Consumer Backlash against Globalization

Evidence from Amazon Product Reviews

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Abstract: Why do consumers turn against globalization? Despite the rise of consumer boycotts against foreign goods akin to non-tariff barriers, we lack a theoretical framework and empirical measures to study this question across time and space. This paper develops a theory of product differentiation based on country of origins that differ across income (which we call "Armington-Engel's Law conjecture") and test its predictions with 20 million product reviews posted on Amazon.com between 2004 and 2018. The results is consistent with the Armington-Engel's Law conjecture. Consumers are more likely to mention foreign country names in the reviews for the high-priced goods (i.e., the higher income elasticities) than low priced goods and reviews that mention foreign country names tend to be more negative in sentiments controlling for product-specific characteristics. Economic hardship of workers *reduces* the probability that a reviewer mentions "China." Consumer backlash against globalization originates from citizens who can afford it.

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Introduction

Why do consumers turn against globalization? The rise of consumer boycotts against foreign goods poses a puzzle because consumer love for a lower price and a wider variety of goods is believed to be the vehicle of globalization. Moreover, emerging consumer boycott against foreign goods counters to the two important trends in the world economy that obscures the national origin of goods: globalization and multinationalization of production and the rise of intra-firm trade. Both trends *should* weaken the salience of country of origins of goods and brands in consumer minds. Yet, citizens in nine out of 15 wealthiest economies have boycotted each other's products in the past decade in response to military and economic conflicts and the revelation of unethical government behavior (Pandya and Venkatesan 2016; Vekasi et al. 2019, Li and Naoi, 2024). Existing estimates of one-year disruption of bilateral trade due to these boycotts range from no effect to 18.8% (Davis and Meunier 2011; Heilmann 2016) and sales of most visible "foreign brand" products, such as cars and beers, experienced up to 70% drop over one-year period (Vekasi et al, 2019, Kim and Kim 2022).

The field of International Political Economy has not been well-equipped to explain this phenomenon despite their prevalence and magnitudes of the effects akin to non-tariff barriers in international trade. In particular, three issues have stagnated the progress. The first is the lopsided attention in the field on *worker* interests and sentiments that produce backlash against globalization, rather than *consumer* interests (Naoi and Kume 2011;2015). The second issue is the lack of established theoretical framework to study consumer-driven product differentiations based on country of origins. The third issue is empirical. We have a cumulation of well-identified studies estimating the effect of consumer boycotts on trade flows (Davis and Meunier 2011; Heilmann 2016), yet, trade flows is the results of aggregated decisions by firms, consumers and the government and hence we have no means to identify whether consumers or firms are boycotting products and affecting trade flows (Li and Naoi, 2024).

This paper studies the effect of political economy shocks on *the salience* of country of origins in consumer minds by leveraging Amazon product reviews posted on Amazon.com between 2004 and 2018 in the United States. We develop a theory of consumer animosity against foreign products based on Armington model of trade, which builds on the assumptions that buyers have ability and tastes to distinguish products based on their location of origins (Armington 1969; Anderson 1979). We marry the insight from the Armington model with the Engel's Law, which together predicts the higher salience of foreign country of origins among consumers of goods with high income elasticities of demand (i.e., goods where the demand increases with the rise of income, so called 'luxury goods' in economics) compared to consumers of goods with low income elasticities of demand (i.e., necessity goods). We argue that consumers who can *afford* to be discriminatory toward goods differentiated by the location of origins will be more aware of foreign origins of goods *and* express more negative sentiments to goods associated with a particular country of origin. The prediction is *the opposite* of existing literature on occupational origins of backlash against globalization, which links low-income and low-skilled workers to

opposition against trade. The prediction also stands in stark contrast to survey-based studies on "ethnocentric" consumers in the field of business and marketing, which has consistently shown that low income and low education attainment respondents reported their preference for domestic over foreign products (Shimp and Sharma 1987, Lusk et al. 2006).

We test this Armington-Engel's Law conjecture leveraging a large text data from consumer reviews and rating of products posted on Amazon.com in the United States between 2004 and 2018. We use name entity recognition (NER) for locations by fine-tuning BERT (Bidirectional Encoder Representations from Transformers, see Devlin et al. 2018 and Ni, Li and McAuley 2019) and identify and tag all the reviews that mention top 10 country names including the United States. We further conduct sentiment analysis of each text review using a fine-tuned BERT. With the data cleaning that eliminates duplicate reviews (that were likely to be fake or paid reviews), we achieve 91.3% reviews in our data being the verified purchases. The data captures actual consumer behavior *and* sentiments and the salience of foreign country of origins in consumer minds. We estimate the probability of a review mentioning each of the top 10 foreign economies and its sentiment with the price of goods purchased by the verified reviewers and a host of macroeconomic conditions that have been known to affect labor market and consumer sentiments against globalization.

The results is consistent with the Armington-Engel's Law conjecture. Consumers are more likely to mention foreign country names in the reviews for the high-priced goods (i.e., the higher income elasticities of demand) than low-priced goods and reviews that mention foreign country names tend to be more negative in sentiments controlling for product-specific characteristics. This holds true even if we analyze reviews that mention "China" or any other foreign country names including European countries: high-priced goods mention foreign country names more than low-priced goods. Economic hardship of workers, measured by quarterly increases in unemployment rate, *reduces* the probability that a reviewer mentions China contrary to some studies that link manufacturing unemployment with the rise of anti-China sentiment that led to Trump's anti-China campaign (Autor et al. 2018). Economic hardship as consumers, measured as quarterly changes in consumer price index (i.e., inflation), has no statistically significant effects on mentioning China or other foreign countries. Finally, Trump's anti-China campaign reduces mentions of China reduces mentioning of China or the United States. These results suggest that consumer backlash against globalization originates from citizens who can afford it.

This paper makes three contributions. First, this paper is one of the first to systematically study consumer backlash against globalization, contrary to the majority of existing literature that examines the backlash originating from workers and labor market competition. We find the salience of foreign country of origin of products in American consumer minds, which is consistent with the gravity model of trade, despite globalization and multinationalization of production over time that *should* obscure country of origins. Second, theoretically, We provide a theoretical framework to study consumer backlash against globalization building on Armington model of trade. We marry Armington model of trade with Engel's Law and demonstrate *the*

opposite of the established findings linking low-skilled and less educated individuals with anti-globalization sentiments: consumers express more negative sentiments toward foreign products and brands for products with higher income elasticities (i.e., the demand for a product increases more with income) than "bare necessity" goods that are low income elasticities of demand. Finally, we provide one of the first direct and behavioral measures of salience of foreign origins of goods in consumer minds leveraging product review data on Amazon.com. The results are consistent with the Armington assumption, i.e., consumers do differentiate products with different country of origins and express positive vs. negative sentiments corresponding with *bilateral* political and diplomatic events in the world affairs.

Section I: The Puzzle – Consumer Backlash Against Globalization

Consumer boycotts against foreign products are on the rise around the world (Davis and Meunier 2011; Heilmann 2016; Pandya and Venkatesan 2016; Vekasi et al. 2019). Li and Naoi (2024) document that citizens in 9 out of top 15 wealthiest economies in the world have boycotted each other's products in the past decade alone in response to military and economic conflicts and the revelation of unethical government behavior.[2] Disruption in bilateral trade due to consumer boycotts can be substantial. Existing estimates by trade economists range from null to 18.8% in overall trade flows and some consumer goods with national brand recognition experienced larger drops, as high as 50% in exports.[3]

Survey evidence corroborates with the trade data. 4 in 10 consumers in the United States surveyed in 2020 have indicated that they were boycotting at least one company, up by 12 points since 2019 (LendingTree, 2020). 84 percent of Americans surveyed in 2021 said they will boycott Russian brands (Brand Keys, 2022). 71 percent of consumers surveyed in India in 2020 said they did not purchase products with a Made in China tag during Diwali to express their disapproval of the Galwan Valley clash between Chinese and Indian military forces in June of 2020, which led to the death of 20 Indian soldiers (Dutta, 2020).

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[2] Well-documented cases of consumer boycotts/buycotts are: American boycott of French products and wine in response to the 2003 Iraq War (Pandya and Venkatesan 2016), boycotts of Danish goods in Arab countries in 2006 in response to the publication of caricature of the Prophet Muhammad (Heilleman 2016), the 2017 Mexico's boycott of Starbucks and other American brand coffee chains in response to Trump's build-a-wall-with tariff campaign (Peña et al. 2022), Chinese citizens' boycott against the U.S. responding to the trade war, Chinese citizens boycotts in response to South Korea's THAAD in 2016, Japan-China in response to the territorial disputes in 2012, Japan-Korea in response to the territorial dispute in 2012, boycotts and sanctions against Russia for the 2014 invasion of Crimea and 2022 invasion of Ukraine, India's campaign against products from China in 2020, the 2021 cotton boycott and sanctions against China in response to Xinjiang forced labor.

[3] Japanese car exports to China, for instance, experienced 40% to 50% drop since the second quarter of 2012 compared to the previous year, when territorial dispute (Senkaku-Daiyou dispute) became salient. "Japanese car sales plunge in China after islands dispute" October 9, 2012. *The Guardian*. See also Vekasi et al. 2019.

The rise of consumer boycotts against foreign goods poses a puzzle because consumers should stand to benefit from globalization through a lower price and a wider variety of goods (Krugman 1980; Naoi and Kume 2011; 2015). Indeed, Handbury and Weinstein (2015) and Bai and Stumpner (2019) found using barcode data on retail sales that consumers, especially low-income citizens, stand to benefit from imports during the economic recessions in advanced industrial nations. Naoi and Kume (2015) find that low-income citizens in Japan support free trade when they were primed to think about consumption, rather than jobs. Yet, consumer backlash against globalization seem to have emerged in the wealthiest capitalist democracies where consumers have enjoyed their access to a variety of goods.

