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The role of firm age in the impact of right-to-work laws on job creation

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Abstract

In this paper, we investigate the effect of right-to-work (RTW) laws on the share of jobs among different firm age groups in Indiana and Wisconsin. Using synthetic control methods, we find that RTW laws negatively impact younger firms in Indiana while benefiting older firms. In contrast, RTW laws have no significant impact on the share of jobs in Wisconsin. These findings show that RTW laws affect businesses in different ways, depending on the industry and union presence. Policymakers should consider firms' age and local economic conditions when making decisions about these laws.

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1. Introduction

This paper provides new evidence on the impact of right-to-work laws on the distribution of jobs across firms of varying sizes. The literature highlights the significant role firms play in driving economic growth (Reynolds, Hay, and Camp, 1999). Here, we focus specifically on the right-to-work (RTW) law. RTW laws grant workers the liberty to decide whether they want to become members of a labor union within their workplace. Additionally, it allows employees in unionized environments the choice of whether to contribute financially to union dues or other membership fees necessary for union representation, regardless of their union membership status. As of now, 27 states have enacted right-to-work laws. In these states, such laws prohibit contractual agreements that mandate workers to become union members to secure or maintain employment. On the other hand, under certain conditions, workers in non-RTW states may be required to pay union fees as a condition of employment, even if they choose not to join the union.

The literature on the economic impacts of RTW laws has predominantly focused on labor market characteristics, such as unemployment rates and the sectoral distribution of jobs (Kalenkoski & Lacombe, 2006; Austin & Lilley, 2021). Additionally, some studies have explored their effects on broader economic outcomes, including creativity (Gondhalekar et al., 2023), Environmental, Social, and Governance (ESG) performance (Gondhalekar et al., 2020), and the conditions influencing their adoption (Mixon, 1994). Prior research also highlights that state-level policies can significantly influence firm behavior, particularly in border-sharing regions. Holmes (1998) finds that firms tend to cluster on the side of a state border with more business-friendly policies, such as RTW laws, suggesting sharp policy-driven differences in economic activity across neighboring states. Bartik (1985) similarly shows that unionization and labor regulations shape firm location decisions. These findings underscore the importance of institutional context and motivate our focus on how RTW laws affect firm dynamics across states, particularly in relation to firm age.

Young and old firms play distinct roles in the economy, with young firms serving as engines of innovation and job creation, while older firms provide stability and sustained employment (Reynolds, Hay, & Camp, 1999). These differences suggest that RTW laws may impact young and old firms differently. Young firms, which rely more on labor and flexible hiring, are especially affected by changes in labor laws. Weaker union influence can lead to lower wages and less job security, making it harder for young firms to attract skilled workers and grow (DeLeire & Levy, 2004). Young firms often operate with limited resources and constrained budgets, making them particularly sensitive to labor market dynamics. While lower unionization may reduce pressure to offer competitive wages, it can also lead to a less motivated or less secure workforce, potentially affecting productivity and innovation (DeLeire & Levy, 2004; Doucouliagos & Laroche, 2009). Furthermore, the diminished job security associated with RTW laws may contribute to higher employee turnover, increasing operational costs for young firms already managing scarce resources (Ellwood & Fine, 1987).

In contrast, older firms, which depend less on labor market flexibility, may benefit from weaker unions. Lower union influence can reduce costs and increase profits, helping these firms retain and create more jobs (Ellwood & Fine, 1987). Moreover, older firms often have better access to capital and resources to accommodate the impacts of the RTW laws. Young firms do not have this advantage as they are in the early stages of their business lifecycle (Doucouliagos & Laroche, 2009). This study explores how RTW laws affect young and old firms differently, filling a gap in existing research. The findings help policymakers understand these effects and make better decisions to support both types of firms while promoting economic growth and stability.

We use the Kauffman Indicators of Entrepreneurship dataset and employ a synthetic control approach to explore the effects of RTW laws on job creation, focusing on Indiana and Wisconsin, which passed RTW laws post-2010.

2. Method and Data

2.1. Synthetic Control Method

To estimate the effect of adopting right-to-work (RTW) policies on the share of jobs in a state, we make use of the Synthetic Control Method. Given the limited number of RTW adoptions and data constraints, we use the synthetic control methodology (Abadie & Gardeazabal 2003; Abadie et al. 2010, 2015). This quasi-experimental approach focuses on a specific RTW adoption as a case study, using data from non-treated states to create a plausible counterfactual for comparison.

When a state adopts RTW, it becomes the treated unit. Other states that did not adopt RTW but have available data serve as potential donors. From this pool, we select non-treated states to construct a counterfactual, allowing us to compare post-treatment changes in job creation. The synthetic control is a weighted average of these donor states, facilitating a comparison of changes in job creation in the synthetic control relative to the treated state.

The credibility of the synthetic control relies on careful donor selection. This selection is data-driven, using indicator variables that predict the outcome of interest, in this case, job creation. These indicators include pre-treatment values of the outcome. However, including all pre-treatment outcome values must be done carefully to avoid rendering other pre-treatment covariates irrelevant (Kaul et al. 2019). The weights in the synthetic control are chosen to closely resemble the treated state in terms of pre-treatment outcomes. The synthetic control is constructed to track job creation in the treated state during the pre-treatment period, before RTW adoption.

