Grocery Shopping for America
Terrorism, National Identity, and Consumer Behavior

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Does national identity have a causal effect on economic behavior?
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National Identity and Political Behavior: Internal vs. External Validity

- Survey experiments provide strong internal validity, but...

- Behavior consistent with survey responses?

- Does salience of national identity vary over time/ across context?
Universal, Consistent, and Frequent Behavior: Supermarket Shopping

- Average US household shops once a week

- Heavier reliance on heuristics for low cost purchases

- Data allow us to control for changes in price, availability, and previous consumption
Nationality-Based Marketing Strategies
Link National Identity to Behavior
Terrorism: Exogenous Shock Makes National Identity More Salient
Terrorist Events Increases Market Share of American-Sounding Brands

- Identifying assumption: events only influence purchasing choice via change in association with American identity

- Controls for price, availability, seasonality
Behavior: Weekly Supermarket Purchases

- Nationally representative sample from IRI (academic-use data set)

- The scanner data includes:
  5184 brands \((i)\),
  1154 supermarkets \((j)\),
  22 product categories \((k)\),
  156 weeks \((t)\) - all weeks in 2001, 2002, 2003
50 Geographic Markets
Outcome: Weekly Change in Market Share Growth Rate

$\Delta \text{Share}01_{i,j,k,t}$ is the number of units of the brand sold, as a percent of all units in the product category sold for brand $i$-product category $k$ in store $j$ in week $t$

First difference controls for all time-invariant characteristics of brands, including supply and demand
**AmericanScore_i = N Coders who Perceive Brand as American**

<table>
<thead>
<tr>
<th>AmericanScore_i</th>
<th>Brand Example (Product Category)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Sam Adams Boston Lager (beer)</td>
</tr>
<tr>
<td></td>
<td>Coca Cola (carb. beverages)</td>
</tr>
<tr>
<td>6</td>
<td>Land O’ Lakes (margarine/butter)</td>
</tr>
<tr>
<td></td>
<td>Phillies (hot dogs)</td>
</tr>
<tr>
<td>5</td>
<td>Olde Cape Cod (spaghetti sauce)</td>
</tr>
<tr>
<td></td>
<td>Swanson American Recipes (frozen dinners)</td>
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<tr>
<td>4</td>
<td>New England (ketchup/mustard)</td>
</tr>
<tr>
<td></td>
<td>Dad’s Root Beer (carb. beverages)</td>
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<tr>
<td>3</td>
<td>Maple Leaf (hot dogs)</td>
</tr>
<tr>
<td></td>
<td>Van De Kamps (frozen dinners)</td>
</tr>
<tr>
<td>2</td>
<td>Life in Provence Aioli (mayonnaise)</td>
</tr>
<tr>
<td></td>
<td>Dietz &amp; Watson (ketchup/mustard)</td>
</tr>
<tr>
<td>1</td>
<td>Royal Scot (margarine/butter)</td>
</tr>
<tr>
<td></td>
<td>World Trend (toothbrushes)</td>
</tr>
<tr>
<td>0</td>
<td>König Ludwig Weiss (beer)</td>
</tr>
<tr>
<td></td>
<td>Cucina Antica (spaghetti sauce)</td>
</tr>
</tbody>
</table>
$\text{AmericanScore}_i = 7$
AmericanScore_i = 0
Empirical Model: Supermarket Sales in Week After 9/11

\[
\Delta \text{Share01}_{ijkt} = \\
\beta_1 \text{TerrorAttack} + \\
\beta_2 \text{AmericanScore}_i + \\
\beta_3 \text{TerrorThreat}_t \ast \text{AmericanScore}_i + \\
\beta_4 \Delta \text{Price01}_{ijkt-1} + \\
\beta_5 \Delta \text{NumVariants01}_{ijkt-1} + \epsilon_{ijkt-1}
\]
Predicted Effect: 9/11 Increases American-Sounding Brand Market Share

![Graph showing predicted median weekly change in market share for American brands with scores above and below 3, highlighting a significant increase in market share for American brands from September 16 to 23.](image-url)
Largest Share Increases for Most American-Sounding Brands

2001:

- -0.00010: all brands avg. change
- 0.00015: $AmericanScore_i = 5$ avg. change
- 0.00070: $AmericanScore_i = 7$ avg. change

$AmericanScore_i = 7$ brands: 29% increase in market share relative to previous week.

By comparison, average price increase generates 4% increase.
DHS Terror Threat Level: Threat Without Supply-Side Effects

- 9/11 attack: confounding unobserved effects?
- 2003 DHS elevated terror alert:
  - No confounding effects
  - Uniform effect across the US
- Year over year market share changes controls for all time-invariant characteristics
Predicted Effect: Threat Level Increases American-Sounding Brand Market Share
Who Switched into American-Sounding Brands?

Store customers: population for 2-mile radius around each store

Correlates of stronger ex ante attachment to US identity:

- Members of the armed forces (9/11)
- US citizens (DHS)
- Blue collar workers (DHS)
Survey Experiment: Importance of Nationalism and Persistence of Shock?

Experimental Design

- Recruit 276 subjects from MTurk in 2014
- Randomize national brand cues (American/non-American)
- Randomize perceived threat (9/11 memory task/Y2K memory task)
- Brand preference questions
Invented American and Non-American Brand Pairs

Control

Treatment
Nationalistic Subjects Prefer American-Sounding Brands

Predicted Willingness to Purchase

Predicted American Product Evaluation

Nationalism
Nationalism Correlates Most with Brand Choice

- Brand preferences uncorrelated with item price, respondent education, income, and partisanship.

- No effect of 9/11 treatment in 2014; no long-term threat persistence.
Conclusion: Real World Behavior Matters

- Supermarket purchases: real-time observable responses to exogenous shocks across contexts
- Novel measure: supermarket purchases link identity and behavior via branding
- IR research: unique behavioral correlate of international policy preferences