Furthermore, globalization and multinationalization of production and the rise of intra-firm trade, the two defining characteristics of global economy in the past three decades, should obscure the country of origins of goods and lower the salience of foreign countries and brands in consumer minds. Existing studies on the effect of country-of-origin labeling has indeed shown that multinational production and globalized ownership of firms have weakened the power of the country-of-origin labeling in shaping consumer choices (Johnson et al. 2016). Pandya and Venkatesan (2016) have also demonstrated that consumers often misidentified product's country of origin. Li and Naoi (2024) show that Japanese and Chinese firms facing American consumer animosity have leveraged this complexity and conducted merger and acquisitions with American firms to hide their national origins.

In contrast to existing studies in the international political economy that view consumer interests as vehicle for globalization, emerging studies have shown that "political consumerism" – consumers expressing political opinions through boycott and so called "buycott" behavior – has increased over time. The emergence of ethical and patriotic consumers is amplified by the lower costs of gathering product information and collective action through e-commerce and social media (Kam and Deichert, 2020). Scholars have attributed the rise of ethical consumers as one of the key contributors of wide-spread adaption of the United Nation's Sustainable Development Goals (SDGs) among multinational firms (World Economic Forum 2024). This behavioral approach views consumer boycotts and buycotts as political behavior akin to voting and protests.

The two arguments discussed above, one that emphasizes evolving structure of global economy that obscures the country of origin and another that emphasizes the heightened morality and patriotism of individual consumers, are at odds with each other with inconsistent evidence. The discrepancies arise from the three sources as discussed in detail below: (1) the lack of theoretical framework to study and predict when consumers differentiate products based on country of origins and which consumers do so more than others, (2) the diverging levels of analysis (individual-level vs. aggregated industry or national-level) and (3) differences in measurements (reported preference via surveys vs. trade flows or sales). Our study addresses these issues by developing a theory that predicts the salience of country of origins in consumer minds that vary across goods/income and test its predictions using new data on consumer product reviews on Amazon.com across goods and time.

Section II: Theory – Armington-Engel's Law Conjecture

2.1. Consumers' Ability and Tastes for Product Differentiations by the Country of Origins

We develop a theory of consumer animosity against foreign products based on Armington model of trade, which builds on the assumptions that buyers have ability or tastes to distinguish products based on their *location of origins* (Armington 1969; Anderson 1979).

To begin, the three well-known trade theorems – Heckscher-Ohlin, Ricardo-Viner and Melitz – tell us very little about why and to what extent consumers prefer some products with different locational origins, because they are based on the principle of comparative advantage and specialization (Blonigen and Wilson 1999; Feenstra et al. 2018). Indeed, empirical work on trade has revealed that these models of comparative advantage and specialization perform poorly in predicting bilateral trade flows (Feenstra et al. 2001, see "missing trade" literature surveyed in Estevadeordal 2002).

Instead, empirical trade scholars have found various gravity models of trade, which predicts bilateral trade flows to be a function of the size of two economies and geographic and cultural/linguistic/political distance between them, to perform better in explaining the bilateral trade flows. Although gravity models of trade have been criticized for the lack of theoretical foundations, Armington model of trade is recognized as one of the theoretical building blocks for the gravity model of trade (Armington 1969; Anderson 1979).

The strength of Armington model is its assumptions that buyers have ability and/or tastes to distinguish products based on their location of origins (Armington 1969; Anderson 1979; Feenstra et al. 2018). While the supply-side, producer-driven theories of product differentiations, based on increasing return to scale and monopolistic competition, has developed by Krugman (1980) and others, the Armington model explains product differentiations from a consumer perspective. In the Armington model, consumers are *able* to distinguish and Italian wine from French wine, or, to tell a difference from Korean cosmetics from Japanese ones and have preference ranking between the two, otherwise similar or identical, products. This theoretical setup is well-suited to study how the rise in political tensions between the two economies or the revelation of unethical behavior by a foreign government — we can call these triggers as *bilateral taste shocks* ala Boehm et al. (2021) –affect consumer hostility against foreign products.

While the empirical performance of Armington model of trade in predicting bilateral trade flows is undisputed, a few issues remain in building on this model to study consumer backlash against globalization. The first issue is theoretical. Very few studies have questioned the validity of Armington assumptions about buyers' ability and/or tastes for product differentiation by location of origins. Rich experimental literature in the field of economics, sociology and marketing has consistently shown that these ability and tastes vary across citizens with different socioeconomic characteristics and political views (Shimp and Sharma 1987; Lusk et al. 2006; Naoi and Kume 2015). Yet, these heterogeneities found in the individual-level studies have not been

incorporated into Armington-type framework. The second issue is empirical. We have a cumulation of well-identified studies estimating the effect of political tensions on trade flows (Davis and Meunier 2011; Davis et al. 2019; Heilmann 2016), yet, trade flows is the results of aggregated decisions by firms, consumers and the governments and hence we have no means to identify whether consumers, firms, or governments are boycotting products and affecting trade flows (Li and Naoi, 2024).

2.2. Armington Model of Trade Meets the Engel's Law

We address these theoretical and empirical shortcomings in Armington/gravity model of trade by considering consumer responses to bilateral taste shocks which varies across income elasticities of goods ala Engel's Law. Engel's Law states that income elasticity of demand – i.e., a demand for a good relative to one's income – varies across different types of goods. In particular, necessity (or 'normal') goods, such as food and basic clothing and shoes, have low income elasticities of demand, meaning that the demand for a necessity good does not increase sharply with the rise of income of a buyer.

Food expenditures is a quintessential example of a good with low income elasticity of demand. One of the most well-established empirical regularities in Economics found through this Engel's Law is that low-income household spend the higher proportion of their expenditures on food compared to high-income household (Houthakker 1957; Handbury and Weinstein 2015; Naoi and Kume 2015). In contrast, luxury goods such as electronic gadgets, cashmere sweaters, high-end home decorations and brand bags and cosmetics are goods with high income elasticity of demand because the demand for these goods increases sharply with the rise of income of a buyer. Studies on international trade has incorporated the insights from Engel's Law, most importantly, consumer's nonhomothetic preferences over goods (i.e., the demand for goods differ among income groups), to account for why the pattern of trade differs by income distribution of trading partners (see Matsuyama 2002; 2019 and Fajgelbaum, Grossman and Helpman 2011).

We argue that a key implication of the Engel's Law is that consumers of luxury goods (i.e., high income elasticity of demand) should be more responsive to the bilateral taste shock than necessity goods because consumers of luxury goods can *afford* to discriminate products from different locational origins and pay price premium that comes with the differentiation. By contrast, consumers of necessity goods (low income elasticity of demand) should be less responsive to the bilateral taste shock because they cannot afford to discriminate goods based on the locational origins of goods.

This paper thus marries the insight from the Armington model with the Engel's Law of income elasticities of demand and argues that consumers who can *afford* to discriminate differentiated goods by the location of origins are more aware of foreign origins of goods *and* express more negative sentiments to goods originated in foreign countries. Our consumer-based prediction is the opposite of existing literature on occupational origins of backlash against globalization, which links low-income and low-skilled workers to opposition against trade. The prediction also

stands in stark contrast to survey-based studies on "ethnocentric" consumers in the field of business and marketing, which has consistently shown that low income and low education attainment respondents are more likely to report preference for domestic over foreign products (Shimp and Sharma 1987).

Our approach is most similar to Fajgelbaum, Grossman and Helpman (2011) which predicts formally that a fraction of consumers who purchase higher-quality product variety (within an identical product category) increases with income because the marginal value of quality is higher for high-income buyers. In essence, Faigelbaum, Grossman and Helpman (2011)'s model develops a consumer-driven explanation for the product differentiations in trade, in contrast to producer-based explanations for product differentiations such as Krugman (1980)'s emphasis on increasing return to trade and monopolistic competition. Like Faigelbaum, Grossman and Helpman (2011), this paper develops a consumer-driven mechanism for product differentiation that varies across income. Unlike Faigelbaum, Grossman and Helpman (2011), whose focus is on quality differentiation, our argument predicts the salience of *locational origins* of goods in consumer minds and sentiments associated with it that vary across income groups (i.e., goods with different income elasticities of demand).

Our Armington-Engel's Law conjecture also considers how economic hardship as workers and consumers affect salience of foreign country of origins in consumer minds and their sentiments toward foreign products. Because economic hardship as workers (e.g., layoffs and decline in wages) should decrease consumers' financial capacity to discriminate products by locations of origins and increase the proportion of necessity goods in their consumer basket, we predict that increase in unemployment rate to reduce anti-foreign sentiments and the salience of product differentiations by country of origins in consumer minds. Economic hardship as consumers – inflation and the rise in import price – should have similar effects, reducing financial capacity to discriminate goods based on country of origins. Accordingly, economic hardship as consumers should decrease the salience of foreign country of origins of goods and reduce negative sentiments toward them.

In sum, our Armington-Engel's Law conjecture predicts heterogenous effects of bilateral taste shock (e.g., the rise in political tensions, military conflicts, or revelation of unethical behavior by a foreign government) and macroeconomic conditions across goods with different income elasticities of demand that mirror consumers' household income. Above discussion leads to the following three hypotheses.

Hypothesis 1 (Armington-Engel's Law Conjecture): Country origins of goods is more salient among consumers of goods with high income elasticity of demand ("luxury goods") than among consumers of goods with low income elasticity of demand ("necessity goods").

Corollary 1: Consumers of goods with high income elasticity of demand express more negative sentiments about goods with foreign country of origins.

Hypothesis 2: Economic hardship as workers decreases the salience of foreign country of origins in consumer minds and reduces their negative sentiments against foreign goods.

Hypothesis 3: Economic hardship as consumers (i.e., inflation or increased imported price of consumer goods) decreases the salience of foreign country of origins in consumer minds and reduces their negative sentiments against foreign goods.

