Importing Political Polarization?
The Electoral Consequences of Rising Trade Exposure

David Autor       David Dorn
Gordon Hanson     Kaveh Majlesi

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Impact of Trade on US Workers: Touchstone Issue in 2016 Presidential Campaign
Context: Rapid Growth of China’s Manufacturing Exports...
Economic Impacts of Import Competition from China

- **Closure of manufacturing plants** (Bernard Jensen Schott '06), declines in employment (Acemoglu Autor Dorn Hanson Price '16; Pierce Schott '16) in more trade-exposed industries

- **Lower employment**, higher labor-force exit, higher long-run unemployment, greater benefits uptake in more trade-exposed local labor markets (Autor Dorn Hanson '13)

- **Lower lifetime incomes**, greater job churning for workers in more trade-exposed industries (Autor Dorn Hanson Song '14)
Anti-trade Sentiments Precede The 2016 Election

- Congressional representatives from trade-exposed districts are more likely to vote against trade bills... (Feigenbaum Hall ’15)

- ...and in favor of anti-China foreign-policy legislation (Kleinberg Fordham ’13; Kuk Seligsohn Zhang ’15)

Our work

- Do the impacts of trade exposure extend beyond voting on trade policy to affect the ideological composition of Congress itself?
Has Rising Trade Exposure in Local Labor Markets Contributed to Political Divisions in Congress?

1. **Anti-incumbency effect?**
   - Incumbents tend to be punished for negative economic outcomes (Fair ’78, Margalit ’11, Jensen Quinn Weymouth ’16)

2. **Party-realignment effect?**
   - Economic shocks may shift voter preferences — Leftward (Alesina La Ferrara 2005, Bruner Ross Washington ’11, Che Lu Pierce Schott Tao ’16) or Rightward (Malgouyres ’14, Dippel Gold Heblich ’15)

3. **Polarization effect?**
   - In response to adverse shocks, beliefs of those leaning right may shift further right and of those leaning left may shift further left
     - Movement to extremes under failure of MLRP (Dixit Weibull ’07, Baliga Hanany Klibanoff ’13, Acemoglu Chernozhukov Yildiz ’15)
Are political impacts of trade shocks distinct from those of other shocks? We compare impact of trade shocks to...

- General labor demand shifts (as captured by Bartik ’91 measure)
- Post-Great Recession housing-market bust (as captured by post-2007 change in local housing prices)
Agenda

1. Empirical Strategy
   - Measuring Electoral Outcomes
   - Exposure to Import Competition from China

2. Main results
   - Anti-Incumbent Effects
   - Party Realignment Effects
   - Polarization Effects

3. Heterogeneity in Polarization Effects
   - Initial Political Affiliation and Demographic Composition

4. Impact of Other Economic Shocks

5. Conclusions
Empirical Strategy: Matching Local Labor Markets to Congressional Districts

Challenge: Congressional districts can have extreme shapes that do not correspond to any definition of local labor market geography.
An Extreme Example: District NC-12

The district closely follows Interstate 85, and at some points is barely wider than a highway lane.

If you drove down the interstate with both car doors open, you’d kill most of the people in the district!

Mickey Micheaux, Member of the North Carolina House of Representatives
Our Analysis is at the County-District Cell Level

- Divide US into county-by-congressional-district cells
  - Attach each county to its corresponding commuting zone (CZ)
  - Weight each cell by its share of congressional-district population
  - Result is a mapping of CZ shocks to district political outcomes
  - Use CZ trade shocks from Acemoglu Autor Dorn Hanson Price (’16)

- Examine electoral outcomes over 2002 to 2010
  - Because of *redistricting*, we can only examine intercensal periods
  - Fortunately, these are *non*-presidential election years
  - Our time period spans the rise of the Tea Party
Data Sources

1. **Political behavior of congressional representatives**
   - DW-Nominate scores (Poole & Rosenthal ’97)
     - Estimated for each legislator in each Congress
     - Tag 2003-2005 score (108th Congress) to winner in 2002 election, 2011-2013 score (112th Congress) to winner in 2010 election

2. **Vote shares by party in House elections**
   - Dave Leip’s Atlas of US Presidential Elections
     - Vote counts for each party by county-district cell