Donor weights are chosen by minimizing differences between predictor variables, each with different levels of importance to the outcome (V-weight). We use a nested method to construct our V-weights, reducing interpolation bias by restricting the donor pool to states with characteristics similar to the treated state (Abadie et al. 2015).

2.2. Data

We utilize data from the National Conference of State Legislatures to identify states that adopted right-to-work (RTW) policies post-2010 due to data constraints. Synthetic control analysis requires sufficient pre and post-treatment data. Outcome variables are available from 2001, making post-2010 adoptions relevant. We identify 22 states that adopted RTW in this period and five post-2010: Indiana (2012), Wisconsin (2015), West Virginia (2016), Kentucky (2017), and Michigan (2012). Michigan is excluded due to its 2023 RTW repeal, and West Virginia and Kentucky due to insufficient post-treatment data. Thus, we focus on Indiana and Wisconsin. We use the Kauffman Indicators of Entrepreneurship as our outcome variable, specifically the job creation share, covering firms aged 0-1, 2-3, 4-5, 6-10, and over 11 years. We analyze these age groups separately.

Constructing a synthetic control depends on selecting indicator variables. We include income, population, price index, employment, and economic freedom from the Bureau of Economic Analysis (BEA) and Fraser Institute. Lagged outcomes are typically included as

predictors, but including all pre-treatment years can render other covariates irrelevant (Kaul et al. 2019). Therefore, we include lagged values for specific years only.

To build donor pools, we restrict them to states with characteristics similar to the treated states to reduce interpolation bias and overfitting. We exclude states that adopted RTW before or after the treatment year, removing 22 states that adopted RTW before 2010. For each treated state, we exclude other treated units from the donor pool. States lacking data for any pre-treatment indicator variable are excluded, resulting in roughly 20-21 donor states for each case.

3. Results

We report on two sets of synthetic control analyses to observe the effect of RTW adoption on the share of jobs in states, including robustness checks to validate the findings. We begin with the 2012 Indiana treatment. For each firm age group, a separate synthetic control was constructed using an independently selected weighted combination of donor states that best matched Indiana's pre-treatment trends. For illustration, the synthetic control for Indiana (for firms aged 0-1 years) is a weighted average of Connecticut (4.4%), Maryland (0.3%), Minnesota (25.9%), Missouri (21%), Ohio (31.5%), and Oregon (17%). Different donor compositions were used for other firm age groups based on the best pre-treatment fit. Figure 1 shows actual and synthetic Indiana job share trends across all firm age groups.

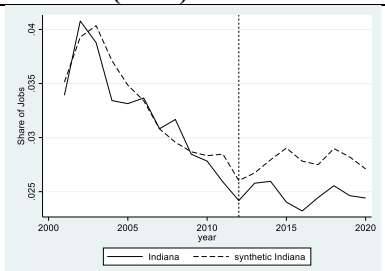
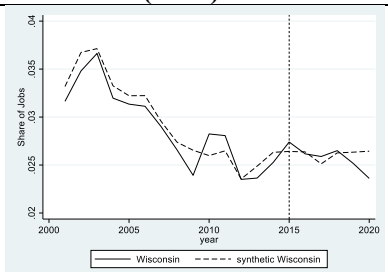
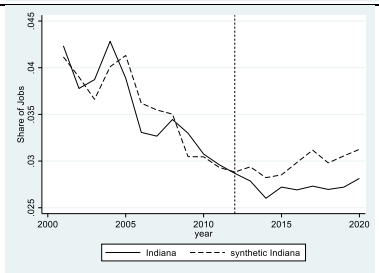
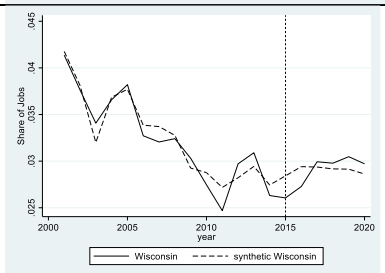
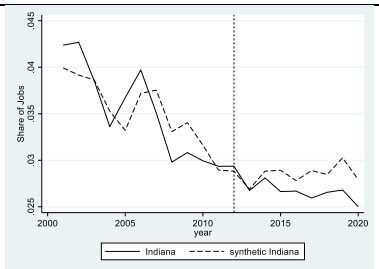
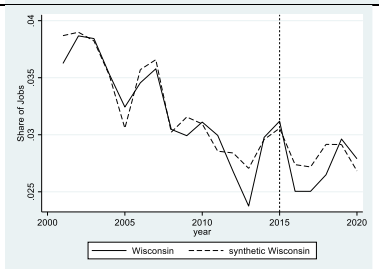
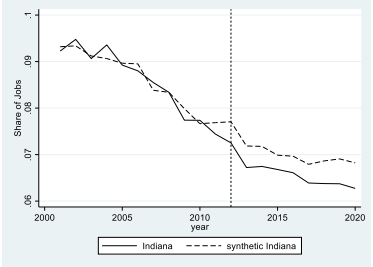
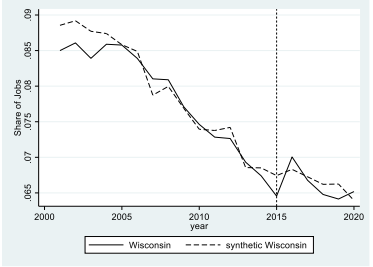
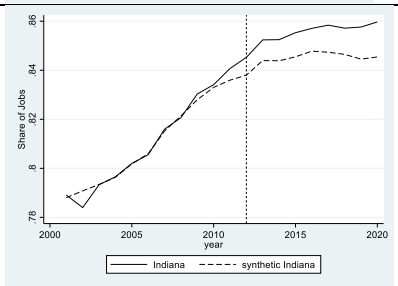
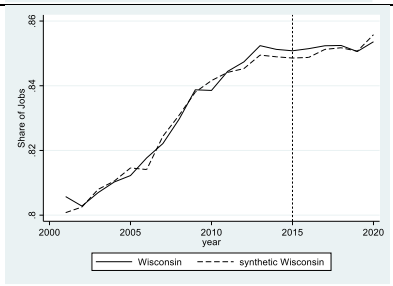
The synthetic Indiana does not perfectly match actual Indiana through 2012 for firms aged 0-5 years, but the match is comparable for firms aged 6+ years. Post-treatment, Indiana's share of jobs is lower than synthetic Indiana for younger firms but higher for firms aged 11+ years. This suggests a negative RTW impact on young firms and a positive impact on older firms, possibly due to industry share, unionization rates, business perception, and regulations. In 2024, manufacturing jobs account for 16.23% of nonfarm jobs in Indiana, with 8.0% union membership (BLS Data, 2023). To validate the results, we ran a placebo test, treating each donor state as the treated unit and recording the ratio of post-treatment RMSPE to pre-treatment RMSPE. If Indiana's ratio is large compared to donor states, it suggests a meaningful post-treatment change in the share of jobs, not driven by noise. Our results confirm this, as Indiana's RMSPE ratio is among the highest in the distribution, indicating a statistically significant difference in job share trends following RTW adoption.

