New Insights into Country of Origin Labeling (COOL): The Effects of Nationalism, Patriotism, and Xenophobia

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Introduction

Country of Origin Labels (COOL) are required on many food products in the U.S. and E.U. primarily as a means of addressing demands for food safety and traceability. Shoppers may use COOL to inform product quality expectations. In addition to such expectations, the labels may trigger positive or negative emotional responses. For example, a shopper may hold some animosity or goodwill toward a specific country of origin. Such feelings may have root in general feelings of patriotism, nationalism, xenophobia, or simply a desire to purchase domestically when given the choice (a sentiment we deem "economic patriotism"). All of these sentiments, whether driven by quality signaling or emotion, can influence the consumer's willingness to pay for a product. In this sense, COOL creates a unique and differentiated brand for each importing country. Hence, products from different countries will not be valued equally by the consumer. Rather product valuation may be influenced by the political or cultural relationship between the home country and the country of origin. In this regard, it may be that negative feelings toward a particular country could have a pronounced effect on consumer willingness to pay.

COOL requirements were put in place to ensure product safety, improve transparency, and to support demand for domestic products (Brester, Marsh, and Atwood 2004). The 2002 U.S. Farm Bill included regulations on COOL for a variety of products, including fish, meat, fruits and vegetables (C. Carter, Krissoff, and Zwane 2006). Many products have used their country of origin to distinguish their products from others in the market. For example, French wine sells at a premium over wine from other countries. Such country-based branding has taken on greater importance over the past 20 years as a response to labeling requirements. However, these requirements are general and apply equally to important trading partners as well as historical foes. We hypothesize that COOL have differing impacts on product demand

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by country of origin, with winners determined not just by product quality, but also by general consumer sentiment for the country of origin.

COOL regulations have been controversial, with many groups claiming that the costs of COOL are prohibitive. COOL imposes costs both on producers who must trace their product inputs, but also on regulators who must verify origins (C. A. Carter and Zwane 2003). While proponents argue that COOL benefits domestic producers by increasing demand for home country goods, Carter (2014) points out that regulations would not be necessary if consumers' willingness to pay for information on country of origin justified the costs. Without strong regulations and concerted efforts to promote COOL, labeling does not appear to be profitable for producers (C. Carter, Krissoff, and Zwane 2006). These critics of COOL, however, tend to consider only domestic products against generically foreign goods. In fact, consumer willingness to pay for imported goods may depend substantially on the importing country. If consumers demand a large enough discount to purchase goods from a leading competitor nation, COOL could preclude competition, leading to a substantial benefit for domestic producers.

COOL has had major impacts on agricultural markets. This is especially true in meat marketing. Early evidence from the literature demonstrates a relatively high price premium for select U.S. products. For example, Loureiro et al. (2003) found that consumers were willing to pay an average of $184 annually for a COOL program that would allow them to identify the origins of beef products. This is a particular concern in the market for meat given food safety issues such as BSE (Lusk et al. 2006). However, pressure from US trading partners to fight COOL regulations has led to a partial repeal of COOL requirements in 2015. Requirements were relaxed on beef and pork to avoid retaliatory tariffs from Canada and Mexico (Countryman and Bonanno 2019). More recently, two US Senators introduced legislation in

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late 2019 to "close a loophole" that currently allows beef products which originated abroad to be labeled a "Product of the U.S.A." (Shaffer 2019). Such pressure from both sides hints at the substantial market effects around the globe when consumers' can discern country of origin.

Given COOL's impact on the global economy, detractors have attacked not just the economic efficiency, but the spirit of COOL policies. Some regard COOL regulations as overly protectionist, especially those with interests in import markets that would compete with domestic products (C. A. Carter and Zwane 2003). These concerns clearly have heterogeneous impacts on different countries. However, the literature tends to focus on willingness to pay for domestic products relative to imports from an unspecified country of origin. In addition to price premiums, some of the literature has examined attitudes towards products. For example, Lewis and Grebitus (2016) find that ethnocentric shoppers were more likely to support "Buy American" products and generally more supportive of COOL. Given the geopolitical nature of COOL, it's necessary to understand within the particular geopolitical context the shopper faces. Rather than generically imported goods, shoppers compare products to competitor products from specific countries of interest, taking into account attitudes towards those specific countries.

This study examines COOL policies and consumer attitudes in the context of produce shopping using an online survey of 10,049 respondents. We look at consumers' willingness to pay for grapes from a variety of countries to compare COOL along different geopolitical relationships. Furthermore, we investigate socio-demographic characteristics, and couch our analysis in consumers' displays of the following sentiments: patriotism, nationalism, xenophobia, and economic patriotism. Countries selected represent a diversity of geopolitical relationships to the U.S. We ask about products from Canada and Mexico, two major trading

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partners for the U.S., Israel and the Palestinian Authority, nations about which many have strong political views, the United Kingdom, a historical ally, and Russia, a historical foe that has become a recent focal point. These countries were selected to get a variety of countries about which attitudes and willingness to pay may differ. We examine the importance of socio-demographics and the four sentiments in determining willingness to pay for grapes from these countries. We find that not only are these sentiments important, but that consumers' willingness to pay differ by country of origin and do so in some cases along religious and political lines. These findings make an important contribution to the ongoing debate over COOL in the U.S., where many products are required to bear a country of origin label. The remaining sections of this paper are as follows: the Conceptual Foundations section lays out the marketing framework and selection of countries on interest, the Methods section describes the survey design and empirical approach for analyzing metrics for the four attitudes, the Results section identifies the role of the four sentiments and differences among the countries of interest, and the Conclusion provides final comments and policy implications

Conceptual Foundations

COOL is often a way to signal quality, which we expect is true in our analysis. But as a practice, it goes far beyond mere quality signals. Part of the motivation for COOL regulations is for consumers to be able to track where their food has come from; thus, COOL fits within a broader literature on traceability, which refers to the ability to identify food along its supply chain. Traceability has a broad set of goals, well laid out by Smith et al. (2005). In addition to the goals that are specific to meat production (e.g. herd surveillance), they note that traceability may be useful to producers for compliance of foreign and domestic labeling requirements, to facilitate value-based and value-added marketing, for quality control, and

to minimize the impact of product recalls. For consumers who demand traceability when purchasing, it may serve to signal food quality and food safety. These are of course two of the goals of the COOL regulations currently in place in the U.S.