3. **Campaign finance scores (Bonica ’14)**
   - Tabulates campaign contributions by donor and recipient for all amounts in excess of $200
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Mapping Industry Import Shocks to Commuting Zones

Exposure of commuting zone \( i \) to trade with China

\[
\Delta IP_{i\tau}^{cu} = \sum_{j} \frac{L_{ijt}}{L_{it}} \Delta IP_{j\tau}^{cu}
\]

- A weighted average of share of different industries in each CZ times industry import penetration from China
- US import demand \( \Delta' \)'s may contaminate estimation
- IV for US imports from China using other DCs (Austria, Denmark, Finland, Germany, Japan, New Zealand, Spain, Switzerland)
Geography of Trade Exposure

Trade Exposure by Commuting Zone, 1990-2007

Legend:
- Lowest Quartile (least exposed)
- 2nd Quartile
- 3rd Quartile
- Highest Quartile (most exposed)
Primary Empirical Specification

$\Delta Y_{jkt}$ is ’02-’10 change in electoral outcome for county $j$, district $k$

$$\Delta Y_{jkt} = \gamma_d + \beta_1 \Delta IP_{jt}^{cu} + X_{jkt}' \beta_2 + e_{jkt}$$

- $\Delta IP_{jt}$ is $\Delta$ in import exposure in CZ for county $j$ (IV using $\Delta IP_{it}^{co}$)
- $X_{jkt}$ is vector of control variables, $\gamma_d$ is census division dummy
  1. Pol. conditions in ’02 for county-district $jk$: winner’s party, vote share, Nominate score, if unopposed—interacted w/ GOP dummy
  2. Econ. conditions in ’00 for CZ containing county $j$: manuf. emp. share, routine-task intensity, offshorability index
  3. Demog. composition in ’00 in county $j$: pop. shares by age, gender, education, race, ethnicity, nativity groups
- Weight by $jk$ pop. share in district $k$, cluster by CZ and by district
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1. **Empirical Strategy**
   - Measuring Electoral Outcomes
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   - Anti-Incumbent Effects
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   - Polarization Effects

3. **Heterogeneity in Polarization Effects**
   - Initial Political Affiliation and Demographic Composition

4. **Impact of Other Economic Shocks**

5. **Conclusions**
Effect of Trade Exposure on Electoral Competitiveness

Trade exposure reduces vote shares for party in power, increases voter turnout and campaign contributions (by individuals)

<table>
<thead>
<tr>
<th></th>
<th>Change in Electoral Outcomes 2002-2010</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Election Outcomes</td>
</tr>
<tr>
<td></td>
<td>Vote % for Party that Won in 2002</td>
</tr>
<tr>
<td></td>
<td>Pr(R+D Compete)</td>
</tr>
<tr>
<td>Δ CZ Import Penetration</td>
<td>-7,05 ** 11,94 (2,69 (6,43)</td>
</tr>
<tr>
<td>Mean Outcome Level in 2002</td>
<td>-8,5 12,3 70,6 81,6</td>
</tr>
<tr>
<td></td>
<td>~ 1079,1 610,8</td>
</tr>
</tbody>
</table>

Notes: N=3,504 County*District cells, except N=2,620 in column 3 and N=2,363 in column 4. Data on registered voters is missing for the states of GA, MS, ND and WI. Columns 5 and 6 measure the log point change of one plus observed campaign contributions in $1,000. All regressions include the full set of control variables. Standard errors are two-way clustered on CZs and Congressional Districts. ~ p ≤ 0.10, * p ≤ 0.05, ** p ≤ 0.01.
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4 Impact of Other Economic Shocks

5 Conclusions
No impact on vote share of Republicans, Democrats, Others

<table>
<thead>
<tr>
<th>Change in Vote Outcome 2002 - 2010</th>
<th>Republican Vote Share (1)</th>
<th>Democrat Vote Share (2)</th>
<th>Other Parties Vote Share (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(\Delta) CZ Import Penetration</td>
<td>1.60</td>
<td>0.86</td>
<td>-2.45</td>
</tr>
<tr>
<td></td>
<td>(2.62)</td>
<td>(2.84)</td>
<td>(1.76)</td>
</tr>
<tr>
<td>Mean Outcome Level in 2002</td>
<td>1.2</td>
<td>-1.3</td>
<td>0.1</td>
</tr>
<tr>
<td></td>
<td>48.8</td>
<td>48.1</td>
<td>3.1</td>
</tr>
</tbody>
</table>

