# Economic Integration Drives Ethnocentrism:

Evidence from Consumer Responses to Foreign Acquisitions

Aycan Katitas, Sonal Pandya, and Rajkumar Venkatesan \*

November 2018 (Preliminary Draft)

<sup>\*</sup>Katitas: Department of Politics, University of Virginia (ak8ef@virginia.edu). Pandya: Department of Politics, University of Virginia (spandya@virginia.edu). Venkatesan: Darden School of Business, University of Virginia (venkatesanr@darden.virginia.edu).

#### Abstract

Does global economic integration fuel ethnocentrism? We leverage the implied nationality of American-sounding supermarket brands to measure weekly fluctuations in local ethnocentrism following foreign acquisitions of American firms. Changes in the market share of these brands in a given store capture the local communitys shifting attachment to American national identity. Foreign acquisitions are exogenous shocks that make national identity more salient to consumers but do not immediately change any other aspects of consumption. We find that the market share of American-sounding brands increases in stores located in counties where a local firm's foreign acquisitions was announced a week prior. This finding holds for acquisitions originating in the UK and Canada but no other countries; and acquisitions in some national security-sensitive industries. A placebo test with wholly domestic acquisitions verifies acquisitions more generally, and their attendant distributive consequences, do not drive our results. We establish the causal effect of global economic integration on ethnocentrism with a high external validity and using a high frequency, geographically disaggregated, behavioral measure of ethnocentrism.

#### I Introduction

Does global economic integration fuel ethnocentrism? Ethnocentrism refers to a psychological tendency to separate between virtuous in-groups and threatening out-groups (Tajfel 1978, Tajfel and Turner 1979). Amid the rise of nationalist politicians with aggressive antiglobalization agendas, understanding the precise origins of mass ethnocentrism takes on a new urgency. A large literature uses opinion surveys, often with embedded experiments, to analyze attitudes towards trade and other specific dimensions of economic integration. A consensus view is that non-material factors like ethnocentrism drive opposition to integration and correlate with attitudes more so than anticipated distributive consequences (Mansfield and Mutz 2009, Chilton et al. 2017, Tingley et al. 2015, Hainmueller and Hiscox 2006, Margalit 2012, Guisinger 2017). Existing research establishes deep and nuanced microfoundations for theories of foreign economic policies with strong internal validity.

Current research, however, focuses less on the reverse proposition: whether exposure to economic integration has causal effects on ethnocentrism. The key challenge to answering this question is how to measure responses to economic integration with a sufficiently high degree of external validity to connect microfoundations to broader political trends. Surveys are ill-suited to this task because they do not readily capture actual salience of economic integration, mediating contextual factors, and, most important, whether responses are sufficiently large to drive behavior.

We turn to consumption as a behavioral metric of national identity. We measure ethnocentrism using sales of American-sounding brands, brands marketed to evoke American national identity. Our measure capitalizes on the tight links between social identity and consumption (Escalas and Bettman 2003, 2005). Consumers purchase brands that reinforce and signal their most important social identities (Khan et al 2013, Muniz and O'Guinn 2001, Shachar et al. 2011). We leverage these links to measure local fluctuations in ethnocentrism by weekly shifts in the market share of American-sounding brands within over 1100 supermarkets nationwide. Our sample spans 2002-2011 and more than 8000 brands across 30

product categories. Supermarket shopping is a frequent, consistent, and nearly universal behavior in the US. The average American household purchases groceries weekly (Kahn and Schmittlein 1989), which allows us to capture virtually real time responses to events. Supermarket shopping is also a relatively apolitical behavior. To the extent that ethnocentrism drives choices in this domain, we can infer its heightened importance in political choices.

We evaluate ethnocentric responses to foreign mergers and acquisitions (M&As), a form of foreign direct investment (FDI) in which a foreign firm acquires ownership and control of an existing firm.<sup>1</sup> As the single largest form of global capital flows, FDI is among the most significant dimensions of global integration. M&As are also particularly insightful for parsing integration's effects on ethnocentrism. Only 28 percent of Americans have a favorable view of M&As whereas three-fourths of Americans support the creation of new American subsidiaries of foreign-owned firms (Pew Research Center 2014). This split indicates that the presence of foreign-owned firms per se is not a problem, but something about foreign acquisition of existing firms is unpopular.<sup>2</sup> Likewise both domestic and foreign firms acquire companies, allowing us to separate responses to acquisitions generally from the nationality of the acquiring firm. As compared to trade in goods and services, the acquiring firm's nationality is highly visible, which allows us to assess variation in the ethnocentrism due to firms' country of origin.

We estimate a difference-in-differences model of change in American-sounding brands' store-week market share. Our identifying assumption is that M&As affect consumer behavior only through their effects on ethnocentrism. M&As are quasi-random shocks in public exposure to economic integration. We assess responses to M&A announcements, which are typical confidential ex ante. Announcements themselves do not affect product characteristics or availability. Local ethnocentrism does not correlate with foreign M&A location decisions within the US (Andrews et al. 2018). We measure weekly change in American-sounding

<sup>&</sup>lt;sup>1</sup>We use M&As as a shorthand for cross-border M&As. We refer to wholly domestic M&A transactions as domestic acquisitions.

<sup>&</sup>lt;sup>2</sup>For example, Donald Trump has touted as great successes new announced US investments by Softbank (Japan) and Foxconn (Taiwan).

brands' market share as compared to the same week in previous year. By estimating a model of year-over-year difference in brands' market share, we hold constant all time invariant store characteristics including the ex ante supply and demand of American-sounding brands and local demographic characteristics that correlate with the propensity to ethnocentrism. This specification also accounts for seasonal variation in demand. In addition, we control for weekly change in availability and price, the only possible real time response to sudden demand shifts.

We find that the market share of American-sounding brands increases in stores located in counties where a local firm's foreign acquisitions was announced a week prior. The finding holds when we limit the sample to Canada and UK-based acquiring firms, the two largest source countries and source countries with the strongest cultural similarities. We find some evidence that ethnocentrism reflects national security concerns but the finding is sensitive to which industries we define as relevant national security. A placebo test with wholly domestic transactions yields a null finding, which confirms that acquisitions more generally do not drive the switch to American-sounding brands.

Finally, we consider changes in the market share of brands owned by acquired companies. These brands are more tangible symbols for foreign takeover and changes in their market share may be a more direct measure of ethnocentrism. Our sample is substantially smaller because it is limited to acquisitions whose affected brands are in our supermarket data. We find that in stores located in the same county as an acquired firm, the market share of that firm's brands is lower, the more American-sounding the brand.

Our work relates to a growing body of research on the consequences of exposure to trade competition (Margalit 2011, Jensen et al 2017, Colantone and Stanig 2017) and immigration (Colantone and Stanig 2018) for party vote shares. Though we share the same basic motivation to link economic integration with recent political upheavals, our direct focus on ethnocentrism is novel. Some studies speculate that ethnocentrism underlies electoral shifts in the US (Autor et al 2017), but labor market consequences motivate empirical tests.

We establish ethnocentrism as a distinct and potentially important additional mechanism. These two mechanisms could have vastly different implications for voters' party choice and party strategies. Our analysis of high frequency data indicates that economic integration's political effects may extend beyond the voting booth to other forms of real time political participation like campaign contributions and indirectly through ethnocentrism's effects on important factors like civic engagement. Additionally, we focus on M&As, which this literature has generally overlooked despite its importance to the global economy. FDI's distributive and non-material consequences are arguably more varied than trade and immigration; disentangling these consequences contributes to a richer and more nuanced account of political reactions to global integration.

Our study also demonstrates how to estimate the causal effects of social identity with a high degree of external validity. We are the first in political science to use supermarket scanner data for this purpose.<sup>4</sup> Our application is in political economy but high frequency, fine grain behavioral measures of ethnocentrism can be useful across the discipline. Our research design can be readily adapted to other social identities central to political science, like race and gender, that also feature prominently in product branding. These applications would complement existing political behavior research by testing external validity with the same rigor that surveys establish internal validity.

Finally, our research contributes to the burgeoning FDI preferences literature by underlining the importance of non-material factors in reaction to FDI. Past research on FDI preferences emphasize FDI's effects on wages (Pandya 2014), job security (Scheve and Slaughter 2004), gender (Jamal and Milner 2015) and reciprocity between countries (Chilton et al. 2017). With our specific focus on M&As, we contribute to a deeper understanding of how ethnocentrism plays a role in opposition toward FDI.

<sup>&</sup>lt;sup>3</sup>Owen 2018 analyzes electoral consequences of greenfield FDI.

<sup>&</sup>lt;sup>4</sup>Research in economics and psychology analyzes consumer boycotts (Pandya and Venkatesan 2016) and war (Pandya et al 2018), respectively.