Other forms of traceability labels are protected geographic indicators (PGI's), which are a form of intellectual property that requires the name of a geographic place only be used on products produced there, and protected designations of origin (PDO's). A classic example of a PGI is French Champagne, which must be produced in the Champagne region of France to bear the label calling it Champagne. PGI's require commitment and coordination from producers to ensure that their brand is protected and kept profitable for them (Skilton and Wu 2013). Consumers have demonstrated a willingness to pay a premium for products with PDO labels (Aprile, Caputo, and Nayga 2012), suggesting that there are geographic indicators that will yield higher willingness to pay from consumers and that foreign products are not always seen as inferior to domestic. However, research has found that with COOL, consumers have a preference for products from their own country with a noticeable demand among American shoppers for products labeled as being produced in the U.S.A. (Ehmke, Lusk, and Tyner 2008; Berry et al. 2015; Kong and Rao 2019). This suggests that while general traceability may be important, COOL may not substitute for more well-established indicators like PGI's or PDO's that are associated with reputations of superior quality resulting from specific regional conditions. Furthermore, simple country of origin labels versus PGI's or PDO's reference the countries, and not specific regions which may be known for producing quality goods. Thus, a COOL label may not be able to establish the kind of branding that is possible with more regionalized indicators. When presented with a country, and not a region, a shopper may be more inclined to defer to geopolitical relationships and his or her attitudes

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that inform evaluation of such relationships. Feelings of nationalism, patriotism, xenophobia, and economic patriotism may thus play a role.

Indeed, this research posits that the four sentiments investigated- patriotism, nationalism, xenophobia, and economic patriotism- can shed light on how COOL enters in willingness to pay and how that differs across countries. We define patriotism as the love of one's own country, nationalism as the belief in one's country's superiority to other countries, xenophobia as the belief in the inferiority of certain other groups, and economic patriotism as the belief that purchasing domestic products is important. While these concepts are related, they are distinct. Indeed, nationalism and patriotism have been found to be correlated with negative attitudes toward outside groups (Blank and Schmidt 2003). Finally, we anticipate that sentiments towards some of the countries of interest will be associated with "bad events"- war, rivalry, immigration and labor debates- and that such events will have a particularly negative impact on consumer perceptions (Baumeister et al. 2001). To that end, what is deemed "bad" may depend on the individual's identity, including religious or political affiliation.

Label Behavior Framework

Because COOL takes the form of labels, it's important to also understand consumer responses in the broader framework of perceptions and behaviors regarding food labels. A label may communicate information (Pirog and Larson 2007), signal quality (Lusk et al. 2006), act as a brand (Traegear and Gorton 2005), or more than one of the above. We assume in this context that the country of origin acts as a brand and is thus assessed as such (Kotler and Gertner 2002). There are several ways to model the consumer's assessment of the product with regards to brand interaction, including a brand signaling model (Erdem and Swait 1989),

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brands as a way of identifying self-concept (Escalas and Bettman 2005), or through a psychological Attachment-Aversion (AA) Relationship model (Schmitt 2013). All of these model approaches offer insights that can be applied here, in combination with what is already known about consumer attitudes towards traceability and consumer interactions with food labels.

We adapt the framework from Grunert and Wills (2007) developed for consumer responses to nutrition information on food labels, which maps out the types of effects that are possible and may be of interest. The possible effects are shown through the flowchart model. We inform this with the cognitive processes laid out by Obermiller (1989), who noted that shoppers' interactions with the label is likely first a cognitive inferential evaluation based on quality after which an affective response is triggered based on pre-existing attitudes such as the four we've identified. Our framework, which maps the behavioral path of the shopper, is described in Figure 1. It begins with the search which occurs when the shopper enters the store and looks at the products on display. The search results in exposure to two types of products: domestic and foreign. Perceptions of each are informed by pre-existing attitudes towards the country "brands" that are presented. For the domestic product, patriotism, nationalism, and economic patriotism are important in how the shopper regards their own country as a brand. For the foreign product, xenophobia and nationalism are important in how the shopper regards the foreign country as a brand. Nationalism is included in both because nationalistic shoppers use the home country as a point of comparison when establishing feelings of superiority over other countries.
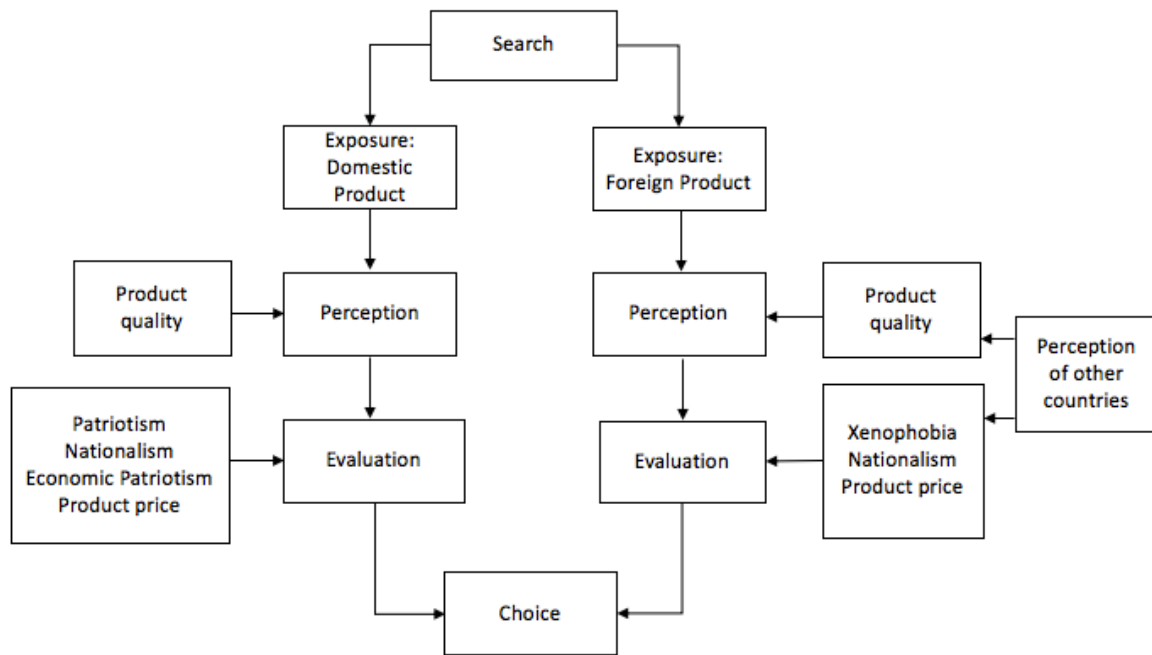
Figure 1: Framework for Understanding Shopper Behavior Regarding COOL