Notes: N=3,504 County*District cells. All regressions include the full set of control variables. Standard errors are two-way clustered on CZs and Congressional Districts. \(\sim p \leq 0.10\), \(* p \leq 0.05\), \(** p \leq 0.01\).
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5 Conclusions
Effect of Trade Exposure on Change in Nominate Scores

Note: Level in 2002 = 13.9

Trade exposure induces shift away from center, net shift to right in legislator voting—due to leg. turnover not within-person Δ’s

<table>
<thead>
<tr>
<th>Dependent Variables: 100*Change Nominate or Absolute Nominate Score of Winner</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002-2010 Change in Political Position</td>
</tr>
<tr>
<td>Nominate Score</td>
</tr>
<tr>
<td>(1)</td>
</tr>
<tr>
<td>Δ CZ Import Penetration</td>
</tr>
<tr>
<td>(7,91)</td>
</tr>
<tr>
<td>Decomposition of Change in Absolute Nominate Score</td>
</tr>
<tr>
<td>Shift to Right</td>
</tr>
<tr>
<td>(3)</td>
</tr>
<tr>
<td>Δ CZ Import Penetration</td>
</tr>
<tr>
<td>(5,32)</td>
</tr>
<tr>
<td>Mean Outcome</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Notes: N=3,504 County*District cells. The outcome in column 1 is the Nominate score times 100, while the outcome in column 2 is the absolute value of that score, corresponding to the distance of a politician from the political center of the Nominate scale. All regressions include the full set of control variables. Standard errors are two-way clustered on CZs and Congressional Districts. ~ p ≤ 0.10, * p ≤ 0.05, ** p ≤ 0.01.
Effect of Trade Exposure on Ideological Position of Winners

Trade exposure hurts moderates, helps conservative Republicans

<table>
<thead>
<tr>
<th>Change in Probability 2002-2010 that Winner has Given Political Orientation</th>
<th>Moderate</th>
<th>Liberal Democrat</th>
<th>Moderate Democrat</th>
<th>Moderate Republican</th>
<th>Cons. Republican</th>
<th>Tea Party Member</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
<tr>
<td>Δ CZ Import Penetration</td>
<td>-35.96</td>
<td>**</td>
<td>0.17</td>
<td>-22.91</td>
<td>**</td>
<td>-13.04</td>
</tr>
<tr>
<td>Mean Outcome</td>
<td>-19.7</td>
<td>2.6</td>
<td>-4.6</td>
<td>-15.0</td>
<td>17.0</td>
<td>11.7</td>
</tr>
<tr>
<td>Level in 2002</td>
<td>56.8</td>
<td>19.9</td>
<td>27.0</td>
<td>29.8</td>
<td>23.3</td>
<td>6.1</td>
</tr>
</tbody>
</table>

Notes: N=3,504 County*District cells. "Liberal Democrats", "Moderates" and "Conservative Republicans" are defined as politicians whose Nominate scores would respectively put them into the bottom quintile, middle three quintiles, or top quintile of the Nominate score in the 107th (2001-2003) congress that precedes the outcome period. A Tea Party Member is defined as a representative who was a member of the Tea Party or Liberty Caucus during the 112th (2011-2013) Congress. All regressions include the full set of control variables. Standard errors are two-way clustered on CZs and Congressional Districts. ~ $p \leq 0.10$, * $p \leq 0.05$, ** $p \leq 0.01$. 
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Heterogeneity in Effects: Initial Party in Power

Losses of centrists compensated by gains on the left and right (initially Dem districts), or right only (initially GOP)

<table>
<thead>
<tr>
<th>Dependent Variables: 100*Change in Nominate Score of Winner or Indicators for Election of Politician by Party and Political Position.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominate Score</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>(1)</td>
</tr>
<tr>
<td>Δ CZ Import Penetration</td>
</tr>
<tr>
<td>Mean Outcome Level in 2002</td>
</tr>
<tr>
<td>-36.4</td>
</tr>
</tbody>
</table>