Hypothesis 4: Negative taste/price shock increases the salience of foreign country of origins in consumer minds and increases negative sentiments against goods associated with the country especially among consumers of luxury goods.

Corollary 2: Consumers of goods with high income elasticity of demand respond to the negative bilateral taste shock more by increasing the negative sentiments against goods associated with the country.

Note that our predictions are *the opposite* of existing literature on occupational origins of backlash against globalization, which links low-income and low-skilled workers to opposition against trade. The prediction also stands in stark contrast to survey-based studies on "ethnocentric" consumers in the field of business and marketing, which has consistently shown that low income and low education attainment respondents reported their preference for domestic over foreign products (Shimp and Sharma 1987, Lusk et al. 2006). Finally, our prediction about bilateral taste/price shock and heterogenous *consumer* responses to the shock is the opposite of what has been argued about the effect of Trump's anti-China campaign – low-income and low-skilled *workers* increasing anti-China sentiments (Autor et al. 2013; 2020).

Section III: Research Design and Data

Testing the above hypotheses requires data that measures the salience of foreign country origins in consumer minds and their sentiments toward foreign countries for a wide range of goods with different levels of income elasticities of demand and over time with changes in macro-economic conditions and bilateral policy shocks.

Existing research on consumer choices between domestic vs. foreign products tend to leverage surveys and survey experiments (e.g., asking respondents' preference and "intention to buy" goods with different country of origins) and this approach has three potential issues. One is "talk is cheap" problem, where respondents' reported intentions to buy might differ from actual shopping behavior. The second issue is that a typical survey question explicitly associates a product with a foreign country origin, and accordingly, the survey does not measure the salience of foreign country of origins in consumer minds in the natural state (the problem of "overattributing globalization." See Naoi 2020). Third, one-shot survey does not capture consumer responses in a wide range of goods and over time. Pathbreaking works leveraging barcode data, on the other hand, solves the first and third issues with the survey research

discussed above, but the barcode research does not provide a measure of salience of foreign country of origins in consumer minds and their sentiments toward them (Handbury and Weinstein 2014; Pandya and Venkatesan 2016).

3.1. Amazon Review Data

This paper introduces a new data that directly measures the salience of foreign country origin from buyers' point of view for a wide range of goods and over time using Amazon product review data. The data solves the two problems that have stagnated the progress on consumer backlash against globalization: (1) inability to combine behavioral shopping data with measures of consumer salience of foreign product origin and sentiments toward them and (2) inability to study consumer responses to political and economic events that span for a long period of time with a diverse set of goods with different income elasticities of demand.

Specifically, we test this Armington-Engel's Law conjecture leveraging a large text data from consumer reviews and rating of products posted on Amazon.com in the United States between 2004 and 2018. The scraped review data comes from our collaborator, Julian McAuley lab at the University of California, San Diego's Computer Science Department (see Ni, Li and McAuley 2018).[4] We use their 5-core data, which has all the products sold under eight broad product categories in Amazon.com website that has more than five reviews in the United States between 2004 and 2018. The eight categories are automotive parts, arts and crafts, beauty products, electronics, fashion and jewelry, appliances, clothing and shoes and home and kitchen. We dropped products sold under four categories, books, movies, video games and music, as consumers of cultural goods tend to be very specific and sticky about their preferences. The unit of analysis is a review i for a product p posted at the time t by a reviewer r and include all the reviews posted including those without textual reviews and with a star rating only. The data includes a product identification number assigned by Amazon.com (Amazon Standardized Identification Number, "ASIN"), a brief product description, manufacturer's name, reviewer name (self-reported), verified purchase status, minimum and maximum price and average price during the duration of a product sold on the website. With the data cleaning that eliminates duplicate and empty reviews (that were likely to be fake or paid reviews), we achieve 91.3% of reviews in the data being the verified users. In total, we have 20 million reviews for products in eight district product categories spanning 14 years between 2004 and 2018. Appendix Table A2 summarizes descriptive statistics.

3.2. Potential Inferential Issues with the Amazon Review Data

We note potential caveats of this data. One is the selection effects. Not all consumers shop at Amazon.com and many shoppers do not leave reviews or star rating. Among those who post reviews, some might consider a country of origin but do not express them in the written reviews.

[4] We use 2018 version available here: https://cseweb.ucsd.edu/~jmcauley/datasets/amazon_v2/ (last accessed, November 3, 2024).

Second is the reporting bias. There is potentially strong, and possibly stronger, desirability bias in online reviews with self-reported reviewer names/nicknames relative to anonymous surveys. While the privacy of a buyer/reviewer is protected, reviews themselves are publicly available online and some reviewers might have used full or part of their actual names. Finally, the review data is censored. The majority of reviews in our data is posted by the verified buyers, which means that these consumers have already made a choice to purchase a given product. Consumers cannot post reviews on products that they did not purchase. As a result, reviews on purchased products might bias toward positive sentiments, relative to a hypothetical (and unrealistic) baseline when they review a product that is randomly assigned. Moreover, one could argue that reviews might only bring up a country name in the case of "buycott" – when a reviewer believed to have purchased a good that rewards a domestic or foreign country that aligned with a reviewer's values. If this is the case, foreign country mentions should be generally associated with positive sentiments of reviews.

After manual inspection of reviews, which is corroborated by statistical evidence presented below, we do not think the censored data is a major concern, however. Our manual inspection reveals that a foreign country name or reference to the United States is often brought up in one of the four contexts: (1) to justify the buyer's decision to purchase a given product by referring to its (true or false) country of origin ("buycott"), (2) to justify the decision *not to* purchase the alternative product by referring to its (true or false) country of origin or to express a buyer's remorse ("boycott" review that is posted for the purchased product), (3) to discuss shipping issues by mentioning an origin country where a product was shipped from, and (4) to associate positive or negative sentiment about a product with a reviewer's past or current experiences with a country or their social network involving these countries (e.g., experience living, traveling, working in a country or having a family member or friends from a given country). Appendix A1. shows the examples of reviews that represent each of the four contexts [See Appendix A1].

In sum, our manual inspections suggest that reviews mentioning foreign country names appear to justify both boycotts, buycotts and buyers' remorse. Accordingly, the censored data issue– that we do not observe reviews on products that reviewers did not purchase – is less of a concern. Boycott and buycott is the different side of the same coin of *product choice among differentiated products*. Manual inspections of reviews suggest that consumers seem to follow the two-stage decision-making process: the first stage decision is to shop for a particular good in needs by visiting Amazon.com website, and the second stage decision is to choose from differentiated products with different country of origins within the same category of goods. Symmetric mentions of country names for both boycott, buycott and remorse decisions mirror this two-stage decision-making process. The two-stage decision making process is also consistent with the model setup in Fajgelbaum, Grossman and Helpman (2011) which considers consumer choice as a nested-logit structure, where consumers first make a choice to purchase a particular good, and then make a product choice among differentiated products with varying qualities.

3.3. Data Processing and Name Entity Recognition using BERT

We use name entity recognition (NER) for locations by fine-tuning BERT (Bidirectional Encoder Representations from Transformers, see Devlin et al. 2018) and identify and tag all the reviews that mention top 10 country names including the United States by fine-tuning locational name recognition (e.g., names of cities or towns are untagged; so as the term 'Amazon' which was initially recognized as location). While pre-BERT large language models process words sequentially (i.e., from left to right), bidirectionality of BERT processes a large text data by predicting masked words and measuring sentiments from left to right and from right to left. This allows BERT to predict masked words and sentiments more efficiently and accurately than pre-existing models. We further conduct sentiment analysis of each text review using BERT that assigns each review text with positive, negative and neutral sentiment. The data captures actual consumer behavior *and* the salience of foreign country of origins in consumer minds and their sentiments toward them. We estimate the probability of a review mentioning each of the top 10 foreign economies and its sentiment with the price of goods purchased by the verified reviewers and a host of macroeconomic conditions that affect hardship of citizens as workers and consumers.

Co-variates from Amazon review data includes *Average Price* (log), which is a logged average price of a product during the duration of period when a product was sold on Amazon.com, *Low Price,* which is a dummy variable we created by recoding *Average Price*, indicating 1 for products whose average price was under $20, and 0 otherwise. *High Price* is a dummy variable indicating 1 for products whose average price was higher than $99 and 0 otherwise. The three price variables are used to test hypotheses about heterogenous effects of goods with different income elasticity of demand (necessity vs. luxury goods, Hypothesis 1). We also create unique review identification number for each of the product by the time stamp of each review (day/year) within a same product ID number to facilitate fixed effect regression at product level (Hypothesis 2-4). Since multiple review can be posted on the same day, when time stamp is not fine grained enough to assign unique review ID within the same day, we force assigned unique identification number to allow fixed effects by products.

3.4. Macro-economic Changes and Policy Shocks

We then merge Amazon product review data with quarterly macroeconomic variables from Bureau of Labor Statistics (BLS) that are associated with economic hardship as workers and consumers: unemployment rate, inflation rate (consumer price index, CPI), and import price index for consumer goods, and import price index for goods imported from China.[5] All these macroeconomic variables are transformed as percentage change from the previous quarter to

[5] The quarterly macroeconomic data is available at Bureau of Labor Statistics: https://www.bls.gov/data/. We calculate quarterly percentage changes in macro-economic variables.

allow standardized comparison. Because consumption has strong seasonality, all the models summarized below include quarter dummies.

For bilateral policy shocks, we test the effect of Trump's anti-China campaign, which started around May of 2016 leading up to the 2016 Presidential election. *Trump's Anti-China Campaign* is a dummy variable indicating 1 for beginning of the third quarter in 2016 and zero otherwise.