Utility framework

We motivate our empirical work with a theoretical model of consumer utility. We assume the arguments of the consumer's utility function are the good of interest (x_k), where k represents the COO, the consumer's expenditure on other goods (y), self norms and beliefs (S_k), and social feedback (G_k). While the good of interest and consumer's expenditure are self-explanatory, the self norms (S_k) and social feedback (G_k) may not be so obvious. We define self-norms to be a measure of the extent to which an individual behaves in a way that contributes to his or her values in terms of patriotism, nationalism, xenophobia, and economic patriotism. In addition to self-norms, a person may also be concerned with the extent to which his or her behavior aligns with the values of the group. This notion is what we refer to as social feedback. S_k and G_k are numerical variables that assume the value -1 if k is perceived to be rejected by the group norm or self mindset, and 1 if k represents a desirable

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COO in the eyes of the social group or self. These terms also appear in an interaction term, with coefficient μ, because there is an expected relationship between self and group norms. Finally, assuming that the price of other goods, y, is 1, the expenditure on other goods is represented by $I - P_k x_k$. Note that the individual is deciding between goods that are functionally identical (and are thus perfect substitutes) though they come from different countries. The individual's utility function for consumption of good x_k is thus given by

$$U(x, y|S, G) = v_x(\textstyle\sum_k x_k) + v_y(I - \sum_k p_k x_k) + \sum_k \{\gamma S_k(x_k)x_k + \delta G_k(x_k)x_k + \qquad (1)$$

$$\mu(\gamma S_k(x_k), \delta G_k(x_k))x_k\}$$

where v represents functional utility of consumption for the goods in question and other goods. For consistency, we assume $\gamma, \delta > 0$. The function μ represents how the individual reacts to conflicts between social feedback and self-norms. This can be positive or negative and may depend on the weight of the social pressure or self-norms. Those with a strong reactance to outside pressure will result in the function following the sign of S_k more strongly as the conflict increases. Those with a strong sense of compliance will result in the function following the sign of G_k as the conflict increases. If both social pressure and self-norms agree, then μ will take on the sign of both. Much of our model focuses on the value δ, which is the coefficient on the social feedback term. In this paper, we propose that religion, religiosity and political support have the potential to increase δ. This is because religion generally encourages conformity and obedience. Deeply religious individuals generally choose not to differentiate themselves from their social group, i.e. their religious community. Of course, religiosity alone does not imply that an individual will have a preference for a local (or imported) product. However, religion and the intensity of religious beliefs affect the supply chain of food by imposing constraints and affecting de facto observed choice (Heiman et al., 2019). Norms and the power of social-religious groups to compensate for obedience and

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invoke guilt or punishment for deviation from in-group standards lead us to believe that religious group norms are expected to serve as stronger motives than patriotism or nationalism that are themselves the outcome of many variables such as political affiliation. To that end, in a similar manner to religion, political views may affect food choices (Chambers et al., 2007). Such influence may be the direct or indirect result of correlations with patriotism and nationalism.

To investigate the value δ and make predictions about behaviors, let us suppose that there are two products, identical in quality and varying only in COO. Let $k = 1$ be local produce and $k = 2$ be imported product from a location about which either the individual or their social group has negative emotions (but not both). Because the goods are functionally equivalent, we will presume that purchases of goods 1 and 2 are mutually exclusive, and thus one would purchase the good that yields the highest maximized utility. Thus, we can implicitly define willingness to pay for good 2, WTP, as the price that makes the consumer indifferent between purchasing the two goods, or

$$v_x(x_1^*) + v_y(I - p_1 x_1^*) + \gamma S_1 x_1^* + \delta G_1 x_1^* + \mu(\gamma S_1, \delta G_1) x_1^* \tag{2}$$

$$= v_x(x_2^*) + v_y(I - WTP x_2^*) + \gamma S_1 x_2^* + \delta G_2 x_2^* + \mu(\gamma S_2, \delta G_2) x_2^*$$

To motivate our empirical work, we wish to investigate the role of group norms in determining WTP for the imported produce holding the price of the domestic produce constant. The magnitude of δ depends on the level of conformity with the group's norms; conservative people tend to be more obedient to norms (Frimer et al., 2014) and conservatism is closely associated with religiosity and right wing support (Duriez, 2003). We can totally differentiate (2) with respect to WTP and δ (the weight of social influence) to find (via the envelope theorem)

$$\frac{dWTP}{d\delta} = -\frac{[G_1 x_1^* - G_2 x_2^*][1 + \mu_G(\gamma S_1, \delta G_1)G_1 x_1^* - \mu_G(\gamma S_2, \delta G_2)G_2 x_2^*]}{v_y'(I - WTP \cdot x_2^*)x_2^*} \qquad (3)$$

The denominator of (3) is clearly positive. If there is no conflict between self and social norms, or if the individual is compliant, then increasing the weight of social pressure will lead the individual to alter their willingness to pay for the imported good to conform. If there is conflict, the case may be much more nuanced. If $G_2 \leq 0$, and $G_1, S_1, S_2 > 0$, then $\mu_G(\gamma S_1, \delta G_1)$ will be positive, while the sign of $\mu_G(\gamma S_2, \delta G_2)$ will be indeterminate. In this case, the buyer caves to the group norm not to purchase from the outside COO (e.g. animosity, xenophobia or nationalism are present) by decreasing their willingness to pay as the weight of outside social pressure increases if $\mu_G(\gamma S_2, \delta G_2)$ is not negative enough to overwhelm the other terms. Alternatively, if both social pressure and self-norms value the good positively, increasing social pressure will increase willingness to pay for the imported good. Economic patriotism can be represented in this format where $S_1 > 0 > S_2$, but may be mimicked if social influence is perceived as $G_1 > 0 > G_2$.