### II Mass Responses to to M&As

A firm acquires another other company to gain control over the target firm's technologies and other productive assets.<sup>5</sup> The target firm's assets typically complement those of the acquiring firm, yielding productive synergies (Nocke and Yeaple 2007, 2008). The US is the world's largest recipient of M&As. In 2011, foreign companies acquired more than 1500 American firms, with a total value over \$140 billion.<sup>6</sup> In the same year, majority-owned foreign firms in the US employed 5.7 million workers.<sup>7</sup> In contrast to cross-border trade, M&As occur across all industries. In recent years, top M&A recipients have been business services, computer software, mining, and pharmaceuticals.<sup>8</sup> The Committee on Foreign Investment in the US (CFIUS), an interagency body of the federal executive branch, retains the authority to review the national security consequences of foreign acquisitions. CIFUS rarely blocks acquisitions. More common are required modifications to the terms of acquisition such as spinning off one line of business into a separate firm.

As noted, less than one-third of Americans believe M&As are good for the country (Pew Research Center 2014). Anecdotal evidence illustrates how M&As provoke ethnocentrism. The 2008 takeover of Anheuser-Busch Co Inc. by the Belgian-owned InBev provoked fierce opposition. Some Americans took to Twitter to express their displeasure: "Save Anheuser Busch from Inbev!!! We must save this American icon"; "Belgium InBev needs to leave my beloved Anheuser-Busch alone. Go make a play for Miller!". Others created Facebook petitions, bumper stickers, and websites (www.saveab.com). Other M&A controversies include Dubai World Ports' 2006 bid to acquire P&O, a British company that operated US ports and failed 2005 attempt by the Chinese state oil company to purchase Unocal.

M&As can trigger ethnocentrism through several possible mechanisms. They have the

 $<sup>^5</sup>$ The statistical definition of FDI is ten percent foreign ownership, the minimum threshold to exercise managerial control. Most M&As in the US during the sample period transfer one hundred percent ownership to the acquiring firm.

<sup>&</sup>lt;sup>6</sup>Data source: SDC Platinum, Thomson Reuters.

<sup>&</sup>lt;sup>7</sup>Data source: Bureau of Economic Analysis, U.S. Department of Commerce. Majority Owned U.S. Affiliates: Employment by State and Country 2007-2015. https://www.bea.gov/international/di1fdiop.

<sup>&</sup>lt;sup>8</sup>See appendix for additional information about M&As in the US.

potential to exact sharp economic costs, which can in turn stoke ethnocentrism. M&As generate scale economies that increase shareholder values (Rossi and Volpin 2004, Griffith et al. 2004) but may require shedding of excess capacity, including workers. The most rigorous evidence on M&As' wage effects, based on employee-level data that spans change in firm ownership, reveals a decline in wages (Heyman et al. 2007). Multiple studies based on less detailed data, however, show modest wage increases (Javorcik 2014). M&As in advanced economies tend to magnify wage inequalities, a reflection of FDI as a channel for skill-biased technological change (Heyman et al. 2011, Hakkala 2014).

Independent of any economic effects, the mass public may react based on priors about the acquiring firm's country of origin. The 2006 Dubai Ports deal provoked discussion about the United Arab Emirates' possible links to state sponsors of terrorism. That the acquiring firm was itself a majority state owned-firm raised additional concerns that the firm may use its position to advance Dubai's political agenda in a manner that undermines national interests and security. M&As can also trigger a generalized sense of foreign invasion, without animosity towards specific countries (Conybeare and Kim 2010).

We argue that consumers respond to foreign acquisitions by purchasing American-sounding brands to reaffirm their American identity. In general, consumers believe M&A causes higher prices and reduced satisfaction in certain industries (Sikora 2005, Thornton et al. 2004), react negatively to acquisitions and tend to leave the target company's brand and "switch" to another brand. Foreign acquisition fit the criteria to cause the switching behavior among consumers. These type of M&A processes create "strong psychological reactance processes" among consumers who buy the target company brands to "assert their freedom" (Thorbjernsen and Dahlen 2004, p. 333).

In the context of foreign acquisitions, this switch will be to American sounding brands. The marketing literature provides extensive evidence on how country-of-origin (COO) and consumer animosity affect consumption behavior (Verlegh and Steenkamp 1999, Maheswaran 1994, Amine 2008, Verlegh 2007). Consumers' social and personal norms drive the decision

to purchase goods from specific countries (Verlegh and Steenkamp 1999)

#### III Measurement

Our analyses require measurement of three concepts: the perceived American origin of brands; weekly supermarket purchases; and the exposure to M&A activity.

## III..1 Foreign Acquisition of American Companies

Our data on M&As are from the SDC Platinum database by Thomson Reuters, the most comprehensive and widely used source for data on global M&A transactions. Among other information, the database reports name and addresses of acquiring and target companies, announcement date, industry, and valuation. We restrict the sample to transactions that were 100% acquisitions of US-headquartered firms by a foreign firm for a total of 6,259 transactions. During the same period there 51,419 wholly domestic transactions (e.g. between two US-based companies).

We follow existing M&A research by using announcement as the initial public exposure to the transaction. Announcements typically surprise consumers, markets, and even senior employees of the firms involved (Bao and Chen 2017). Announcements occur prior to any other changes such as changes in product characteristics and availability that could otherwise influence consumers' brand choice. As we noted earlier, the location of target firms does not correlate with local ethnocentrism, and to the extent announcement timing is endogenous to public sentiment we are less likely to find our expected result.

From the perspective of a given supermarket, a "local" foreign acquisition is the announcement of an acquisition of an American company whose hometown is in the same US county as the store. We use target firms' address to link supermarkets to M&As of firms in the same county. We sum store-week foreign acquisition announcements to generate  $ForeignCount_{jt}$ , our measure of M&A exposure.

### III..2 Perceived Brand Nationality

We measure perceived brand nationality using the product brand names supplied in our sales data. We rely on brand name to indicate nationality because it is a highly salient, readily available cue (Usunier and Shaner 2002). For American consumers, brand names based on foreign languages frequently evoke associations with a foreign country through distinctive letter combinations and special characters, such as umlauts and accent marks that do not occur in English. By contrast, brands that incorporate geographic locations in the US or American cultural symbols imply American-made products. Survey and experimental evidence shows consumers systematically misidentify the national origin of products because they infer nationality from marketing cues, rather than searching for official country of origin labels (Samiee et al 2005; Balabanis and Diamantopoulos 2011). Additionally, consumers perceive as American some very well-known brands that lack obvious American nationality cues.

Brand nationality is a cue that operates outside of consumers' conscious awareness in a manner analogous to social stereotypes (Liu and Johnson 2005, Martin et al 2011). Consumers draw inferences based on prior associations between the implied country and the product. A French-sounding brand name, for instance, cues "a rich network of associations related to aesthetic sensitivity, refined taste, and sensory pleasure" (LeClerc et al 1994, 264-268).

We administered surveys to assess the perceived nationality of brands via Amazon.com's Mechanical Turk service (MTurk), an online marketplace for repetitive human coding tasks paid by piece rate. Our survey presented respondents with the brand name of a product and its product category and asked them to select the most relevant from a list of brand nation-

<sup>&</sup>lt;sup>9</sup>We performed a trial experiment to test whether additional brand information influenced perceived nationality. For a random sample of brands with US-trademarked logos, we surveyed a randomly selected group on the nationality of brands based on the brand name, product category, and logo. A control group scored the same brands based only on brand name and product category. Answers were not statistically distinguishable between the two groups.

<sup>&</sup>lt;sup>10</sup>Products labeled "made in the USA" have to meet legal requirements set by the US Federal Trade Commission.

alities.<sup>11</sup> Seven respondents independently coded each brand. Across a range of disciplines, including Psychology (Paolacci et al 2010, Buhrmester et al 2011), Linguistics (Schnoebelen and Kuperman 2010, Sprouse 2011), and Political Science (Berinsky, Huber, and Lenz 2012), MTurk often produces more reliable results than convenience samples or lab-based alternatives.<sup>12</sup>

AmericanScore<sub>i</sub> takes values between 0 and 7 corresponding to the number of respondents who deemed brand i to be American. Table 1 provides examples of brands at each variable value. Brands with  $AmericanScore_i = 7$  exhibit strong American nationality cues including geographic references and historical figures. Coca-Cola is an example of a high profile brand perceived as American though without explicit American branding cues. Lower-scoring brands have distinctively foreign elements including words in other languages and foreign geographic references. Table 1 summarizes the distribution of American-sounding brands across product categories. Higher scoring brands contain specific cues to geographic locations in the US and prominent historical figures. As the high ranking for Coca Cola suggests, consumers maintain strong American associations to brands without obvious American cues due to their cultural significance. The lowest ranking brands include strong cues of foreignness including words from other languages and diacritics not found in the English language.

<sup>&</sup>lt;sup>11</sup>We conducted our survey in 2011 to approximate perceived brand nationality during 2002-2011. While its possible that marketing during the sample period shifted to stronger cues of American identity, core branding features of mature brands (e.g. those stocked by major retailers) are highly stable.

<sup>&</sup>lt;sup>12</sup>Also we sought to draw coders from the population of American consumers, an MTurk sample is more demographically representative of the adult consumer population than a sample of undergraduate coders.

