strunk, Katharine O., and Jason A. Grissom. 2010. "Do Strong Unions Shape District Policies? Collective Bargaining, Teacher Contract Restrictiveness, and the Political Power of Teachers' Unions." *Educational Evaluation and Policy Analysis* 32(3): 389–406.

[20] Hannaway, Jane, and Andrew Rotherham. 2010. *Collective Bargaining in Education: Negotiating Change in Today's Schools*. Cambridge, Massachusetts: Harvard Education Press.

[21] Ichniowski, Casey, and Jeffrey S. Zax. 1991. "Right-to-Work Laws, Free Riders, and Unionization in the Local Public Sector." *Journal of Labor Economics* 9(3): 255–75.

Wisconsin has seen similar fluctuations in membership according to the literature as well. Even in historically strong union districts like Milwaukee and Madison there was drop off. Milwaukee Teachers' Education Association has lost 30% of its membership since 2011. Prior to Act 10 union members were 14.2% of all people employed in the state, as of 2015 that number was down to 8.3%.[22]

Part of why unions exist is to gain the benefits that come with being organized together. This organization allows for union representation which allows for better benefits for members. However, union membership is key to bargain effectively according to Blakemore and Faith.[23] Unions typically are intended to benefit members by showing unity, increasing salaries, bargaining better benefits, and representing a large group. Winter and Grimes and Register's works show that unionized school districts pay experienced teachers up to 25% more than districts that do not have union representation.[24] Unionized districts also tend to carry this positive impact on salary to districts around them. Grimes and Register found that when a district is unionized and receives a 1% pay increase, pay in a nearby district sees at least a 0.52% increase.[25] On the contrary, Eberts found that districts that have unionized teachers cost the

[22] "For Unions in Wisconsin, a Fast and Hard Fall since Act 10 | Journal Sentinel - Jsonline.com." https://projects.jsonline.com/news/2016/11/27/for-unions-in-wisconsin-fast-and-hard-fall-since-act-10.html (February 11, 2018).

[23] Blakemore, Arthur E., and Roger L. Faith. 1989. "Bargaining Effect and Membership Effect in Public Sector Unions." *Southern Economic Journal* 55(4): 908–23.

[24] Winters, John V. 2011. "Teacher Salaries and Teacher Unions: A Spatial Econometric Approach." *Industrial and Labor Relations Review* 64(4): 747–64.

[25] Grimes, Paul W., and Charles A. Register. 1990. "Teachers' Unions and Student Achievement in High School Economics." *The Journal of Economic Education* 21(3): 297–306.

district 15% more than non-union districts.[26] This ability to impact districts outside of their own shows the far-reaching effects unionization can have.

There are many examples of states that have legislation in place that directly impacts unions. Unions can have extended impacts such as, their negotiated benefits setting a bar for neighboring districts. Lindy found that in New Mexico mandatory teachers' union laws impacted student performance. Lower performing students performed worse; however, higher achieving students were shown to do better.[27] Eberts (1987) had earlier works that found that unionized districts raised student performance by 3%.[28] However, later Eberts found the impacts of unions were lowering the performance of already low performing students and raising high performers.[29] However, Moe has conducted research which found contrary effects; unionization in California hurt student performance, especially minority students.[30] Biasi analyzed the impact that union laws have on teacher quality rather than student performance and found that Act 10 had positive impacts on teacher quality in Wisconsin. She specifically found that changes to pay schemes led to high-quality teachers coming into Wisconsin and low-quality teachers going out which she found, "Leads to improvement of the overall workforce."[31] Lovenheim found that unions in fact have no real impact on teacher pay, benefits, or teacher performance. The main

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[26] Eberts, Randall W. 2007. "Teachers Unions and Student Performance: Help or Hindrance?" *The Future of Children* 17(1): 175–200

[27] Lindy, Benjamin. 2011. "The Impact of Teacher Collective Bargaining Laws on Student Achievement: Evidence from a New Mexico Natural Experiment." *The Yale Law Journal* 120(5): 1130–91.

[28] Eberts, Randall W., and Joe A. Stone. 1987. "Teacher Unions and the Productivity of Public Schools." *Industrial and Labor Relations Review* 40(3): 354–63.

[29] Eberts, Randall W. 2007. "Teachers Unions and Student Performance: Help or Hindrance?" *The Future of Children* 17(1): 175–200

[30] Moe, Terry M. 2009. "Collective Bargaining and the Performance of the Public Schools." *American Journal of Political Science* 53(1): 156–74.

[31] Biasi, Barbara. "Unions, Salaries, and the Market for Teachers: Evidence from Wisconsin." 2016. https://web.stanford.edu/~bbiasi/jmp.pdf (October 1, 2017).

impact was an increased number of teachers hired by unionized districts of 5%.[32] This literature clearly demonstrates the wide array of potential local impacts state policies on unions can have.

When analyzing legislation that pointedly impacted unions it is vital to understand these aspects laid out in other literature. Understanding how unions form, why they form, how they have changed over time, benefits they offer, how they impact performance and district costs, and how laws have impacted them are all helpful in tying together the main research question of the paper. To determine if perceived effects of state policy differ from the actual effects how unions form, why they form, and benefits that are gained from unionization all may impact the perceived effects of a policy.

Theory and Hypotheses

I believe that the strong negative opinions from teachers regarding Act 10 are still very prevalent today some 7 years later. To accurately measure if the perceived effects match the actual effects, one must demonstrate that the perceived effects are all still there and have not faded with time. To accurately measure the impacts Act 10 has had to this day, the polarization behind the topic must be confirmed. If teachers still have strong negative opinions regarding Act 10 and believe the policy had negative effects and continues to do so, the perceived effect will obviously be negative. This means that if the perception does not match the empirical analysis of salaries, then the political rhetoric and accuracy of said perception should be called into question. Union strength could also impact this rhetoric because if a union is strong with many connections, their message can be easily spread.

[32] Lovenheim, Michael F. 2009. "The Effect of Teachers' Unions on Education Production: Evidence from Union Election Certifications in Three Midwestern States." *Journal of Labor Economics* 27(4): 525–87.

If strong Wisconsin unions saw this legislation as an attempt to weaken their political clout and a direct attack, then they would strike back with passion to show their strength and ability to come together. This outcome seems likely considering the Governor's recall election that followed soon after Act 10 passed.

If teachers still feel strongly about Act 10 and think the policy had significant impacts, then the impact of the state policy at the local level, according to teachers, initially can be believed to have been significant. Perceived local effects can be measured by surveying teachers regarding their feelings about their autonomy, relationships with administrators, their salary impacts, benefit impacts, and union membership. When surveyed, if teachers voice strong negative opinions about Act 10, it will demonstrate a perceived negative effect of the policy at the local level. Current union membership may also be an indicator of teacher feelings regarding Act 10. However, even if teachers are not union members, or never were union members, I believe they will still have negative opinions regarding Act 10. Furthermore, if teachers are truly as passionate about Act 10, as I believe, the survey will show, as was heard in the media, and from union leaders, negative responses will be seen from most teachers.