We cluster standard errors at product-level in the statistical test of Hypothesis 1 and Corollary 1. We do not want to include product fixed effects in the models to test these hypotheses, because product fixed effects does not allow us to compare reviews for different goods cross-sectionally. For Hypothesis 2, 3 and 4 and Corollary 2 (macroeconomic conditions and policy shocks), the tightest inference we can make is to compare changes in reviews over time within a same product. Accordingly, our models include product fixed effects with OLS, logit and relogit on the binary dependent variable for the tests of Hypothesis 2-4 and Corollary 2. See below for estimated equation for each hypothesis testing.

Estimated Equation for the Hypothesis 1 and Corollary 1

$Y_i = \beta 0 + \beta 1 X1_i + \beta 2 X2_q + \beta 3\ \text{shock}_q * \text{price}_i + \varepsilon_i$, where

i; a review

X1*:* independent variables measured at product-level *p* (price, product category, time stamp of a review at *t* for a product *p*)

X2: independent variables measured quarterly *q* (macroecoomic changes from the previous quarter *q-1* and 0-1 indicator for the bilateral taste shocks)

β3: coefficient of an interaction term between taste shock *q* and average price of a product *p*

ε: error terms clustered at a product-level *p*

Estimated Equation for the Hypothesis 2-4 and Corollary 2

$Y_i = \beta_p + \beta 1 X1_i + \beta 2 X2_q + \beta 3\ \text{shock}_q * \text{price}_i + \varepsilon_i$, where

i; a review

p: a product

β *p:* product fixed effect

X1*:* independent variables measured at product-level *p* (price, product category, time stamp of a review at *t* for a product *p*)

X2: independent variables measured quarterly *q* (macroeconomic changes from the previous quarter *q-1* and 0-1 indicator for the bilateral taste shocks)

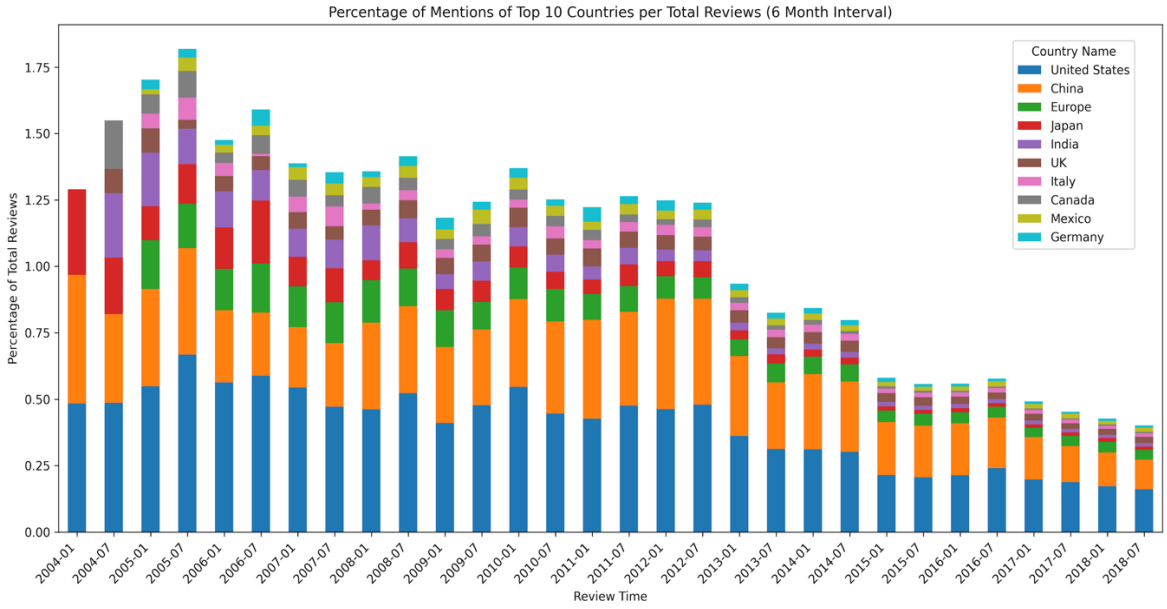
β3: coefficient of an interaction term between taste shock *q* and average price of a product *p*

ε: error terms

Section IV: The Results

First, the descriptive data documents relatively low salience of foreign country of origins in consumer minds. **Figure 1** summarizes the percentage of reviews that mention top 10 economies per total reviews for every sixth month interval from 2004 and 2018.

Figure 1 Proportion of Top 10 Country Mentions per Total Reviews



Note: Authors made this figure using Amazon Review Data (Core 5 version), 2004-2018

The figure suggests that during the mid-2000s, between 1.25% to 1.8% of total reviews mention one of the top 10 economies (1/80 to 1/55). The proportion of country mentions per total reviews gradually declined especially since early 2013. By the second half of 2017, the proportion of reviews that mentioned at least one of the country names is less than a half of 2004-2012 period.[6]

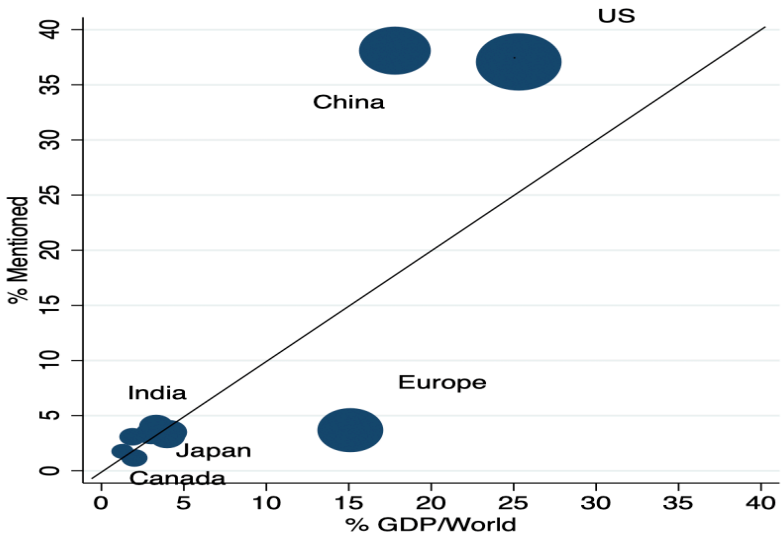
[6] See Appendix **Figure A1** on the total number of reviews that mentioned any country, rather than their proportion. The absolute number of reviews that mention country names peaked in the last half of 2016 and declined since then.

The proportion of country mentions is disproportionately low relative to the proportion of American consumer spending on imported goods from abroad that is estimated at 10% (Federal Reserve Bank of San Francisco, 2019). Our review data suggests that, consistent with the increase in multinational national production and intra-firm trade that obscures the country of origins, the salience of foreign country of origin is lower than the actual presence of imported goods in consumer market and declining over time as the global value chains deepened. The evidence is contrary to the rise of consumer boycott/buycott against foreign goods discussed previously.

Next, **Figure 2** plots the proportion of reviews that mentioned each of the ten country names per total reviews in Y-axis and each country's GDP per World GDP on X-axis. The pattern is consistent with the barebone version of the gravity model of trade. The economic size of country, measured by GDP, is proportional to the proportion of reviews that mention a given country per total reviews that mention at least one of the ten countries. Mention of "China" constitutes 38% of total reviews, while "the United States" is mentioned in 37% of total reviews.

There are countries that punch above the weight – i.e., receive more mentions than what its GDP suggests – such as Italy for Home and Kitchen category and South Korea for Beauty category. By contrast, there are countries that underperform in mentions relative to the size of country and its significance for the U.S. import, such as Canada. These deviations (what gravity models consider as "frictions," estimated as residuals) seem to be driven by the reputation and branding of a foreign country in particular categories of consumer goods, such as Italian reputation in the Home and Kitchen category.

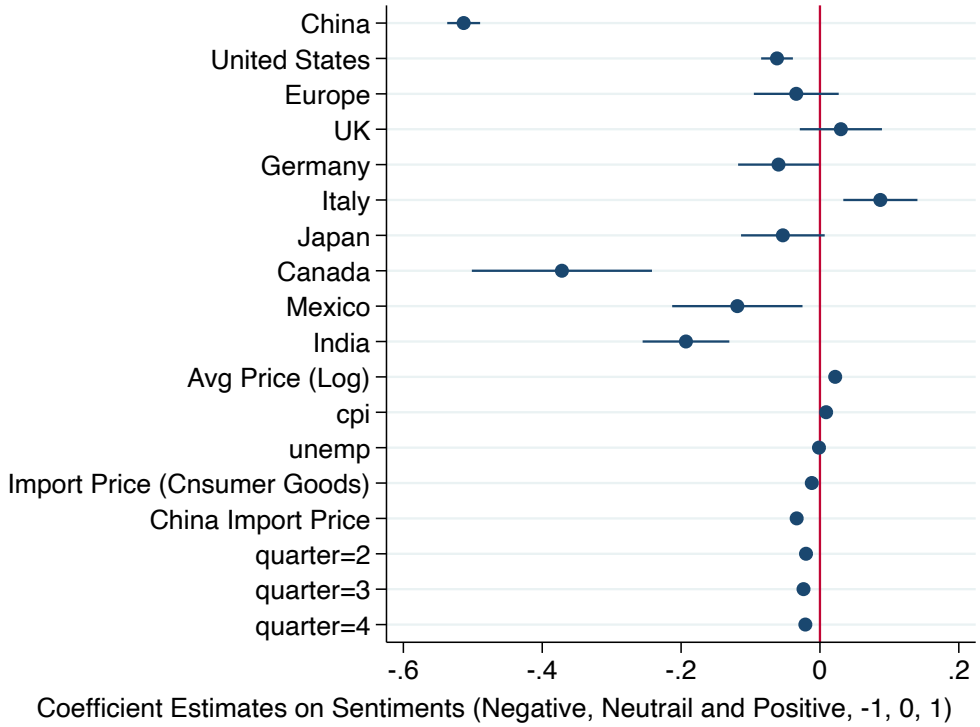
Figure 2: Gravity Model of Foreign Country of Origins Expressed in Consumer Reviews



Note: X-axis is the proportion of a country's GDP per World GDP from Penn World Table and Y-axis is % of each country mentioned among the total reviews that mention any of the top 10 countries from our amazon product review data.