Table 1: Brand Examples Across American Score Values

$American Score_b \\$	Brand Example (Product Category)		
7	Sam Adams Boston Lager (beer)		
1	Coca Cola (carb. beverages)		
6	Land O' Lakes (margarine/butter)		
U	Phillies (hot dogs)		
5	Olde Cape Cod (spaghetti sauce)		
J	Swanson American Recipes (frozen dinners)		
4	New England (ketchup/mustard)		
4	Dad's Root Beer (carb. beverages)		
3	Maple Leaf (hot dogs)		
J	Van De Kamps (frozen dinners)		
2	Life in Provence Aioli (mayonnaise)		
Δ	Jubilee (ketchup/mustard)		
1	Royal Scot (margarine/butter)		
1	World Trend (toothbrushes)		
0	König Ludwig Weiss (beer)		
U	Anna Mario's (spaghetti sauce)		

## III..3 Supermarket Scanner Data

We measure consumer response to acquisitions of US companies using weekly supermarket sales data supplied by Information Resources Inc. (IRI), a leading source of US supermarket scanner data (Bronnenberg, Kreuger, and Mela 2008). These data cover a representative sample of 1,145 supermarkets across 50 IRI-designated geographic markets.<sup>13</sup> Figure 1 maps the geographic coverage of our data. The 135 supermarket chains represented in the data collectively account for roughly 80% of US supermarket sales in during the sample period.<sup>14</sup>

 $<sup>^{13}</sup>$ IRI set its market definitions in 1987 to achieve a representative sample of US consumers making it unlikely that our findings are artifact of sample selection.

 $<sup>^{14}</sup>$ During the sample approximately 70% of American grocery purchases were in supermarkets; 20% were in big box retailers, and 10% in specialty retailers.

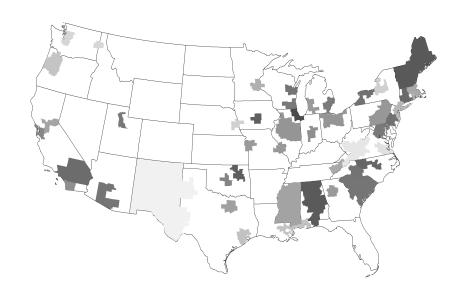


Figure I: IRI Geographic Coverage Shading distinguishes adjacent geographic markets.

We construct our store-level measure of consumer response using weekly unit sales for 8,644 brands across 30 categories of grocery products.<sup>15</sup> Major supermarket chains stock mature brands and maintain a relatively stable portfolio of brands within each store. We aggregate data across multiple stock keeping unit (SKU) codes of a single brand-product category (e.g. six-pack of Coke, two-liter bottle of Coke) but not across distinct but related brands (e.g. Coke and Diet Coke). In addition to unit sales, our data reports price and size of selection, which we use as control variables.

To focus on trends common to American-sounding brands perform we aggregate at the  $AmericanScore_i$  level and calculate the average market share across brands at each of the eight levels of  $AmericanScore_i$  for each store-week-year, using 30 product categories for 8,644 brands. This aggregation reflects our interest in change across  $AmericanScore_i$  levels rather than individual brands and reduces the sample to a computationally feasible size. For every American Score level-store-week in our sample, we calculate the change in market share between Year 2 and Year 1, from years 2002 to 2011  $(Share^{(Year2)} - Share^{(Year1)}_{ijktz})$ . Our outcome of interest is indexed by:

i: 8 American Score levels,

j: 1,154 supermarkets,

k: 30 product categories,

t: 52 weeks and

z: 10 years.

A brand's weekly store market share is the number of brand product units sold as a percentage of all units in the product category sold in that store-week. For example, if brand i in product category k (e.g. yogurt) had a 0.5% market share in a given store j for

<sup>&</sup>lt;sup>15</sup>Categories: beer, blades, carbonated beverages, cigarettes, coffee, cold cereal, deodorant, diapers, facial tissue, frozen dinners, frozen pizza, household cleaners, hot dogs, laundry detergent, butter, mayonnaise, milk, mustard/ketchup, paper towel, peanut butter, photo, razors, salty snacks, shampoo, soup, spaghetti sauce, sugar substitutes, toilet tissue, toothbrush, yogurt

<sup>&</sup>lt;sup>16</sup>We prefer this strategy for reducing the computational burden to the alternative of sampling subset of stores. Our approach maintains generalizability and utilizes variation in foreign and domestic acquisition announcements across stores.

<sup>&</sup>lt;sup>17</sup>Differences for 2002 are calculated with 2001 data.

week t, the brand accounted for half of all units of yogurt sold in that store in that week.

For every brand-product category-store-week in our sample, we calculate the change in market share between two years (ShareYear1- $ShareYear2_{ijkt}$ ). For example, to evaluate sales in 2003 we would use data for 2002 and 2003 (Share03- $02_{ijkt}$ ). Measuring a brand's market share, as opposed to the total number of units sold, allows us to scale that store's sales of a brand relative to overall demand for that product category in that store-week. Changes in market share also capture shifts in demand for brands distinct from changes in demand for a particular product category.

Measuring annual change in demand within each store allows us to hold constant all timeinvariant baseline characteristics of the store's customer base that influence sales, especially
ex ante customer preferences. If we were to observe sales only in Year 1, we could not
differentiate between a change in demand and preexisting low demand. For each store, we
retain only brands that were sold in all weeks of Year 1 and year 2 so our results are not
biased by attrition nor entry. We also hold constant seasonal fluctuations in brands' market
share by comparing shares to the same week in the prior year.

We generate our dependent variable by calculating the weekly change (between week t and week t-1) in annual market-share growth rate:

 $\Delta Share Year 2$ -Year  $1_{ijktz} = (Share Year 2$ -Share Year  $1_{ijktz})$ -(Share Year 2-Share Year  $1_{ijktz-1})$ . Taking the weekly difference in annual share growth controls for variation across product categories in purchase frequency. For instance, consumers typically purchase shampoo less frequently than salty snacks. Weekly difference also controls for any systematic correlation between the propensities to consume a particular product category and participate in the boycott. By estimating a model of weekly change, we control for unit roots that may arise with inclusion of lagged growth rates.

## III.A Empirical Analysis

We estimate a difference-in-differences ordinary least squares model of store-weekly-American Score level changes in market-share growth ( $\Delta Share Year2-Year1_{ijkt}$ ), pooling across years 2002 to 2011.

$$\begin{split} \Delta Share Year T-Year T-\mathbf{1}_{ijt} &= \beta_1 Foreign Count_{jtT} + \beta_2 American Score_i + \\ \beta_3 American Score_i \times Foreign Count_{jt} \\ &+ \beta_4 \Delta Price Year 2-Year \mathbf{1}_{ijt} + \beta_5 \Delta Num Variants Year 2-Year \mathbf{1}_{ijt} + \\ \epsilon_{ijt} \end{split}$$

where:

 $\epsilon_{ijkt}$ 

 $\Delta Share YearT - YearT - 1_{ijt}$ average difference in share growth across brands from Year T-1 to year T, for years 2002-2011 between week t and t-1 for American-Score-level iin store j,  $AmericanScore_i$ American-score-level ifrom 8 American-Score-Levels,  $ForeignCount_{jt}$ count of foreign acquisition announcements in week t in year T in store j $\Delta Price Year2$ -  $Year1_{ijkt}$ average difference in price growth across brands between week t and t-1 for brand i-product in store j,  $\Delta Num Variants Year 2$ - Year  $1_{ijkt}$ difference in number of variants from Year T-1 to year T, for years 2002-2011 between week t and t-1 for American-Score-level iin store j,

normally distributed random error term.

As is standard in empirical marketing analyses, we control for two time-varying brandstore characteristics that influence fluctuations in market share (Ataman, Van Heerde, and Mela 2010).  $\Delta Price Year1-Year2_{ijkt-1}$  controls for exogenous price changes and the effect of promotional, time-limited price discounts.<sup>18</sup> Non-pricing responses, such as advertising, were less likely because they require longer lead times to implement. Price promotions are retailers' fastest response to negative demand shocks.<sup>19</sup> Retailers' contracts with manufacturers forbid changes to products' shelf space allocation and location, so no retailer-driven change in product supply or location is possible.<sup>20</sup>

We also control for weekly changes in the number of varieties of a brand a store stocks in a product category. All else equal, consumers are more likely to purchase a brand if a store stocks more varieties.  $\Delta Num Variants Year2-Year1_{ijkt-1}$  is the annual change in the share of brand *i*-product category k's product line length in store j from a year prior in week t-1.

On average, brand shares changed little from year to year. Our controls for prices and number of product varieties stocked were similarly stable, as is characteristic of sales in well-established grocery retailers.

<sup>&</sup>lt;sup>18</sup>We verify weekly price changes are uncorrelated with brands' AmericanScore<sub>i</sub>.

<sup>&</sup>lt;sup>19</sup>Manufacturers provide retailers with a trade allowance to finance price promotions.

<sup>&</sup>lt;sup>20</sup>Manufactures negotiate with retailers for specific shelf locations for their products. Local distributors stock shelves and can monitor compliance. These agreements are negotiated chain-wide and renegotiated at fixed intervals.

## III.A.1 Results

Table 2 provides our baseline results. In line with our expectations, the market share of American-sounding brands increases in week after the announcement that a local firm will be acquired by a foreign company. The interaction of  $ForeignCount_{jt} \times AmericanScore_i$  is positive and significant at 90% confidence level ( $\beta_3 = 2.89\text{E-}05$ , p<.1).