If many of these teachers claim the policy had negative effects, especially on their salary, then salaries before and after Act 10 can either bolster or cast doubt on their claims. While benefits like health insurance cannot be sufficiently analyzed because of WEAC's strong hold on insurance costs through contract negotiations and data availability, salaries can certainly be analyzed to determine the true local effects of Act 10. As stated earlier prior to Act 10, Wisconsin teachers were receiving some of the best benefits in the nation. Upon implementation of Act 10 there were significant changes to the structuring of benefits. Districts could now open their health insurance plans to any insurers to save money. This change in how each district

would spend when it came to benefits makes it nearly impossible to quantify the impacts Act 10 may have had on benefits specifically. This is because teachers could be receiving the same quality of benefits for substantially less money, but the statistics reported are the amount spent on benefits per teacher, which will clearly go down as the law stated it had to. Teachers' salaries on the other hand have not had the significant changes to their overall structure like benefits have, so they can be used for analysis. If teachers' salaries in Wisconsin in comparison to Missouri did not go down like many claimed following Act 10, then the political framing, perceived effects, and actual local effects of the policy do not align. Soon after the passage of Act 10, it was reported by EducationNext that many districts were able to use the new flexibility they received to turn deficits into surpluses and hire more teachers, which potentially demonstrates an initial positive impact. This study demonstrates that salaries may have, in fact, not gone down, and the local effect was not negative, as was perceived by teachers and propagated by unions.

Three main hypotheses can summarize my beliefs going into the empirical research. One, if state policies like Act 10, have a significant impact at the local level as was perceived, drastic changes to teacher salaries will also be seen. Two, if teachers' responses show strong opinions or emotions on state policies, this will indicate a belief that there was a significant effect on their district, although it may not fit the true effects. Finally, if empirical analysis of teacher salaries does not fit the rhetoric that was used by unions and beliefs held by teachers, the debate around the effects of the policy were framed incorrectly, and the perceived effects do not match the actual effects of the policy.

Methods

To first establish that there is a potential disconnect between the perceived effects of the policy and the actual effects teachers were surveyed to determine their overall feelings regarding Act 10. Teacher salaries in Wisconsin and Missouri were gathered from the Wisconsin Department of Instruction (DPI), and Missouri administrator's data collection. Then the data was used to determine if salaries in Wisconsin truly did go down as was assumed to be the case from most of the responses from teachers in the survey. This assumption comes from media coverage and very clear union rhetoric surrounding Act 10. Creating the structure of the survey to accurately gauge the feelings of teachers in Wisconsin required questions to be sensitive of strong political sentiments behind Act 10, but also straightforward enough to get honest opinions.

I designed a 30-question survey that covered topics including years of experience, feelings about the K-12 state budget, Common Core, Act 10, union membership, and union usefulness. These statements and their exact wording can be found in Appendix A. The goal was to be able to achieve an accurate measure of teacher opinions regarding Act 10. Teachers were asked initially non-political questions such as their education level, experience, and grade level before being asked more specific questions regarding politics which may have turned off some respondents if they were the initial questions. 3,561 teachers were emailed the survey. Nineteen addresses bounced back. 3,542 were contacted of which 250 responded for a response rate of 7.06%, which is considered an acceptable response rate for contemporary research.[33] However,

[33] Ramshaw, Adam. "The Complete Guide to Acceptable Survey Response Rates." 2017. *Genroe*. https://www.genroe.com/blog/acceptable-survey-response-rate/11504 (April 11, 2018).

this response rate is most likely artificially low because some teachers are likely to have missed the survey due to spam filtering or because they avoided the politically sensitive topic. If fewer teachers actually saw the survey than the 3,542 that were emailed, the response rate would naturally be higher. This response rate does create room for substantial response bias where only teachers with strong beliefs saw this survey as a chance to sound off about the policy. However, events like the attempted recall of Governor Walker can be pointed to as evidence that a wide group of teachers felt strongly about Act 10 and the response results represent that.

These teachers were surveyed from a variety of geographical areas across the state: Madison, Manitowoc, Racine, Cedarburg, West Bend, Green Bay, Appleton, Hortonville, La Crosse, Bay Port, and Marshfield. The districts also leaned different directions politically, as of the 2016 presidential election. For Example, Madison and La Crosse were some of the districts that tended to vote for Democrats and Hortonville and Appleton among those which leaned Republican. These districts were chosen because they had varying degrees of implementation of Act 10, typically varying political leanings, and varying size of district. Some of these districts made significant changes to things like their handbooks, which is a set of guidelines the district will follow regarding topics such as class sizes, sick days, and most importantly, pay scales. Other districts took advantage of the freedom Act 10 granted them to change health insurance plans and the percentage teachers pay of their premiums.

The survey questions themselves were phrased as statements on a scale from strongly agree to disagree or do not care, with 10 being strongly agreeing. Once all the teachers' answers were received, the answers were then scaled down to 1-5. Now 5 represented strongly agreeing and 1 being disagreeing or not caring. This allowed for consistent interpretation of coefficients and keep the integrity of the original scaling format. Teachers were asked to rank multiple

statements regarding Act 10 in the survey. A teacher's answer across all these statements was averaged to create an "Act 10 Score". This method of aggregating and averaging was defensible by the summary statistics which showed that the majority of teachers consistently had strong views one way or the other across all Act 10 statements. The average of the Act 10 Score for the sample was a 4, meaning they mostly agreed that Act 10 was negative most of the time.

These survey responses were used in an ordered logit regression. Since the responses are coded as multichotomous values, an ordered logit regression is the appropriate statistical model to account for potential outputs.[34] Teachers were asked if unions make them better educators, if the K-12 state budget was bad for education, if unions make them feel better represented, their years of experience, and if they were currently a union member. These questions were used as variables in the regression equation below.

$$Unions\ Make\ for\ Better\ Educators = B_0 + B_1 Average\ Act\ 10 + B_2 StateBudgetisBad + B_3 Unions\ give\ better\ political\ represenation + B_4 Experience + B_5 Currently\ a\ Union\ Member + u$$

By taking these results and plotting the predicted probabilities of their opinions on Act 10 changing and the other variables held constant it can be demonstrated that teacher feelings regarding Act 10 are closely related to their feelings that unions make teachers better at their profession.

[34] Andrew S. Fullerton. 2009. "A Conceptual Framework for Ordered Logistic Regression Models." *Sociological Methods & Research* 38(2): 306–47.

Results

Table 1 shows the strong feelings that were seen in the initial survey data. The vast majority (75.80%) of teachers at least mostly agree that Act 10 negatively impacted their salary. Similarly, a large majority (85.84%) have overall negative feelings about Act 10. The Average Act 10 Score was used in the regression; however, the feelings on average for the questions regarding Act 10 were not nearly as strongly negative as when asked directly about salary impacts.

