Supplemental Material:

“Congressional Politics of U.S. Immigration Reforms”

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This supplemental material consists of two parts. In Part I, we provide details of our main method and a sample WinBUGS code. In Part II, we provide figures that present the location of the status quo, the floor median, the majority median, and the distribution of ideal points in each dimension.

Part I.

1. Agenda Constrained Ideal Point Estimation

Using the House version of the 2005 immigration bill, we illustrate the procedure of agenda constraints. We chose this bill because this bill includes an example insincere voting, making it a good case to illustrate how insincere voting can be handled. In the 11 votes of the House bill, the total number of bill parameters is 44 because yea and nay locations must be defined in both dimensions. Using both substantive and agenda information, we reduce the number of bill parameters to identify the model.

The first vote was related to the rights dimension. Thus, the yea and nay locations on the admission dimension for this vote are the same (A1). On the rights dimension, the yea location of this vote is the Jackson-Lee amendment (delta1) and the nay location is the Judiciary Committee bill as introduced on the House floor (A2). Since this amendment did not pass, the Judiciary Committee bill (A2) remained the reversion point on the rights dimension. The second vote was on the Hunter amendment. This amendment was an attempt to change the content of the bill on the admission dimension. Thus, theta1 represents the new location proposed by this amendment. Since this amendment passed, the reversion point of the third vote on the admission dimension changed to theta1. The third vote was on the Goodlatte amendment, which attempted to change the bill on the admission dimension (theta2). Since it passed, the reversion point of the fourth vote on the admission dimension changed to theta2. The fourth amendment passed, changing the reversion point on the rights dimension to delta2.

The next vote was on the controversial Sensenbrenner amendment. This amendment proposed to reduce an unlawful presence conviction to misdemeanor instead of a felony. Since this amendment represented an improvement of the rights of (illegal) immigrants relative to the
Judiciary Committee bill, representatives who preferred granting more rights to immigrants should have voted for this amendment. However, Democrats voted against this amendment because they thought that a yea vote would be interpreted as endorsing the idea of criminalizing unlawful presence. For instance, Representative Gutierrez (D-CA) said on the House floor, “we should not criminalize this in the first place just on principle. We have civil statutes that deal with this. So I stand, and the Hispanic Congressional Caucus has unanimously adopted a position to stand against this motion and this amendment in particular” (Congressional Record 2005, H11953).

Table A1: Agenda Constraints on the House Immigration Debate in 2005

<table>
<thead>
<tr>
<th>j</th>
<th>Dimension</th>
<th>Pass?</th>
<th>Dim1</th>
<th>Dim2</th>
<th>Dim1</th>
<th>Dim2</th>
<th>Sponsor</th>
<th>Brief description of Yeaj(j)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>rights</td>
<td>fail</td>
<td>$A_1$</td>
<td>$\delta_1$</td>
<td>$A_1$</td>
<td>$A_2$</td>
<td>Jackson-Lee (D-TX)</td>
<td>to amend the detention provision.</td>
</tr>
<tr>
<td>2</td>
<td>admission</td>
<td>pass</td>
<td>$\theta_1$</td>
<td>$A_2$</td>
<td>$A_1$</td>
<td>$A_2$</td>
<td>Hunter (R-CA)</td>
<td>to strengthen security fencing along the Southwest border.</td>
</tr>
<tr>
<td>3</td>
<td>admission</td>
<td>pass</td>
<td>$\theta_2$</td>
<td>$A_2$</td>
<td>$\theta_1$</td>
<td>$A_2$</td>
<td>Goodlatte (R-VA)</td>
<td>to eliminate the visa lottery program.</td>
</tr>
<tr>
<td>4</td>
<td>rights</td>
<td>pass</td>
<td>$\theta_2$</td>
<td>$\theta_2$</td>
<td>$\theta_2$</td>
<td>$A_2$</td>
<td>Steams (R-FL)</td>
<td>to prohibit the DHS from granting any benefits to alien until database of criminal records have been checked.</td>
</tr>
<tr>
<td>5</td>
<td>rights</td>
<td>fail</td>
<td>$\theta_2$</td>
<td>$\delta^R_5$; $\delta^D_5$</td>
<td>$\theta_2$</td>
<td>$\delta_2$</td>
<td>Sensenbrenne (R-WI)</td>
<td>to reduce the maximum sentences in the bill for unlawful presence to six months.</td>
</tr>
<tr>
<td>6</td>
<td>rights</td>
<td>pass</td>
<td>$\theta_2$</td>
<td>$\delta_4$</td>
<td>$\theta_2$</td>
<td>$\delta_2$</td>
<td>Norwood (R-GA)</td>
<td>to increase local law enforcement’s access to information on illegal criminal aliens.</td>
</tr>
<tr>
<td>7</td>
<td>both</td>
<td>pass</td>
<td>$\theta_2$</td>
<td>$\delta_5$</td>
<td>$\theta_2$</td>
<td>$\delta_4$</td>
<td>Westmoreland (R-GA)</td>
<td>to set caps on employer sanctions penalties.</td>
</tr>
<tr>
<td>8</td>
<td>rights</td>
<td>fail</td>
<td>$\theta_3$</td>
<td>$\delta_6$</td>
<td>$\theta_3$</td>
<td>$\delta_3$</td>
<td>Gonzalez (D-TX)</td>
<td>to provide funds to state and local governments to provide public services to illegal aliens.</td>
</tr>
<tr>
<td>9</td>
<td>rights</td>
<td>fail</td>
<td>$\theta_3$</td>
<td>$\delta_7$</td>
<td>$\theta_3$</td>
<td>$\delta_3$</td>
<td>Sullivan (R-OK)</td>
<td>to give state and local law enforcement the ability to detain illegal aliens in the course of their regular duties.</td>
</tr>
<tr>
<td>10</td>
<td>admission</td>
<td>fail</td>
<td>$\theta_4$</td>
<td>$\delta_5$</td>
<td>$\theta_3$</td>
<td>$\delta_3$</td>
<td>Reyes (D-TX)</td>
<td>on motion to recommit with instructions to amend border security clauses.</td>
</tr>
<tr>
<td>11</td>
<td>both</td>
<td>pass</td>
<td>$\theta_3$</td>
<td>$\delta_5$</td>
<td>$SQ_1$</td>
<td>$SQ_2$</td>
<td></td>
<td>to pass the amended bill.</td>
</tr>
</tbody>
</table>