TABLE 2: YEARLY WEEKLY CHANGE IN AMERICAN SOUNDING BRANDS' SHARE GROWTH POST-FOREIGN ACQUISITION ANNOUNCEMENT

	Market Share Change
$AmericanScore_i$	-4.92E-06 (4.85E-06)
$For eign Count_{jt}$	<b>-0.0001</b> (5.96E-05)
$For eign Count_{jtT} \times American Score_i$	<b>2.89E-05</b> (1.68E-05)
$\Delta Price_{ijkt}$	<b>-0.0074</b> (1.11E-05)
$\Delta SKUCount_{ijkt}$	<b>0.0100</b> (8.33E-06)
$R^2$	0.088
Observations  Estimates that are significant at a	20524483

Estimates that are significant at p<.1 are in **bold**.

Numerous studies in the marketing literature have investigated the country-of-origin (COO) effects to understand how consumer perceptions of a product's originating country effect influence their purchasing habits (Baughn and Yaprak 1993, Verlegh and Steenkamp 1999, Roth and Romeo 1992, Amine 2008, Balabanis and Diamantopoulos 2004). These studies indicate the existence of "liability of foreignness", documenting that consumer evaluations of a product change based on how they perceive the country from which the product originates from. Deriving from these findings, several other studies make predictions on how country-of-origin would serve as "a heuristic" in determining consumers' evaluations of foreign takeover of local companies (Fong et al. 2013, Jensen and Lindstat 2015). These studies use survey experiments and conclude that foreign investments are evaluated in a more negative manner than domestic investments, and the negativity perception exacerbates as consumers perceive the origin country in a more negative manner.

While these studies provide important insights on consumer perceptions toward foreign direct investment, they are limited in the sense that they rely on survey experiments and are unable to capture real-time shifts in consumer responses to foreign acquisitions. Moreover, past research has focused on few countries as examples to measure COO effects due to survey questionnaire restrictions.

In this section, we test whether American consumers react differently to foreign acquisition announcements depending on the nationality of the acquiror company. We group our foreign acquisition announcements in three categories: i) Acquisition announcements by UK-Canadian companies ii) Acquisition announcements by Chinese companies iii) Acquisition announcements by the rest. We choose UK and Canada as our first group because these countries are the US' closest allies. We choose to separately look at Chinese company acquisitions because in our time frame, especially in the second half of our sample time frame, China started replacing Japan as a threat to the US economy, and has accelerated its acquisition of U.S. companies. Finally, we group the rest of countries as non-allies to the US and see whether American consumers react to their companies differently. Our

key variables of interest are  $UKCanada_{jt} \times AmericanScore_i$ ,  $China_{jt} \times AmericanScore_i$ ,  $Rest_{jt} \times AmericanScore_i$ . We estimate three separate regressions with the expectation that American consumers switch to American-sounding brands more following the acquisition announcements from China and the rest while this switch is not observed as strongly following acquisition announcements from UK and Canada.

Table 3 summarizes these results. All interactions between American Score levels and foreign acquisition announcement counts with different COO specifications are positive, indicating that regardless of COO, American consumers switch to American-sounding brands in the weeks of foreign acquisition announcements. Interestingly, only the interaction between  $UKCanada_{jt} \times AmericanScore_i$  is significant ( $\beta_3 = 5.84\text{E-}05$ , p<.05). This finding is contrary to previous studies which have suggested that different perceptions of COO trigger different responses from consumers (Jensen and Lindstadt 2013). Contrary to our expectation that foreign acquisition announcements made by US ally countries wouldn't trigger nationalistic reactions from American consumers, American consumers increased their purchase of American-sounding brands.<sup>21</sup>

 $<sup>^{21}</sup>$ The interaction between  $China_{jt} \times AmericanScore_i$  is positive and in the expected direction, but sample size for foreign acquisitions announced by Chinese firms is too small for the coefficient to reach statistical significance. as only 214 out of 6,259 foreign acquisition announcements are from Chinese firms.

TABLE 3: YEARLY WEEKLY CHANGE IN AMERICAN SOUNDING BRANDS' SHARE GROWTH FOREIGN ACQUISITIONS BY COUNTRY OF ORIGIN

	China	UK-Canada	Rest
$AmericanScore_i$	-3.17E-06 (4.72E-06)	-4.94E-06 (4.79E-06)	-3.05E-06 (4.79E-06)
$China_{jt}$	-0.0008 (0.0010)		
$China_{jt} \times AmericanScore_i$	0.0002 (0.0000)		
$UKCanada_{jt}$		<b>-0.0003</b> (8.77E-05)	
$UKCanada_{jt} \times AmericanScore_i$		<b>5.84E-05</b> (2.47E-05)	
$Rest_{jt}$			1.85E-05 (8.8E-05)
$Rest_{jt} \times AmericanScore_i$			5.52E-07 (2.48E-05)
$\Delta Price_{ijt}$	<b>-0.0074</b> (1.11E-05)	<b>-0.0074</b> (1.11E-05)	<b>-0.0074</b> (1.11E-05)
$\Delta SKUCount_{ijt}$	<b>0.0100</b> (8.33E-06)	<b>0.0100</b> (8.33E-06)	<b>0.0100</b> (8.33E-06)
$R^2$	0.088	0.088	0.088
Observations	20524483	20524483	20524483

Estimates that are significant at p<.1 are in **bold**.

US FDI regulations provide for blocking or modifying M&As that pose national security threats. <sup>22</sup> Previous research has cited national security concerns as an important factor that determines whether consumers will react negative to foreign acquisitions (Tingley et al. 2015). Yet, we lack a clear understanding on how national security concerns shape consumer reactions toward foreign acquisitions, as these studies fail to provide concrete and convincing evidence on whether consumers indeed care about national security concerns. Moreover, previous studies are unable to demonstrate whether negative reactions toward foreign acquisitions arise from consumer ethnocentrism or national security concerns. Moreover, they don't take into account of the possibility that COO concerns might exacerbate national security concern and increase the magnitude of negative reactions from consumers toward foreign acquisitions.

Our setup allows us to entangle the complex relationship between foreign acquisitions, national security concerns and COO effects. We look at how consumers react to foreign acquisitions in sensitive industries, depending on where the acquiror company comes from. We construct our measure of "sensitive industries" by looking at which industries were covered the most in CFIUS filings prior to 2011. We extract information on such industries from CFIUS Annual Reports to Congress. <sup>23</sup> Although CFIUS individual company filings are kept secret, CFIUS presents an annual report to Congress, summarizing its activities and the transactions it covered for the year. In these reports, CFIUS communicates the transactions it covered by Business Sector and Country. We use these reported industrial sectors and subsectors to determine which industries are seen as critical industries to Americans.<sup>24</sup>

We construct two different measures of national security sensitive industries: broad utilizes all the industry sectors included in the CFIUS report and narrow utilizes only the

<sup>&</sup>lt;sup>22</sup>M&As into the US fall under the preview of the Committee on Foreign Investment in the United States (CFIUS). CFIUS was created to oversee the investment transactions in the U.S. that included a foreign party and decide whether the transaction constituted a national security threat to the U.S. All foreign companies that would like to invest in the U.S. are suggested to direct their case to CFIUS, but CFIUS can start investigations regardless of this self-referral (Zaring 2009).

<sup>&</sup>lt;sup>23</sup>CFIUS 2008 Annual Report to Congress, 2009 Annual Report to Congress, Annual Report to Congress for CY 2009, Annual Report to Congress for CY 2010, Annual Report to Congress for CY 2010

<sup>&</sup>lt;sup>24</sup>See appendix for industries coded as sensitive for this the analysis.

subsectors of those sectors reported in the CFIUS report. We deem Computer and Electronic Products Manufacturing, Professional, Scientific, and Technical Services, Transportation Equipment Manufacturing and Utilities industries as the most security sensitive industries as CFIUS has received the most number of notices concerning these industries.  $ForeignNatSec_{jt}$  is a count measure that reports the number of foreign acquisition announcements in security sensitive industries in a given store, given week.  $UK - CanadaNatSec_{jt}$ ,  $ChinaNatSec_{jt}$  and  $RestNatSec_{jt}^{25}$  count the number of acquisition announcements in security sensitive industries in a given store, week form UK-Canada, China and the rest of countries respectively. We expect that acquisition announcements from non-ally country and Chinese companies to generate a negative response from American consumers whereas acquisitions from ally countries should not have the same effect.

Table 4 shows an overview of the results obtained from the analysis. The results hold, but are somewhat sensitive to different definitions of sensitive industries. The interaction between  $Foreign_{jt} \times$ 

AmericanScore<sub>i</sub> is positive and significant ( $\beta_3 = 4.31\text{E-}05$ , p<.05), meaning that American consumers increase their purchase of American-sounding brands in the week of foreign acquisition announcements that concern a sensitive industry. The positive and significant interaction between  $UK - Canada_{jt} \times$ 

AmericanScore<sub>i</sub> ( $\beta_3 = 4.41\text{E-}05$ , p<.05) reinforces our belief that foreign acquisitions heighten ethnocentrism among American consumers, regardless of where they originate from, especially if they are associated with the loss of a company in an industry of national security importance. It is not surprising to find that when American national security is at concern, Americans react negatively to foreign companies, wherever they originate from. This finding is also in line with the observation that the majority of CFIUS filings tend to be from Canada and U.K., as these countries have the largest volume of investment activity in the U.S. Foreign acquisitions from other countries also increase the purchase of American-

 $<sup>^{25}</sup>RestNatSec_{jt}$  includes all companies from countries that are not UK and Canada as well as China.

sounding brands, but the effect is statistically insignificant. Interestingly, in our sample time period, American consumers reacted to acquisition announcements by Chinese companies in sensitive industries by decreasing their purchase of American-sounding brands. However, this effect is statistically insignificant as well.