A. Initially Democratic District

B. Initially Republican District

| Δ CZ Import Penetration | 12.17 (6.91) | ~ | 0.00 (7.32) | -13.23 (13.57) | ~ | -19.26 (16.05) | 32.49 * | 16.89 (15.02) |
| Mean Outcome Level in 2002 | 2.5 | 0.0 | 9.9 | -31.5 | 21.6 | 17.4 |
| 58.3 | 0.0 | 0.0 | 56.1 | 43.9 | 11.6 |

Notes: N=1,233 County*District cells in Panel A, 2,271 County*District cells in Panel B. All regressions include the full set of control variables. Standard errors are two-way clustered. ~ p ≤ 0.10, * p ≤ 0.05, ** p ≤ 0.01.
### Trade Exposure Helps Conservative GOPers in White-Majority Districts, Liberal Dems in Non-White-Majority Districts

<table>
<thead>
<tr>
<th align="left">Dependent Variables: 100<em>Change in Nominate Score of Winner, 100</em>Change in Indicators for Election of Politician by Party and Political Position.</th>
</tr>
</thead>
<tbody>
<tr>
<td align="left">Nominate Score</td>
</tr>
<tr>
<td align="left">Liberal Democrat</td>
</tr>
<tr>
<td align="left">(1)</td>
</tr>
<tr>
<td align="left">Δ CZ Import Penetration</td>
</tr>
<tr>
<td align="left">(8.63)</td>
</tr>
<tr>
<td align="left">Mean Outcome</td>
</tr>
<tr>
<td align="left">Level in 2002</td>
</tr>
</tbody>
</table>

**A. Counties where >1/2 of Voting Age Pop is Non-Hispanic White**

### Δ CZ Import Penetration

| Δ CZ Import Penetration | 25.66 | * | -22.90 | ~ | 9.99 | -12.74 | 1.12 |
| (7.87) | (12.59) | (11.82) | (6.81) | (9.95) | (7.56) |
| Mean Outcome | 1.8 | 5.0 | -6.8 | -1.8 | 3.5 | 3.4 |
| Level in 2002 | -17.7 | 39.3 | 38.4 | 10.9 | 11.4 | 5.3 |

**B. Counties where <=1/2 of Voting Age Pop is Non-Hispanic White**

Notes: N=3,241 (263) County*District cells covering 347 (69) districts in Panel A (B). All regressions include the full set of control variables. Standard errors are two-way clustered. ~ p ≤ 0.10, * p ≤ 0.05, ** p ≤ 0.01.
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5. Conclusions
We add measures of two economic shocks to our baseline specification:

1. A Bartik measure for the predicted change in CZ log employment based on national-industry employment changes
2. The peak-to-trough log change in local housing prices during the post-2006 housing-market collapse

We find that

- The results for the effect of import exposure on electoral outcomes are substantially the same.
- Changes in housing prices are strongly related to changes in electoral outcomes, but only in initially Republican districts.
- The qualitative effects of trade shocks and predicted employment changes are similar, but only changes in import penetration generate political polarization.
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5 Conclusions
Rising political polarization is striking but not well understood

- Coincidence with widening income inequality leads naturally to conjecture that economic shocks are behind greater partisanship

Why would trade shocks contribute to political polarization?

- Dem and GOP beliefs about policy have diverged, with substantial differences in prior beliefs possibly contributing to divergent responses to common shocks (Dixit Weibull ’07)

The employment consequences of trade are acutely recognizable and therefore politically actionable.

- Rising import penetration from China and other low-wage countries disproportionately bears on local labor markets that historically specialized in labor-intensive manufacturing.
What Would The House Look Like If We Had Less Trade?

If imports from China had grown half as fast between 2002 and 2010 as they actually did, Congress probably would have fewer conservatives and liberals and more moderates, according to a new study by a group of economists.

Source: Autor, Dorn, Hanson and Majlesi. “Importing Political Polarization? The Electoral Consequences of Rising Trade Exposure”
Durable Scars from Job Displacement
*Much Worse in Recessions*

Average Earnings Losses of Displaced Workers as a Percent of Pre-Displacement Earnings

![Graph showing average earnings losses of displaced workers over time in expansions and recessions.](image)
On measure after measure – whether primary voting, writing letters to officials, volunteering for or donating to a campaign – the most politically polarized are more actively involved in politics, amplifying the voices that are the least willing to see the parties meet each other halfway.

