# Congress and the Political Economy of Daylight Saving Time, 1918–1985

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*Objective.* Daylight Saving Time (DST) is a government policy regulating the timing of daylight during the summer months. While DST's existence is taken for granted in modern American life, the adoption and expansion of the policy was heavily debated, with strong opposition that persists to the present day—a full century after its inception as a World War I energy-efficiency program. After reviewing the history of DST, we analyze the political economy of congressional vote choice on DST policy. *Method.* We analyze votes of members of Congress on all DST-specific roll calls between 1918 and 1985, assessing whether members voted to expand or reduce DST. *Results.* We find that ideology, party, geographic location, and the portion of a constituency made up by farmers all strongly predict member support for adopting and expanding DST—and that each of these effects is durable over time. Digging deeper, we find significant evidence for local representation on DST votes, as constituency-specific factors are more strongly associated with congressional vote choice than partisanship or general ideological preferences. *Conclusion.* Overall, our results provide an original empirical assessment of the factors that drove the adoption and revision of a contentious and significant government policy that endures today.

Daylight Saving Time (DST) has been a normal part of everyday life in the United States (and around the world) since the late-1960s. The goal of DST is to preserve as much daylight as possible during the typical waking hours in the summer months—clocks are shifted ahead an hour, so that an hour of daylight very early in the morning (when most people are still asleep) is shifted to the evening (when people are done with work and home with their families or enjoying leisure activities). DST was thus once known as "Summer Time," and the routine of adjusting clocks follows the pattern of "spring ahead, Fall back"—that is, clocks are shifted ahead an hour at some point in the spring and back an hour at some point in the fall. Since 2007, following the adoption of the Energy Act of 2005, the start and end dates of DST are the second Sunday in April and the first Sunday in November.

Yet, DST remains controversial. A variety of interests support or oppose DST. For example, farmers have generally opposed DST, as losing an hour of daylight in the morning disproportionately impacts the traditional "early rise" agricultural work pattern. Parents with young children often raise safety concerns regarding DST, as their children head off to school in the "artificially dark" early morning, which could yield increased accidents and injury on dark roadways. Merchants, on the other hand, have generally favored DST, believing that an extra hour of daylight in the evening leads to more commercial activity. And a range of supporters have argued that DST lowers energy consumption—as people are awake and active an extra hour during daylight rather than in darkness—which reduces

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lighting and heating usage. These interest disputes (and other events) have led Congress to tinker with DST provisions since the early-1970s. Such tinkering has involved shortening or lengthening the time parameters of Summer Time—and, once, even making DST a year-round endeavor.

As DST is a contentious topic and affects people's lives, it has generated a fair amount of academic research. Economists have taken the lead, studying the effects of DST on energy usage (Kotchen and Grant, 2011), safety (Coate and Markowitz, 2004; Sullivan and Flannagan, 2002; Coren, 1996a, 1996b), health (Kantermann et al., 2007), economic coordination (Hammermesh, Myers, and Pocock, 2008), and stock market performance (Kamstra, Kramer, and Levi, 2000, 2002; Pinegar, 2002). Political scientists, on the other hand, have virtually ignored the political aspects of DST, such as the determinants of DST legislation. Only Shipan (1996) has examined congressional vote choice on DST, analyzing a single roll call in 1986—and only as a means for understanding whether Senate committee jurisdictions matter.[1]

We fill this gap in the political science literature by examining the determinants of voting in the U.S. Congress on all substantive measures dealing with DST across American history. Our analysis covers more than 20 legislative measures spanning much of the 20th century, from the initial adoption of DST during World War I (and its subsequent repeal over President Woodrow Wilson's veto a year later), through the first permanent DST law in 1966, up to the most recent revision attempts and extensions. We examine how member ideology, partisanship, geographic location, and constituency interests affect congressional vote choice. Our results allow us to better understand the political economy of DST and uncover the significant factors that have determined legislative outcomes.

We find evidence that conservative members (and Republicans) have opposed expansive DST policy more than liberal members (and Democrats). But we also find that ideology or partisanship only go so far in explaining vote choice on DST. That is, members of Congress also strongly respond to and represent their local interests, controlling for ideology or party—members whose constituencies are more affected by DST due to geography are less supportive, while those whose districts or states contain sizeable farmer populations are also less supportive. We further explore these results by analyzing variation across chambers, party, and time, and show strongly consistent findings. The strongest consistent predictor of vote choice is actually a targeted constituency measure, the share of the district or state population made up by farmers, which outperforms general preference measures such as NOMINATE. These findings allow us to describe DST voting in Congress across the 20th century as a quintessential example of meaningful constituent representation.

## A Short History of DST Legislation in the U.S. Congress

We first provide a short history of DST legislation in the U.S. Congress.[2] We do this for three reasons. First, the legislative history of DST is not very well known. DST has, in fact, gone through some considerable ups and downs in Congress, and laying out the general facts of how DST emerged and has changed over time is a useful endeavor. Second, understanding the evolution of DST, and how members of Congress have approached revising or extending it (and, in one case, repealing it), will allow readers to better understand the content of the roll-call votes that we employ in our data set. And third, a better understanding of the

[1] Adams (1981) examines DST adoption at the state level, before the Uniform Time Act of 1966 was passed, via a demand-side analysis.

[2] We rely mainly on Downing (2005) and Prerau (2005) for the material in this section.

history of DST policy will help substantiate why we believe certain factors influenced DST voting and why we ultimately choose to include them empirically.

While historians often identify Benjamin Franklin as the first public proponent of daylight saving—via his essay "An Economical Project"—the first modern advocate was British builder William Willett, who lobbied tirelessly for daylight saving legislation. In 1907, he self-published a pamphlet, "Waste of Daylight," that called for time to be advanced in 20-minute increments in April and then reversed in a similar fashion in September. Willet—like many others later—believed this April–September shift would save energy by reducing lighting costs. Unfortunately, Willett died of influenza in 1915, before he was able to persuade British politicians to adopt his system. Shortly after his death, however, his idea gained momentum. As Europe found itself embroiled in World War I, coal—which was burned to produce electricity—grew short and energy was at a distinct premium. European leaders quickly saw DST as a way to save energy and gain an advantage on their enemies. In April 1916, Germany became the first nation to adopt DST. Britain became the second a month later and a number of other European nations quickly followed suit.

The United States adopted DST on March 19, 1918, also as a wartime measure to save electricity. More generally, DST was part of the Standard Time Act (P.L. 65–106), which created "standard time" (i.e., four distinct time zones—Eastern, Central, Mountain, and Pacific) as well as seven months of Summer Time or "War Time" (as it was known given the World War I context). From the start, interests lined up on both sides; farmers were opposed while the local chambers of commerce were in favor. Wartime pragmatism won out and the Daylight Standard Time Act passed with a huge majority (253–40) in the House and by voice vote in the Senate (see Online Appendix Table A1).[3]

Following the end of World War I, farmers built up their lobbying organizations in Washington, and the Farm Bloc was at its zenith (see Hanson, 1991). As a result, farmers used their influence to push for a repeal of the DST provision of the Daylight Standard Time Act. Despite opposition from President Woodrow Wilson, the momentum for repeal was too strong. Without the wartime concern for saving energy, the organized farming interests won out. The House and Senate each passed the repeal legislation by large majorities, 232–122 and 41–12, respectively.[4] President Wilson vetoed the measure, and both chambers easily overrode him, 223–101 and 57–19, respectively.[5] (See Online Appendix Table A2 for a partisan breakdown of these four votes.)

DST was thus dead and would remain dead at the federal level for more than four decades, other than a short period during World War II—between 1942 and 1945—when "War Time" was implemented again as an energy-saving measure.[6] In the postwar years, as Burdick (2017) writes, "daylight saving was a free-for-all; cities, counties, and states could follow it on whatever schedule they liked, or not follow it at all." As Table 1 indicates, in 1955, some of the largest cities in the U.S. had very different time schedules: two variants of DST, as well as regular year-round standard time. Consider a truck driving goods from Atlanta to Boston in October 1955. The driver would pass repeatedly back and forth through different time regimes, needing to reset his watch every other hour, without ever leaving his time zone.

[3] *Congressional Record*, 65th Congress, 2nd Session (March 15, 1918): 3583; (March 16, 1918): 3595.