TABLE 4: WEEKLY CHANGE IN AMERICAN SOUNDING BRANDS' SHARE GROWTH FOREIGN ACQUISITIONS IN SENSITIVE INDUSTRIES -NARROW AND BROAD DEFINITION

		oreign		anada		ina		est	
$AmericanScore_i$	(N) -4.67E-06 (4.79E-06)	(B) -4.89E-06 (4.81E-06)	(N) -4.25E-06 (4.76E-06)	(B) -4.40E-06 (4.77E-05)	(N) -3.18E-06 (4.72E-06)	(B) -3.00E-06 (4.72E-06)	(N) -3.55E-06 (4.76E-06)	(B) -3.62E-06 (4.77E-06)	
$For eignNatSec_{jt}$	-0.0002 (8.67E-05)	<b>-0.0002</b> (7.64E-05)							
$Foreign_{jt} imes \ American Score_i$	4.82E-05 (2.44E-05)	<b>4.31E-05</b> (2.15E-05)							
$UK-CanadaNatSec_{jt} \\$			<b>-0.0003</b> (0.00)	<b>-0.0003</b> (0.00)					
$UK-Canada_{jt}  imes AmericanScore_i$			<b>7.17E-05</b> (3.57E-05)	<b>6.41E-05</b> (3.16E-05)					
$ChinaNatSec_{jt}$					<b>-0.0019</b> (0.0010)	-0.0001 (0.0010)			
$China_{jt} imes \\ American Score_i$					0.0004 (0.0000)	-5.63E-05 (0.0000)			
$RestNatSec_{jt}$							-0.0001 (0.0000)	-0.0001 (0.0000)	
$\substack{Rest_{jt} \times \\ AmericanScore_i}$							3.06E-05 (3.51E-05)	2.77E-05 (3.1E-05)	
$\Delta Price_{ijkt}$	<b>-0.0074</b> (1.11E-05)								
$\Delta SKUCount_{ijkt}$	<b>0.0100</b> (8.33E-06)								
$R^2$	0.088	0.088	0.088	0.088	0.088	0.088	0.088	0.088	0.088
Observations	20524483	20524483	20524483	20524483	20524483	20524483	20524483	20524483	2052448

Estimates that are significant at p<.1 are in **bold**.

We perform a placebo test by replacing our foreign acquisition measure with an analogous measure of wholly domestic acquisitions. We assert that announcements of American company acquisitions by foreign firms trigger ethnocentrism among American consumers that lead them to buy more American-sounding brands. If our claim about the nationalistic response is true, then we should not be observing the same response for domestic acquisition announcements. This is because only the threat of an American company, hence American brands, changing ownership and being acquired by foreign brands should motivate American consumers to change their consumption habits and switch to buying American. In order to

test this proposition, we run our regressions, this time using counts of domestic acquisition announcements and domestic acquisition news instead of foreign acquisition announcements and foreign acquisition news. By running this analysis, we try to understand whether it's the foreignness of the acquiring company or the acquisition process itself that make American consumers buy the target brand more as it sounds more American.

Domestic acquisition announcements serve as a placebo test for foreign acquisition announcements only to the extent that they are similar enough to serve as a control to one another. For our analysis purposes, there shouldn't be any major differences between foreign and domestic acquisition characteristics that might trigger ethnocentric consumers reactions through other channels.<sup>26</sup> In order to establish similarity between domestic and foreign acquisitions, we compared the acquired brand categories for foreign and domestic acquisition announcements, ex ante market share, American score, price and unit demand of brands in the announcement weeks in our sample and found no alarming differences.

Tables 5 and 6 summarizes our findings. The sign of the interaction term becomes negative and insignificant, strengthening our argument that foreign acquisitions do heighten ethnocentrism among American consumers. This result holds both for total domestic acquisition counts and domestic acquisitions in sensitive industries.

#### IV Market Share of Acquired Firms' Brands

While we assert that foreign acquisition announcements' impact on ethnocentrism is primarily portrayed through consumers switching to American-sounding brands, we argue that there's another field that foreign acquisitions could trigger purchasing response motivated by heightened nationalistic sentiments. Consumers might react to acquisition announcements by switching away from target brands that are set to be acquired by foreign companies, depending on how strongly they associate the brand with Americanness.

<sup>&</sup>lt;sup>26</sup>By nature, foreign acquisitions are expected to be made by bigger companies as Multinational Corporations tend to be larger than domestic firms. But differences such as differences in size of companies don't constitute a problem for our analysis as long as they don't correlate with ethnocentric consumer reactions

 $\hbox{Table 5: YEARLY WEEKLY CHANGE IN AMERICAN SOUNDING BRANDS' SHARE GROWTH POST-DOMESTIC ACQUISITION ANNOUNCEMENT }$ 

	Market Share Change
$AmericanScore_i$	-2.97E-06 (5.22E-06)
$DomesticCount_{jt}$	-6.91E-06 (1.54E-05)
$DomesticCount_{jt} \times AmericanScore_{i}$	-1.29E-07 (4.34E-06)
$\Delta Price_{ijkt}$	<b>-0.0074</b> (1.11E-05)
$\Delta SKUCount_{ijkt}$	<b>0.0100</b> (8.33E-06)
$R^2$	0.088
Observations	20524483

Estimates that are significant at p<.05 are in **bold**.

In order to observe changes in market shares of target brands sold in grocery stores, we focus on IRI brands that belong to Food and Kindred Products category, and restrict our sample to the following 8 categories: beer, hot dog, salty snacks, mayonnaise, mustard-ketchup, milk, soup and spaghetti sauce. This restriction is necessary for us to be able to match target companies with their brands and market share performances in the IRI data. For each brand-product category-store-week in our dataset, we model the weekly change in market-share annual growth rate between 2002 and 2010. Our outcome of interest is indexed

by: i: 6,965 brands,

j: 1,154 supermarkets,

k: 8 product categories,

t: 52 weeks and

TABLE 6: WEEKLY CHANGE IN AMERICAN BRANDS' SHARE GROWTH DOMESTIC ACQUISITIONS IN SENSITIVE INDUSTRIES -NARROW AND BROAD DEFINITION

	All Foreign (N) (B)			
$American Score_i$	-2.55E-06 (5.04E-06)	( /		
$Domestic_{jt}$	-9.63E-06 (2.71E-05)	8.07E-06 (2.41E-05)		
$Domestic_{jt} \times \\ AmericanScore_i$	-2.11E-06 (7.62E-06)	-4.09E-06 (6.77E-06)		
$\Delta Price_{ijkt}$	<b>-0.0074</b> (1.11E-05)	<b>-0.0074</b> (1.11E-05)		
$\Delta SKUCount_{ijkt}$	<b>0.0100</b> (8.33E-06)	<b>0.0100</b> (8.33E-06)		
$R^2$	0.088	0.088		
Observations	20524483	20524483		
Estimates that are significant at p<.05 are in <b>bold</b> .				

## z: 9 years.

Our sample consists of M&A transactions in which the target firm is in the Food and Kindred Product industry (Standard Industrial Classification (SIC) 20). In order to see how brands of companies that face an acquisition perform, we face the challenge of matching companies collected from SDC Platinum data to brands in product categories in the IRI data (Not all categories are included in IRI data, for example Dog and Cat Foods). We first find company acquisition announcements in IRI product categories through matching 8 IRI categories to companies in the related industry via SIC codes. We found 523 American target company acquisition announcements whose brands could potentially be in the IRI data. Then, our undergraduate research assistants matched acquisition target companies to their related brands found in the IRI data by going through a supplemental data file IRI

provides that contains company-brand information <sup>27</sup>. Out of 523, we were able to match 134 companies with their brands, of which 10 were set to be acquired by foreign companies and 124 by other American companies. Nations of acquiring foreign firms were: Canada, UK, Mexico, India, France, Belgium, Australia. <sup>28</sup>. Most acquisitions were announced in the first half of the week. Table in the Appendix portrays the breakdown of company matches in our dataset.

Our key variable of interests are  $ForeignAQ_{ikjt}$  and  $StoreAQ_{ijt}$ . The first is a dummy variable that indicates whether a brand's company's acquisition by a foreign company has been announced in a product category, in a given week, in a given year. The second variable is a dummy variable that indicates whether a foreign acquisition announcement that concerns a target company in the country of that store in a given week and year took place. We are interested in the interactions between:

 $StoreAQ_{jt} \times AmericanScore_i$ : To see whether American consumers switch to buying more American sounding brands in stores where the target company of the acquisition is located in week-year of foreign acquisition announcement.