We next investigate the role of self-norms and beliefs, as captured by the coefficient γ. Certainly, self-norms and beliefs may be related to group norms. We think that self-norms may manifest in an individual's sense of obligation to one's country or as animosity felt towards a different COO. Such norms may reveal xenophobic beliefs towards the other or nationalism towards one's own country. We evaluate the role of γ in the same manner as we did for δ, finding

$$\frac{dWTP}{d\gamma} = -\frac{[S_1 x_1^* - S_2 x_2^*][1 + \mu_S(\gamma S_1, \delta G_1)S_1 x_1^* - \mu_S(\gamma S_2, \delta G_2)S_2 x_2^*]}{v_y'(I - WTP \cdot x_2^*)x_2^*} \qquad (4)$$

As with external pressure, increasing the weight of self-norms will lead the individual to adjust their willingness to pay for the foreign good in order to comply with their self-norms in the absence of conflict between their self-norm and social norm. Conflicts between self and social

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group could lead to much more nuanced behavior—even self suppression in favor of the group.

This framework allows us to see how adherence to self-norms and group norms would represent sentiments of nationalism, patriotism, xenophobia, and economic patriotism and how such sentiments impact the premium or discount expect for a foreign or domestic product. We can further populate it with specific values for S_k and G_k to determine the expected change in WTP.

Countries of interest

We select six countries to provide points of comparison with domestically (U.S.) produced grapes. Canada is selected because it is a major trading partner with the United States, with trade totaling an estimated $718.5 billion in 2018 ("Canada | United States Trade Representative" 2018). American consumers can thus be assumed be quite familiar with Canadian products. In terms of diplomatic relations, the United States and Canada have enjoyed an amicable relationship. We do not expect many of our respondents to harbor strong hostile attitudes towards Canada the way one would harbor hostile attitudes towards an adversary in a major conflict.

We also include another major trading partner from North America: Mexico. While Mexico also enjoys high trade totals with the United States, the relationship between Mexico and the United States may be viewed as more tenuous due to controversies over immigration and migration at the U.S. southern border, which is shared with Mexico. This is further exacerbated by stories of drug and gang violence in Mexico which have been featured in U.S. media. To that end, there are Americans who have demonstrated negative sentiments

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towards Mexico, including xenophobia, which we expect may impact their willingness to pay for fruit from Mexico when compared to that which is domestically produced.

The United Kingdom is included because the U.S. and the U.K. are close allies. We expect there would be little animosity expressed towards the U.K. To that end, we do not expect heavy discounts expected for products from the U.K. as a result of animosity or high rankings of the four sentiments of interest. Rather, we expect discounts expected from U.K. products would reflect distance, and possible attitudes towards the carbon footprint of the product. In this way, the combination of the U.K. and Canada give us a baseline for countries where we expect low reporting of negative attitudes. However, the distance in geographic distance may matter to shoppers considering the environmental impact of the purchase.

Israel and the Palestinian Authority are included for individual analysis and to compare to one another. These are nations that have been in conflict for many years and whose conflict has captured global attention. We expect many American consumers will know of the conflict and have opinions of the nations as a result. Their stance on the Israeli-Palestinian conflict may even factor into their willingness to pay for grapes from the two regions as the conflict intertwined with the two nations' brands. We do not expect the difference between the two would be driven by geography or environmental concerns, but rather that any difference detected could be mapped back to the four sentiments of interest as well as religion affiliation.

Finally, Russia is included as it has been a historical foe of the United States and we anticipate it may be a country that elicits strong feelings of nationalism among American consumers. Furthermore, at the time of data collection, the U.S. was dealing with the so-called "Russia probe" and investigations into Russian meddling in the 2016 election. To that

end, anti-Russia sentiment may have been stronger than usual which may impact both willingness to pay.

Product of Interest: Grapes

We use grapes as the product of interest. While many meat products have been the topic of debate in COOL regulations, there is evidence that COOL labeling of meat is also bound up with concerns about food safety (Loureiro and Umberger 2007). We wanted to minimize concerns about food safety among consumers for this study so that such results would not need to be disentangled from our main findings. Grapes are grown in all countries of interest and thus make a suitable product for this study.

Methods

Experimental Design

This study is completed using an online survey. A field experiment, especially with altered prices would not be feasible for the research questions laid out for this study because it would require adjustment of prices which would not be possible in a true shopping context (Just and Byrne 2019), but a high powered online experiment is sufficient to answer the questions of interest. The survey was disseminated using Qualtrics survey services to a general population sample in February 2019. The respondents' socio-demographic characteristics are described in Table 1. Notably, this sample skews female and lower income. However, women are more frequently responsible for food shopping, so we are not concerned about the gender breakdown. Furthermore, we expect price sensitivities to be most pronounced among low income and resource constrained shoppers, so we are not

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concerned with the income breakdown either. Respondents come from across the United States, with all 50 states represented proportionally to their population.

Table 1: Socio-demographic characteristics of sample (N = 10,049)

		%
Gender		
	Female	58
	Male	42
Race		
	American Indian or Alaska Native	0.8
	Asian	6.0
	Black or African American	8.2
	Native Hawaiian or Pacific Islander	0.3
	White (including Hispanic)	81.5
	Other	3.2
Marital Status		
	Married	50.6
	Divorced	12.6
	Never Married	32.1
	Widowed	4.7
Education		
	Some high school or less	1.6
	High school diploma	14.9
	Some college	30.9
	Bachelor's degree	32.6
	Graduate degree	20.0
Income		
	$14,999 or less	28.7
	$15,000 - $29,999	11.9
	$30,000 - $49,999	13.9
	$50,000 - $74,999	16.1
	$75,000 - $89,999	7.9
	$90,000 - $109,999	6.6
	$110,000 - $149,999	7.4
	$150,000 or more	7.5

The survey asks a series of questions pertaining to the consumer's willingness to purchase grapes from the country of interest. They are assured that the quality is identical between the foreign and domestic grapes. Below is an example of the question asked when the country of interest is Canada:

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"If the price of red seedless grapes produced in the US is $2/lb, select the maximum price at which you would be willing to buy red seedless grapes produced in Canada (if you are not willing to purchase at any price, select zero)."