[4] *Congressional Record*, 66th Congress, 1st Session (June 18, 1919): 1335; (August 1, 1919): 3510.

[5] *Congressional Reco*rd, 66th Congress, 1st Session; (August 19, 1919): 3980; (August 20, 1919): 4009. The Act for the Repeal of the Daylight Saving Law thus went into effect on August 20, 1919 (P.L. 66-40).

[6] The passage of the National Security and Defense by Establishing Daylight Saving Time Act was adopted on January 20, 1942 (P.L. 77-403). There were no recorded roll-call votes in either chamber. The Act to Provide for the Termination of Daylight Saving Time was adopted on September 25, 1945 (P.L. 79-187). Again, there were no recorded roll-call votes in either chamber.

TABLE 1

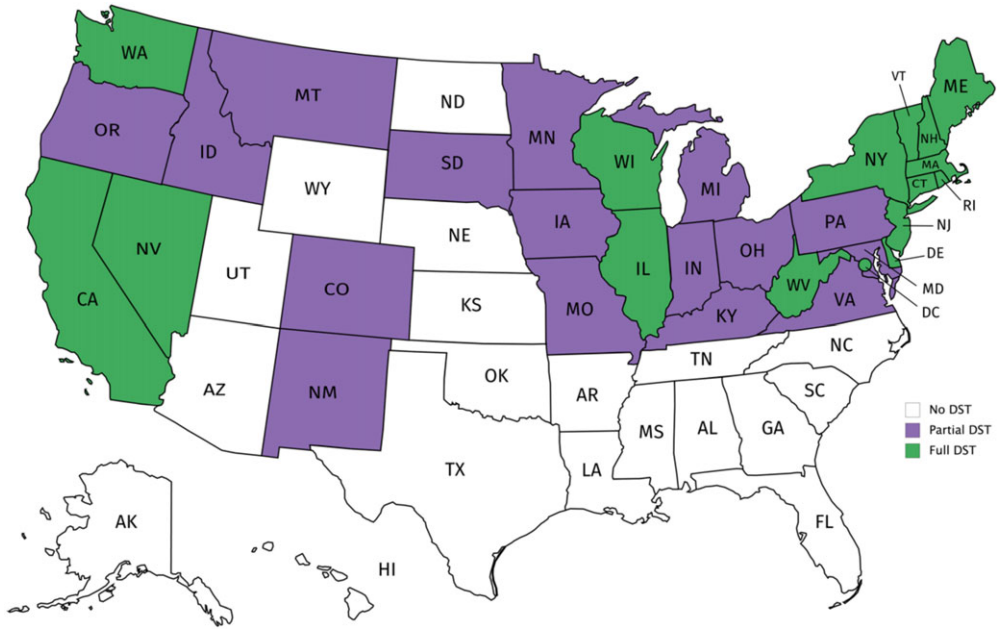
Time Observed in Major U.S. Cities, 1955

| Daylight Saving Time | | | |
|---|---|---|---|
| May Through September | May Through October | Year Round Standard Time | |
| Baltimore | Boston | Atlanta | Memphis |
| Cleveland | Buffalo | Birmingham | Milwaukee |
| Los Angeles | Chicago | Cincinnati | Minneapolis |
| Louisville | Hartford | Dallas | New Orleans |
| Montreal | New York | Denver | Omaha |
| St. Louis | Philadelphia | Detroit | Salt Lake City |
| Washington, DC | Pittsburgh | Houston | Seattle |
| | Providence | Kansas City | Portland, OR |

SOURCE: Prerau (2005:163).

FIGURE 1

DST Policy by State, 1965




SOURCE: "Congress Attacks Jumble: Nationwide Daylight Saving?" *Christian Science Monitor*, March 19, 1966, p. 1.

From an organizational perspective, this decentralization was chaotic—creating significant coordination problems. The communications and transportation industries were especially affected, and transportation executives were on the forefront of lobbying Congress for a new national standard. By 1965, DST was operating fully in 15 states and in parts of 16 others. Figure 1 illustrates this distribution—the Northeast was a full subscriber to

DST, with much of the Mid-Atlantic, Midwest, and West on board at least partly. The traditional South, outside of Virginia, was the major holdout.

As more of the country was trending toward uniformity, a similar sentiment was felt on Capitol Hill. And President Lyndon Johnson was supportive as well. In the 89th Congress (1965–1966), multiple DST bill were introduced, and the issue was debated in earnest. Finally, Congress approved a measure that would institute DST for six months of the year, spanning the last Sunday in April through the last Sunday in October. While some opposition still existed, the House passed the measure easily—approving the conference report 282–91—while the Senate adopted it via voice vote (see Online Appendix Table A2).[7] And on April 13, 1966, President Johnson signed the Uniform Time Act (P.L. 89-387) into law.[8]

DST was now a permanent fixture in the United States. And DST, as per the guidelines of the Uniform Time Act, was stable into the early-1970s. Then a shock occurred—the OPEC oil embargo of 1973–1974.[9] OPEC used the embargo as a way to punish nations that it believed supported Israel in the Yom Kippur War, which began when an Arab coalition (led by Egypt and Syria) led a surprise attack on Israel on Yom Kippur (October 6, 1973). As a result of the embargo, the United States—one of the nations targeted by OPEC—suffered its first ever peacetime energy crisis. U.S. leaders quickly sought emergency measures. One that was floated—and had been floated before, without much support—was the implementation of DST on a year-round basis, as it had been in World War II. Advocates of year-round DST argued that the continuation of standard time, in the face of the oil crisis, would lead to unnecessary energy consumption. Before long, the oil crisis worsened—heating oil prices rose considerably, gasoline prices skyrocketed, and gasoline shortages became commonplace—and, as a result, support for year-round DST grew.

Six weeks after the embargo began, Congress was ready to act. On the table was a proposal that would institute year-round DST for a two-year trial period. The new year-round DST would begin on January 6, 1974, and last until October 26, 1975 (the end of the regular DST period). The proposal passed 311–80 in the House and (a week later) 68–10 in the Senate (see Online Appendix Table A4).[10] On December 15, 1973, President Richard Nixon signed the Emergency DST Energy Conservation Act (P.L. 93-182) into law.

Not long after the Emergency DST went into effect, public opinion began to shift against it.[11] Parents of school-age children were upset, as their children often had to leave for school in the dark. And when several children were killed in traffic accidents early in the winter, opponents of the Emergency DST quickly blamed it on the legislation. In addition, early reports of energy saving were quite low, which disappointed supporters and made them question the efficacy of the legislation. The final straw, however, was the

[7] *Congressional Record*, 89th Congress, 2nd Session (March 30, 1966): 7222–23; (March 29, 1966): 7005.

[8] The Uniform Time Act did contain a provision that allowed a state to exempt itself (or opt out) by passing a state law. By March 1971, four states-–Arizona, Hawaii, Indiana, and Michigan-–would do just this. Michigan would reverse itself and go on DST in 1973. Indiana would follow in 1986.

[9] See Hamilton (2013) for a useful summary.

[10] *Congressional Record*, 93rd Congress, 1st Session (November 27, 1973): 38053; (December 4, 1973): 39537. An amendment was offered in the Senate to limit the trial period to one year, but it failed 31–51. *Congressional Record*, 93rd Congress, 1st Session (December 4, 1973): 39528.

[11] Opinion in Congress was also shifting. On March 4, 1974, Sen. Robert Taft, Jr. offered an amendment to the Fair Labor Standard Amendments, which was under consideration in the Senate at that time. If the amendment was adopted, and the underlying amended bill passed, the Emergency DST would be terminated on the first Sunday after the date of enactment. Sen. John Pastore (D-RI) moved to table Taft's amendment, which was successful by the relatively slim margin of 49–43. *Congressional Record*, 93rd Congress, 2nd Session (March 7, 1974): 5715–16.

end of the oil embargo, which OPEC lifted on March 18, 1974. Thus, while the United States might face a long-term energy issue, the short-term problem was gone. As a result, Congress sought to follow a Department of Transportation recommendation and scale back the Emergency DST measure—an amendment was offered that would return all of January and much of February 1975 to standard time. This would in effect provide more daylight in the morning during the darkest winter months, but also give the country a trial with an eight-month DST (from the last Sunday in February through the last Sunday in October). The House adopted the amendment almost unanimously (383–16), while the Senate approved it by voice vote (see Online Appendix Table A5).[12] On October 5, 1974, President Gerald Ford signed the amendment into law (P.L. 93-434).