	Don't Care	Slightly Agree	Somewhat Agree	Mostly Agree	Strongly Agree
Act 10 Score	0.42%	3.75%	10.00%	50.42%	35.42%
Act 10 Negatively Impacted Salary	4.57%	2.28%	17.35%	22.83%	52.97%

Table 1. Response percentages of the survey questions.

Table 2 shows the regression results of the proportional ordered logit regression. All of the coefficients are statistically significant, and can be more easily interpreted by analyzing a graph of the predicted probabilities.

	Coefficient	Value Std. Error	T value
Act 10 Score	0.8498 ***	0.21870	3.886
State Budget is Bad	0.4462 ***	0.12685	3.517
Unions=BetterPoliticalRep.	0.9199 ***	0.12011	7.659
Currently a Union Member	1.0867 ***	0.27901	3.895
Experience	-0.1821 **	0.09290	-1.960
	** p < .05	*** p < .01	

Table 2. Proportional ordered logit regression results.

All variables in the predicted probabilities graphs are being held constant at their average value from the survey besides the Act 10 Score. Whether a teacher is currently in a union was held constant at 0, meaning they are assumed to be currently not in a union. There is a correlation between the idea that unions make educators better and the belief that Act 10 was incredibly negative. This would indicate a perceived local effect from Act 10 creating worse education because educators would no longer be better if their unions had been dismantled.

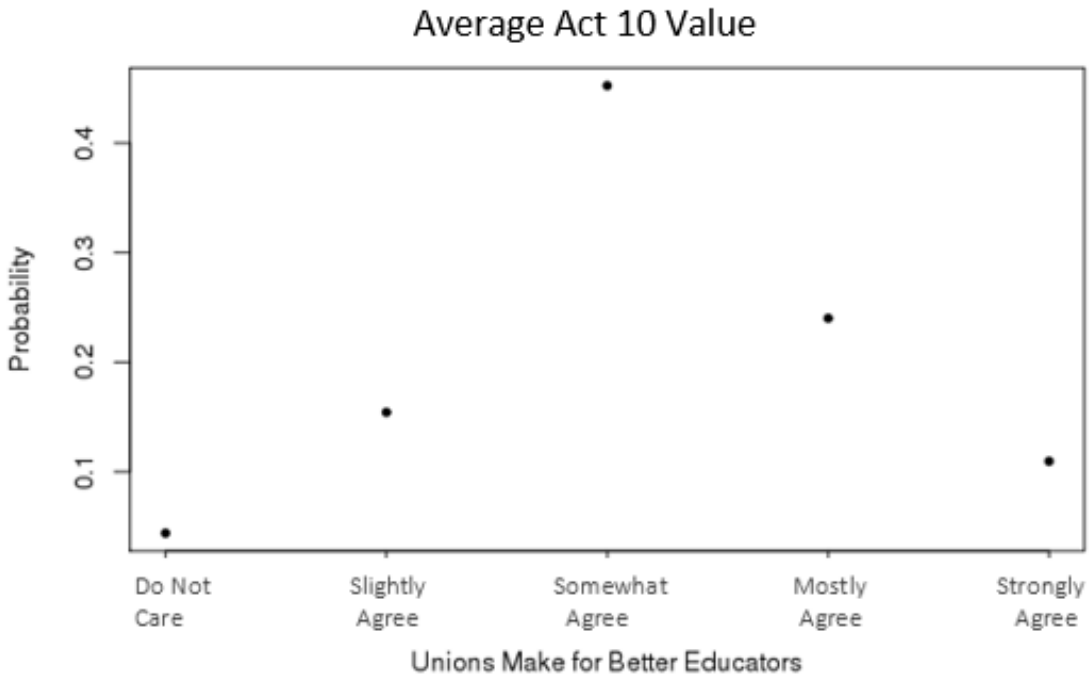

Figure 3. Predicated probabilities graph holding all variables constant at their average value.

Figure 3 shows that the average teacher somewhat agreed with the statement that unions make them better educators. If unions were dismantled by Act 10 as was believed by many teachers and union members, unions can no longer make educators better which would indicate a significant local effect of Act 10. While this figure demonstrates the average response rate, the

maximum response rate for Act 10 Score was a 5, which Table 1 showed was not an insignificant portion of the respondents, provides further insight into the perceived local beliefs and how they may have been framed.

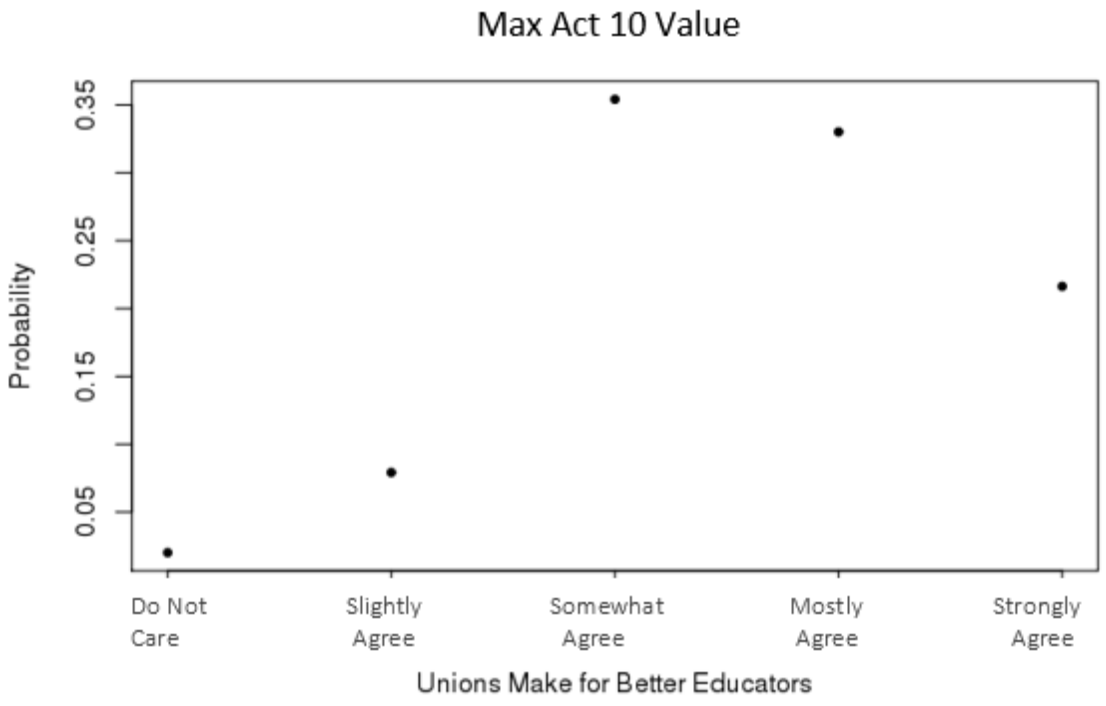

Figure 4. Predicted probabilities graph with the maximum Act 10 Score and holding all other variables constant at the average.