Wisconsin adopted RTW in 2015. Similar to the Indiana case, we constructed a separate synthetic control for each firm age group. The synthetic control for Wisconsin is a weighted average of Connecticut (1.9%), Delaware (20.4%), Minnesota (16.4%), and Ohio (61.4%). Figure 1 presents the actual versus synthetic trends by firm age group. Across all groups, Wisconsin does not outperform donor states based on the post-pre RMSPE ratio, indicating no significant RTW law effect on job share. This is likely due to Wisconsin's industry composition. In 2024, manufacturing jobs account for 14.19% of nonfarm jobs, with 7.4% union membership (BLS Data, 2023), lower than Indiana. Therefore, RTW had a noticeable impact in Indiana, particularly on older firms, while Wisconsin saw no significant change, likely due to differences in industry composition and unionization rates.

Some donor states in our synthetic control, such as Ohio for Indiana and Minnesota for Wisconsin, share borders with the treated states. This raises the possibility of cross-border spillover effects, as employment outcomes may not shift abruptly at state lines. While the synthetic control method does not explicitly account for such geographic spillovers, we conducted a robustness

check by excluding neighboring states from the donor pool and found similar results. These results are available upon request.

Figure 1: Trends in Share of Jobs in Treated State and Synthetic Unit

	Indiana (2012)	Wisconsin (2015)
Panel a: Firm Aged 0 to 1 Years		
Panel b: Firm Aged 2 to 3 Years		
Panel c: Firm Aged 4 to 5 Years		
Panel d: Firm Aged 6 to 11 Years		
Panel e: Firm Aged 11 Years or More		

4. Conclusion

This study examines the impact of right-to-work (RTW) laws on job shares across different firm age groups in Indiana and Wisconsin. Using synthetic control methods and the Kauffman Indicators of Entrepreneurship, we find that RTW laws significantly negatively affect younger firms in Indiana, while older firms benefit. In contrast, Wisconsin shows no significant change after RTW adoption, likely due to differences in industry composition and unionization rates. The contrasting results between Indiana and Wisconsin also reflect the broader reality that state policy adoption is not random. States differ in their political, economic, and institutional environments, all of which can influence both the likelihood of adopting RTW laws and the resulting firm dynamics. These underlying differences likely contribute to the variation in outcomes we observe and should be considered when interpreting the causal impact of such policies.

A key limitation of our study is that it does not account for industry-level variation, which is important because RTW laws are unlikely to affect all sectors uniformly. Differences in union density, labor intensity, and regulatory environments mean that some industries (e.g., manufacturing and construction) may experience stronger effects than others. Our dataset does not include industry-level breakdowns, which limits our ability to assess these differential impacts. Future research should incorporate industry-specific data to better capture the nuanced effects of RTW laws across sectors.

Our findings highlight the importance of considering firm age and regional characteristics in evaluating RTW legislation. Policymakers should consider targeted support for younger firms to mitigate potential negative effects on job creation and growth.

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