Next, we correlate a country mentioned in the review with review sentiments [negative (-1), neutral (0), and positive (1)] and star rating (1-5 where 5 is the most positive). Table 1-a summarizes the coefficient estimates of each country mentioned and the sentiment of a review text. Our outcome measure is a review sentiment $Yi \; I \in \{-1, 0, 1\}$ for a review *i* for a product *p* at time *t*. We estimate the dependent variable that ranges from -1 (negative sentiment) to 1 (positive sentiment) with a linear regression.

Table 1-a: Country Mentions and Positive Sentiments Expressed in the Product Reviews



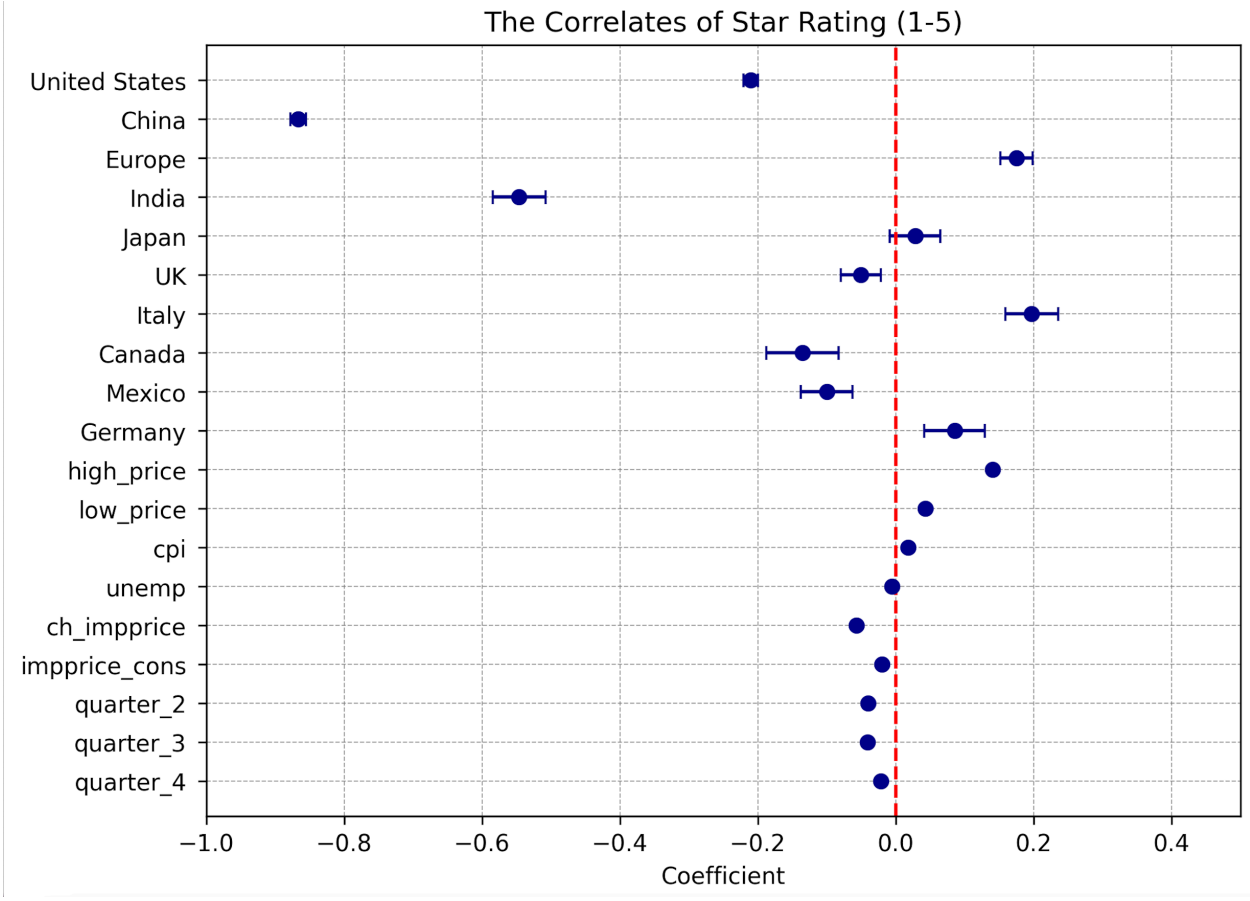
Note: Linear estimates with robust standard errors clustered at a product-level. Coefficient plot above is for Home and Kitchen category. See the result for entire data in Appendix Table A3 and A4, which is consistent with the coefficient plot above.

The results are contrary to the *love* for variety that is at the core of consumer-driven theories of product differentiation (Handbury and Weinstein 2015). Only reviews that mention "Italy" is associated with positive sentiments. An important takeaway is that a foreign country mention is generally associated with more negative sentiment (less positive) of a review compared to reviews that do not bring up country name or has null effects on the expressed sentiments (the case of reviews that mention "Europe" or "United Kingdom"). The results hold true for reviews that mention wealthy economies with reputation for high quality manufacturing, such as Germany and Japan, and reviews that mention emerging economies such as India and Mexico.

Reviews mentioning “China” is associated with the largest drop in positive sentiments estimated to be 0.5 point reduction in three-point Likert scale (-1 is negative, 1 is positive and 0 is neutral). These effects are statistically significant at 1% level. Finally, a review mentioning the United States is associated with less positive sentiment of a review. This result is also contrary to the bipartisan support American voters rallied around “Buy American” campaigns by elites during the Great Recession identified in surveys (Naoi 2024).

We replicate this result with five-point star rating, instead of sentiment analysis of review texts. The key results hold with more European countries (Italy, Germany and “Europe”) being associated with the higher star-rating and emerging economies (China, India and Mexico) associated with the lower rating. Reviews that mention the United States (America, American, U.S.) are associated with significantly lower star-rating (0.2 lower in the five-star rating) which contradicts the existing survey finding about the high bipartisan support for the Buy American campaign.

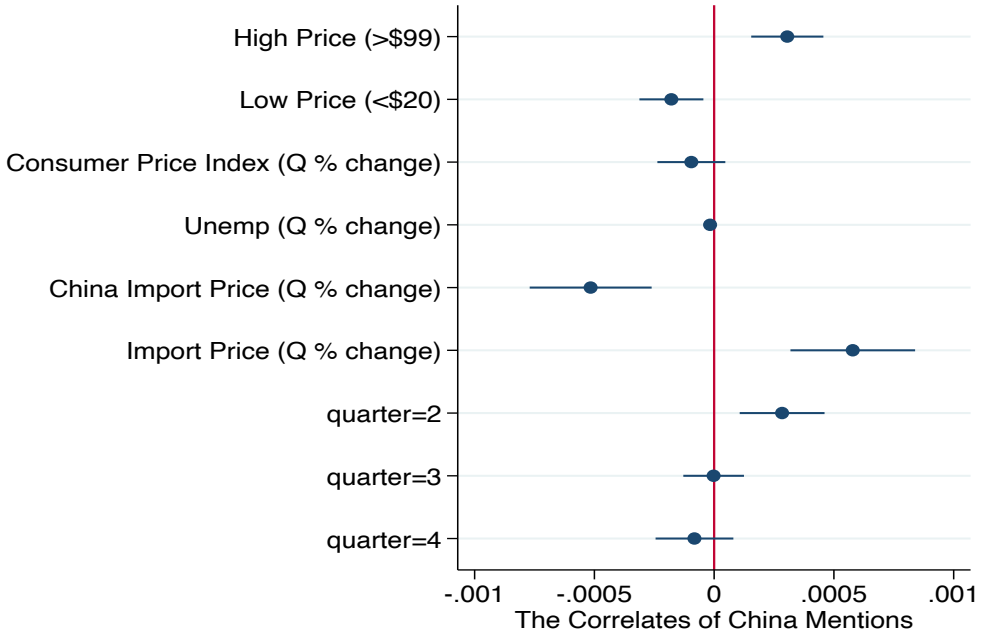
Table 1-b: Country Mentions and Star Rating in the Product Reviews



Note: Linear estimates with robust standard errors clustered at a product-level.

Next, we test H1-H3 on the salience of foreign country origins in consumer minds. Table 2 summarizes the coefficient estimates of average price of a product during the duration of time it was sold on Amazon.com and macroeconomic conditions. Consistent with Armington-meets-Engel's Law prediction (H1), consumers who purchased low-priced products (average price under $20 during the duration of time on Amazon.com website) are less likely to mention "China" and consumers who purchased high-priced products (average price over $99) are more likely to mention "China" compared to the base category (consumers who purchased products sold at the higher than $20 and lower than $99). The results that goods with lower income elasticities receive less mentions of foreign countries of origins are consistent even if we analyze all foreign country mentions including China in the reviews or only European country mentions. Low-priced goods (necessity goods that has low income elasticities) consistently receive less foreign country mentions compared to mid-priced or high-priced products.