Figure 4 once again shows a strong connection between thinking Act 10 was bad and that unions make teachers better educators. However, the probability of strongly agreeing or mostly agreeing is substantially higher than was seen in Figure 3. These correlations demonstrate that there was clear perceived effect locally that Act 10 had a negative effect. This correlation is further seen when analyzing teachers who responded at the minimum Act 10 Score which shows a considerably weaker belief that unions make them better educators.

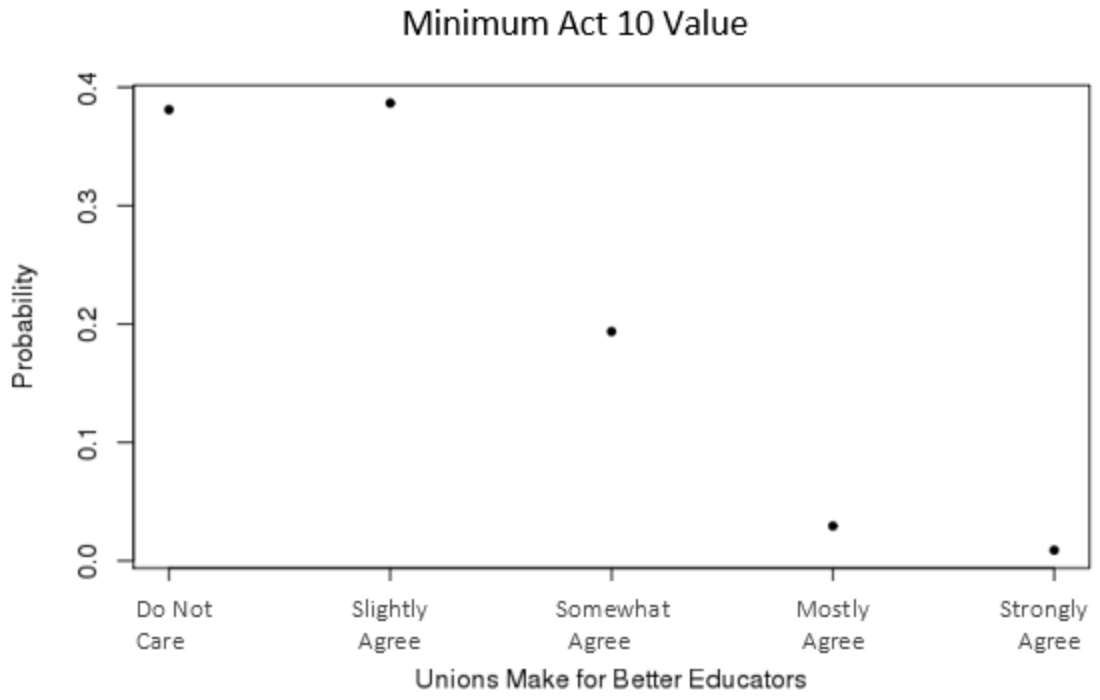

Figure 5. Predicted probabilities graph with Act 10 Score at the minimum and all other variables held constant at the average.

Figure 5 helps further establish that there may be some framing or rhetoric that is impacting teacher beliefs about Act 10. Teachers who think Act 10 was overall very negative also tend to think that unions make them better educators. This expands on the belief that there was most likely political framing behind the perceived effects of Act 10 that may not have been correct. Considering the close correlation between the belief that unions make educators better and that Act 10 was bad the connection can easily be made that teachers who thought unions were great also think Act 10 negatively impacted them in all aspects of the policy. Next, the perceived effects that Act 10 negatively impacted teacher salaries can be analyzed to determine if this perception is true or the remnants of unions rhetoric. This leads to the necessity of the next analysis of data, did teachers truly see salary decreases? So, I turn to an empirical test of this perception that Act 10 negatively affected salaries.

Salary Data

If teacher salaries do not reflect the perceived impacts they stated, there is a clear disconnect between the rhetoric, framing, and perception of the effects and the true local effects. Teacher salaries from 2009-2016 were gathered from Missouri and Wisconsin. Missouri was chosen as a comparison state due to availability of comparable data, its lack of Act 10-like union legislation, and its geographical location. Missouri had the most accessible data, but also served as a valuable comparison because states like Indiana and Ohio passed legislation changing collective bargaining abilities of public unions. Missouri also codified union abilities to collectively bargain their contracts in the 2007 Missouri Supreme Court case where it was found that "all public employees, including teachers, (have) the right to bargain collectively and reach binding agreements."[35]

The salaries are from administrative data and the Wisconsin Department of Instruction. The data was cleaned so that teachers could be individually identified and matched from year to year. This created a data set that had a teacher's unique identifier (ID number), year, experience, and salary for each year they taught. The salaries were then adjusted for inflation using the US Department of Labor's Consumer Price Index, using 2016 as the base year. This allowed for state, year, and experience to all be controlled for when running linear regressions. I will first examine salaries in two specific years, the year immediately prior to Act 10 (2009) and immediately following Act 10 (2011). Next, I will examine salaries over the full time frame of the data (2009-2016).

[35] Missouri National Education Association. "Collective Bargaining FAQs." *Missouri National Education Association.* https://www.mnea.org/Missouri/BargainingFAQ.aspx.

Salary Results

Table 3 shows the average salary for teachers both before Act 10 (2009) and after Act 10 (2011) in Wisconsin and Missouri. Before Act 10, the average salary in Wisconsin was $44,834.43. After Act 10, the average salary in Wisconsin rose to $49,246.25, an increase of $4,411.82. Similarly, in Missouri the average salary was initially $38,450.76 and rose to $41,356.19, an increase of $2,905.43. While the average salary increased over this time in both states, salaries in Wisconsin increased by an additional $1,506.39. This value, $1,506.39, is known as the "difference-in-differences" estimate.

Similarly, this same difference-in-differences estimate can be obtained by comparing the average salary across the two states within each time period, and then observing if the difference between states grows over time. Before Act 10, the average salary was $6,638.67 higher in Wisconsin. Following Act 10, this difference in average salary grew to $7,890.06, an increase of $1,506.39.

	WI	MO	WI-MO
Pre-Act 10	$44,834.43	$38,450.76	$6,383.67
Post-Act 10	$49,246.25	$41,356.19	$7,890.06
Post - Pre	$4,411.82	$2,905.43	**$1,506.39**

Table 3. The bolded and underlined value is the difference of the difference of Pre-Act 10 and Post Act 10.