 $ForeignAQ_{ikjt} \times StoreAQ_{jt}$ : To see changes in American consumer purchasing patterns of target brands of foreign acquisition announcements in the week-year of an announcement in stores where the target company of the acquisition is located.

 $ForeignAQ_{ikjt} \times StoreAQ_{jt} \times AmericanScore_i$ : To see changes in American consumer purchasing patterns of target brands of foreign acquisition announcements in the week-year of an announcement in stores where the target company of the acquisition is located, depending on their association with American national identity.

 $<sup>^{27}</sup>$ Kruger and Pagni 2015

<sup>&</sup>lt;sup>28</sup>The inability to match some companies with their brands in the IRI dataset is driven by the fact that some to-be-acquired companies are suppliers to companies that produce products in such categories, and not the end product itself. Moreover, SDC Platinum also records data on companies that produces generic brands to grocery stores (like Kroger brands for Kroger). Brands that belong to these companies appear as "PRIVATE LABEL", which makes it impossible for a company-brands match

We estimate a difference-in-differences ordinary least squares model of weekly changes in each brand's rate of market-share growth ( $\Delta Share Year2-Year1_{ijkt}$ ), pooling across years 2002 to 2010.

(1) 
$$\Delta Share Year2-Year1_{ijkt} = \beta_1 Store AQ_{jt} + \beta_2 American Score_i +$$

$$\beta_3 American Score_i \times Store AQ_{jt} + \beta_4 \Delta Price Year2-Year1_{ijkt-1} + \beta_5 \Delta Num Variants Year2-Year1_{ijkt-1} +$$

$$\epsilon_{ijkt}$$

(2) 
$$\Delta Share Year 2$$
-  $Year 1_{ijkt} = \beta_1 Store AQ_{jt} + \beta_2 Foreign AQ_{ijkt} + \beta_3 Store AQ_{jt} \times Foreign AQ_{ijkt} + \beta_4 \Delta Price Year 2$ -  $Year 1_{ijkt-1} + \beta_5 \Delta Num Variants Year 2$ -  $Year 1_{ijkt-1} + \epsilon_{ijkt}$ 

$$(3) \ \Delta Share Year 2-Year 1_{ijkt} = \beta_1 Store AQ_{jt} + \beta_2 Foreign AQ_{ijkt} + \\ \beta_3 American Score_i + \beta_4 Foreign AQ_{ijkt} \times American Score_i \\ + \beta_5 Store AQ_{jt} \times Foreign AQ_{ijkt} + \\ \beta_6 Foreign AQ_{ijkt} \times Store AQ_{jt} \times American Score_i + \\ \beta_7 \Delta Price Year 2-Year 1_{ijkt-1} + \beta_8 \Delta Num Variants Year 2-Year 1_{ijkt-1} + \\ \epsilon_{ijkt}$$

where

 $\Delta Share Year 2$ -Year  $1_{ijkt}$  = difference in share growth from Year 1 to year 2 between week t and t-1 for brand i-product category k in store j,

 $AmericanScore_i$  = number of survey participants that deemed brand i to be American,

 $Store AQ_{jt}$  = indicator of whether store j is in the county of a target company announced to be acquired by a foreign company in week t

Foreign  $AQ_{ijkt}$  = indicator of whether brand i is announced to be acquired by a foreign company in store j in product category k in week t

 $\Delta Price Year 2$ -Year  $1_{ijkt}$  = difference in price growth from Year 1 to Year 2 between week t and t-1 for brand i-product category k in store j,

 $\Delta Num Variants Year 2$ -Year  $1_{ijkt}$  = difference in number of variants from Year 1 to Year 2 between week t and t for brand i-product category k in store j,

 $\epsilon_{ijkt}$  = normally distributed random error term.

Table 7 presents preliminary results for our analysis. The interaction between  $StoreAQ_{jt} \times AmericanScore_i$  is negative and significant ( $\beta_3 = -0.0010$ , p<.01), meaning that American consumers reduces their purchases of American sounding brands in stores in counties where the target company is located at. This goes against our prediction that foreign acquisitions trigger nationalistic sentiments by showing that American consumers in localities affected by foreign acquisition announcements switch away from American sounding brands. The interaction between  $ForeignAQ_{ikjt} \times StoreAQ_{jt}$  ( $\beta_3 = -0.0173$ , p<.01) is also negative and significant, showing that target brands of foreign acquisition announcements sell less in

stores in counties where the target company is located at. Moreover, the negative and significant interaction between  $ForeignAQ_{ikjt} \times StoreAQ_{jt} \times AmericanScore_i$  demonstrates that American consumers purchase target brands of foreign acquisition announcements less in target localities if these brands are associated more with American national identity. Taken together, these results might suggest that American consumers residing in close proximity to foreign acquisition targets react more in lines with economic concerns rather than nationalistic concerns. Further research is needed to confirm and explain these preliminary results.

Table 7: YEARLY WEEKLY CHANGE IN TARGET BRANDS OF FOREIGN ACQUISITONS TREATED STORES AND TARGET BRANDS

	Model 1	Model 2	Model 3
$AmericanScore_i$	-6.09E-08 (2.51E-06)		-7.66E-08 (2.51E-06)
$StoreAQ_{jt}$	<b>0.0032</b> (0.0010)	-0.0001 (0.0010)	<b>0.0031</b> (0.0010)
$StoreAQ_{jt} \times AmericanScore_{i}$	<b>-0.0010</b> (0.0000)		<b>-0.0009</b> (0.0000)
$ForeignAQ_{ijkt}$		-0.0002 (0.0010)	-0.0007 (0.0010)
$ForeignAQ_{ijkt} \times StoreAQ_{jt}$		<b>-0.0173</b> (0.0060)	0.0167 $(0.0210)$
$For eign AQ_{ijkt} \times American Score_{i}$			0.0001 (0.0000)
$For eign AQ_{ijkt} \times Store AQ_{jt} \times American Score_{i}$			<b>-0.0060</b> (0.0040)
$\Delta Price_{ijkt}$	<b>-0.0026</b> (3.55E-06)	<b>-0.0026</b> (3.55E-06)	<b>-0.0026</b> (3.55E-06)
$\Delta SKUCount_{ijkt}$	<b>0.0066</b> (3.83E-06)	<b>0.0066</b> (3.83E-06)	<b>0.0066</b> (3.83E-06)
$R^2$	0.034	0.034	0.034
Observations	101273316	101273316	101273316

Estimates that are significant at p<.1 are in **bold**.

#### V Conclusion

Ethnocentrism is a defining characteristic of contemporary politics in many advanced industrialized countries but we have lacked ways of establishing ethnocentrism's behavioral consequences. We analyze the effects of M&As, am important dimension of exposure to global economic integration, on American ethnocentrism during 2002-2011. We turn to an unorthodox data source, supermarket scanner data, to construct a behavioral, time-varying measure of ethnocentrism: weekly fluctuations in the market share of American-sounding supermarket brands.

We find that in the weeks following a foreign acquisition announcement, the market share of American-sounding brands rise in stores located in the same county as the acquisition target. This result is best explained by foreign acquisitions' announcements' effect on ethnocentrism - threats of foreign acquisitions make American national identity salient among American consumers, and prompts them to switch to more American-sounding brands. The findings apply to foreign acquisitions originating from all countries, regardless of their foreign relations with the U.S. Moreover, we revealed that ethnocentrism partially reflects concern about losing ownership of critical American companies. The strong negative reaction towards foreign acquisitions regardless of their origin and in sensitive industries highlight that consumer ethnocentrism is the primary mechanism behind this nationalistic reaction we see when Americans switch to American-sounding brands. We find no effect of analogous domestic acquisitions, indicating that economic dislocation and other unobserved features of acquisitions do not drive our results.

Our findings shed new light on the relationship between ethnocentrism and economic integration. Alongside providing a time-varying measure of ethnocentrism with greater external validity compared to previous studies, they point to an overlooked dimension in the political consequences of global economic integration - its effect on ethnocentrism. By providing evidence that foreign acquisition announcements trigger ethnocentrism, it paints a bleak picture for future economic liberalization prospects: increasing foreign acquisitions

future foreign acquisitions. To the extent that cross-border M&A activity is expected to increase in the U.S. (and reports indicate that it will), we could expect heightened ethnocentrism among American consumers. This is especially important since new players like China and India are expected to increase their outward FDI into the U.S. and increasingly channel their efforts in industries deemed as sensitive by national security standards such as high technology and digital platforms.

In addition, our studies also contribute to the growing literature on the impact of economic globalization on domestic political competition by suggesting the possibility for populist leaders to exploit heightened ethnocentric sentiments following foreign acquisitions and use them for their domestic electoral gains by appealing to consumers' discontent. Our findings establish that foreign acquisitions provide far-right parties and populist leaders a practical and convenient platform to channel their ethnocentric messages, as foreign companies are politically more correct to show discontent towards.