On April 27, 1975, the Emergency DST Energy Conservation Act expired, and the Uniform Time Act's provisions were back in force. However, the eight-month DST trial in 1975 was very well received and led some in Congress to seek a permanent change. Sen. Adlai Stevenson (D-IL) proposed such a bill (S. 2931) on February 2, 1976, which would have extended DST from the second Sunday of March though the second Sunday of October (for 8.25 months in total), for a two-year trial. The bill would also direct the Secretary of Transportation to report to Congress (by July 31, 1977) on the operation of this Act, including the effects on energy use and the safety of children traveling to and from school. The Senate debated the measure, and an amendment was offered by Sen. Wendell Ford (D-KY) to bring the DST period down to five months (from the last Sunday in April to the last Sunday in September). It failed 31–62. A second amendment was offered by Sen. Robert Dole (R-KS) to bring the DST period down to seven months (from the second Sunday in March to the second Sunday in October). This was adopted 48–45. The amended bill then passed 70–23 (see Online Appendix Table A6 for these votes).[13] S. 2931, as amended, was then sent to the House and referred to the Committee on Interstate and Foreign Travel. The legislation would go no further, however, as the House committee took no action.

In 1981, lengthening the DST period was pursued again. This time, the House took the lead. The Energy Conservation Daylight Saving Act (H.R. 4437) would have amended the start date of the Uniform Time Act, changing it from the last Sunday of April to the first Sunday of March. Thus, the DST period would be increased to almost eight months. Sen. Thomas Hartnett (R-SC) offered an amendment that would have allowed states to exempt themselves from the bill's provisions. It was defeated 170–242, which meant that the bill would truly be uniform across the country. The House then passed the bill 243–165. H.R. 4437 was then sent to the Senate and referred to the Committee on Commerce (see Online Appendix Table A7 for these votes).[14] The legislation would go no further, however, as the Senate committee took no action.

In 1983, the House again took the lead. And the measure was the same as the one in the previous Congress: H.R. 1398, the Energy Conservation Daylight Saving Act, would have amended the start date of the Uniform Time Act, changing it from the last Sunday of April to the first Sunday of March. The DST period would thus be increased to almost eight months. Sen. Dan Coats (R-IN) offered the same amendment that Sen. Hartnett did in the previous Congress, which would have allowed states to exempt themselves from the

[12] *Congressional Record*, 93rd Congress, 2nd Session (August 19, 1974): 29002; (September 30, 1974): 32925.

[13] *Congressional Record*, 94th Congress, 2nd Session (February 25, 1976): 4416; (February 25, 1976): 4417; (February 25, 1976): 4417.

[14] *Congressional Record*, 97th Congress, 1st Session (October 28, 1981): 25719; (October 28, 1981): 25720–21.

bill's provisions. Unlike the Hartnett amendment, however, the Coats amendment passed 221–187. And unlike H.R. 4437 from the previous Congress, H.R. 1398 (as amended) would go down to defeat 199–211 (see Online Appendix Table A8 for these votes).[15]

In 1985, Congress tried yet again to expand DST. But unlike 1976, 1981, and 1983, this time there was considerable momentum for a change. For example, the business community—led by convenience stores, fast-food companies, makers of barbeque grills, and candy manufacturers—was part of a large DST lobbying coalition. And President Ronald Reagan also voiced support for a DST extension. The House moved first, considering a bill (H.R. 2095, the Daylight Saving Extension Act) introduced by Rep. Edward Markey (D-MA), which would have amended the Uniform Time Act of 1966 to start DST on the first Sunday of April (rather than the last Sunday of April) and to end it on the first Sunday of November (rather than on the last Sunday of October). Thus, DST would now cover seven months. On October 22, 1985, the House passed H.R. 2095 by the comfortable margin of 240–157. The bill was then sent to the Senate and referred to the Committee on Commerce—where it sat deep into 1986. The chief advocate in the Senate, Sen. Slade Gorton (R-WA), then decided to bypass the committee by offering the bill as a rider to the Federal Fire and Control Appropriations Act (S. 2180), a relatively uncontroversial measure. However, gauging the support of the DST lobbying coalition and his Senate colleagues, Gorton decided to reduce the proposed extension by one week, shifting the end date from the first Sunday in November to the last Sunday in October (thus matching the current DST end point).[16] On May 20, 1986, Sen. Bob Dole (R-KS) moved to table Gorton's amendment, which failed 36–48 (see Online Appendix Table A9 for these votes).[17] The amendment was then tacked on to S. 2180, which passed easily in both chambers. On July 8, 1986, President Reagan signed into law the Federal Fire and Control Act (P.L. 99-359), which increased the period of DST by three weeks.

Thus, beginning in 1987, DST covered nearly seven months, from the first Sunday in April through last Sunday in October. This lasted until the end of the George W. Bush Administration, when an additional extension was made. As part of the Energy Policy Act of 2005, DST would extend from the second Sunday in March through the first Sunday in November. This would increase DST by roughly four to five weeks.[18] The extension into November was pushed by Sen. Michael Enzi (R-WY) and Rep. Fred Upton (R-MI), based on lobbying from candy manufacturers and concerned parents, who wanted one more hour of daylight to allow children to go trick-or-treating on Halloween. No separate votes were had on the DST provision.[19]

Since 2007, then, DST extends from the second Sunday in March through the first Sunday in November. This is the prevailing status quo. Recently, state interests began forming on the issue—to potentially effect change (see Burdick, 2017). Interestingly, the

[15] *Congressional Record*, 98th Congress, 1st Session (July 14, 1983): 19156; (July 14, 1983): 19157.

[16] As Prerau (2005:208) notes: "[Gorton's] maneuver greatly disappointed the candy manufacturers, who had wanted DST on Halloween, but the rest of the Daylight Saving Time Coalition was more concerned with the three-week spring extension."

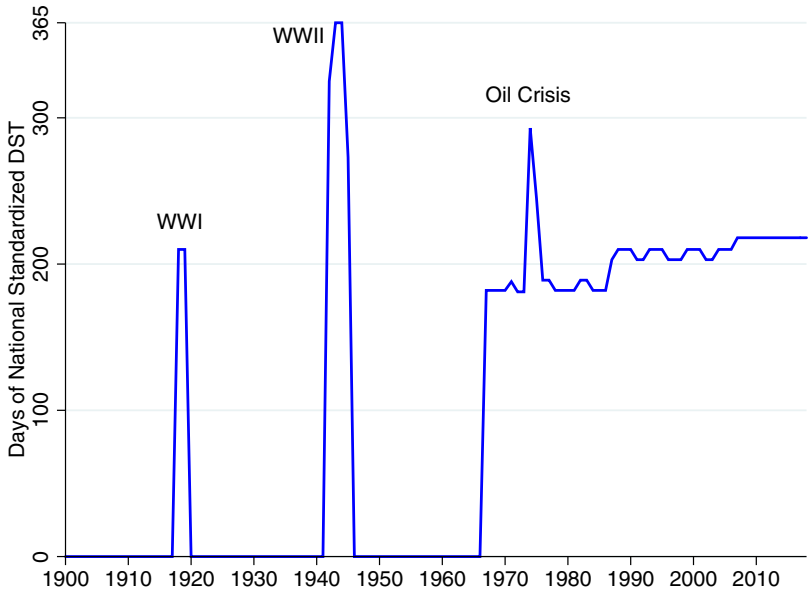
[17] *Congressional Record*, 99th Congress, 1st Session (October 22, 1985): 8938; 2nd Session (May 20 1986): 11279.

[18] In years when April 1 falls on Monday, Tuesday, or Wednesday, the change leads a DST period that is five weeks longer; in years when April 1 falls on Thursday, Friday, Saturday, or Sunday, the change leads to a DST period that is four weeks longer.

[19] The Energy Policy Act (H.R. 6) itself passed in the House on April 21, 2005 on a 249–183 vote. It passed in the Senate on June 28, 2005 on an 85–12 vote. A conference committee was created to iron out the differences. The conference bill was passed in the House on July 28, 2005 on a 275–156 vote, and passed in the Senate on July 29, 2005 on a 74–26 vote. On August 8, 2005, President George W. Bush signed it into law (P.L. 109-58).