Respondents were also asked, "Please describe your emotional feelings regarding the following countries:" followed by the countries listed. They were asked to indicate on a 7-point Likert scale from "1- dislike very much" to "7- like very much." These questions provide country-specific attitudes which are examined alongside general sentiments of patriotism, nationalism, xenophobia, and economic patriotism.

To elicit sentiments of patriotism, nationalism, xenophobia, and economic patriotism, we asked respondents, "how strongly you do agree with the following statements?" followed by the set of statements presented in Table 2 with a 5-point Likert scale ranging from "1 – totally disagree" to "5 – totally agree." For analysis, we take the average Likert skill for each category so that they are all normalized to a five-point scale where 1 is weakest demonstration of the sentiment (patriotism, nationalism, xenophobia, economic patriotism) and 5 is the strongest.

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Table 2: Statements Corresponding to Sentiments of Interest (5-point scale)

Patriotism

    I love my country.

    It is important to serve my country.

    I am proud to be an American.

    Patriots are the ones who have made this country great.

Nationalism

    In view of America's moral and material superiority, it is only right that we should have the biggest say in deciding United Nations policy.

    Foreign nations have done some very fine things, but it take America to do things in a big way.

    This country must continue to lead the "Free World."

    We should do anything necessary to increase the power of our country, even if it means war.

Xenophobia

    Some groups of people are simply not the equals of others.

    In getting what you want, it is sometimes necessary to use force against other groups.

    It is OK if some groups have more of a chance in life than others.

    To get ahead in life, it is sometimes necessary to step on other groups.

    If certain groups stayed in their place, we would have fewer problems.

Economic Patriotism

    Consumption of local produce helps the US economy.

    -Local produce is fresher and have more quality than foreign produce.

Empirical Strategy

We construct ratings for the sentiments of interest based on respondents' Likert scale ratings of the statements shown in Table 2. We construct a linear regression model for individual $i = 1, \dots, N$ who is identifies her willingness to pay for grapes from several different country j,

$$PRICE_{ij} = \alpha + \beta \cdot ATTITUDE_i + \gamma \cdot CHARACTERISTICS_i + v \cdot COUNTRY_j + u_{ij} \quad (5)$$

where, $PRICE_{ij}$ is the individual's willingness to pay for grapes from country j; $ATTITUDE_i$ is individual i's rating for patriotism, nationalism, economic patriotism or xenophobia (sentiment of interest); $CHARACTERISTICS_i$ is a vector of characteristics for individual i that are uncorrelated with country j. These include age, gender, race, political view, income, state

of residence (i.e. state fixed effects), urban environment (i.e. urban, suburban or rural place of residence); and $COUNTRY_j$ is a vector of country fixed effects.

We additionally test for the interaction between sentiment of interest and country because we think the effect of the sentiment of interest may differ by country. This specification is as follows,

$$PRICE_{ij} = \alpha + \beta \cdot ATTITUDE_i + \gamma \cdot CHARACTERISTICS_i + v \cdot COUNTRY_j \qquad (6)$$
$$+\eta \cdot COUNTRY_j \cdot ATTITUDE_i + u_{ij}$$

Equations (5) and (6) are estimated using OLS. Additional statistical analysis is conducted on subgroups in order to determine the importance of certain socio-demographic characteristics and the explain analysis of the main results.

Results

We first conduct an analysis of the relationship between our four sentiments: nationalism, patriotism, xenophobia, and economic patriotism. We average the five-point Likert scale values of the questions pertaining to each sentiment. We find that out of a possible score of 5, the median respondent has a patriotism score of 4.5, indicating a high degree of patriotism in our sample pool. We find the same, a median score of 4.5, for respondents' ratings of economic patriotism. We find these two sentiments to have a correlation coefficient of 0.452, which indicates that while they are correlated they are not highly correlated and there are respondents who are patriotic without demonstrating great economic patriotism and vice versa.

We find significantly lower numbers for nationalism, with a median score for these questions of 3.0. This suggests that nationalism is less common than patriotism in our sample pool. However, we find a correlation coefficient between nationalism and patriotism of 0.540,

which suggests that nationalism is more highly correlated with patriotism than economic patriotism. We find even lower scores for xenophobia, with a median score of 2.0. Furthermore, we find that xenophobia is largely uncorrelated with patriotism with a correlation coefficient of 0.126. Xenophobia is much more highly correlated with nationalism, with a correlation coefficient of 0.492. However, it is weakly negatively correlated with economic patriotism (correlation coefficient of -0.014), indicating that the two sentiments go in opposite directions. The final pairing is nationalism and economic patriotism, which we find to be weakly correlated with a correlation coefficient of 0.299. These correlations allow us to see the extent to which the sentiments we study are related to one another and in what way, which allows us to better understand the profiles of the respondents we study in later analyses.