# V.A Appendix

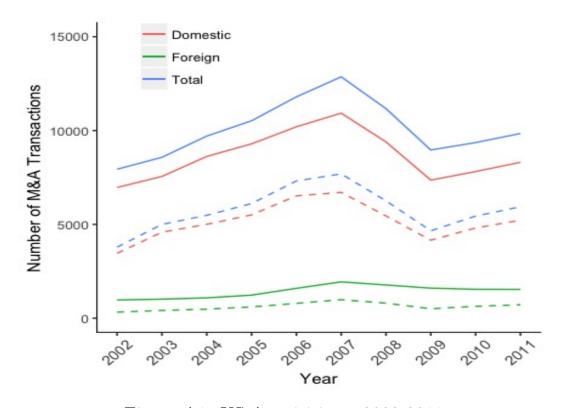


Figure A1: US Acquisitions, 2002-2011 solid lines: all acquisitions nationwide, dashed lines: acquisitions in our geographic sample.

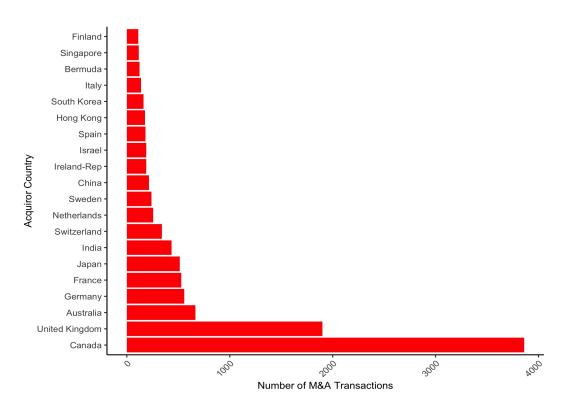


Figure A2: Top 20 M&A Source Countries, 2002-2011

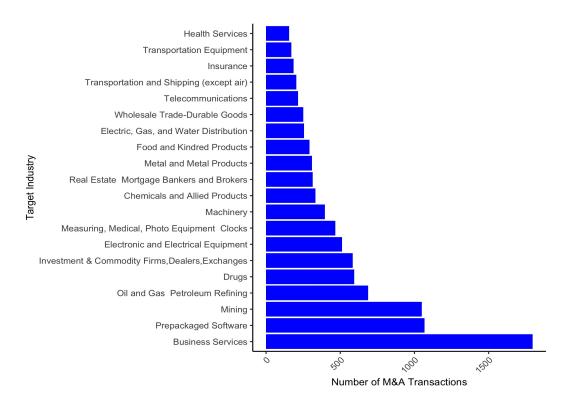


Figure A3: Top 20 M&A Target Industries, 2002-2011

## Table A1: CFIUS SENSITIVE INDUSTRIES - BROAD

## Manufacturing

Computer and Electronic Products

Transportation Equipment

Electrical Equipment, Appliance and Component

Machinery

Primary Metal

## Finance, Information and Services

Professional, Scientific and Technical Services

Publishing Industries (except Internet)

Telecommunications

## Mining, Utilities, and Construction

Utilities

Support for Activities for Mining

Mining (except Oil and Gas)

Oil and Gas Extraction

## Wholesale, Retail and Transportation

Support for Activities for Transportation

#### Table A2: CFIUS SENSITIVE INDUSTRIES - NARROW

Manufacturing
Navigational, Measuring, Electromedial and Control Instruments Manufacturing
Communications Equipment Manufacturing

Semiconductor and Other Electronic Component Manufacturing Computer and Peripheral Equipment Manufacturing

Manufacturing and Reproducing Magnetic and Optical Media

Aerospace Product and Parts Manufacturing Motor Vehicle Parts Manufacturing

Ship and Boat Building

Finance, Information and Services

Computer Systems Design and Related Services

Architectural, Engineering and Related Services Management, Scientific and Technical Consulting Services

Scientific Research and Development Services Other Professional, Scientific and Technical Services

Publishing Industries

Periodicals Miscellaneous Publishing

Book Publishing
Miscellaneous Publishing
Direct Mail Advertising Services

Miscellaneous Publishing

Greeting Cards

Miscellaneous Publishing

Prepackaged Software Information Retrieval Services

Telephone Communication (except Radio)

Telegraph and Other Communications

Communication Services, Nec

Radiotelephone Communication

Communication Services, Nec Telephone Communication (except Radio)

Radiotelephone Communication

Communication Services, Nec Information Retrieval Services

Cable and Other Pay Television Services

#### Mining, Utilities and Construction

Electric Power Generation, Transmission and Distribution Natural Gas Distribution

Water, Sewage, and Other Systems

Bituminous Coal-underground Mining Anthracite Mining

Iron Ores Gold Ores

Silver Ores

Copper Ores

Lead and Zinc Ores Ferroalloy Ores (except Vanadium)

Uranium-radium-vanadium Ores

Metal Ores, Nec

Ferroalloy Ores (Except Vanadium)

Bituminous Coal and Lignite-surface Mining

Oil and Gas Exploration Services Oil and Gas Field Services, Nec

Coal Mining Services Metal Mining Services

Nonmetallic Mineral Services

Drilling Oil and Gas Wells Natural Gas Liquids

Industrial Inorganic Chemicals, Nec Crude Petroleum and Natural Gas

Wholesale Trade
Airports, Flying Fields and Services
Membership Sports and Recreation Clubs

Airports, Flying Fields and Services

Sanitary Services, Nec Regulation, Administration of Transportation

Water Transportation Services, Nec Marine Cargo Handling

Marine Cargo Handling

Towing and Tugboat Service

Water Transportation Services, Nec Repair Services, Nec

Inspection and Fixed Facilities Shipbuilding and Repairing

Water Transportation Services, Nec

Freight Transportation Arrangement

#### References

- [1] Ailawadi, K., B. A. Harlam, J. César, D. Trounce. 2007. "Quantifying and Improving Promotion Effectiveness at CVS," *Marketing Science* 26, no. 4, 566-575.
- [2] Amine, L. S., 2008. Country-of-origin, animosity and consumer response: Marketing implications of anti-Americanism and Francophobia. *International Business Review*, 17(4), 402-422.
- [3] Andrews, S., Leblang, D., and Pandya, S. S., 2018. "Ethnocentrism Reduces Foreign Direct Investment." *The Journal of Politics*, 80(2), pp.697-700.
- [4] Ataman, M. B., Heerde V., H. J., and Mela, C. F., 2010. "The long-term effect of marketing strategy on brand sales." *Journal of Marketing Research*, 47(5), pp.866-882.
- [5] Autor, D., Dorn, D., Hanson, G., Majlesi, K., 2017. "Importing Political Polarization? The Electoral Consequences of Rising Trade Exposure." *Unpublished Manuscript*
- [6] Balabanis, G. and Diamantopoulos, A., 2004. "Domestic country bias, country-of-origin effects, and consumer ethnocentrism: a multidimensional unfolding approach." *Journal of the Academy of Marketing Science*, 32(1), pp.80.
- [7] Balabanis, George, and Adamantios Diamantopoulos. 2011. "Gains and Losses from the Misperception of Brand Origin: The Role of Brand Strength and Country-of-Origin Image," Journal of International Marketing 19, no. 2, 95-116.
- [8] Bao, C. G., and Chen M. X., 2017. "Foreign Rivals are Coming to Town: Responding to the Threat of Foreign Multinational Entry." *Unpublished Manuscript*
- [9] Baughn, C.C. and Yaprak, A., 1993. "Mapping country-of-origin research: Recent developments and emerging avenues." Product-country images: Impact and role in international marketing, pp.89-116.

- [10] Berinsky, Adam J., Gregory A. Huber, and Gabriel S. Lenz. 2012. "Using Mechanical Turk as a Subject Recruitment Tool for Experimental Research," *Political Analysis* 20, 351-368.
- [11] Bertrand, Olivier, Betschinger, Marie-Ann, & Settles, Alexander. 2015. The relevance of political animosity for the initial acquisition premium in cross-border acquisitions. Strate-qic Management Journal
- [12] Bronnenberg, B. J., Kruger, M. W., Mela, C. F., 2008. "Database paper: The IRI Marketing Data Set," Marketing Science 27, no. 4, 745-748.
- [13] Buhrmester, M., Kwang, T., and Gosling, S. D., 2011. "Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data?." Perspectives on psychological science, 6(1), pp.3-5.
- [14] Cebenoyan, A Sinan, Papaioannou, George J, & Travlos, Nickolaos G. 1992. Foreign takeover activity in the US and wealth effects for target rm shareholders. Financial Management, 58-68.
- [15] Chilton, A.S., Milner, H.V. and Tingley, D., 2017. "Reciprocity and Public Opposition to Foreign Direct Investment." *British Journal of Political Science*, pp.1-25.
- [16] Colantone, I., and Stanig, P. 2017. "The Economic Roots of the Cultural Backlash: Global Competition and Attitudes in Western Europe." *Unpublished Msanuscript*
- [17] Colantone, I., and Stanig, P. 2017. "The trade origins of economic nationalism: Import competition and voting behavior in Western Europe." *American Journal of Political Science*, 62(4), pp.936-953.
- [18] Connell, Paul, and Huang, Tian. An Empirical Analysis of CFIUS: Examining Investment Regulation in the United States. Yale Journal of International Law, Forthcoming.