This difference-in-differences estimate can also be obtained via linear regression by estimating the following model:

$$salary_{it} = \beta_0 + \beta_1 WI_i + \beta_2 y2011_t + \beta_3 WI_i \cdot y2011_t + u_{it}$$

where $WI_i = 1$ indicates that teacher i is in Wisconsin and $WI_i = 0$ indicates that teacher i is in Missouri, $y2011_t = 1$ for year $t = 2011$ and $y2011_t = 0$ for year $t = 2009$, and the interaction $WI_i \cdot y2011_t = 1$ for a teacher in Wisconsin in 2011 and equals 0 otherwise. Table 4 shows the results of this model.

Variable	Coef.	Std. Err.	T-statistic	95% Confidence Interval	
Intercept	38450.76	42.56	903.49***	38367.34	38534.17
WI	6383.67	62.71	101.8***	6260.77	6506.57
y2011	2905.43	63.00	46.11***	2781.94	3028.92
WI y2011	**1506.39**	92.68	16.25***	1324.73	1688.04

Table 4. Difference-in-differences estimate using salaries from 2009 and 2011. n=259,399, R^2=0.105

As shown in Table 4, the estimate of the coefficient on the interaction term, $\hat{\beta}_3 = 1506.39$, is the same difference-in-differences estimate as shown in Table 3.

The results shown in Tables 3 and 4 only consider salaries in two years, 2009 and 2011. Next, we will examine salaries from all years in the data. Before examining the difference-in-differences model for multiple years we will examine the trends of average salary over time by estimating the following model:

$$salary_{it} = \beta_0 + \beta_1 WI_i + \beta_2 y2009_t + \beta_3 y2011_t + \cdots + \beta_8 y2016_t + u_{it}$$

The results of this model are shown in Figure 6. Coefficient estimates and standard errors for this and all remaining models are shown in Appendix B.

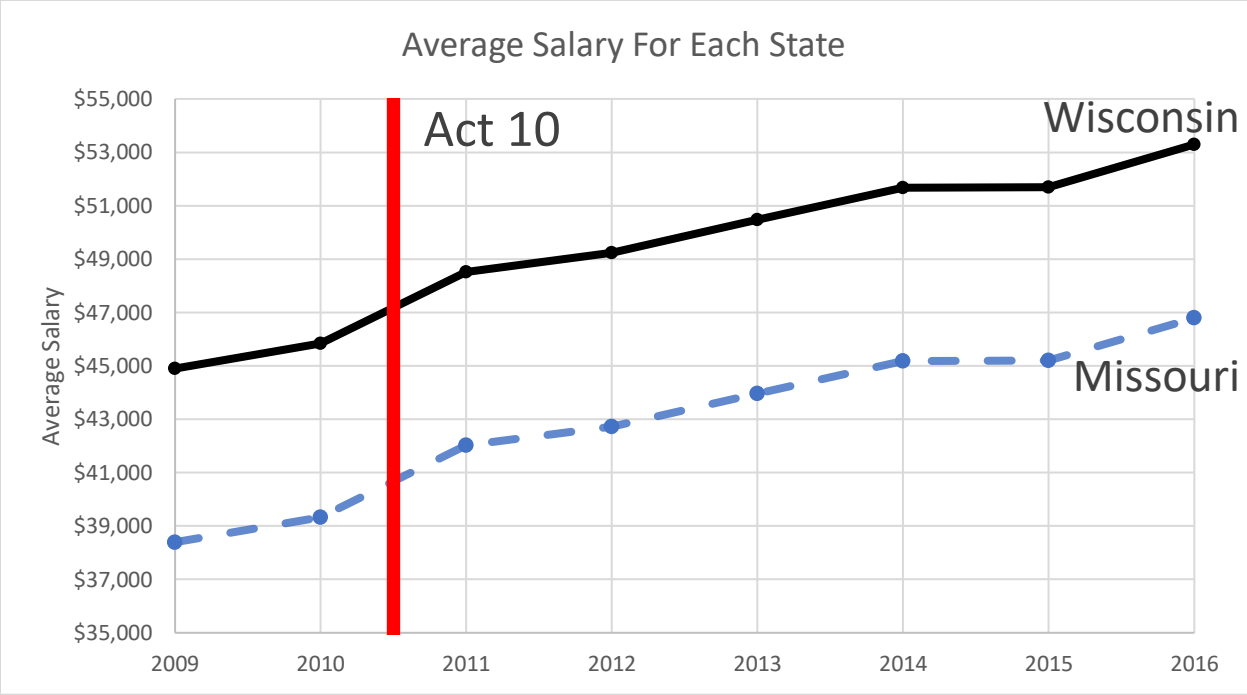

Figure 6. Trends of teacher salaries from 2009-2016 with a constant average difference between states.

Figure 6 shows the average increase in salary over this time-period. This model allows for average salaries in Wisconsin to be greater over this time-period, but restricts this difference to be the same in all years. In other words, this does not allow for a difference-in-differences estimate.

To allow for a difference-in-differences estimate, similar to Tables 3 and 4 except for all years, we need to allow for the effect of each year to be different in Wisconsin or Missouri. Figure 7 shows results of this model.

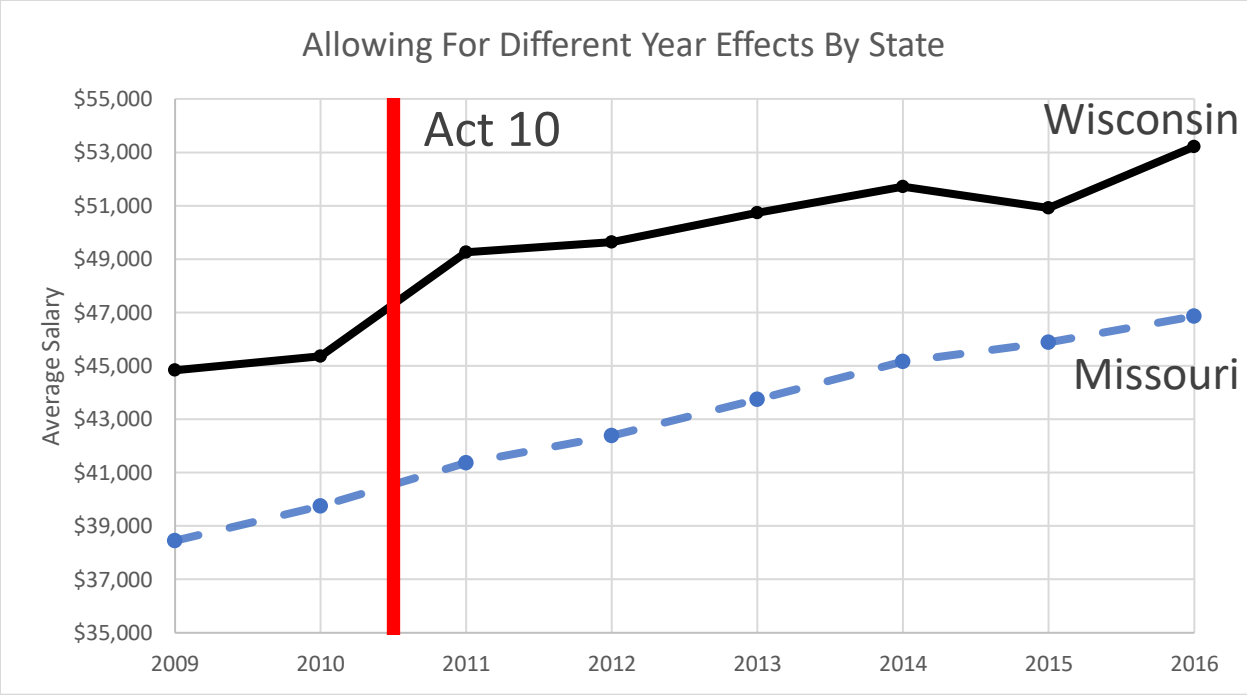

Figure 7. Difference-in-differences estimate, similar to Tables 3 and 4, showing an increase in average salary following Act 10.