FIGURE 2

Days of Standardized Daylight Saving Time in the United States




inconvenience of changing time twice a year has driven the modern opposition to DST. And this has ironically led to new proposals. Recently, Senator Marco Rubio (R-FL) and Representative Vern Buchanan (R-FL) introduced identical bills in the Senate and House to shift the country to year-round DST.[20] This throwback initiative (to the Emergency DST of the early-1970s) would solve the problem of time changes and remove DST from active consideration by effectively making it permanent. To provide a visual summary of all of the congressional changes on DST over time, we refer the reader to Figure 2, which illustrates the number of days of DST since the policy's initial inception during World War I.

## Expectations Drawn from Qualitative Analysis

Our review of the history, both as presented here and in greater detail than we may recapitulate, leads us to believe that a variety of factors drove congressional behavior on DST policy in the 20th century. We focus on the votes of individual members of Congress on specific proposals that reach the floor. Thus, we generate expectations regarding member behavior. A typical starting point for explaining congressional vote choice is with members'

[20]On March 14, 2018, during the 115th Congress, Rubio and Buchanan first introduced the Sunshine Protection Act (S. 2537 and H.R. 5279). On the same day, Rubio also introduced the Sunshine State Act (S. 2536), which requested that Congress provide Florida for an exemption to go to year-round DST. In introducing S. 2536, Rubio was representing the Florida Legislature, which voted overwhelmingly in support of year-round DST legislation (103–11 in the Florida House, 33–2 in the Florida Senate). In a press release, Rubio outlines a variety of potential positive effects for the nation in going to year-round DST; see ⟨https://www.rubio.senate.gov/public/index.cfm/press-releases?ID⟩ = FE3C7A71-E17A-4406-8D2D-BD615C8D3694. S. 2537 and H.R. 5297 both died in committee. On March 6, 2019, during the 116th Congress, Rubio and Buchanan reintroduced the legislation (S. 670 and H.R. 1556).

revealed (or "induced") preferences on basic ideological questions. We have reason to believe from the historical record that conservatives (and Republicans) were less supportive of DST. That said, this is simply a general tendency, and neither ideology nor party provide a guarantee of support or opposition. In fact, Republicans and Democrats have each favored DST expansion and contraction at different points in the 20th century. This implies that other factors may also have explanatory power.

The most consistent organized interest over time was farmers. Farmers were numerous and politically organized in strong opposition both to the establishment of DST and then to its expansion after the initial six-month standardized system was put into place. We should expect then that members of Congress who served as faithful representatives of their constituents—or simply members who were mindful of the electoral consequences of angering politically organized and powerful local interests—should have been more favorable to DST the less agrarian their district or state was.

Finally, one recurring issue regarding DST is its actual, day-to-day physical effects. For example, people have expressed concerns regarding how well illuminated roadways and walk paths are during early morning commutes. This sort of concern goes to the heart of DST, which has been an effort to manipulate sunlight. It does not achieve this science-fictional feat directly, but rather changes the human schedule around when that sunlight can be expected. This invokes geography, however, since where and when sunlight illuminates are geographic questions that vary east to west in the United States. Thus, if people are concerned about DST's actual physical effects, and those physical effects vary, we expect that congressional votes in support of expanding DST will vary too—based on how a geographic location (district or state) is affected by daylight shifting. We also expect that it may have taken time and experience—such as the accidents discussed in the preceding section—to learn these localized effects.

## Data and Measures

To conduct our analysis of the determinants of DST policy in Congress, we collect all roll-call votes in congressional history that were explicitly and primarily about DST, including final-amendment votes in addition to final-passage votes. In total, there were 21 such roll calls. The first of these was in 1918 (the 65th Congress) and the most recent was in 1986 (the 99th Congress).[21] This is not an exhaustive set of DST votes for several reasons. First, we do not include votes for larger bills that may have tangentially affected DST (like the Energy Policy Act of 2005) or modified it as a minor provision of omnibus legislation (like the Federal Fire and Control Act of 1986). Second, we consider only national DST policy, and thus exclude some votes about DST in Washington, DC. Third, we exclude purely procedural votes on DST-related bills that had no DST policy impact on their own. Finally, we are unable to include votes that did not receive a recorded roll call, which was the case for some votes exclusively about DST.

For each of the 21 roll calls, we take the associated vote matrix using the Voteview system (Lewis et al., 2017) and stack them into a single data set organized with a member-vote observational unit. Twice in our data set, a roll call in the Senate matched a roll call in the House identically (the 1919 repeal of DST and the subsequent override of President

[21]Admittedly, this is a long period of time for a single analysis. While we assume that there is a single data-generating process for these votes, we accept that this is possibly a strong assumption. Thus, we also analyze decades separately to show how the process was changing, if at all. The results of these separate analyses are presented in Figure 6.

Wilson's veto), and so we combine these votes into a single bicameral roll call, reducing our total number of unique roll calls to 19.[22]

Our dependent variable is **Pro-DST Vote**, which is a "1" when the member of Congress voted for the side that would result in the most expansive DST, and a "0" otherwise. For final-passage votes, we compare the proposal to the status quo. For example, in a proposal to create DST when none exists, a vote for the bill is coded as Pro-DST, while a vote against that bill is coded as not Pro-DST. However, votes for a proposal to reduce an existing DST (e.g., from six to five months per year) are counted as not Pro-DST.

For amendment votes, we compare the proposed amendment to the underlying bill being amended. Consider, for example, a case in which the status quo is six months of DST and a bill is proposed to raise it to eight months. An amendment introduced to change "eight months" in the proposed bill to "seven months" would be anti-DST as it is voting for a reduced amount of time relative to the legislation if the amendment vote fails. Ultimately, a vote for the underlying bill (as amended to a seven-month DST) is coded as Pro-DST, as it would raise DST from the six-month status quo. This sequence roughly matches the Senate's 1976 legislative process on DST. In total, we analyze 5,402 directionally coded votes by 1,746 different members of Congress (MCs).

As independent variables, and in line with the historically informed expectations explained in the preceding section, we consider four different types of constituency-specific variables: ideology, partisanship, geography, and constituencies. First, for ideological variables, we include both **First-** and **Second-Dimension Common Space DW-NOMINATE Scores** (hereafter "NOMINATE Scores"). These are measures of revealed preferences, which are scaled based on all recorded roll calls across congressional history (Lewis et al., 2017).[23] The first dimension, which dominates classification of congressional voting, is widely seen as separating members based on their preferences regarding public intervention in the economy, with lower scores representing liberals who favor more public intervention, and higher scores representing conservatives who favor less public intervention (Poole and Rosenthal, 1997, 2007). We may expect that economic conservatives were less favorable of government interventions—to the extent of changing time—in order to engineer economic efficiencies and benefits to public quality of life. The second dimension has a more controversial interpretation, but likely captures racial and cultural divides, especially in the 20th century. This may be relevant as it may capture urban/rural divides that heavily overlapped with cultural and racial preferences at the times of these votes (Friedman, 1961). Thus, for both dimensions, we expect higher scores to be correlated with reduced support for DST.

To measure partisanship, we include a dummy variable, Republican, which takes the value "1" for members of the Republican Party and "0" otherwise. We are primarily interested in the difference between Democrats and Republicans, whose members cast more than 99 percent of all votes in our data set. Thus, while the comparison is between Republicans and all other members, it is substantially the same as the difference between Republicans and Democrats. We expect that Republicans, being more consistently economically conservative, were less likely to support DST than Democrats.

Time and daylight also have a clear geographic component. Sunlight occurs first in the most eastern parts of the United States, moving west. This provides the justification for time zones, incrementally pushing time back one hour in progressive western segments of

[22]We combine these two votes because the underlying content of each was identical and their combination allows us to better identify the impact of our variables of interest. An additional Senate fixed effect with identical substance would simply become a measure of the difference between the two chambers, which we would like to explain with our variables.