Note 1: ‘Dim1’ denotes the admission dimension. ‘Dim2’ denotes the rights dimension.
Note 2: $\delta^R_5$ and $\delta^D_5$ represent the locations of the 5th amendment perceived by Republicans and Democrats, respectively.

To account for this insincere voting of Democrats\(^1\), different parameters are assigned for the location of the Sensenbrenner amendment for Republicans (delta3R) and Democrats (delta3D). Reflecting Democrats’ perception of this amendment, the location of this amendment for Democrats (‘D5’ in the bottom panel of Figure 5) was estimated to be much tougher on immigrants. Nevertheless, since the Sensenbrenner amendment did not pass, the reversion point in the next vote is again delta2.

\(^1\) Incidents of insincere voting can be detected by checking classification rates by vote. When sincere voting is dominant, the votes involved in strategic or insincere voting have a low classification rate. The insincere voting on the Sensenbrenner amendment was identified due to the low classification rate on this vote when only one bill parameter (delta3) was used.
After two more amendments passed, the final passage vote was a choice between the amended Judiciary Committee bill (\theta_3, \delta_5) and the status quo of no new legislation (SQ1, SQ2). To identify the model, the location of the Judiciary Committee bill as introduced on the floor was fixed at (A1=0, A2=0), while the location of the status quo was fixed at (SQ1=2, SQ2=2) to indicate that the Judiciary Committee bill was restrictive on both dimensions.

2. WinBUGS code for the House Debate in 2005

```plaintext
model{
  for (i in 1:N){  # Loop over legislators
    for(j in 1:1){
        Y[i,j] ~ dbern(pi[i,j])
        logit(pi[i,j]) <- beta*Q2[i,j]
        Q2[i,j] <- -(x[i,2] - delta[j])* (x[i,2] - delta[j]) + (x[i,2] - A2)*(x[i,2] - A2)
    }
    for(j in 2:2){
        Y[i,j] ~ dbern(pi[i,j])
        logit(pi[i,j]) <- beta*Q1[i,j]
        Q1[i,j] <- -(x[i,1] - theta[1])* (x[i,1] - theta[1]) + (x[i,1] - A1)*(x[i,1] - A1)
    }
    for(j in 3:3){
        Y[i,j] ~ dbern(pi[i,j])
        logit(pi[i,j]) <- beta*Q1[i,j]
        Q1[i,j] <- -(x[i,1] - theta[2])* (x[i,1] - theta[2]) + (x[i,1] - theta[1])*(x[i,1] - theta[1])
    }
    for(j in 4:4){
        Y[i,j] ~ dbern(pi[i,j])
        logit(pi[i,j]) <- beta*Q2[i,j]
        Q2[i,j] <- -(x[i,2] - delta[j-2])* (x[i,2] - delta[j-2]) + (x[i,2] - A2)*(x[i,2] - A2)
    }
    for(j in 6:6){
        Y[i,j] ~ dbern(pi[i,j])
        logit(pi[i,j]) <- beta*Q2[i,j]
        Q2[i,j] <- -(x[i,2] - delta[j-2])* (x[i,2] - delta[j-2]) + (x[i,2] - delta[2])*(x[i,2] - delta[2])
    }
    for(j in 7:7){
        Y[i,j] ~ dbern(pi[i,j])
        logit(pi[i,j]) <- beta*Q1[i,j] + beta*Q2[i,j]
        Q1[i,j] <- -(x[i,1] - theta[j-4])* (x[i,1] - theta[j-4]) + (x[i,1] - theta[j-5])*(x[i,1] - theta[j-5])
        Q2[i,j] <- -(x[i,2] - delta[j-2])* (x[i,2] - delta[j-2]) + (x[i,2] - delta[j-3])*(x[i,2] - delta[j-3])
    }
    for(j in 8:9){
        Y[i,j] ~ dbern(pi[i,j])
        logit(pi[i,j]) <- beta*Q2[i,j]
        Q2[i,j] <- -(x[i,2] - delta[j-2])* (x[i,2] - delta[j-2]) + (x[i,2] - delta[5])*(x[i,2] - delta[5])
    }
  }
}
```
for(j in 10:10){
  Y[i,j] ~ dbern(pi[i,j])
  logit(pi[i,j]) <- beta*Q1[i,j]
  Q1[i,j] <- -(x[i,1] - theta[4])*(x[i,1] - theta[4]) + (x[i,1] - theta[3])*(x[i,1] - theta[3])
}