Looking at Figure 7 and comparing years 2009 and 2011 we see a similar pattern as the one shown in Tables 3 and 4. Salaries in both states increase; the increase is larger in Wisconsin. Between 2011 and 2016 this difference in average salaries between Wisconsin and Missouri does not go away.

The results shown thus far are not consistent with a decrease in teacher salaries following the passage of Act 10 and, if anything, demonstrate an increase in salaries. One of the aspects of

contract negotiation that changed as a result of Act 10 was experience-based pay. The following models will examine the effect of experience on salary.

The model shown in Figure 8 controls for experience. All other aspects of the model remain unchanged. As we see, after controlling for experience, average salaries in both states follow a similar pattern as shown in Figure 7.

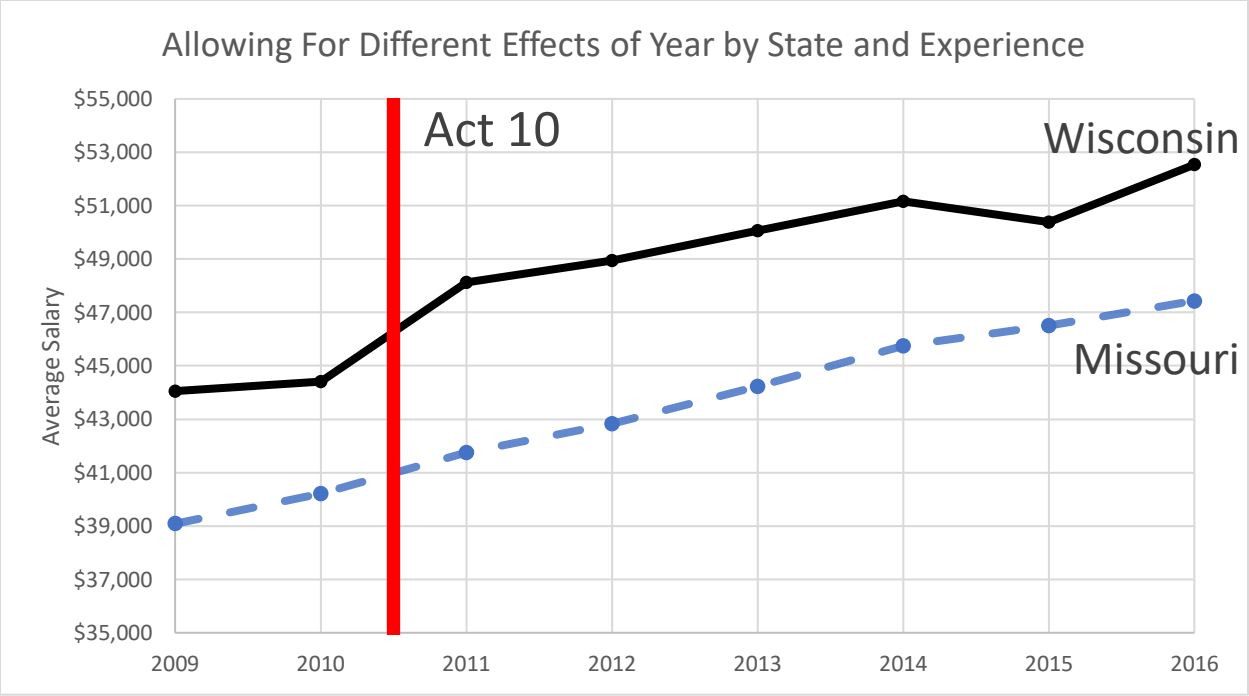

Figure 8. Difference-in-differences estimate, controlling for experience.

The model in Figure 8 controls for the effect of experience on salary, but restricts the impact to be the same for both states. Figure 9 relaxes this restriction, allowing the effect of experience on salary to be different in the two states. Comparing the results in Figures 8 and 9, we again see a similar pattern.

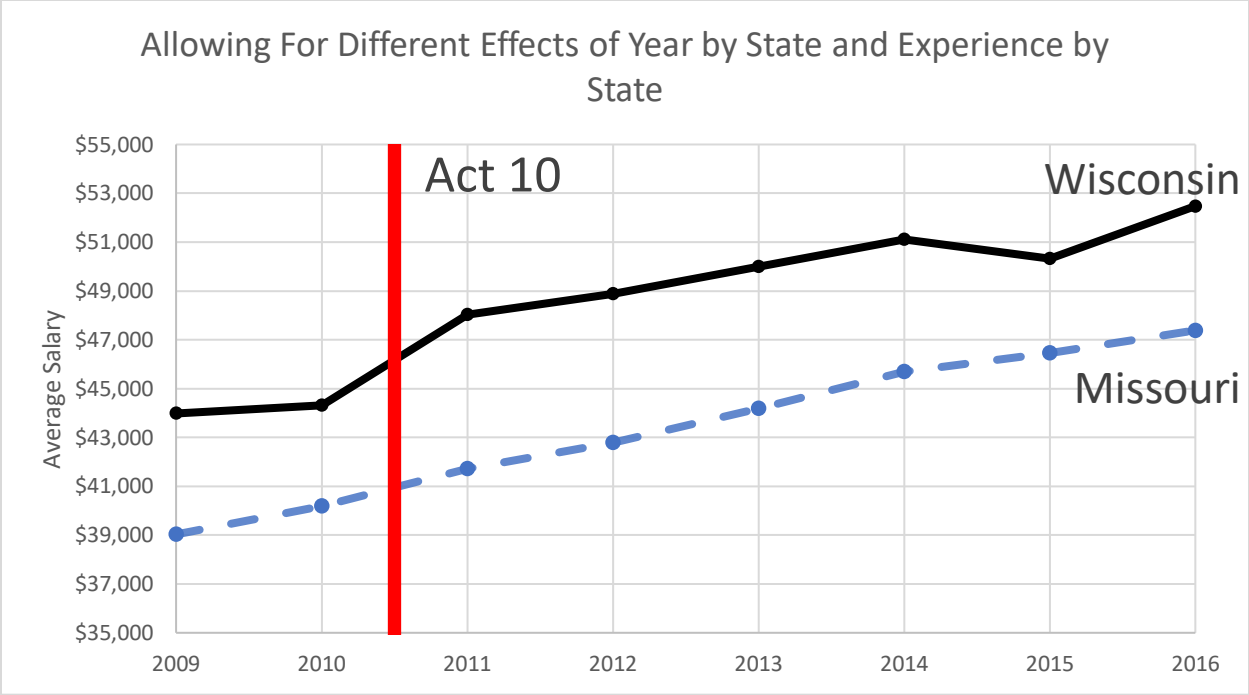

Figure 9. Difference-in-differences estimate, controlling for experience, allowing the effect of experience to differ by state.