[23]We accessed these scores on Voteview.com on December 31, 2017.

the country. Within each time zone, this same pattern emerges and intersects with DST. The most western parts of any time zone are the ones where the sun will rise latest in local time. When DST pushes clocks forward, it has the greatest effect on these areas as sunlight will occur latest there. Some anti-DST advocates have argued that pushing time forward would mean that morning commutes for workers and school children would be undertaken in the dark, increasing risks for accidents. If this were true, the western parts of each time zone would be the parts most likely to be affected. It is possible that this concern for how strongly an area would be affected would filter into the intensity of constituent opposition and eventually into representative opposition. For example, Michigan is on the western edge of the time-zone border (the sun rises the latest there), while Illinois is on the eastern edge (it rises earliest there). We expect that Michigan is more impacted by DST than Illinois for this reason. To assess this more systematically, we include a measure of **Distance to Time-Zone Edge**, which is the number of miles (in hundreds) from the centroid of the district (for representatives) or states (for senators) to the western edge of the centroid's time zone. The centroid is the geographic mean location of the district. The distance is measured in the shortest straight line. These measurements were constructed using geographic information system (GIS) shape files of historical congressional districts and of time zones.[24]

Finally, we consider the presence of a particularly organized and powerful constituency that strongly opposed DST: farmers. All historical evidence points to farmers representing the strongest opposition to DST. Thus, if members of Congress are responsive to their constituents, especially their politically organized and mobilized voters, they should be more likely to oppose them the more farmers there are in their district. To assess this, we include **Farmers' Share of Population**, which divides the number of farmers in a district or state as of the previous census with the total number of people in the district or state at the previous census. We multiply this by 100 to provide a more appreciable percentage-point scale. These farmer and population numbers are provided in the decennial U.S. Census. For post-WWII years, we rely on Adler (n.d.) for data; for the WWI-era votes, we collect the data ourselves from the 1910 U.S. Census. These measures are admittedly imperfect. Relying on the most recent census creates some lag between the measure and the time of votes and mapping census results onto districts admittedly features the possibility of measurement error. However, this measure is facially valid and captures the agrarian level of constituencies. Districts range from about 0 percent farmers to about 20 percent farmers, though the average has trended down considerably over time. All districts in which farmers represented more than a 10th of the population were during WWI-era votes.

Summary statistics for all variables appear in Table 2.

## Results

We estimate two logit models and present the results in Table 3. Each model contains fixed effects for unique roll-call votes, plus the geographic and farmer variables. Model 1 also includes the ideological variables, First- and Second-Dimension NOMINATE Scores. Model 2 drops the NOMINATE scores and includes instead a Republican dummy variable. In each model, errors are clustered by individual MC, to correct for the correlation of vote choices across multiple votes by the same person.

[24]These GIS shape files were constructed by Lewis et al. (2013) and were obtained from: ⟨http://cdmaps.polisci.ucla.edu/⟩.

TABLE 2

Summary Statistics

| Variable | *N* | Mean | Median | *SD* | Range |
|---|---|---|---|---|---|
| Pro-DST Vote | 5,402 | 0.55 | 1 | 0.5 | [0,1] |
| 1st-Dimension NOMINATE | 5,402 | −0.03 | −0.10 | 0.35 | [−0.83,0.96] |
| 2nd-Dimension NOMINATE | 5,402 | 0.03 | 0.00 | 0.47 | [−1,1] |
| Republican | 5,402 | 0.43 | 0 | 0.50 | [0,1] |
| Distance to time-zone edge | 5,402 | 4.30 | 4.29 | 2.61 | [0,13.62] |
| Farmer % of population | 5,402 | 2.65 | 1.11 | 3.63 | [0,19.55] |

TABLE 3

Vote Choice on DST Roll Calls in Congress, 1918–1985

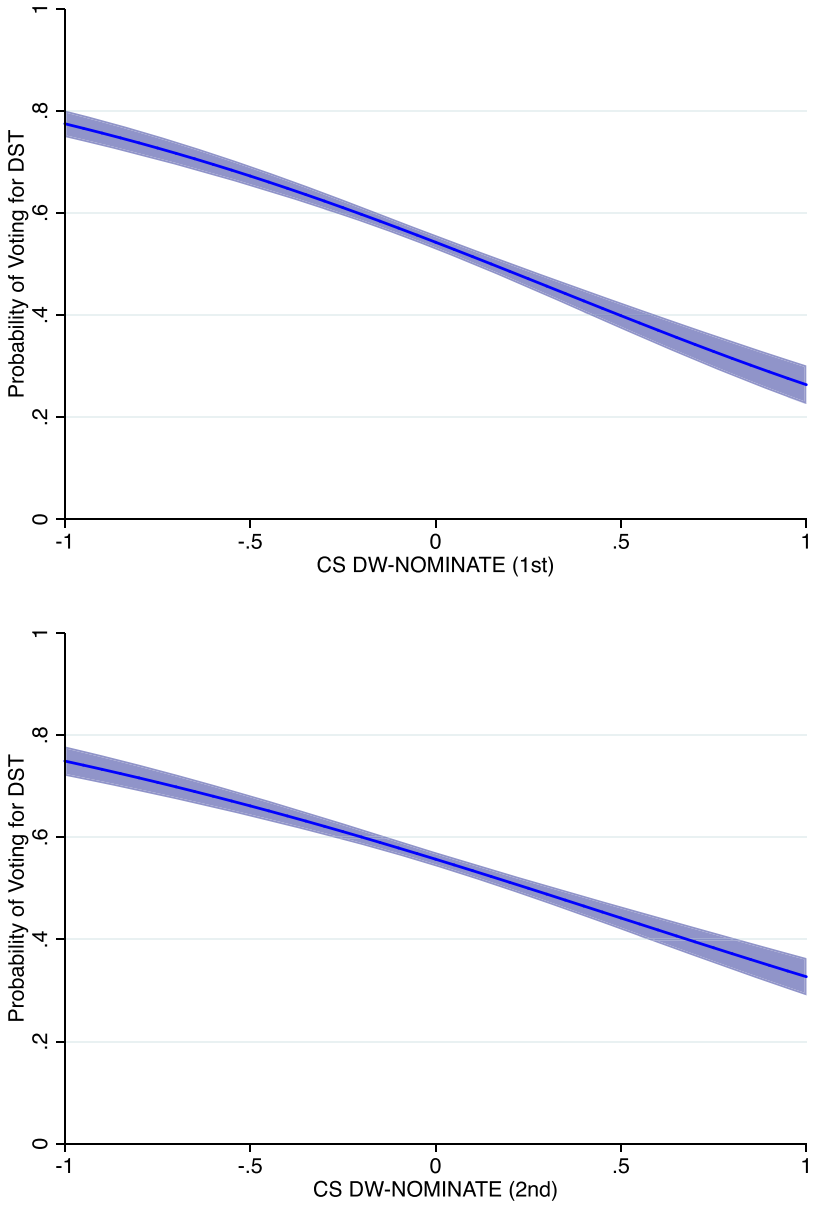
| Variable | (1) | (2) |
|---|---|---|
| 1st-Dimension NOMINATE | −1.96** | |
| | (0.15) | |
| 2ns-Dimension NOMINATE | −1.57** | |
| | (0.13) | |
| Republican | | −0.50** |
| | | (0.10) |
| Distance to time-zone edge | 0.17** | 0.20** |
| | (0.02) | (0.03) |
| Farmer % of population | −0.42** | −0.49** |
| | (0.03) | (0.03) |
| *N* | 5,402 | 5,402 |
| Clustering level | MC | MC |
| Years | 1918–1985 | 1918–1985 |
| Clusters | 1,746 | 1,746 |
| "Pseudo" $R^2$ | 0.40 | 0.33 |

NOTE: Numbers in cells are logistic regression coefficients with clustered standard errors in parentheses. An intercept is included in the model, but excluded from the table for ease of presentation. "Pseudo" $R^2$ figures are for the total model. About 15 percent of variation is explained by the fixed effects alone.
**$p < 0.01$.

These preliminary results provide interesting first indications of what drove DST decision making in Congress. First, there are strong relationships between vote choice and ideology—in terms of both NOMINATE dimensions—in Model 1. More economically conservative members (First-Dimension NOMINATE Score) were considerably less likely to vote for DST expansion than more liberal members, holding other attributes fixed. A one-point shift corresponds to about a 26.5 percentage-point decrease in the probability of a pro-DST vote. To visualize this over the observed range of the NOMINATE first dimension, we plot the predicted value as the first-dimension score changes, presented in the top plot within Figure 3. The difference between the extremes is greater than 50 percentage points. The estimates are sufficiently certain that the estimates at each point are statistically distinguishable from most of the remainder of the scale. The pattern for the second dimension is substantially similar and is presented in the bottom plot within Figure 3. A one-unit increase in the Second-Dimension NOMINATE score corresponds to about a 21 percentage-point decrease in the probability of a pro-DST vote. The differences are again substantial (over 40 percentage points between the extremes) and statistically significant.

