National Solidarity in Wartime: How Military Casualties Shape Consumer Behavior

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November 14, 2015
Motivation

- Social identities explain survey results on IR issues but actual behavioral implications unknown
- Variation in identity’s salience over time and across contexts also unknown
- Do casualties shape public support for war independent of partisan/media cues?
Research Question

- Do consumers express support for national identity in the wake of military casualties?
Casualties Strengthen National Identity via Mortality Salience

- Conditional on military enlistment, local exposure to casualties is random
- Localized shocks narrow scope for elite/media priming
- Mechanism: consumers reaffirm national identity to cope with mortality salience
Casualties and Recruitment Data

- AP provides complete list of casualties, including hometown
- We link our sample of stores/households to each casualty’s hometown county
Brands Affirm and Signal Identity

- Brands use cues to create symbolic meaning
- Brand choice reflects consumer identity
Expectations

- Consumers purchase more American-sounding brands in the wake of military casualties.
- Casualties with a local connection will prompt even stronger shift to American-sounding brands.
Measuring Perceived Brand Nationality

What nationality does this brand most make you think of? Don't worry if you don't know what country the product actually comes from; this question only concerns your opinion about what country seems most relevant.

product name
(This is a brand of ${category_name}.)

If the brand name suggests more than one nationality, choose the one that suits this brand most. If it has no national associations, choose "None."

- American
- Chinese
- English
- French
- German
- Italian
- Japanese
- Spanish
- None
- Other

If "Other," please specify a nationality in the box below.

Submit
American Scores

- 7 coders, 12,538 brands, 27 product categories
- Normalize scores by dividing sum American codes by variance of other national codes
- Average score = 0.28
AmericanScore\textsubscript{i} = 1
AmericanScore_{i} = 0
Empirical Strategy

Leverage two sources of consumer data:

- Store-level data, DV = brand market share
- Household panel data, DV = proportion of American-sounding brand purchases
Store-Level Data

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

- The scanner data includes:
  12,538 brands \((i)\),
  1154 supermarkets \((j)\),
  27 product categories \((k)\),
  364 weeks \((t)\) - all weeks 2002-2008
Outcome: Annual Difference in Weekly Change in Market Share Growth Rate

$\Delta Share2 - 1_{ijkt}$ is the annual change in 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
Store Level Model

\[ \Delta Share_{ijkt} = \]
\[ \beta_1 \Delta NationalCasualties_{2-1, t-1} \times AmericanScore_i + \]
\[ \beta_2 \Delta LocalCasualties_{2-1, t-1} \times AmericanScore_i + \]
\[ \beta_3 \Delta NationalCasualties_{2-1, t-1} + \]
\[ \beta_4 \Delta LocalCasualties_{2-1, t-1} + \]
\[ \beta_5 AmericanScore_i + \]
\[ \beta_6 \Delta Price_{2-1, ijk, t-1} + \]
\[ \beta_7 \Delta NumVariants_{2, ijk, t-1} + \]
\[ \epsilon_{ijkt-1} \]
### Store Level Results

<table>
<thead>
<tr>
<th>Term</th>
<th>Coef.</th>
<th>S.E.</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\Delta NationalCasualties_{2-1t-1} \times AmericanScore_i$</td>
<td>5.70E-06</td>
<td>(1.35E-06)</td>
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<tr>
<td>$\Delta LocalCasualties_{2-1t-1} \times AmericanScore_i$</td>
<td>8.30E-05</td>
<td>(3.69E-05)</td>
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<td>$\Delta NationalCasualties_{2-1t-1}$</td>
<td>-3.49E-06</td>
<td>(8.40E-07)</td>
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<tr>
<td>$\Delta LocalCasualties_{2-1t-1}$</td>
<td>-4.73E-06</td>
<td>(2.31E-05)</td>
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<tr>
<td>$AmericanScore_i$</td>
<td>-2.18E-05</td>
<td>(1.98E-05)</td>
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<tr>
<td>$\Delta Price_{2-1ijkt-1}$</td>
<td>-1.39E-03</td>
<td>(2.52E-06)</td>
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<tr>
<td>$\Delta NumVariants_{2-1ijkt-1}$</td>
<td>1.01E-02</td>
<td>(4.68E-06)</td>
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</table>

<table>
<thead>
<tr>
<th>Summary Statistics</th>
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<tbody>
<tr>
<td>N</td>
<td>74,575,333</td>
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<tr>
<td>$R^2$</td>
<td>0.06</td>
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</table>
Interpretation of Effects