The se are among the findings of the largest study of U.S. political attitudes ever undertaken by the Pew Research Center. Data are drawn from a national telephone survey of 10,131 adults, conducted from January through March of this year, and an ongoing series of follow-up surveys.

This rich dataset, coupled with trends and insights from two decades of Pew Research Center polling, reveals a complex picture of partisan polarization and how it manifests itself in political behaviors, policy debates, election dynamics and everyday life.

To chart the progression of ideological thinking, responses to 10 political values questions asked on multiple Pew Research surveys since 1994 have been combined to create a measure of ideological consistency (See Appendix A).

Over the past twenty years, the number of Americans in the “tails” of this ideological distribution has doubled from 10% to 21%. Meanwhile, the center has shrunk: 39% currently take a roughly equal number of liberal and conservative positions. That is down from about half (49%) of the public in surveys conducted in 1994 and 2004.

Growing Minority Holds Consistent Ideological Views

On a 10-item scale of political values, % who are...

<table>
<thead>
<tr>
<th>1994</th>
<th>2004</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONSISTENTLY LIBERAL</td>
<td>MOSTLY MIXED</td>
<td>CONSISTENTLY CONSERVATIVE</td>
</tr>
<tr>
<td>3</td>
<td>18</td>
<td>49%</td>
</tr>
<tr>
<td>23</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>12</td>
<td>22</td>
<td>39%</td>
</tr>
</tbody>
</table>

Source: 2014 Political Polarization in the American Public
Notes: Ideological consistency based on a scale of 10 political values questions. (See Appendix A for details on how the scale is constructed and how scores are grouped.)

PEW RESEARCH CENTER
Gap between Democrats and Republicans Is Growing across a Wide Range of Issues

- Government regulation of business usually does more harm than good
- Government is almost always wasteful and inefficient
- Poor people today have it easy because they can get government benefits without doing anything in return
- The government today can't afford to do much more to help the needy

Blacks who can't get ahead in this country are mostly responsible for their own condition
Immigrants today are a burden on our country because they take our jobs, housing and health care
Most corporations make a fair and reasonable amount of profit
Stricter environmental laws and regulations cost too many jobs and hurt the economy
Less Mixing of Views Means That since Mid-2000s Median Democrat and Republican Have Grown Further Apart

Republicans Shift to the Right, Democrats to the Left
Distribution of Republicans and Democrats on a 10-item scale of political values

Source: 2014 Political Polarization in the American Public
Notes: Ideological consistency based on a scale of 10 political values questions (see Appendix A). Republicans include Republican-leaning independents; Democrats include Democratic-leaning independents (see Appendix B).
Polarization of House Commences in Late 1970s

- Ted Cruz (0.88), Marco Rubio (0.58), 4th and 33rd most conservative
- Bernie Sanders (−0.53), Hillary Clinton (−0.40), 4th and 109th most liberal
Polarization of Nominate Scores, Not Vote Shares

Parties are winning with more extreme candidates and narrower victories
Mapping Industry Import Shocks to Commuting Zones

**Observed $\Delta$ in industry import penetration from China**

$$\Delta IP_{j,\tau} = \frac{\Delta M_{j,\tau}^{cu}}{Y_{j,91} + M_{j,91} - E_{j,91}}$$

- $\Delta M_{j,\tau}^{cu}$ is $\Delta$ in China imports over ’02–’10 in US industry $j$, $Y_{j,91} + M_{j,91} - E_{j,91}$ is industry absorption in ’91 (pre-China shock)

**Exposure of commuting zone $i$ to trade with China**

$$\Delta IP_{i\tau}^{cu} = \sum_j \frac{L_{ijt}}{L_{it}} \Delta IP_{j\tau}^{cu}$$

- where $L_{ijt}/L_{it}$ is share of industry $j$ in employment of CZ $i$ in ’00
Isolating the Supply Shock Component of China Imports: Instrumental Variables Approach

Problem

- US import demand $\Delta'$s may contaminate estimation

Instrumental variables approach

- IV for US imports from China using other DCs (Austria, Denmark, Finland, Germany, Japan, New Zealand, Spain, Switzerland)

- Assumption: Common component of $\Delta$ in rich country imports from China is China export supply shock

$$
\Delta IP_{i,t}^{co} = \sum_j \frac{L_{ijt-10} - L_{uijt-10}}{\Delta IP_{j,\tau}^{co}}
$$

where $\Delta IP_{i,t}^{co} = \Delta M_{j,\tau}^{co} / (Y_{j,\tau} + M_{j,\tau} - E_{j,\tau})$ is based on change in imports from China in other high-income countries
Issue-specific Nominate scores are strongly positively correlated, indicating legislators vote in ideologically consistent manner.