Table 2: The Determinants of Reviews Mentioning "China"

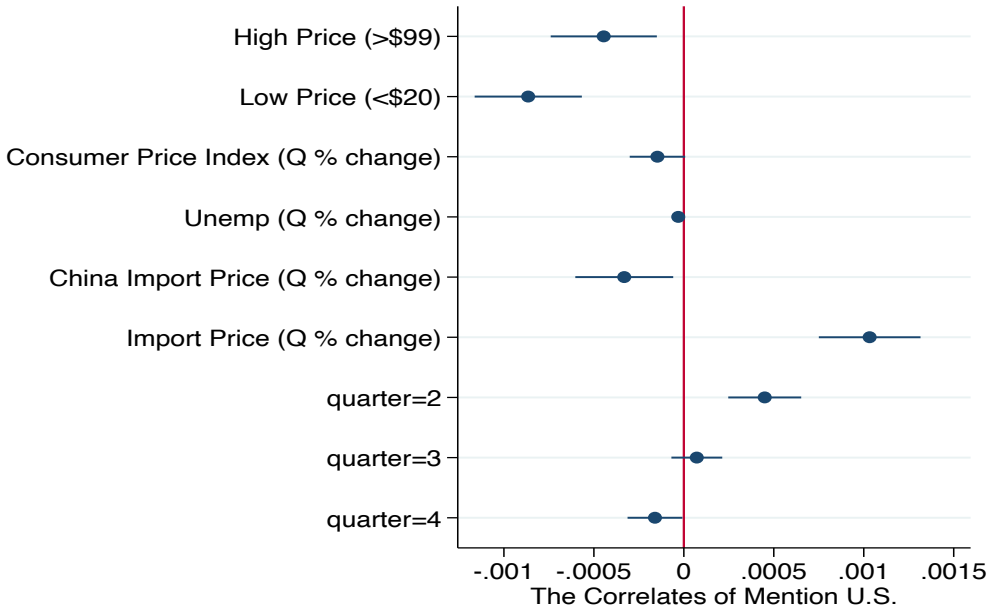


Note: Linear estimates with robust standard errors clustered at a product-level.

Moreover, economic hardship as workers (percentage change in unemployment rate from a previous quarter) *reduces* the propensity of reviews mentioning "China." The evidence is in contrast to the existing studies linking economic hardship as workers with the anti-China sentiment and the rise of Trump in 2016 election (Autor et al. 2013). Instead, economic hardship as consumers, measured by percentage increase in import price of consumer goods, is associated with the higher probability that reviews mentioning "China."

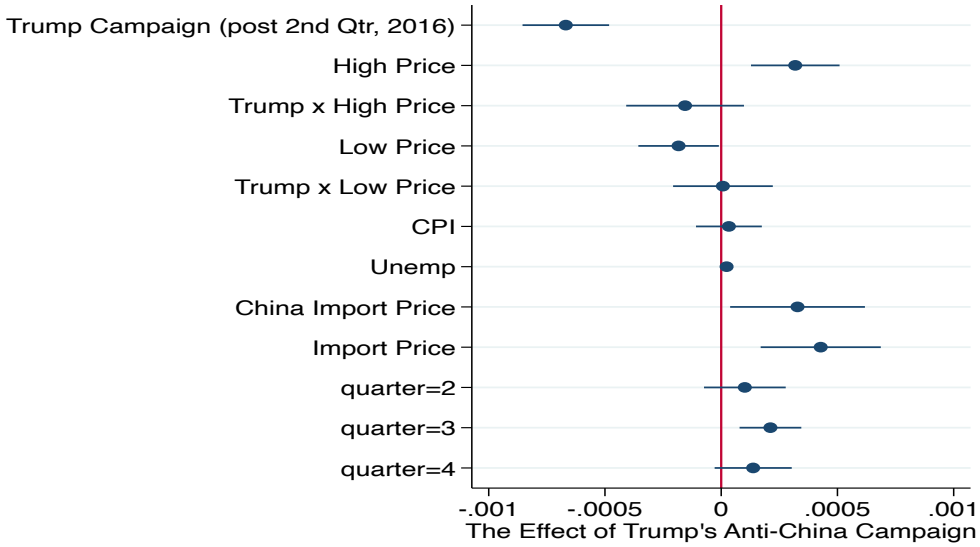
Table 3 replicates the analysis for the reviews mentioning the United States. The results suggest that both consumers of low-priced goods as well as high-priced goods are less likely to mention the United States compared to those who purchased mid-priced products (the higher price than $20 and lower than $99). Consumer suffering from inflation, measured by percentage change in Consumer Price Index from a previous quarter, is associated with less mentioning of the United States, which might imply that consumer preference for domestic goods weakens with inflation. Consistently, the rise in import price increases mentions of the United States, lending support that consumers prefer domestic over foreign goods. By contrast, the rise in unemployment rate – economic hardship as workers –is associated with the lower salience of the United States in consumer minds. The results make sense in light of the Armington-Engel's Law conjecture (H3) that consumers are more aware of foreign origins of goods when they can afford it and they are more likely to prefer domestic goods when import price is higher.

Table 3: The Determinants of Reviews Mentioning "the United States"



Note: Linear estimates with robust standard errors clustered at a product-level.

Table 4: The Effect of Anti-China Campaign by Donald Trump



Finally, we examine the effect of Donald Trump's anti-China campaign during the 2016 presidential election. We estimate the interaction terms between a dummy variable 1 for the beginning of Trump's anti-China campaign (beginning the third quarter of 2016 since the anti-China campaign began in May of 2016) and 0 otherwise. The results suggest that anti-China campaign reduces the probability of reviews mentioning China, contrary to the established evidence from survey research that the campaign increased anti-China sentiments. Trump's vilification of China might have produced backlash effects or Trump campaign has heightened the desirability bias among consumers. The coefficient estimates of interaction terms between *Low* and *High Price* and the campaign are statistically not significant at the conventional level, suggesting that the campaign had similar effects on consumers of low vs. high-priced goods. The evidence does not support the Hypothesis 4.

Section V: Discussion

This paper has demonstrated that consumer backlash against globalization might be originating from citizens who can afford it. The results from over 20 million Amazon product reviews spanning 14 years in the United States suggests that while the salience of foreign country of origins has declined over time, consumers of goods with higher income elasticity of demand (i.e., luxury goods) are more likely to mention foreign country of origins including China than consumers of goods with low income elasticity of demand (necessity goods) and country mentions, including the United States, tend to be associated with negative sentiments of reviews. Economic hardship as workers reduces the likelihood that reviews mentioned China, while economic hardship as consumers increases it. The results are consistent with the Armington-Engel's Law conjecture.

Contrary to the prediction, Presidential candidate, Donald Trump's anti-China campaign in 2016, reduces consumer reviews mentioning China and the United States. The results are contrary to survey-based evidence that anti-China campaign has fueled anti-China sentiments among American voters.

To conclude, we discuss broader implications of our findings. First, our results might help us better understand why the proponents of globalization do not seem to be as powerful as we have thought to reverse the U.S. government turn to protectionism. Citizen support for protectionism might be broader and stronger than we originally thought, encompassing low-skilled workers and variety-loving/hating wealthier consumers. Wealthier consumers who are believed to be the proponent of globalization might turn against globalization due to their sensitivity to bilateral political shocks such as political conflicts or elite campaign against adversarial country. Second, deepening of global value chains has weakened the salience of foreign origins of goods in consumer minds, potentially counter-acting the rise of ethical and patriotic consumers. While country-of-origin labeling and rules of origin provisions in free trade agreements continue to be the political battleground, these provisions seem to matter more for firms seeking preferential tariff treatments than shaping product choices by ordinary consumers. Finally, our findings suggest the importance of understanding citizen experience with economic hardship in two dimensions: as workers or consumers (Naoi and Kume 2015). Consistent with the experimental evidence, this study finds that economic hardship as workers can fuel consumer support for globalization especially among low-income workers.

Selected Bibliography

Ahmed, Sadrudin A., and Alain d′ Astous. “Comparison of country of origin effects on household and organizational buyers′ product perceptions.” *European Journal of Marketing* 29.3 (1995): 35-51.

Ahmed, Sadrudin A., and Alain d'Astous. “Cross-national evaluation of made-in concept using multiple cues.” *European Journal of Marketing* 27.7 (1993): 39-52.

Anderson, James E. “A theoretical foundation for the gravity equation.” *The American economic review* 69.1 (1979): 106-116.

Armington, Paul S. “A Theory of Demand for Products Distinguished by Place of Production (Une théorie de la demande de produits différenciés d'après leur origine)(Una teoría de la demanda de productos distinguiéndolos según el lugar de producción).” *Staff Papers-International Monetary Fund* (1969): 159-178.

Autor, David, et al. “Importing political polarization? The electoral consequences of rising trade exposure.” *American Economic Review* 110.10 (2020): 3139-3183.

Bai, Liang, and Sebastian Stumpner. “Estimating US consumer gains from Chinese imports.” *American Economic Review: Insights* 1.2 (2019): 209-224.

Blonigen, Bruce A., and Wesley W. Wilson. “Explaining Armington: what determines substitutability between home and foreign goods?.” *canadian Journal of Economics* (1999): 1-21.

Boehm, Christoph E., Andrei A. Levchenko, and Nitya Pandalai-Nayar. *The long and short (run) of trade elasticities*. No. w27064. National Bureau of Economic Research, 2020.

Davis, Christina L., and Sophie Meunier. “Business as usual? Economic responses to political tensions.” *American Journal of Political Science* 55.3 (2011): 628-646.

Davis, Christina L., Andreas Fuchs, and Kristina Johnson. “State control and the effects of foreign relations on bilateral trade.” *Journal of Conflict Resolution* 63.2 (2019): 405-438.Devlin, Jacob. "Bert: Pre-training of deep bidirectional transformers for language understanding." *arXiv preprint arXiv:1810.04805* (2018).

Devlin, Jacob. "Bert: Pre-training of deep bidirectional transformers for language understanding." *arXiv preprint arXiv:1810.04805* (2018).

Estevadeordal, Antoni, and Alan M. Taylor. "A century of missing trade?." *American Economic Review* 92.1 (2002): 383-393.

Fajgelbaum, Pablo, Gene M. Grossman, and Elhanan Helpman. "Income distribution, product quality, and international trade." *Journal of political Economy* 119.4 (2011): 721-765.

Feenstra, Robert C., James R. Markusen, and Andrew K. Rose. “Using the gravity equation to differentiate among alternative theories of trade.” *Canadian Journal of Economics/Revue canadienne d'économique* 34.2 (2001): 430-447.