- Changes in annual brand market share growth equivalent to $0.10 price decrease per local casualty

- Each local casualty has the effect of about ten casualties in the aggregate
Household-Level Data

- Nationally representative sample of household from Nielsen

- The data include:
  12,538 brands \((i)\),
  90,624 households \((j)\),
  260 weeks \((t)\) - all weeks 2004-2008
52 Scan-Trac Markets

Note: Markets Defined by Nielsen
Distribution of Casualties

- Total Number of Casualties in Sample: 895 Afghanistan, 3953 Iraq

- Households that experience a local casualty (64% of the sample) are:
  - Slightly less educated
  - Slightly more racially diverse

- No substantively meaningful differences in average income, household size, or age
Outcome: Weekly Proportion of American-Sounding Purchases

$AmericanProportion_{jt}$ is the percent of all products purchased by household $j$ in week $t$ which a majority of coders deem to be American-sounding.
Household Level Model

\[ \text{AmericanProportion}_{jt} = \]
\[ \beta_1 \text{WeeklyTotalCasualties}_{t-1} + \]
\[ \beta_2 \text{WeeklyLocalCasualties}_{t-1} + \]
\[ \beta_3 \text{MilitaryHousehold}_j + \]
\[ \beta_4 \text{MilitaryHousehold}_j \times \text{WeeklyLocalCasualties}_{t-1} + \]
\[ \beta_5 X_j + \]
\[ \epsilon_{ijkt-1} \]

Where \( X_j \) is a vector of region fixed effects, household-level controls for income, age, and education, and an indicator variable for the holiday week of July 4.
### Household Level Results:
Change in Proportion American Purchases

<table>
<thead>
<tr>
<th></th>
<th>Coef.</th>
<th>S.E.</th>
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<tbody>
<tr>
<td>$WeeklyTotalCasualties_{t-1}$</td>
<td>0.007</td>
<td>(0.001)</td>
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<tr>
<td>$WeeklyLocalCasualties_{t-1}$</td>
<td>0.332</td>
<td>(0.113)</td>
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<tr>
<td>$MilitaryHousehold_j$</td>
<td>-0.7778</td>
<td>(0.525)</td>
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<td>$MilitaryHousehold_j \times \ $</td>
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<tr>
<td>$WeeklyLocalCasualties_{t-1}$</td>
<td>2.224</td>
<td>(1.025)</td>
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<td>Household Controls</td>
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<tr>
<td>Region Fixed Effects</td>
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<tr>
<td>N</td>
<td>12,468,158</td>
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</tbody>
</table>
Interpretation of Effects

- Week with most national casualties increased American purchase proportion by 0.31 percentage points

- Each local casualty increases proportion of American purchases by 0.33, a 1% increase

- Each local casualty has the effect of about thirty casualties in the aggregate

- Military households dramatically respond to local casualties: 2.22 percentage point increase
Additional Robustness Checks

- Annual county-level military enlistment (Kriner and Shen 2015) associated with American brand purchasing
- Wealthier households less likely to buy American-sounding brands
- Results hold (but decrease in magnitude) for three weeks post-casualty shock
- Results hold with fixed effects for media markets
Brand Choice as Nationalistic Sentiment

- Casualties shape nationalistic consumption consistently
- Local casualties have much larger effects on consumer behavior than national totals
- Military families especially likely to change behavior
Next Steps

- Identify cross-sectional variation in responses:
  - Local and national news coverage
  - Social capital and peer effects
  - Correlation with political participation

- Experiment to tease out individual-level moderators
Project Abstract:
A growing body of survey-based evidence suggests social identities drive foreign policy preferences but to build microfoundations of IR theory two puzzles remain: (a) social identity has to drive actual behavior, and (b) variation in identity’s salience over time and across contexts must be readily observed. We analyze US consumer behavior following war casualties, an exogenous, quasi-randomly distributed shock that makes national identity more salient. In our analysis of household panel data, including 90,000 U.S. households, and retail scanner data, including over 70 million individual consumer purchases, we match Iraq and Afghanistan war casualties during 2002-2008 to their US hometowns to assess local shifts in behavior. Purchases of American-sounding supermarket brands increase ten fold in communities following the death of a local solider. Households that included armed forces employees show especially large increases. These findings demonstrate a causal effect of national identity on economic behavior and suggest that casualties influence attitudes about war independent of media and partisan priming.