If Act 10 changed the relationship between experience and pay in Wisconsin, these changes would only be seen following the passage of the legislation. Figure 10 allows for the effect of experience to be different in each year for each state. Figure 10 confirms the pattern shown in Figures 7, 8, and 9 of an increase in average teacher salaries in Wisconsin following Act 10.

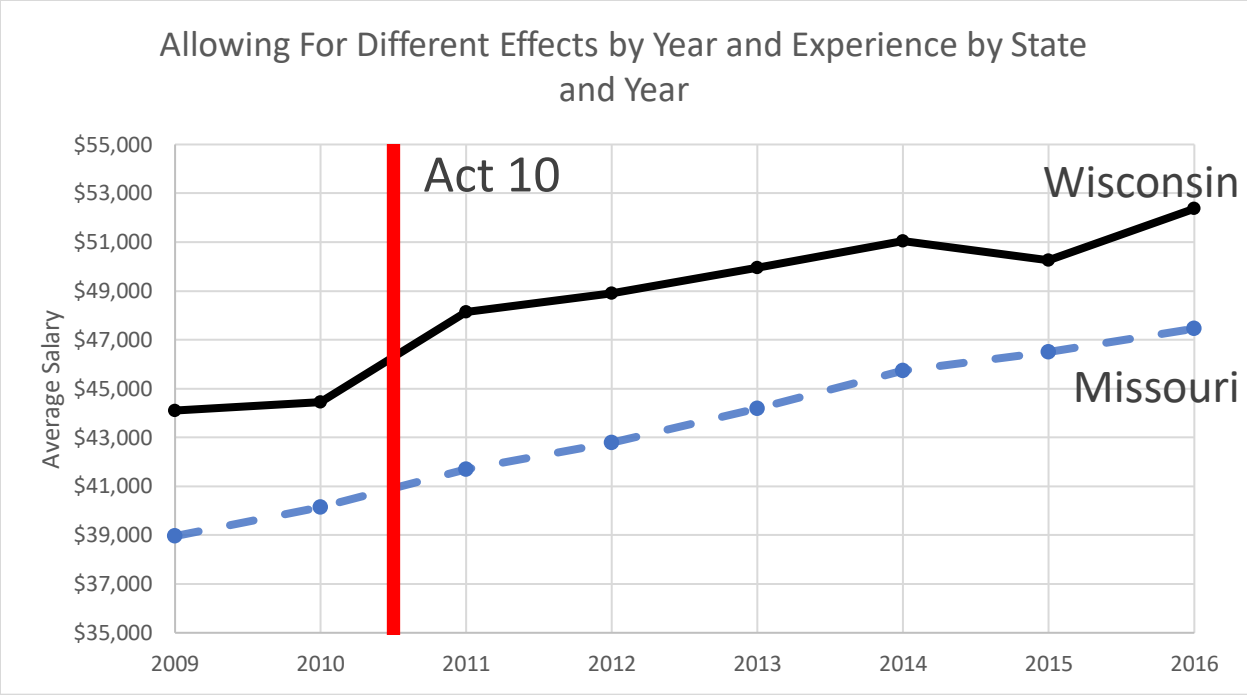

Figure 10. Difference-in-differences estimate, controlling for experience, allowing the effect of experience to differ by state within each year.

It was widely believed that following Act 10 teachers' salaries would decrease. Examining the salary data for the years before and after Act 10 this belief does not come to pass. This is an example of perceived effects potentially not aligning with the actual effects of a state policy.

Conclusion

Teachers in Wisconsin certainly hold strong feelings regarding Act 10 and the overwhelming majority of them are negative. While there were substantial changes to unions and collective bargaining in the state of Wisconsin that came with Act 10, the strong belief that teachers' salaries would be negatively impacted does not seem to have come to pass. Salaries of teachers, assuming they would have followed the same increasing trajectory and holding experience constant, tended to increase more in Wisconsin than in Missouri post-Act 10. Even if

salaries did not increase there was a belief that they decrease and these models show that there was most certainly not a decrease in teacher salaries following Act 10. These findings do not take into account changes to teacher benefit packages, as those are impossible to quantify considering the massive number of changes that each school district could have made to their policies on that matter. Being able to quantify teacher benefit changes would be possible only if the personal value a teacher put on their personal benefits before and after Act 10 could be determined, as well as how their personal perception of the value relates to the actual changes in price. The differing personal values on quality of benefits, as well as the fact that the data only provided the dollar amount the district paid for a teacher's benefits, makes the changes to benefits impossible to quantify.

There are a couple potential reasons Act 10 may have prompted heated reactions. It is likely that union members were left-of-center and would disagree with policies from a right-of-center governor like Scott Walker. As reflected in the survey years following Act 10, a philosophical commitment to a union idea rather than making a personal analysis of the policy seems to be at play. However, it is beyond the scope of this paper to say with any certainty that it is partisan beliefs that led to the significant uprising regarding this policy. Hundreds of thousands of people disagreed with the governor on this policy, and it was the spotlight of national news for months up until his unsuccessful recall election. Why Wisconsin was a breeding ground for such a vast and harsh backlash when other states have implemented similar policies is also beyond the scope of this paper but, nonetheless, a very intriguing question.

There is without question room for more literature on the topic of Act 10 specifically and the local impacts it may have had. Biasi's piece seems to be the only literature that analyzes the

local effects on teacher quality.[36] However, none question whether the perceived beliefs driven by unions are backed up by what truly happened. This empirical research did not show such decreases in salaries, as was believed by many which may have been the result of union rhetoric. This has a significant effect locally because political framing can impact things like political choices, how taxpayer dollars are spent, and how policies are implemented. For example, Kaukauna used the freedoms Act 10 gave to administration to turn a deficit into a surplus and rehire teachers. If more districts had framed Act 10 as this sort of opportunity the negative connotations with the legislation may not be as severe and more districts would have followed Kaukauna's path. But, following the backlash getting behind the policy was a dicey move considering the potential harm it would have on administrator and teacher relationships. Future literature could also analyze more states than Missouri to compare to Wisconsin. An analysis of all state salaries could allow us to view if the changes in Wisconsin following Act 10 aligned with national trends at the time.