Federal Reserve Bank of San Francisco, “How Much Do We Spend on Imports?” 2019-01 *Economic Letter*, Available at: https://www.frbsf.org/research-and-insights/publications/economic-letter/2019/01/how-much-do-we-spend-on-imports/#:~:text=Our%20estimates%20show%20that%20nearly,changed%20somewhat%20during%20that%20time.

Feenstra, Robert C., et al. “In search of the Armington elasticity.” *Review of Economics and Statistics* 100.1 (2018): 135-150.

Fieler, Ana Cecilia. 2011. “Non-homotheticity and Bilateral Trade: Evidence and a Quantitative Explanation.” *Econometrica* 79 (4): 1069–1101

Handbury, Jessie, and David E. Weinstein. “Goods prices and availability in cities.” *The Review of Economic Studies* 82.1 (2015): 258-296.

Hanson, Gordon H., and Chong Xiang. “The home-market effect and bilateral trade patterns.” *American Economic Review* 94.4 (2004): 1108-1129.

Head, Keith, and John Ries. “Increasing returns versus national product differentiation as an explanation for the pattern of US–Canada trade.” *American Economic Review* 91.4 (2001): 858-876.

Heilmann, Kilian. “Does political conflict hurt trade? Evidence from consumer boycotts.” *Journal of International Economics* 99 (2016): 179-191.

Johnson, Zachary S., Yichao Tian, and Sangwon Lee. "Country-of-origin fit: when does a discrepancy between brand origin and country of manufacture reduce consumers’ product evaluations?." *Journal of Brand Management* 23 (2016): 403-418.

Kam, Cindy D., and Maggie Deichert. “Boycotting, buycotting, and the psychology of political consumerism.” *The Journal of Politics* 82.1 (2020): 72-88.

Kim, In Kyung, and Kyoo il Kim. “No Beer No Friends: Quantifying the Effect of the Beer Boycott.” *The Journal of Industrial Economics* 70.3 (2022): 711-751.

Krugman, Paul. “Scale economies, product differentiation, and the pattern of trade.” *American economic review* 70.5 (1980): 950-959.

Li, Sichen and Megumi Naoi. How Political Tensions Fuel Cross-border Investment: American Consumer Animosity and Merger and Acquisitions by Chinese and Japanese Firms. Working Paper. 2024. UC San Diego.

Lusk, Jayson L., et al. “Consumer behavior, public policy, and country-of-origin labeling.” *Applied Economic Perspectives and Policy* 28.2 (2006): 284-292.

Malesky, Edmund J., and Layna Mosley. "Chains of love? Global production and the firm-level diffusion of labor standards." *American Journal of Political Science* 62.3 (2018): 712-728.

Naoi, Megumi, and Ikuo Kume. “Explaining mass support for agricultural protectionism: Evidence from a survey experiment during the global recession.” *International Organization* 65.4 (2011): 771-795.

Naoi, Megumi, and Ikuo Kume. “Workers or consumers? A survey experiment on the duality of citizens’ interests in the politics of trade.” *Comparative Political Studies* 48.10 (2015): 1293-1317.

Naoi, Megumi. "Survey experiments in international political economy: what we (don't) know about the backlash against globalization." *Annual Review of Political Science* 23.1 (2020): 333-356.

Neilson, Lisa A. “Boycott or buycott? Understanding political consumerism.” *Journal of Consumer Behaviour* 9.3 (2010): 214-227.

Ni, Jianmo, Jiacheng Li, and Julian McAuley. "Justifying recommendations using distantly-labeled reviews and fine-grained aspects." *Proceedings of the 2019 conference on empirical methods in natural language processing and the 9th international joint conference on natural language processing (EMNLP-IJCNLP)*. 2019.

Osgood, Iain. “The breakdown of industrial opposition to trade: Firms, product variety, and reciprocal liberalization.” *World Politics* 69.1 (2017): 184-231.

Pandya, Sonal S., and Rajkumar Venkatesan. “French roast: consumer response to international conflict—evidence from supermarket scanner data.” *Review of Economics and Statistics* 98.1 (2016): 42-56.

Peña, Pablo A., Saidé Salazar, and Carlos Serrano. "Trump’s wall and gourmet coffee sales: The effect of a consumer boycott in Mexico." *Economics & Politics* 34.1 (2022): 113-141

Trefler, Daniel. "The case of the missing trade and other mysteries." *The American Economic Review* (1995): 1029-1046.

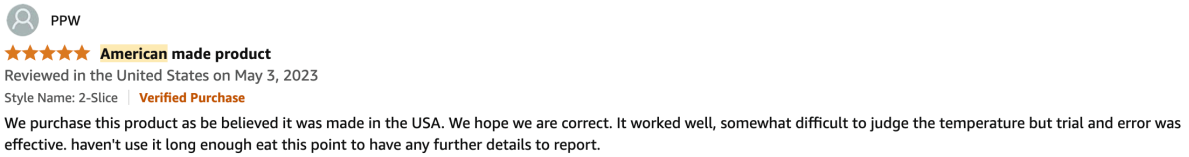
Vekasi, Kristin, and Jiwon Nam. "Boycotting Japan: Explaining divergence in Chinese and south Korean economic backlash." *Journal of Asian Security and International Affairs* 6.3 (2019): 299-326.

Yi, Kei-Mu. “Can multistage production explain the home bias in trade?.” *American Economic Review*100.1 (2010): 364-393.

Appendix for Consumer Backlash Against Globalization

Table A1. The Examples of Amazon Reviews that Mention Country Names

Buycott Example 1: "America" to justify the purchase of General Electronics' Toaster


PPW

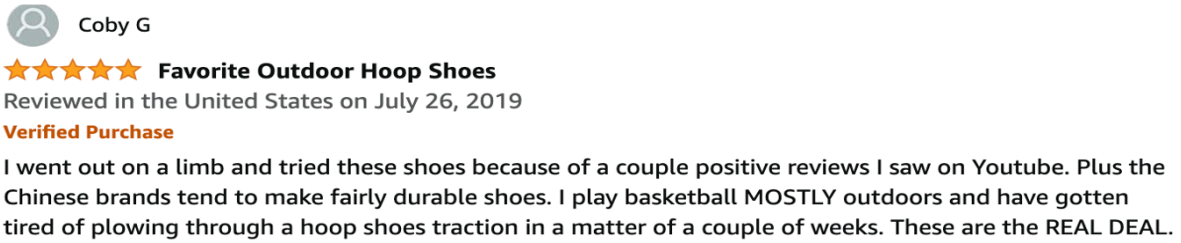
★★★★★ American made product

Reviewed in the United States on May 3, 2023

Style Name: 2-Slice | Verified Purchase

We purchase this product as be believed it was made in the USA. We hope we are correct. It worked well, somewhat difficult to judge the temperature but trial and error was effective. haven't use it long enough eat this point to have any further details to report.

Buycott Example 2: "China" to justify the purchase of Li Ning Sneakers


Coby G

★★★★★ Favorite Outdoor Hoop Shoes

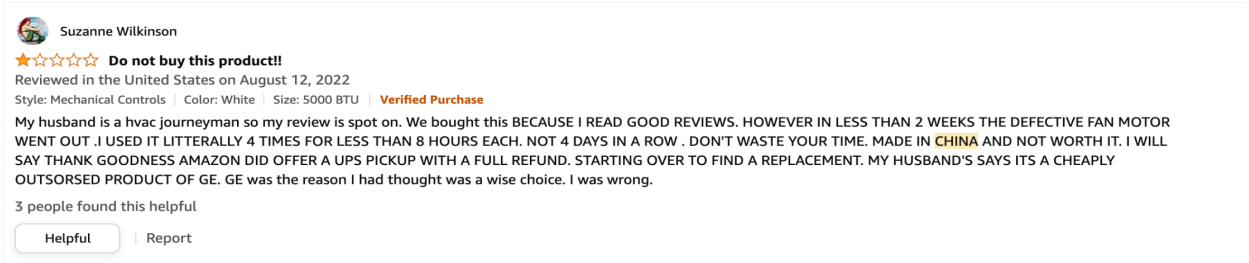
Reviewed in the United States on July 26, 2019

Verified Purchase

I went out on a limb and tried these shoes because of a couple positive reviews I saw on Youtube. Plus the Chinese brands tend to make fairly durable shoes. I play basketball MOSTLY outdoors and have gotten tired of plowing through a hoop shoes traction in a matter of a couple of weeks. These are the REAL DEAL.

Buycott Example 3: "Korea" to justify the purchase of Rael[7] Acne Patch

Boycott Example 1: "China" to express a buyer's remorse for GE's Electronic Window Air Conditioner (NOTE: GE Appliances is owned by a Chinese company Haier as of 2016)


Suzanne Wilkinson

★☆☆☆☆ Do not buy this product!!

Reviewed in the United States on August 12, 2022

Style: Mechanical Controls | Color: White | Size: 5000 BTU | Verified Purchase

My husband is a hvac journeyman so my review is spot on. We bought this BECAUSE I READ GOOD REVIEWS. HOWEVER IN LESS THAN 2 WEEKS THE DEFECTIVE FAN MOTOR WENT OUT .I USED IT LITTERALLY 4 TIMES FOR LESS THAN 8 HOURS EACH. NOT 4 DAYS IN A ROW . DON'T WASTE YOUR TIME. MADE IN CHINA AND NOT WORTH IT. I WILL SAY THANK GOODNESS AMAZON DID OFFER A UPS PICKUP WITH A FULL REFUND. STARTING OVER TO FIND A REPLACEMENT. MY HUSBAND'S SAYS ITS A CHEAPLY OUTSORSED PRODUCT OF GE. GE was the reason I had thought was a wise choice. I was wrong.