### Correlations between DW-Nominate Score and issue-specific W-Nominate Scores.

<table>
<thead>
<tr>
<th>Issue-Specific W-Nominate Score</th>
<th>Budget (1)</th>
<th>Regulation (2)</th>
<th>Domestic Social Policy (3)</th>
<th>Foreign Policy (4)</th>
<th>Globalization (5)</th>
<th>Tariffs &amp; Trade Regulation (6)</th>
<th>Immigr. &amp; Naturalization (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Nominate Scores in 2002</td>
<td>0.990</td>
<td>0.966</td>
<td>0.983</td>
<td>0.982</td>
<td>0.963</td>
<td>0.926</td>
<td>0.947</td>
</tr>
<tr>
<td>B. Nominate Scores in 2010</td>
<td>0.985</td>
<td>0.969</td>
<td>0.974</td>
<td>0.978</td>
<td>0.962</td>
<td>0.926</td>
<td>0.951</td>
</tr>
<tr>
<td>C. Δ Nominate Scores 2002-2010</td>
<td>0.947</td>
<td>0.893</td>
<td>0.918</td>
<td>0.932</td>
<td>0.889</td>
<td>0.858</td>
<td>0.849</td>
</tr>
</tbody>
</table>

Notes: This table reports pairwise correlations between DW-Nominate scores and issue-specific W-Nominate scores across legislators in 2002 and 2010 and correlations across congressional districts for the 2002-2010 change in Nominate scores. These issue areas are based on aggregate Peltzman codes in the Nominate data: budget general and special interest (Peltzman codes 1, 2), regulation general and special interest (Peltzman codes 3, 4), domestic social policy (Peltzman code 5), defense and foreign policy budget and resolutions (Peltzman codes 61, 62, 71, 72), tariffs and trade regulation (issue code 50), and immigration/naturalization (issue code 59).
Effect of Trade Exposure on Change in Nominate Scores

Note: Level in 2002 = 13.9

Trade exposure induces shift away from center, net shift to right in legislator voting—due to leg. turnover not within-person $\Delta's$

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<td>2002-2010 Change in Political Position</td>
</tr>
<tr>
<td>Nominate Score</td>
</tr>
<tr>
<td>(1)</td>
</tr>
</tbody>
</table>

A. Between and Within Person Change of Nominate Score

$\Delta$ CZ Import Penetration

<table>
<thead>
<tr>
<th>Mean Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.13</td>
</tr>
<tr>
<td>(7.91)</td>
</tr>
<tr>
<td>Mean Outcome</td>
</tr>
</tbody>
</table>

B. Between Person Change of Nominate Score Only

$\Delta$ CZ Import Penetration

<table>
<thead>
<tr>
<th>Mean Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>19.69</td>
</tr>
<tr>
<td>(7.82)</td>
</tr>
<tr>
<td>Mean Outcome</td>
</tr>
</tbody>
</table>

Notes: N=3,504 County*District cells. The outcome in column 1 is the Nominate score times 100, while the outcome in column 2 is the absolute value of that score, corresponding to the distance of a politician from the political center of the Nominate scale. All regressions include the full set of control variables. Standard errors are two-way clustered on CZs and Congressional Districts. $\sim p \leq 0.10$, $* p \leq 0.05$, $** p \leq 0.01$. 
Interpreting Magnitudes

Interpreting magnitudes

- Consider two congressional districts that are at the 25\textsuperscript{th} and 75\textsuperscript{th} percentile of change in trade exposure, respectively

- More trade-exposed district would have:
  - change in Nominate score that is $0.18 \times (0.89 - 0.40)/49$ standard deviations higher
  - change in distance from political center that is $0.36 \times (0.89 - 0.40)/19$ standard deviations greater
Trade exposure helps induce transitions ('02-'10: 218 CDs no Δ incumbent; other CDs: 104 R→R, 42 D→D, 30 D→R, 22 R→D)