for(j in 11:11){
  Y[i,j] ~ dbern(pi[i,j])
  logit(pi[i,j]) <- beta*Q1[i,j] + beta*Q2[i,j]
  Q1[i,j] <- -(x[i,1] - theta[3])*(x[i,1] - theta[3]) + (x[i,1] - SQ1)*(x[i,1] - SQ1)
  Q2[i,j] <- -(x[i,2] - delta[5])*(x[i,2] - delta[5]) + (x[i,2] - SQ2)*(x[i,2] - SQ2)
}

for (i in 1:N1){  # Loop over Republicans only
  for(j in 5:5){
    Y[i,j] ~ dbern(pi[i,j])
    logit(pi[i,j]) <- beta*Q2[i,j]
    Q2[i,j] <- -(x[i,2] - delta[j-2])*(x[i,2] - delta[j-2]) + (x[i,2] - delta[2])*(x[i,2] - delta[2])
  }
}

for (i in (N1+1):N){  # Loop over Democrats only
  for(j in 5:5){
    Y[i,j] ~ dbern(pi[i,j])
    logit(pi[i,j]) <- beta*Q2[i,j]
    Q2[i,j] <- -(x[i,2] - delta[8])*(x[i,2] - delta[8]) + (x[i,2] - delta[2])*(x[i,2] - delta[2])
  }
}

##### priors for X
for (i in 1:N){ x[i,1:2] ~ dmnorm(mu.x[i,1:2], Isigma.x[i,1:2, 1:2]) }
mu.x[1] <- 0; mu.x[2] <- 0
Isigma.x[1,1] <- 1/10; Isigma.x[1,2] <- 0
Isigma.x[2,1] <- 0; Isigma.x[2,2] <- 1/10

##### priors for bill parameters
for (i in 1:1){theta[i] ~ dunif(left, right)}
for (i in 3:4){theta[i] ~ dunif(left, right)}
for (i in 1:6){delta[i] ~ dunif(left, right)}
for (i in 7:8){delta[i] ~ dunif(left, right)}
left <- -7; right <- 7
beta ~ dunif(0,1)
theta[2] <- -1
A1 <- 0
A2 <- 0
SQ1<- 2
SQ2<- 2
}
Part II.

The following figures show the distribution of ideal points, the location of the floor median (FM), the majority party median (MM), the status quo (SQ), the initial bill (Origin), and the final outcome (Final) in each dimension. The rectangles represent the 80% intervals. The status quo and the initial bill were fixed to identify the models.

**Figure 1: One-Dimensional Analysis of the House Debate in 1986.** Little bars at the bottom of the figure represent ideal points. The rectangles represent the 80% intervals for the floor median (FM) and the majority party median (MM), the status quo (SQ), the initial bill (Origin), and the final outcome (Final) in each dimension.
Figure 2: One-Dimensional Analysis of the Senate Debate in 1986. Little bars at the bottom of the figure represent ideal points. The rectangles represent the 80% intervals for the floor median (FM) and the majority party median (MM), the status quo (SQ), the initial bill (Origin), and the final outcome (Final) in each dimension.
Figure 3: One-Dimensional Analysis of the House Debate in 1996. Little bars at the bottom of the figure represent ideal points. The rectangles represent the 80% intervals for the floor median (FM) and the majority party median (MM), the status quo (SQ), the initial bill (Origin), and the final outcome (Final) in each dimension.
Figure 4: One-Dimensional Analysis of the Senate Debate in 1996. Little bars at the bottom of the figure represent ideal points. The rectangles represent the 80% intervals for the floor median (FM) and the majority party median (MM), the initial bill (Origin), and the final outcome (Final) in each dimension. The status quo was not estimated because of the voice votes before the final passage vote.
Figure 5: One-Dimensional Analysis of the House Debate in 2005. Little bars at the bottom of the figure represent ideal points. The rectangles represent the 80% intervals for the floor median (FM) and the majority party median (MM), the status quo (SQ), the initial bill (Origin), and the final outcome (Final) in each dimension.
Figure 6: One-Dimensional Analysis of the Senate Debate in 2006. Little bars at the bottom of the figure represent ideal points. The rectangles represent the 80% intervals for the floor median (FM) and the majority party median (MM), the status quo (SQ), the initial bill (Origin), and the final outcome (Final) in each dimension.