Public policy in the future can use this methodology as a gauge for the true effects of policies. Political rhetoric and framing of policies will not always fit the true impacts of a policy especially if an organization has substantial political clout. Public policies and their effectiveness are not easy to measure to begin with but, it can be suggested that future policies not be judged based off the rhetoric surrounding them. In the case of teachers' pay and teachers' unions it may be considered that unions negatively impacted the framing of the debate and struck unnecessary fear into teachers because their political strength was in jeopardy. The biggest takeaway from

[36] Biasi, Barbara. "Unions, Salaries, and the Market for Teachers: Evidence from Wisconsin." 2016. https://web.stanford.edu/~bbiasi/jmp.pdf (October 1, 2017).

this research is that before judging the merit of a policy based off political rhetoric the true impacts should be measured first.

Appendix A (Survey Questions)

This appendix displays a full list of survey questions. Teachers were asked to rate whether they strongly agreed or did not agree/did not care on the topic.

1. How many years have you been a teacher?

2. What is the highest level of education you have completed?

3. At what level do you currently teach?

4. How many students are enrolled in your school district?

5. If you chose to become a teacher in the last 7 years did any state politics impact it?

    5a. If so, please explain.

6. The current state budget proposal for funds to K-12 education will better education.

7. Changes in policies like Common Core have made me feel like I have less autonomy in the classroom.

8. Common Core has overall benefited the education of students.

9. Have changes in ability to collectively bargain impacted you?

10. Is teaching the only career you have had?

11. Were you a teacher when Wisconsin's Act 10 was passed in 2011?

12. If you answered yes to the previous question, have you seen changes in teachers' handbooks since 2011?

13. How much did your teacher's handbook change after Act 10?

14. How, if at all, have teacher/administrator relationships been impacted by state politics (ex. Act 10)?

15. The procedures for teacher performance evaluations are more satisfactory after Act 10.

16. I have more autonomy over my classroom after Act 10.

17. My job is less secure after Act 10.

18. Act 10 negatively impacted collective bargaining policies.

19. If there were positive impacts, please briefly describe what they are.

20. How greatly did Act 10 impact how much you pay for your benefits (ex. insurance/healthcare)?

21. Did Act 10 negatively impact your salary? (If you do not feel comfortable answering this question feel free to leave it blank.)

22. 8 years later, does Act 10 still impact your attitudes regarding state politics?

23. If yes, why? Please explain.

24. Were you ever a member of a teachers' association (union)?

25. Are you currently a member of a teachers' association (union)?

26. If you were or are a member of WEAC did you feel better represented because of it?

27. Teachers associations makes you feel like you have stronger political representation on the state level.

28. Teachers associations make for better training of teachers.

29. If you were a member of a teachers' union and chose to leave please explain what the biggest contributing factors were.

30. Please include any other opinions, comments, or relevant information to my research. If you would like to share your school district you could here as well.

Appendix B (Regression Results)

This appendix shows regression results for the five regression models corresponding with Figures 6 through 10. The variables are shown in the leftmost column. The first row for each variable has the coefficient, while the second row has the robust standard error in parentheses. Blank indicates that variables was not included in that model. The asterisks indicate statistical significance, with * denoting statistical significance at the 10% level, ** denoting statistical significant at the 5% level, and *** denoting statistical significance at the 1% level. The average salary for each year in each state was calculated using the coefficients and the average level of experience and then displayed in the figures.

	Figure 6	Figure 7	Figure 8	Figure 9	Figure 10
2009	-931.82***	-1298.38***	-1135.91***	-1150.31***	-1022.67***
	(45.76)	(61.02)	(53.39)	(53.05)	(84.90)
2011	2687.51***	1607.05***	1531.50***	1538.20***	1065.06***
	(47.74)	(63.81)	(55.89)	(55.65)	(93.29)
2012	3403.75***	2632.06***	2611.81***	2613.61***	1882.07***
	(48.65)	(64.71)	(56.69)	(56.47)	(96.00)
2013	4641.27***	3987.34***	4000.30***	3999.15***	2968.52***
	(49.62)	(65.87)	(57.65)	(57.47)	(98.29)
2014	5849.36***	5405.25***	5523.10***	5512.65***	4017.96***
	(50.15)	(67.09)	(58.62)	(58.50)	(100.95)
2015	5871.82***	6137.42***	6279.12***	6266.56***	4522.04***
	(50.61)	(67.73)	(59.12)	(59.03)	(102.55)
2016	7463.46***	7109.94***	7214.90***	7205.59***	5179.35***
	(50.72)	(68.32)	(59.51)	(59.45)	(103.64)
WI	6503.92***				
	(25.24)				
WI2009		6383.67***	4967.80***	3153.04***	3812.61***
		(62.71)	(52.52)	(62.47)	(87.34)
WI2010		5603.87***	4179.91***	2334.97***	2921.62***
		(67.30)	(57.57)	(66.60)	(99.72)
WI2011		7890.06***	6375.86***	4509.27***	5197.74***
		(68.25)	(57.80)	(66.85)	(105.07)
WI2012		7246.53***	6112.73***	4290.72***	4326.36***
		(70.96)	(60.04)	(67.60)	(112.53)
WI2013		6995.44***	5841.65***	4023.80***	3506.10***
		(73.67)	(61.90)	(68.80)	(115.92)
WI2014		6548.89***	5417.30***	3620.38***	2961.25***
		(75.01)	(62.37)	(68.64)	(115.42)
WI2015		5035.24***	3877.09***	2081.09***	1643.66***
		(76.12)	(63.39)	(69.50)	(114.07)
WI2016		6354.50***	5098.30***	3289.21***	2722.98***

		(76.43)	(62.90)	(68.97)	(116.26)
exp			758.12***	690.92***	
			(1.63)	(2.49)	
expWI				136.06***	
				(3.23)	
exp2009					608.93***
					(5.62)
exp2010					620.45***
					(5.96)
exp2011					658.24***
					(6.64)
exp2012					678.50***
					(7.08)
exp2013					702.22***
					(7.40)
exp2014					739.61***
					(7.84)
exp2015					759.85***
					(8.03)
exp2016					782.18***
					(8.16)
expWI2009					100.55***
					(7.17)
expWI2010					104.73***
					(7.93)
expWI2011					93.69***
					(8.49)
expWI2012					134.85***
					(9.48)
expWI2013					171.52***
					(9.89)
expWI2014					178.11***
					(10.17)
expWI2015					159.78***
					(10.09)
expWI2016					165.62***
					(10.31)
Intercept	39326.17***	39749.14***	30191.74***	31038.86***	31927.29***
	(35.10)	(43.73)	(40.57)	(44.54)	(61.99)
N	1,023,439	1,023,439	1,023,230	1,023,230	1,023,230
R-sq	0.101	0.102	0.367	0.369	0.372

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