FIGURE 3

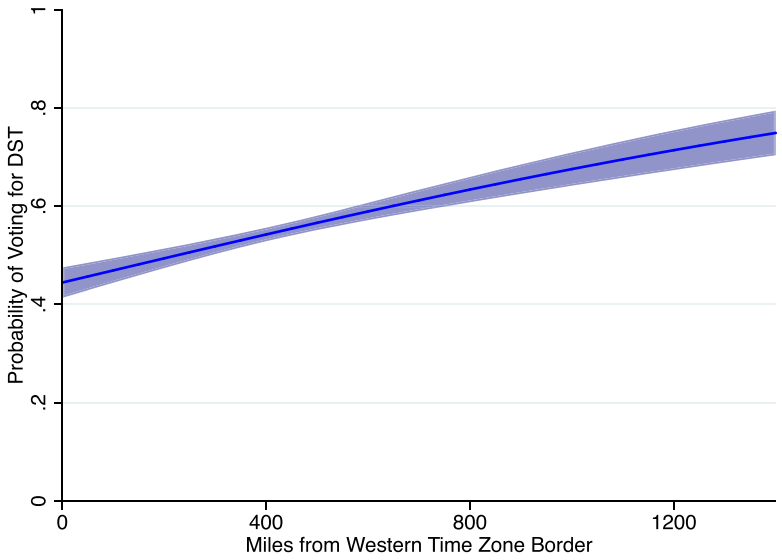
Predicted Probability of Support for DST Expansion Over the Range of the First and Second NOMINATE Dimensions




Next, we consider the geographic measurement. Here, we find that those in the western parts of their time zones were less likely to support DST, as expected. As the number of miles from the western time zone border increased, the likelihood of supporting DST also increased. In this case, every 100 miles of distance corresponded to about 2.3 percentage points of predicted pro-DST vote probability. In Figure 4, we show the predicted probabilities over the range of observed values.

FIGURE 4

Predicted Probability of Support for DST Expansion Over the Range of Distance from Western Time-Zone Border




Finally, we consider the effect of specific constituents and the representation they may receive from their members of Congress. It is worth noting that this is a somewhat difficult test. Undoubtedly, given their nature as organized political interests, farmers impacted the revealed preferences of their representatives. NOMINATE scores should include information about constituents' preferences, including those of farmers. Thus, the inclusion of farmers in our model tests for the specific impact of a highly agrarian constituency above and beyond how that agrarian constituency otherwise influences a member's revealed preferences.

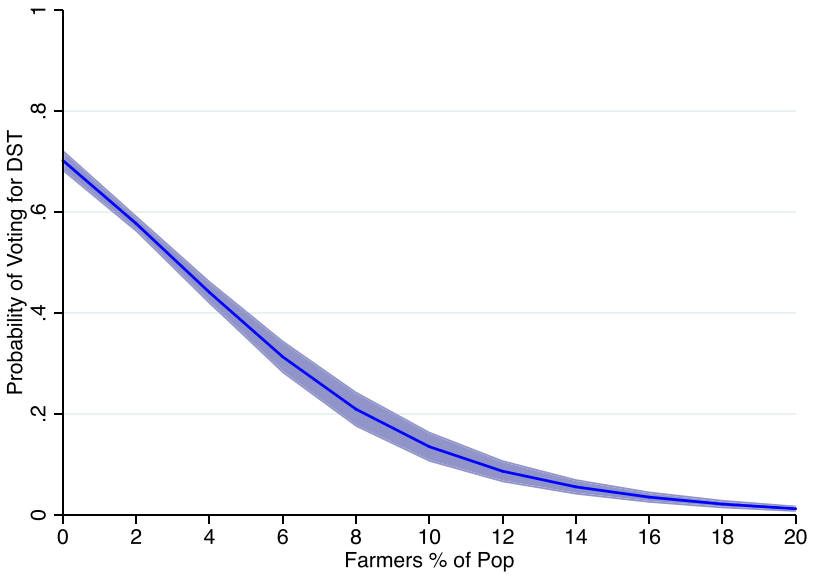
Despite this conservative test, we still find strong, significant results. Each extra percent of the district or state made up by farmers is associated with a 5.6 percentage-point decrease in the likelihood of supporting DST expansion. Members from highly agrarian districts were extremely unlikely to support DST expansion. In Figure 5, we present the predicted probability of pro-DST votes over the observed range of values for Farmers' Share of Population. The gap between the extremes is about 70 percentage points. The strength of this relationship even after accounting for the NOMINATE dimensions is notable and implies strong representation of at least some constituents' interests that is not well captured by broader ideology scores.

**Digging Deeper: Exploring Partisan, Chamber, Regional, and Temporal Variation**

The results in Table 3 indicate the explanatory power of ideological, partisan, geographic, and constituent factors. We further consider whether these effects are consistent or heterogeneous across different partisan and institutional settings, across regions, and across time. We also attempt to discern the relative effect sizes of the variables we analyze.

FIGURE 5

Predicted Probability of Support for DST Expansion Over the Range of Farmers' Share of Population




### *Partisan and Institutional Variation*

We assess whether our ideological, geographic, and constituent results are consistent within parties and in each chamber. A global test is easier for NOMINATE scores because any issue that separates the parties will likely show separation on at least the first-dimension NOMINATE score because of the correlation of those scores within parties. A harder test is whether they show meaningful explanatory power within parties. That is, among Republicans, do more conservative members still oppose DST more often? We test this by rerunning Model 1 in Table 3 on Democratic and Republican subsets of the data. These results appear in Models 1 and 2 of Table 4. Additionally, we consider whether there were differences between Senate and House voting on these bills. House members, with smaller constituencies, had more potential for concentrated interests on the DST question, while senators were more likely to represent a diversity of interests—perhaps creating differing outcomes. We thus rerun our main model by chamber. These results, for the House and Senate, appear in Models 3 and 4 of Table 4.

Both NOMINATE dimensions are robust in their explanatory power both within and between parties, indicating that ideology explains vote choice beyond simply which party members are in. Both dimensions are also strongly correlated with vote choice in each chamber. Additionally, both the geographic and farmer measures are consistently correlated with vote choice within each party and chamber. Collectively, these results show that across institutional contexts, ideological preferences were correlated with votes, but their explanatory power could be enhanced by constituency-specific information.

TABLE 4

Vote Choice on DST Votes in Congress by Party and Chamber, 1918–1985

| Variable | Democrats | Republicans | House | Senate |
|---|---|---|---|---|
| 1st-Dimension NOMINATE | −3.81** | −1.77** | −2.04** | −1.47** |
| | (0.57) | (0.47) | (0.17) | (0.32) |
| 2nd-Dimension NOMINATE | −1.44** | −1.68** | −1.48** | −1.91** |
| | (0.20) | (0.25) | (0.14) | (0.31) |
| Distance to time-zone edge | 0.17** | 0.19** | 0.19** | 0.16** |
| | (0.03) | (0.03) | (0.03) | (0.04) |
| Farmer % of population | −0.39** | −0.39** | −0.43** | −0.30** |
| | (0.04) | (0.04) | (0.03) | (0.06) |
| *N* | 3,036 | 2,341 | 4,623 | 777 |
| Clustering Level | MC | MC | Representative | Senator |
| Clusters | 949 | 792 | 1,513 | 257 |
| "Pseudo" $R^2$ | 0.43 | 0.39 | 0.41 | 0.35 |

NOTE: Numbers in cells are logistic regression coefficients with clustered standard errors in parentheses. An intercept is included in the model, but excluded from the table for ease of presentation. "Pseudo $R^2$" figures are for the total model. About 15 percent of variation is explained by the fixed effects alone.
**$p < 0.01$.