We next examine differences across the countries used in this study. We find that the specific country of origin matters in consumers' willingness to pay (WTP). We plot demand curves showing the proportion of respondents who selected a given price and display these curves together for all countries of origin in Figure 2 below. We see that Canada shows the highest demand curve, indicating that Canada is the country of origin where demand would most closely match that of demand for American products. Conversely, Russia has the lowest demand, indicating high discounts expected for Russian grapes.
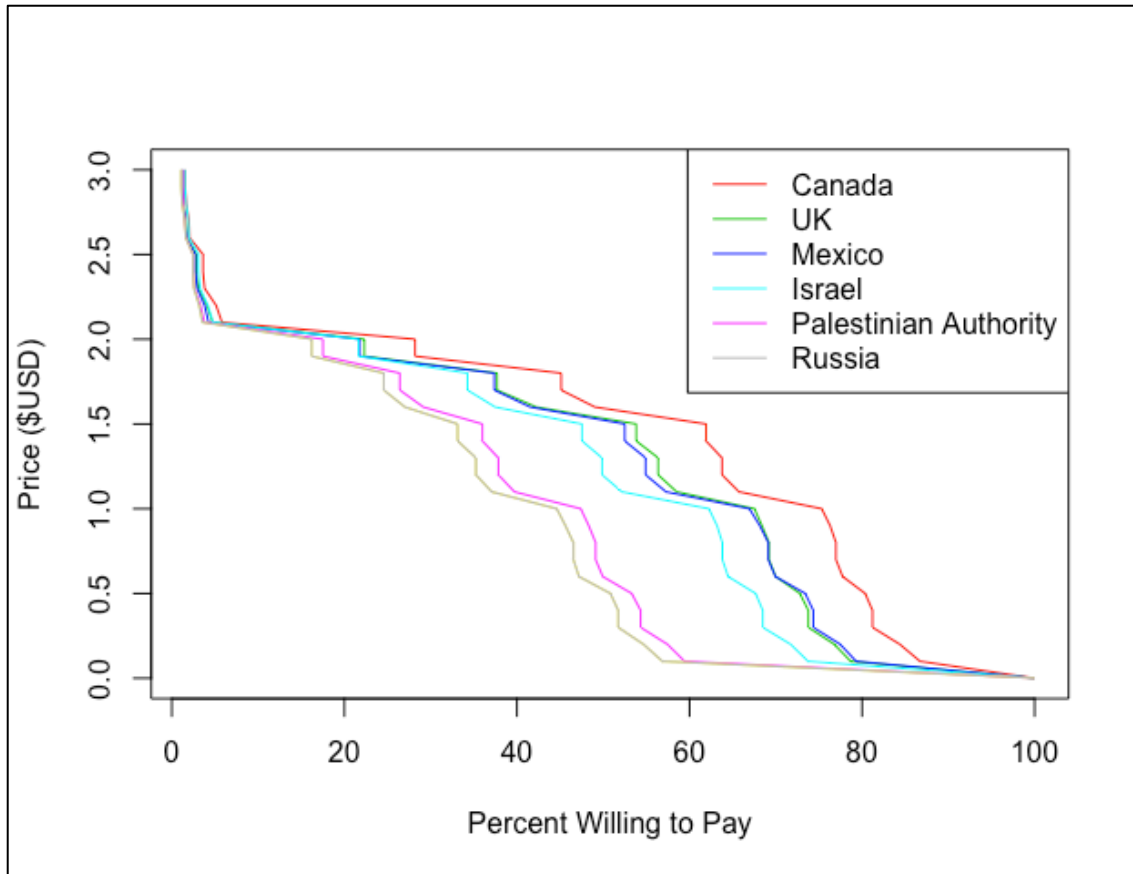
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Figure 2: Demand Curves for Grapes by Countries of Origin

The differing WTP is also captured by the average prices reported, which are displayed in Table 3. The differences in means with and without the inclusion of zeros are of particular note for both Russia and the Palestinian Authority, where a high proportion of respondents selected $0.00, indicating an unwillingness to purchase grapes from these countries.

Table 3: Average WTP for Grapes by Country of Origin (if U.S. Grapes are $2)

Country	Mean WTP (including 0's)	Mean WTP (excluding 0's)	Median WTP (including 0's)	Median WTP (excluding 0's)
Canada	$1.36	$1.57	$1.50	$1.80
United Kingdom	$1.21	$1.54	$1.50	$1.70
Mexico	$1.20	$1.51	$1.50	$1.70
Israel	$1.11	$1.51	$1.20	$1.60
Palestinian Authority	$0.87	$1.46	$0.60	$1.50
Russia	$0.82	$1.44	$0.50	$1.50

These initial results serve two purposes. First, they validate our hypothesis that the countries selected have sufficient differentiation in consumer perceptions. Second, they highlight key trends that can be explored in more depth. Specifically, we see that the WTP for grapes from Mexico and the U.K. is nearly identical along the entire supply curve, we see a distinct discount expected for grapes from the Palestinian Authority when compared to Israel, and we see a high expected discount for grapes from Russia, with many consumers indicating an unwillingness to buy them at all. Given the different relationships these countries have with the United States, we use these results to motivate further analysis in tandem with our results for metrics associated with xenophobia, nationalism, patriotism, and economic patriotism.

We find that Russia and the Palestinian Authority, in particular, have a high proportion of respondents who were unwilling to purchase grapes from these countries at any price. In the case of Russia, 4,335 of the 10,049 respondents selected a price of zero. In the case of the Palestinian Authority, 4,077 of the 10,049 respondents selected a price of zero. We run logit regressions to understand what types of respondents are driving these results. We find that for Russia, individuals who are older, have less education (specifically those without a college degree), and males are driving the proportion of zeros we see in WTP for grapes. In the case of the Palestinian Authority, we find that individuals who are living in rural environments, those with lower education (again, those without a college degree), older individuals, and females were driving the proportion of zeros we see in WTP for grapes.

We additionally examine the correlations between the four sentiments and attitudes towards the individual countries to discern the sample's overall sentiment towards these countries. This allows us to validate priors laid out in the Conceptual Foundations section. We

see a few notable trends emerge. First, nationalism and xenophobia are negatively correlated with almost every country; this is expected since both sentiments include an evaluation of the other country or group and a conclusion that the home country or group is best. The notable exceptions to this are Russia in both categories and Israel in the case of nationalism. With Russia, this may have to do with the politicization of the Russia probe concerning the Trump administration and public sentiment surrounding it whereby those who are xenophobic are also sympathetic to Russia due to political circumstance at the time of data collection. In the case of Israel, this is likely due to the close relationship shared between the U.S. and Israel and the notion that they are American allies in the "war on terror" fought in the Middle East. We see that for patriotism and economic patriotism, more attitudes towards countries are positively correlated and are most so for the U.S.'s largest trading partner, Canada, and its historically closest ally, the U.K. Attitudes towards the Palestinian Authority are negatively correlated with all four sentiments of interest, which may reflect attitudes towards this formally unrecognized nation. Finally, attitudes towards Mexico are negatively correlated with all four sentiments suggesting feelings of patriotism and nationalism are in conflict with positive attitudes towards Mexico, xenophobia is associated with Mexico, and the economic patriotism that is positively associated with the U.S.'s other neighbor, Canada, is not associated with Mexico.