<table>
<thead>
<tr>
<th>Change in Party</th>
<th>No Change in Party</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Different Rep</td>
</tr>
</tbody>
</table>

| Г. All Districts |  |
|------------------|--|-----------------|------------------|
| Δ CZ Import Penetration | 8,16 | 14,27 | -22,43 *       |
|                  | (8,15) | (11,12) | (10,29)         |
| Mean Outcome    | 12,4  | 35,1  | 52,4            |

| Б. Initially Democratic District |  |
|---------------------------------|--|-----------------|-----------------|
| Δ CZ Import Penetration | 29,82 | ~ | -6,36 | -23,46 |
|                  | (17,81) | (18,26) | (17,97)         |
| Mean Outcome    | 15,4  | 21,6  | 63,1            |

| С. Initially Republican District |  |
|---------------------------------|--|-----------------|-----------------|
| Δ CZ Import Penetration | -13,23 | ~ | 38,66 * | -25,43 ~       |
|                  | (7,32) | (15,38) | (13,34)         |
| Mean Outcome    | 9,9  | 47,2  | 43,0            |

Notes: N=3,504 County*District cells in Panel A, N=1,233 in Panel B, N=2,271 in Panel C. All regressions include the full set of control variables. Standard errors are two-way clustered on CZs and Congressional Districts. ~ p ≤ 0.10, * p ≤ 0.05, ** p ≤ 0.01.
Explaining Polarization

Literature is large but little consensus on causal mechanisms

- Explanations shown to lack empirical support
  - Immigration, manipulation of blue-collar voters (Gelman et al. ’08)
  - Greater geographic voter segregation—the “big sort” didn’t happen (Glaeser Ward ’06, Abrams Fiorina ’12)
  - Gerrymandering, changes in election structure or congressional rules (McCarty Poole Rosenthal ’09, Barber McCarty ’15)

- Explanations supported by circumstantial evidence
  - Tax/regulatory reform (Bartels ’10, Hacker Pierson ’10)
  - Stronger ideological sorting of voters by party (Levendusky ’09)
  - Media partisanship (DellaVigna Kaplan ’07, Gentzkow Shapiro ’11)
## Imports from China in the US and Other Developed Economies 1991 – 2007

### Imports from China in the U.S. and Other Developed Economies 1991 - 2007 (in Billions of 2007$), and their Correlations with U.S.-China Imports

<table>
<thead>
<tr>
<th></th>
<th>United States</th>
<th>Japan</th>
<th>Germany</th>
<th>Spain</th>
<th>Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Δ Chinese Imports (Bil$)</td>
<td>303.8</td>
<td>108.1</td>
<td>64.3</td>
<td>23.2</td>
<td>21.5</td>
</tr>
<tr>
<td>No. Industries with Import</td>
<td>385</td>
<td>368</td>
<td>371</td>
<td>377</td>
<td>378</td>
</tr>
<tr>
<td>Correlation w/ U.S.-China</td>
<td>1.00</td>
<td>0.86</td>
<td>0.91</td>
<td>0.68</td>
<td>0.96</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>8 Non-US Countries</th>
<th>Finland</th>
<th>Denmark</th>
<th>New Zealand</th>
<th>Switzerland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Δ Chinese Imports (Bil$)</td>
<td>234.7</td>
<td>5.7</td>
<td>4.7</td>
<td>3.8</td>
<td>3.3</td>
</tr>
<tr>
<td>No. Industries with Import</td>
<td>383</td>
<td>356</td>
<td>362</td>
<td>379</td>
<td>343</td>
</tr>
<tr>
<td>Correlation w/ U.S.-China</td>
<td>0.92</td>
<td>0.58</td>
<td>0.62</td>
<td>0.92</td>
<td>0.55</td>
</tr>
</tbody>
</table>

Correlations of imports across 397 4-digit industries are weighted using 1991 industry employment from the NBER Manufacturing database.
Robustness: Notes on Alternative Specifications

Results are robust to

- Using ’10 levels, rather than ’02-’10 changes, on LHS
- Controlling for quadratic in or bin sizes of ’02 Nominate scores
- Defining liberals and conservatives cardinally as outside $[-0.5, 0.5]$