### *Regional Variation*

We can also show that our results are not driven exclusively by a single region of clustered, like-minded states. In Table 5, we replicate our models across the four U.S. Census regions: the West, the Midwest, the South, and the Northeast. Given the relative similarity of geographically proximate states, this poses a more difficult test as variance is reduced. In the results, we see that all of our variables produce statistically significant results in the expected directions in each model. This shows that our effects are not driven by any

TABLE 5

Vote Choice on DST Votes in Congress by Census Region, 1918–1985

| Variable | West | Midwest | South | Northeast |
|---|---|---|---|---|
| 1st-Dimension NOMINATE | −2.26** | −2.39** | −1.61** | −2.83** |
| | (0.29) | (0.29) | (0.32) | (0.59) |
| 2nd-Dimension NOMINATE | −0.89* | −1.36** | −1.85** | −1.17** |
| | (0.38) | (0.32) | (0.25) | (0.40) |
| Distance to time-zone edge | 0.25** | 0.24** | 0.09** | 0.40** |
| | (0.08) | (0.05) | (0.03) | (0.11) |
| Farmer % of population | −0.39** | −0.39** | −0.21** | −0.67** |
| | (0.07) | (0.05) | (0.06) | (0.15) |
| *N* | 888 | 1,537 | 1,600 | 1,103 |
| Clustering level | MC | MC | MC | MC |
| Clusters | 273 | 515 | 542 | 392 |
| "Psuedo" $R^2$ | 0.38 | 0.44 | 0.24 | 0.49 |

NOTE: Numbers in cells are logistic regression coefficients with clustered standard errors in parentheses. An intercept is included in the model, but excluded from the table for ease of presentation. "Pseudo" $R^2$ figures are for the total model.
*$p < 0.05$; **$p < 0.01$.

TABLE 6

Relative Explanatory Power of Variables

| Variable | NOM1 | NOM2 | NOM | Geographic | Farmers |
|---|---|---|---|---|---|
| 1st-Dimension NOMINATE | −1.31** | | −1.85** | | |
| | (0.13) | | (0.14) | | |
| 2nd-Dimension NOMINATE | | −1.80** | −2.09** | | |
| | | (0.12) | (0.12) | | |
| Distance to time-zone edge | | | | 0.25** | |
| | | | | (0.02) | |
| Farmer % of population | | | | | −0.52** |
| | | | | | (0.03) |
| Proportional reduction in error | 11.6% | 13.7% | 23.1% | 11.4% | 25.5% |
| "Pseudo" $R^2$ | 0.18 | 0.24 | 0.29 | 0.21 | 0.30 |

NOTE: Numbers in cells are logistic regression coefficients with clustered standard errors in parentheses. An intercept is included in the model, but excluded from the table for ease of presentation. Each model has an *N* of 5,402, with standard errors adjusted for clustered votes by 1,746 unique members of Congress. "Pseudo" $R^2$ figures are for the total model. About 15 percent of variation is explained by the fixed effects alone. Proportional reduction in error is based on reduction in postestimation classification error. The naïve fixed effects model achieves a 68.33 percent postestimation classification rate.
**$p < 0.01$.

particular regional dynamic. It is notable that, in terms of model explanatory power and relative effect sizes, approximately half of the country (states in the West and Midwest regions) look relatively similar, while the South and Northeast diverge dramatically, a common fact in American historical research. Our variables explain the most variation and have the largest effect sizes in the Northeast states, and the weakest explanatory power in the southern states. We also note that the Second-Dimension NOMINATE score has a smaller coefficient than the first dimension in all but the South, where those are reversed.

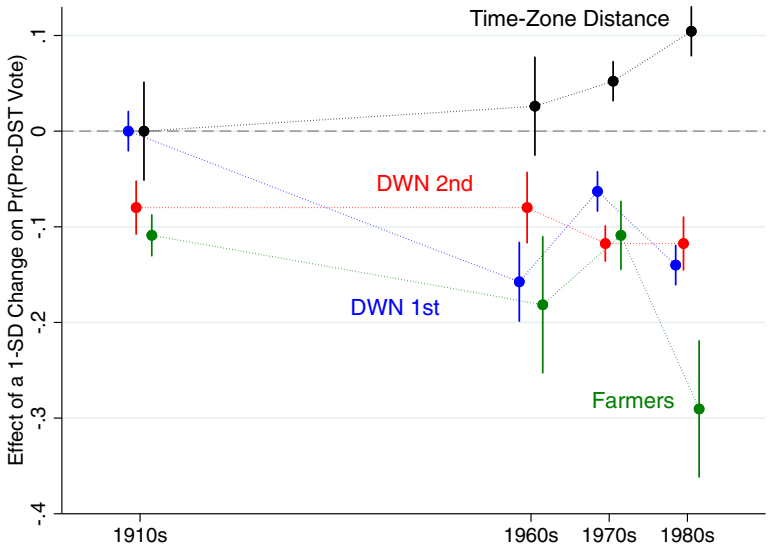
### *Relative Impacts of Variables*

We next consider the relative impacts of each of the variables we analyze in explaining DST votes. In Table 6, we present five models, where we include as independent variables the two NOMINATE dimensions individually (Models 1 and 2); the two NOMINATE dimensions together (Model 3); the geographic measure (Model 4); and the farmers measure (Model 5). The results indicate that the farmers measure is the strongest individual predictor of congressional vote choice on DST, whether measured in variance terms (via the "Pseudo" $R^2$) or classification success (via the proportional reduction in error). The farmers measure also outperformers a model that includes both DW-NOMINATE dimensions. The geographic variable performs around as well as the first NOMINATE dimension, but not as well as the second dimension. That the second NOMINATE dimension provides a better fit than the first dimension is interesting, given the sporadic relevance (and changing issue content) of the second dimension over the 20th century.[25] Overall, though, the geographic variable and especially the farmers variable indicate the constituency basis of DST has been very strong over time.

[25]Another model, not reported, that includes only party (Republican) performs worse than any other model—while the coefficient is significant (and negative), it yields only a 3.5 percent proportional reduction in error with a "Pseudo $R^2$" of 0.17.

FIGURE 6

Marginal Effect of a 1-*SD* Increase in Each Variable by Decade




### *Over Time Variation*

We analyze votes taken over more than 60 years with frequent, long gaps between votes. It is entirely possible—likely, even—that the relative impact of the different factors changed over time. This is further likely because the DST agenda changed over time as well. In the 1910s and again in the 1960s, DST questions were largely about creating DST and establishing a national standard for it. The votes of the 1970s and 1980s were largely about determining *how much* DST there would be, with its elimination rarely considered. To assess when our factors mattered and how much, we analyzed votes separately within each of the four decades featuring roll calls: the 1910s, 1960s, 1970s, and 1980s. We then plot the marginal effect of a one-standard-deviation increase in each variable within each decade and present the results in Figure 6.

There are several distinctive features in the figure. First, both the second NOMINATE dimension and the percentage of farmers in a district were significant covariates of vote choice in each decade. The first NOMINATE dimension and the distance to the western time-zone border only became significant covariates in the latter decades. The impact of geographic considerations appears to have increased over time. As the agenda switched from "whether" to "how much" those most impacted were more reluctant to expand it further. Also, over the same time that America became considerably less agrarian, between 1918 and 1985, the relative importance of farmers appears to have increased. Members of Congress from districts with large numbers of farmers in the 1980s were considerably less likely to support expansions of DST.

## Conclusion

DST is a remarkable policy. While it may seem mundane to the many Americans who have lived their entire lives with "springing forward" and "falling back," there is something

striking about the government unilaterally changing the time to achieve better human outcomes. And indeed, as we review, the history of the policy shows the cracks and stresses of such ambition. Adopted in fits and starts, decades of U.S. history featured inconsistent use of DST across—and even within—states. The achievement of a mostly consistent national application of a seven-month long DST in the present day is a notable political accomplishment.

In this article, we look back on the development of this policy and find familiar explanations for the DST outcome. The same economic and cultural ideologies, parties, and regional divides that explain much of the 20th century in American politics provide extensive explanatory power in the case of congressional vote choice on DST. Overall, DST appears to have been a mostly "liberal" policy, and one that also worked well for urban members of Congress from the coasts. Mid-century Democrats were split on DST votes between their conservative, rural, southern members, and their more urban, liberal members just as they were on so many other issues. Though less pronounced, Republicans were also split along similar dimensions of constituency-specific attributes. Finally, coalitional dynamics on DST have been very durable over time, especially on the series of votes that encompass the post-World War II era.