Table 4: Correlations Between Sentiments and Attitudes Towards Countries of Interest

	Patriotism	Nationalism	Xenophobia	Economic Patriotism
Canada	0.0371	-0.0950	-0.1620	0.1127
United Kingdom	0.0867	-0.0664	-0.1480	0.0965
Mexico	-0.0739	-0.1426	-0.1378	-0.0698
Israel	0.2343	0.1517	-0.0453	0.1032
Palestinian Authority	-0.1519	-0.1600	-0.0467	-0.1318
Russia	-0.0127	0.0309	0.1187	-0.1002

Impact of Patriotism, Nationalism, Xenophobia and Economic Patriotism on WTP

We find that all four sentiments of interest- patriotism, nationalism, economic patriotism, and xenophobia- correspond with decreased willingness to pay. The results from equation (1) are displayed in Table 5. The metrics for patriotism, nationalism, economic patriotism and xenophobia are 1-5 rankings where 1 represents the lowest level of that metric based on a series of questions and 5 represents the highest level. The coefficients represent the change in WTP resulting from a 1-point increase in the sentiment of interest. For example, A shift from a nationalism rating of 3 to a nationalism rating of 4 corresponds with an $0.09 reduction in willingness to pay for imported grapes when domestic grapes are $2.00. Thus, the difference between the willingness to pay of a person with a 1 rating and the willingness to pay of a person with a 5 rating for nationalism is $0.36.

Table 5: Regression results with no interaction (Eq. 1)

Estimated coefficients for controls (age, gender, race, income, political view, and urban or rural) are omitted, Canada is excluded to avoid perfect collinearity of countries, standard errors are displayed below.				
	Patriotism	Nationalism	Economic Patriotism	Xenophobia
Intercept	1.7429639*** (0.0548543)	1.7934663*** (0.0536144)	1.9246537*** (0.0552799)	1.6380327*** (0.0533800)
Attitude of Interest	-0.0641321*** (0.0043965)	-0.0884953*** (0.0036564)	-0.1089691*** (0.0046771)	-0.0456027*** (0.0034459)
Israel	-0.2523734*** (0.0117035)	-0.2523734*** (0.0116675)	-0.2523734*** (0.0116717)	-0.2523734*** (0.0117072)
Mexico	-0.1638870*** (0.0117035)	-0.1638870*** (0.0116675)	-0.1638870*** (0.0116717)	-0.1638870*** (0.0117072)
Palestinian Authority	-0.4975619*** (0.0117035)	-0.4975619*** (0.0116675)	-0.4975619*** (0.0116717)	-0.4975619*** (0.0117072)
Russia	-0.547686*** (0.0117035)	-0.5476863*** (0.0116675)	-0.5476863*** (0.0116717)	-0.5476863*** (0.0117072)
UK	-0.1560852*** (0.0117035)	-0.1560852*** (0.0116675)	-0.1560852*** (0.0116717)	-0.1560852*** (0.0117072)
R-Squared	*0.09568*	*0.1012*	*0.1006*	*0.09512*

We include an additional specification where we interact each country with the sentiment of interest (patriotism, nationalism, economic patriotism, or xenophobia) as described in equation (2), with results displayed in Table 6. Generally, we see that for patriotism, nationalism, and xenophobia, the significant explanatory variables are the metrics of interest and the country fixed effects, but not the interaction terms, while the significant explanatory variables for economic patriotism are the metric of interest and the interaction terms. This suggests that for those who have high levels or economic patriotism, the country of origin is secondary to their economic patriotism; they simply prefer domestic products. For the other three metrics, the significance of the interaction term suggests that these metrics are more (or less) important for some countries of origin than for others. For example, the interaction term for patriotism and Palestinian Authority is highly significant and negative while the interaction term for patriotism and Israel is highly significant and positive. This suggests that for patriotic individuals, a discount is expected for products from the Palestinian Authority while a premium is accepted when purchasing grapes from Israel as compared to other foreign countries of origin. Similarly, the interaction coefficients for Russia and the U.K. with the nationalism metric are positive and significant, suggesting that nationalistic individuals are more willing to pay a slight premium for grapes from these countries when compared to grapes from the other countries listed.

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Table 6: Regression results with interaction (Eq. 2)

	Patriotism	Nationalism	Economic Patriotism	Xenophobia
Estimated coefficients for controls (age, gender, race, income, political view, and urban or rural) are omitted, Canada is excluded to avoid perfect collinearity of countries, standard errors are displayed below.				
Intercept	1.7192903*** (0.0656593)	1.9046965*** (0.0584053)	1.6381455*** (0.0695156)	1.7452223*** (0.0555342)
Sentiment of Interest	-0.0584719*** (0.0096931)	-0.1241430*** (0.0083130)	-0.0423798*** (0.0108644)	-0.0953688*** (0.0080019)
Israel	-0.4870913*** (0.0571922)	-0.5211869*** (0.0379323)	-0.0189360 (0.0664063)	-0.3730754*** (0.0267908)
Mexico	-0.0691875 (0.0571922)	-0.1341525*** (0.0379323)	0.0774972 (0.0664063)	-0.1896923*** (0.0267908)
Palestinian Authority	-0.2585686*** (0.0571922)	-0.5519503*** (0.0379323)	0.0367751 (0.0664063)	-0.6297625*** (0.0267908)
Russia	-0.4681748*** (0.0571922)	-0.8267366*** (0.0379323)	-0.0718959 (0.0664063)	-0.8228830*** (0.0267908)
UK	-0.1925301*** (0.0571922)	-0.2509486*** (0.0379323)	0.0780151 (0.0664063)	-0.2453184*** (0.0267908)
Sentiment*Israel	0.0561190*** (0.0133851)	0.0861510*** (0.0115687)	-0.0542547*** (0.0151940)	0.0560397*** (0.0111915)
Sentiment*Mexico	-0.0226418~ (0.0133851)	-0.0095295 (0.0115687)	-0.0561017*** (0.0151940)	0.0119810 (0.0111915)
Sentiment*Palestinian Authority	-0.0571412*** (0.0133851)	0.0174307 (0.0115687)	-0.1241888*** (0.0151940)	0.0613782*** (0.0111915)
Sentiment*Russia	-0.0190105 (0.0133851)	0.0894317*** (0.0115687)	-0.1105816*** (0.0151940)	0.1277687*** (0.0111915)
Sentiment*UK	0.0087137 (0.0133851)	0.0304024** (0.0115687)	-0.0544088*** (0.0151940)	0.0414293*** (0.0111915)
R-Squared	*0.09689*	*0.1033*	*0.1019*	*0.09757*

Significance codes:0 <***> 0.001 <**> 0.01 <*> 0.05 <~> 0.01 < > 1

The four sentiments toward local and foreign agricultural products are related to religion identity and political support. It has been shown (ref) that right wing supporters tend to be more nationalists and patriotic relative to liberal and supporter of the left wing. Affiliation to a certain religion defines who you are, who is your social reference group, what is your moral attitude and in certain cases who are your enemies (e.g., Buddhists and Muslims in China, Jews and Muslims in the Middle East). In the next section, we start our analysis by

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comparing the revealed attitude toward Israel and the Palestinian Authority of American Jews and Muslims.