3 people found this helpful

Helpful | Report

Boycott Example 2: "America" to justify the purchase but found out that it was made in China (GE's Toaster)

[7] Rael is feminine and cosmetic product company founded by a team of Korean American women and is headquartered in Los Angeles, California. The branding of this company and products is centered around Korean beauty technology ("K-beauty"). For instance, Rael's FAQ section on the website says: "Where are Rael products made?
"Our products are designed by Rael in sunny California. The majority of Rael's line of products uses innovative manufacturing technology from South Korea to create high-performance products all women can rely on." (URL: https://www.getrael.com/pages/faq#:~:text=Where%20are%20Rael%20products%20made,all%20women%20can%20rely%20on.) (Last accessed, November 4, 2024)

Anna

★★★★☆ **NOT MADE IN AMERICA DESPITE THEIR CLAIM OF AMERICA'S #1**

Reviewed in the United States on April 10, 2024

Style Name: 2-Slice | **Verified Purchase**

I searched for toaster Made in America. This one said America's #1 brand. Uh huh, box says Made in China. I would not have ordered it if I had known. So, if you are looking for American made, this is NOT it.

2 people found this helpful

Shipping Example 1: “France” as the origin of shipping for “Porsche Men's P8227 B Eyeglasses, Gold”

roger

★☆☆☆☆ **Weird adresses Although the glasses were fine and good quality**

Reviewed in the United States on November 26, 2016

Verified Purchase

This item arrived and the package was shipped " from France " when I returned I never got my refund back ! Weird adresses Although the glasses were fine and good quality

Association (Reviewer’s past experiences & Social Network)

GarbeigeConsumer

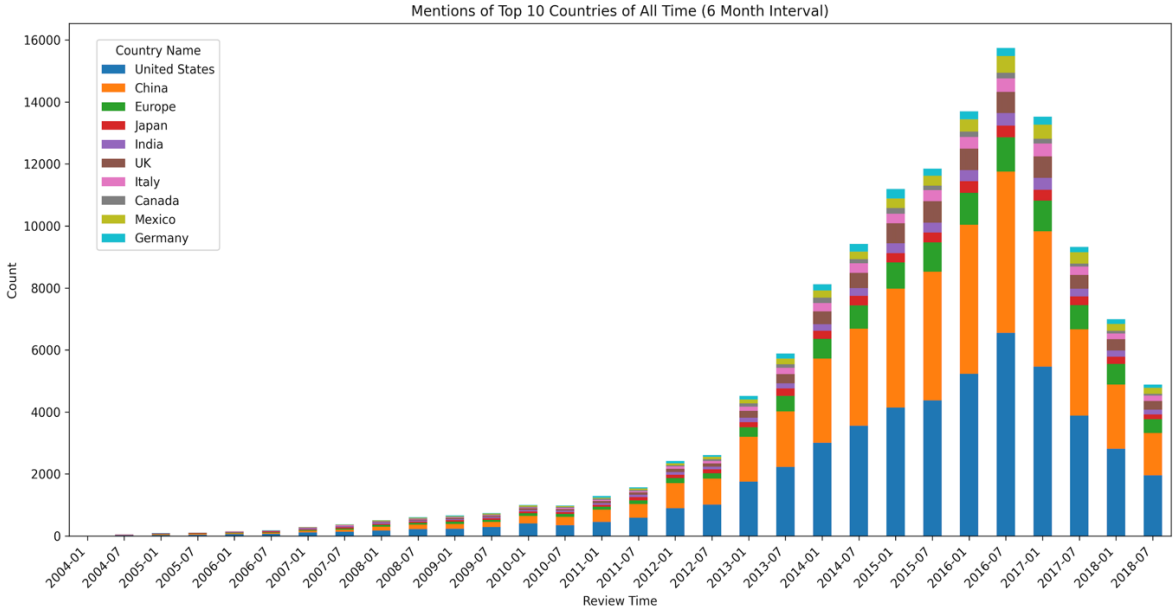
★★★★★ **My favorite Stateside acne patch**

Reviewed in the United States on December 15, 2019

Size: 96 Count (Pack of 1) | **Verified Purchase**

I lived in Korea for a bit and patches like these were great, since I'm ridiculously acne prone. After trying several styles out, I developed a criteria for a good hydrocolloid patch: the backing should be perforated to tear it off at the halfway mark of each patch and the patches should look cushy and soft and stretchable instead of like a sticky plastic. Just

Figure A1. Frequency of Top 10 Country Mentions (6 month interval)



Source: Authors made this figure using BERT to tag top 10 country mentions using Amazon product review data from Julian McAuley lab at UC San Diego.

Table A2. Descriptive Statistics

Variable	N	Mean	St. Dev	Median	Min	Max
Product-Level Variables						
average price	11658914	34.29014	128.055	19.610	0.01	64895.09
ln averageprice	11658914	3.04182	0.930	2.976	-4.61	11.08
high price	21415082	0.03237	0.177	0.000	0.00	1.00
low price	21415082	0.28711	0.452	0.000	0.00	1.00
United States	21415082	0.00235	0.048	0.000	0.00	1.00
China	21415082	0.00194	0.044	0.000	0.00	1.00
Europe	21415082	0.00048	0.022	0.000	0.00	1.00
India	21415082	0.00018	0.013	0.000	0.00	1.00
Japan	21415082	0.00019	0.014	0.000	0.00	1.00
UK	21415082	0.00031	0.018	0.000	0.00	1.00
Italy	21415082	0.00018	0.013	0.000	0.00	1.00
Canada	21415082	0.00009	0.010	0.000	0.00	1.00
Mexico	21415082	0.00019	0.014	0.000	0.00	1.00
Germany	21415082	0.00013	0.012	0.000	0.00	1.00
All Beauty	21415082	0.00006	0.008	0.000	0.00	1.00
AMAZON FASHION	21415082	0.00002	0.005	0.000	0.00	1.00
Appliances	21415082	0.00001	0.003	0.000	0.00	1.00
Arts Crafts and Sewing	21415082	0.01648	0.127	0.000	0.00	1.00
Automotive	21415082	0.06301	0.243	0.000	0.00	1.00
Clothing Shoes and Jewelry	21415082	0.38690	0.487	0.000	0.00	1.00
Electronics	21415082	0.26172	0.440	0.000	0.00	1.00
Home and Kitchen	21415082	0.27180	0.445	0.000	0.00	1.00
Quarterly Changes						
cpi	19788080	0.4651	0.529	0.400	-2.80	2.20
unemp	19788080	-2.5449	2.571	-2.633	-7.03	20.43
ch impprice	19788080	-0.2327	0.306	-0.333	-1.47	1.53
impprice cons	19788080	-0.0572	0.295	-0.033	-0.47	1.23
post trumpcampaign	21415082	0.3844	0.486	0.000	0.00	1.00
greatrecession	21415082	0.0078	0.088	0.000	0.00	1.00
greatrecession unemp	21415082	0.0303	0.171	0.000	0.00	1.00
Russia Crimea	21415082	0.8311	0.375	1.000	0.00	1.00

Table A3. Country Mentions and Review Sentiments: Entire Dataset (8 Shopping Categories)

	Dependent variable: sentiment
	Sentiment (OLS)
	(1)
Canada	-0.177***
	(0.016)
China	-0.517***
	(0.004)
Europe	0.072***
	(0.007)
Germany	-0.021
	(0.013)
India	-0.370***
	(0.012)
Italy	0.061***
	(0.012)
Japan	-0.091***
	(0.011)
Mexico	-0.096***
	(0.011)
UK	-0.093***
	(0.009)
United States	-0.178***
	(0.003)
const	0.604***
	(0.000)
Observations	21415082.0
R-squared	0.001
Adjusted R-squared	0.001
Akaike Inf. Crit.	46942242.957
Observations	21415082
R^2	0.001
Adjusted R^2	0.001
Residual Std. Error	0.724 (df=21415071)
F Statistic	2571.397*** (df=10; 21415071)
Note:	*p<0.1; **p<0.05; ***p<0.01

Table A4. Country Mentions and the Determinants of Positive, Neutral and Negative Sentiments

	Positive Sentiment	Neutral Sentiment	Negative Sentiment
	(1)	(2)	(3)
Canada	-0.078***	-0.021***	0.099***
	(0.010)	(0.007)	(0.008)
China	-0.279***	0.042***	0.238***
	(0.002)	(0.002)	(0.002)
Europe	0.056***	-0.040***	-0.016***
	(0.004)	(0.003)	(0.003)
Germany	0.005	-0.031***	0.026***
	(0.008)	(0.006)	(0.007)
India	-0.182***	-0.006	0.188***
	(0.007)	(0.005)	(0.006)
Italy	0.050***	-0.038***	-0.011**
	(0.007)	(0.005)	(0.006)
Japan	-0.036***	-0.018***	0.054***
	(0.007)	(0.005)	(0.005)
Mexico	-0.041***	-0.013**	0.054***
	(0.007)	(0.005)	(0.006)
UK	-0.046***	-0.001	0.047***
	(0.005)	(0.004)	(0.004)
United States	-0.095***	0.012***	0.083***
	(0.002)	(0.001)	(0.002)
const	0.746***	0.112***	0.142***
	(0.000)	(0.000)	(0.000)
Observations	21415082.0	21415082.0	21415082.0
R-squared	0.001	0.000	0.001
Adjusted R-squared	0.001	0.000	0.001
Akaike Inf. Crit.	25173255.599	11362899.057	15754362.690
Observations	21415082	21415082	21415082
R^2	0.001	0.000	0.001
Adjusted R^2	0.001	0.000	0.001
Residual Std. Error	0.436 (df=21415071)	0.315 (df=21415071)	0.350 (df=21415071)
F Statistic	2059.515*** (df=10; 21415071)	108.717*** (df=10; 21415071)	2363.017*** (df=10; 21415071)

Note: *p<0.1; **p<0.05; ***p<0.01