While our analysis provides significant insight into the political aspects of DST, which fills a yawning gap in the scholarly literature, more work can still be done. For example, our study is restricted to a subset of votes that made it to a recorded roll call—essentially the endgame of the congressional process. One thing we do not investigate is the agenda-setting aspect of why these policies emerged at these times and who was supplying them and demanding them. One way to get at this question would be to analyze bill proposals in Congress, both in terms of who introduced and supported (co-sponsored) those bills, as well as the covariates of when bills progressed from mere proposals to getting space on the legislative agenda.[26] This is but one avenue that could be explored in future research.

What is the future of DST? As noted, efforts have been made to make DST permanent. Sen. Rubio and Rep. Buchanan have led the charge in this regard (Rubio and Buchanan, 2019). Other major figures in Congress, like Senators Patty Murray (D-WA) and Ron Wyden (D-OR), have lent their support, suggesting that year-round DST has bipartisan support (Banse, 2019). And President Trump is also an advocate of permanent DST (Nace, 2019). While Congress considers whether to take action, however, a number of state legislatures are in the process of deciding for themselves (Johnson, 2019). And even as different levels of government in the United States struggle with what to do with DST, foreign nations are also considering change. Recently, for example, the European Parliament voted to end DST in European-member nations by 2021 (Shoot, 2019). At that point, individual E.U. member states will need to decide for themselves whether to continue with DST or adopt standard time. Thus, DST continues to be an important and contentious topic, and lawmakers at different levels of government in various nations will likely discuss policy options for some time to come.

## REFERENCES

Adams, James D. 1981. "Daylight Savings: An Endogenous Law." *Public Choice* 36:345–49.

Adler, E. Scott. n.d. *Congressional District Data File*. Boulder, CO: University of Colorado. Available at ⟨https://sites.google.com/a/colorado.edu/adler-scott/data/congressional-district-data⟩.

[26]The data provided in Adler and Wilkerson (n.d.) would be extremely useful here.

Adler, E. Scott, and John Wilkerson. n.d. *Congressional Bills Project File*. Seattle, WA: University of Washington. Available at ⟨http://congressionalbills.org/index.html⟩.

Banse, Tom. 2019. "Sen. Patty Murray Says She'll Push for Daylight Saving Time Year-Round." *nw news network* March 20. Available at ⟨https://www.nwnewsnetwork.org/post/sen-patty-murray-says-she-ll-push-daylight-saving-time-year-round⟩.

Burdick, Alan. 2017. "Can We Fix Daylight-Saving Time for Good?" *New Yorker* March 12. Available at ⟨https://www.newyorker.com/tech/elements/can-we-fix-daylight-saving-time-for-good⟩.

Coate, Douglas, and Sara Markowitz. 2004. "The Effects of Daylight and Daylight Saving Time on US Pedestrian Fatalities and Motor Vehicle Occupant Fatalities." *Accident Analysis and Prevention* 35:351–57.

Coren, Stanley. 1996a. "Accidental Death and the Shift to Daylight Saving Time." *Perception and Motor Skills* 83:921–22.

———. 1996b. "Daylight Saving Time and Traffic Accidents—Reply." *New England Journal of Medicine* 335:356–57.

Downing, Michael. 2005. *Spring Forward: The Annual Madness of Daylight Saving Time*. Washington, DC: Shoemaker & Hoard.

Friedman, Robert S. 1961. "The Urban-Rural Conflict Revisited." *Western Political Quarterly* 14:481–95.

Hamilton, James D. 2013. "Historical Oil Shocks." Pp. 239–65 in Randall E. Parker and Robert Whaples, eds., *Routledge Handbook of Major Events in Economic History*. New York: Routledge Taylor and Francis Group.

Hammermesh, Daniel S., Caitlin Knowles Myers, and Mark L. Pocock. 2008. "Cues for Timing and Coordination: Latitude, Letterman, and Longitude." *Journal of Labor Economics* 26:223–46.

Hanson, John Mark. 1991. *Gaining Access: Congress and the Farm Lobby, 1919–1981*. Chicago, IL: University of Chicago Press.

Johnson, Kirk. 2019. "Daylight Saving Is Here. Suppose We Made This Time Change Our Last?" *New York Times* March 9. Available at ⟨https://www.nytimes.com/2019/03/09/us/daylight-savings-time.html⟩.

Kamstra, Mark J., Lisa A. Kramer, and Maurice D. Levi. 2000. "Losing Sleep at the Market: The Daylight Saving Anomaly." *American Economic Review* 90:1005–11.

———. 2002. "Losing Sleep at the Market: The Daylight Saving Anomaly: Reply." *American Economic Review* 92:1257–63.

Kantermann, Thomas, Myriam Juda, Martha Merrow, and Till Roenneberg. 2007. "The Human Circadian Clock's Seasonal Adjustjustment is Disrupted by Daylight Saving Time." *Current Biology* 17:1996–2000.

Kotchen, Matthew J., and Laura E. Grant. 2011. "Does Daylight Saving Time Save Energy? Evidence from a Natural Experiment in Indiana." *Review of Economics and Statistics* 93:1172–85.

Lewis, Jeffrey B., Brandon DeVine, Lincoln Pritcher, and Kenneth C. Martis. 2013. *United States Congressional District Shapefiles*. Los Angeles, CA: UCLA. Available at ⟨http://cdmaps.polisci.ucla.edu/⟩.

Lewis, Jeffrey B., Keith Poole, Howard Rosenthal, Adam Boche, Aaron Rudkin, and Luke Sonnet. 2017. *Voteview: Congressional Roll-Call Votes Database*. Available at ⟨https://voteview.com/⟩.

Nace, Trevor. 2019. "Trump to America: Let's Make Daylight Saving Time Permanent." *Forbes* March 11. Available at ⟨https://www.forbes.com/sites/trevornace/2019/03/11/trump-to-america-lets-stop-daylight-saving-time/#4582e2052ed8⟩.

Pinegar, J. Michael. 2002. "Losing Sleep at the Market: Comment." *American Economic Review* 92:1251–56.

Poole, Keith T., and Howard Rosenthal. 1997. *Congress: A Political-Economic History of Roll Call Voting*. New York: Oxford University Press.

———. 2007. *Ideology and Congress*. New Brunswick: Transaction Publishers.

Prerau, David. 2005. *Seize the Daylight: The Curious and Contentious Story of Daylight Saving Time*. New York: Thunder's Mouth Press.

Rubio, Marco, and Vern Buchanan. 2019. "Trump Is Right. Daylight Saving Time Should Be Permanent." *Washington Post* March 15. Available at ⟨https://www.washingtonpost.com/opinions/trump-is-right-daylight-saving-time-should-be-permanent/2019/03/15/e983315c-466a-11e9-8aab-95b8d80a1e4f_story.html?utm_term=.56654dabbf7c⟩.

Shipan, Charles R. 1996. "Senate Committees and Turf: Do Jurisdictions Matter?" *Political Research Quarterly* 49:177–89.

Shoot, Brittany. 2019. "European Parliament Votes to Let the Sun Go Down on Daylight Saving Time." *Fortune* March 26. Available at ⟨http://fortune.com/2019/03/26/european-union-parliament-daylight-saving-time/?fbclid=IwAR1aeZjU2pDMoZEOtyTuFT49jWtO9KlPeAS4lguUplKS47llsvqk1HUpKcc⟩.

Sullivan, John M., and Michael J. Flannagan. 2002. "The Role of Ambient Light Level in Fatal Crashes: Inferences from Daylight Saving Time." *Accident Analysis and Prevention* 23:487–98.

**Supporting Information**

Additional supporting information may be found online in the Supporting Information section at the end of the article.

**TABLE A1.** To Pass Daylight Standard Time Act (S. 184), 65th Congress
**TABLE A2.** To Repeal Daylight Saving Time (H.R. 3854), 66th Congress
**TABLE A3.** To Pass Uniform Time Act (S. 1404), 89th Congress
**TABLE A4.** To Provide DST on a Year-Round Basis (Two-Year Trial), 93rd Congress
**TABLE A5.** To Amend the Emergency Conservation Act of 1973, 93rd Congress
**TABLE A6.** Daylight Saving Time Act of 1976, 94th Congress
**TABLE A7.** Energy Conservation Daylight Saving Act of 1981, 97th Congress
**TABLE A8.** Energy Conservation Daylight Saving Act of 1983, 98th Congress
**TABLE A9.** To Extend Daylight Saving Time, 99th Congress