- [19] Conybeare, John, and Kim, Dong-Hun. 2010. Barbarians at the gates: State control of global mergers and acquisitions. *The World Economy*, 33(9), 1175-1199.
- [20] Escalas, J.E. and Bettman, J.R., 2003. "You are what they eat: The influence of reference groups on consumers connections to brands." *Journal of consumer psychology*, 13(3), pp.339-348.
- [21] Escalas, J.E. and Bettman, J.R., 2005. "Self-construal, reference groups, and brand meaning." *Journal of consumer research*, 32(3), pp.378-389.
- [22] Fong, C.M., Lee, C.L. and Du, Y., 2013. "Target reputation transferability, consumer animosity, and cross-border acquisition success: A comparison between China and Taiwan." *International Business Review*, 22(1), pp.174-186.
- [23] Grith, R., Redding, S., and Simpson, H., 2004. Foreign ownership and productivity: new evidence from the service sector and the R&D lab. Oxford Review of Economic Policy, 20(3), 440-456.
- [24] Guisinger, A. 2017. American Opinion on Trade. Preferences Without Politics. Oxford University Press.
- [25] Hainmueller, J. and Hiscox, M.J., 2006. "Learning to love globalization: Education and individual attitudes toward international trade." *International Organization*, 60(2), pp.469-498.
- [26] Hakkala, K. N., Heyman, F., and Sjholm, F., 2014. "Multinational firms, acquisitions and job tasks." *European Economic Review*, 66, pp.248-265.
- [27] Heyman, F., Sjholm, F., and Tingvall, P. G., 2007. "Is there really a foreign ownership wage premium? Evidence from matched employeremployee data." *Journal of International Economics*, 73(2), pp.355-376.

- [28] Heyman, F., Sjholm, F., and Tingvall, P. G., 2011. "Multinationals, crossborder acquisitions and wage dispersion." Canadian Journal of Economics/Revue canadienne d'conomique, 44(2), pp.627-650.
- [29] Jamal, A., Milner, H., 2015. "Women, Patriarchy, and Globalization in MENA: Evidence from Tunisia." *Unpublished Manuscript*
- [30] Javorcik, B., 2012. "Does FDI bring good jobs to host countries?" World Bank.
- [31] Jensen, J. B., Quinn, D. P., and Weymouth, S., 2017. "Winners and losers in international trade: The effects on US presidential voting". *International Organization*, 71(3), pp.423-457.
- [32] Jensen, N.M. and Lindstdt, R., 2015. "Globalization with whom: Context-dependent foreign direct investment preferences". *Unpublished Manuscript*
- [33] Kahn, B. E., and Schmittlein, D. C., 1989. "Shopping trip behavior: An empirical investigation". *Marketing Letters*, 1(1), pp.55-69.
- [34] Khan, R., Misra, K. and Singh, V., 2013. "Ideology and brand consumption." *Psychological science*, 24(3), pp.326-333.
- [35] Kruger M., and Pagni, D., 2015. "IRI Academic Data Set Description." IRI Report.
- [36] Leclerc, F., Schmitt, B. H., and Dube, L. 1994. "Foreign branding and its effects on product perceptions and attitudes." *Journal of marketing Research*, 263-270.
- [37] Liu, S. S., and Johnson. K. F., 2005. "The Automatic Country-of-Origin Effects on Brand Judgments," *Journal of Advertising* 34, no. 1, 87-97.
- [38] Mansfield, E.D. and Mutz, D.C., 2009. "Support for free trade: Self-interest, sociotropic politics, and out-group anxiety." *International Organization*, 63(3), pp.425-457.

- [39] Margalit, Y. 2011. "Costly jobs: Trade-related layoffs, government compensation, and voting in US elections." *American Political Science Review*, 105(1), pp.166-188.
- [40] Margalit, Y., 2012. "Lost in globalization: International economic integration and the sources of popular discontent." *International Studies Quarterly*, 56(3), pp.484-500.
- [41] Martin, B., Lee, M. S. W., and Lacey, C. 2011. "Countering Negative Country of Origin Effects using Imagery Processing," *Journal of Consumer Behaviour* 10, no. 2, 80-92.
- [42] Maheswaran, D., 1994. "Country of origin as a stereotype: Effects of consumer expertise and attribute strength on product evaluations." *Journal of consumer research*, 21(2), pp.354-365.
- [43] Muniz, A.M. and O'Guinn, T.C., 2001. "Brand community." Journal of consumer research, 27(4), pp.412-432.
- [44] Nocke, V. and Yeaple, S. 2008. "An Assignment Theory of Foreign Direct Investment." Review of Economic Studies, 75(2): 529-557.
- [45] Nocke, V. and Yeaple, S. 2007. "Cross-Border Mergers and Acquisitions versus Greenfield Foreign Direct Investment: The Role of Firm Heterogeneity." *Journal of International Economics*, 72(2): 336-365.
- [46] Pandya, S. S. 2014. Trading Spaces: FDI Regulation, 1970-2000. Cambridge University Press.
- [47] Pandya S. S. and Venkatesan, R., 2016. "French Roast: Consumer Response to International Conflict Evidence from Supermarket Scanner Data." Review of Economics and Statistics, 98(1), pp.42-56.
- [48] Pandya S. S., Cian, L., and Venkatesan, R., 2018. "Grocery Shopping for America: External vs. Internal Threats to National Identity." *Unpublished Manuscript*

- [49] Paolacci, G., Chandler, J., and Ipeirotis, P. G., 2010. "Running Experiments on Amazon Mechanical Turk," *Judgment and Decision Making* 5, no. 5, 411-419.
- [50] Peterson, R.A. and Jolibert, A.J., 1995. "A meta-analysis of country-of-origin effects."

  Journal of International business studies, 26(4), pp.883-900.
- [51] Pew Research Center, 2014. "Faith and Skepticism about Trade, Foreign Investment" Pew Research Center Report (September).
- [52] Rossi, Stefano, and Volpin, Paolo. 2004. "Cross-country Determinants of Mergers and Acquisitions." *Journal of Financial Economics*.
- [53] Roth, M.S. and Romeo, J.B., 1992. "Matching product category and country image perceptions: A framework for managing country-of-origin effects." *Journal of international* business studies, 23(3), pp.477-497.
- [54] Samiee, S., Shimp T. A., and Sharma S., 2005. "Brand Origin Recognition Accuracy: Its Antecedents and Consumers' Cognitive Limitations," *Journal of International Business* Studies 36, no. 4, 379-397.
- [55] Scheve, K., Slaughter, M., 2004. "Economic Insecurity and the Globalization of Production," American Journal of Political Science, 48(4), pp.662-674.
- [56] Schnoebelen, Tyler, and Victor Kuperman. 2010. "Using Amazon Mechanical Turk for Linguistic Research," *Psihologija* 43, no. 4, 441-464.
- [57] Shachar, R., Erdem, T., Cutright, K.M. and Fitzsimons, G.J., 2011. "Brands: The opiate of the nonreligious masses?." *Marketing Science*, 30(1), pp.92-110.
- [58] Shimp, T.A. and Sharma, S., 1987. "Consumer ethnocentrism: Construction and validation of the CETSCALE." *Journal of marketing research*, pp.280-289.
- [59] Sikora, M., 2005. "Consumers are a hot issue for merging businesses." Mergers and Acquisitions, 40(7), pp.16-18.

- [60] Sprouse, J., 2011. "A validation of Amazon Mechanical Turk for the collection of acceptability judgments in linguistic theory." *Behavior research methods*, 43(1), pp.155-167.
- [61] Tajfel, H., editor (1978). Differentation between Social Groups: Studies in the Social Psychology of Intergroup Relations. Academic Press London.
- [62] Tajfel, H. and Turner, J.C., 1979. "An integrative theory of intergroup conflict" The social psychology of intergroup relations. 33(47), p.74.
- [63] Thorbjörnsen, H., and Dahlën, M., 2011. "Customer reactions to acquirer-dominant mergers and acquisitions." *International journal of research in marketing*, 28(4), pp.332-341.
- [64] Tingley, D., Xu, C., Chilton, A. and Milner, H.V., 2015. "The political economy of inward FDI: opposition to Chinese mergers and acquisitions." *The Chinese Journal of International Politics*, 8(1), pp.27-57.
- [65] Usunier, J.C., and Shaner J., 2002. "Using Linguistics for Creating Better International Brand Names," *Journal of Marketing Communications* 8, 211-228.
- [66] Verlegh, Peeter WJ. 2007. Home country bias in product evaluation: the complementary roles of economic and socio-psychological motives. *Journal of International Business Studies*, 38(3), 361-373.
- [67] Verlegh, P. WJ, and Steenkamp, J.B. EM. 1999. A review and meta-analysis of country-of-origin research. *Journal of economic psychology*, 20(5), 521-546.
- [68] Wiles, M., Morgan, N., and Rego, L., 2012. The Effect of Brand Acquisition and Disposal on Stock Returns. *Journal of Marketing*, 76(1), 38-58.
- [69] Zaring, D., 2009. "CFIUS as a congressional notification service." S. Cal. L. Rev., 83, p.81.

[70] Zhang, Jianhong, and He, Xinming. 2014. Economic nationalism and foreign acquisition completion: The case of China. *International Business Review*, 23(1), 212-227.