Role of Religion

We examine differences between Jewish and Muslim respondents with a particular eye towards their willingness to pay for products from the middle east countries. We find that for American Jews and Muslims, religion plays an important role in willingness to pay. Jewish respondents willing to pay a much higher price than Muslim respondents for grapes from Israel. We see this trend flipped in the case of the Palestinian Authority as well as in the case of Russia, where Muslim respondents are willing to pay far more than Jewish respondents.

Differences in the Means Between Jewish and Muslim Respondents

Country	Mean for Jewish Respondents	Mean for Muslim Respondents	t-statistic (p-value)
Canada	$1.396	$1.318	0.8336 (0.4056)
UK	$1.312	$1.370	-0.5567 (0.5784)
Mexico	$1.196	$1.324	-1.3207 (0.1881)
Israel	$1.418	$1.061	3.3909*** (<0.0001)
Palestinian Authority	$0.562	$1.416	-7.4791*** (<0.0001)
Russia	$0.617	$1.212	-5.5134*** (<0.0001)

***Reject null hypothesis that the true difference in means is 0.

Role of Politics

Respondents were asked about political affiliation using a Likert scale with options of "strong conservative," "weak conservative," "strong liberal," "weak liberal," "centrist," or "other." We find that some countries create a divide in the political spectrum. In particular,

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the WTP for grapes from Mexico is strongly dependent on political affiliation, as evidenced in the demand curves shown in Figure 3 where those who identify as "strong conservative" or "weak conservative" demonstrate a significantly lower willingness to pay than those who identify as "strong liberal" or "weak liberal."
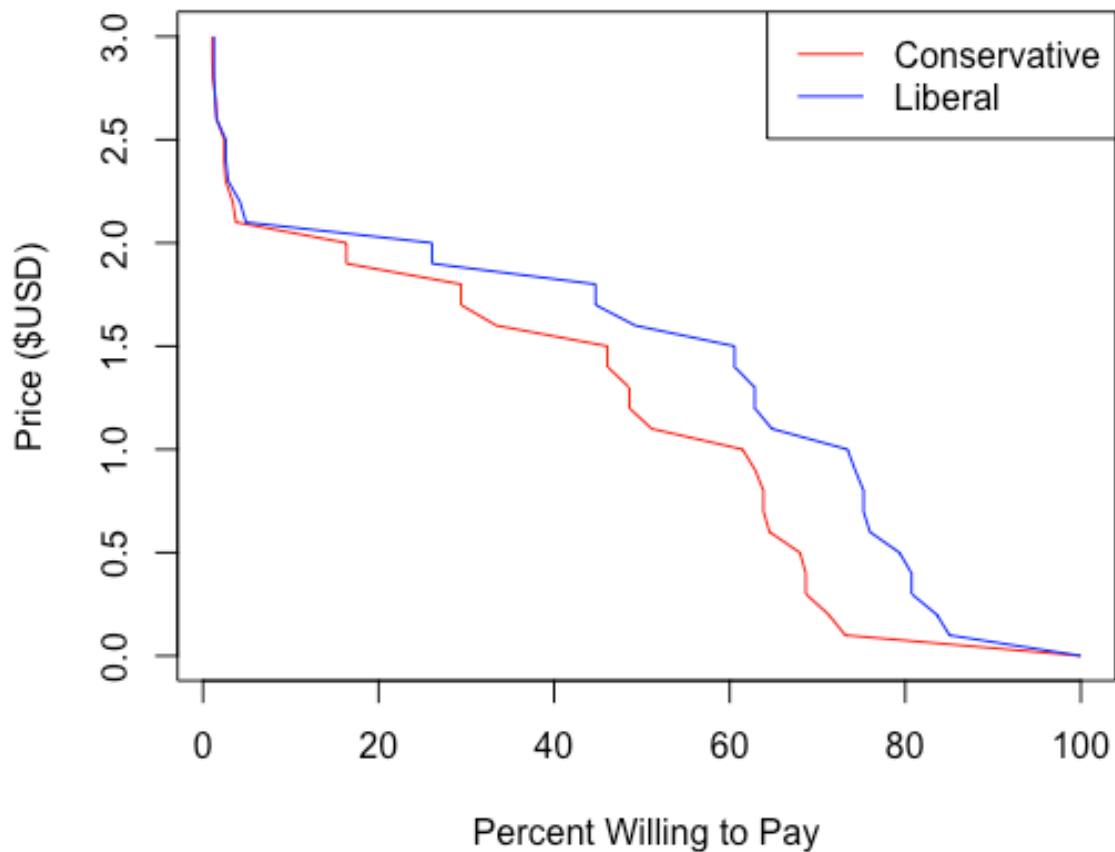

Figure 3: Demand Curves for Mexican Grapes by Political Affiliation

Conclusion

Country of origin labeling (COOL) is an important manner in which information is communicated about products in a food retail environment. While a large literature has explored the effects of COOL on prices and found that it has minor direct effects on the premium of local produce and the discount of imported produce that consumers expect, the

positive relationship between such premiums and discounts to geo-political relationships has received little academic attention. This paper explores the role of latent sentiments on willingness to pay (WTP) for produce from a variety of countries when the COOL is present. We examine the role of patriotism, nationalism, xenophobia, and a sentiment we label as "economic patriotism" which refers to an individual's desire to patronize his or her own country's goods. While most previous studies have examined COOL in a context where domestic is compared to foreign, we take things a step further and examine specific countries in an effort to parse out sentiments about foreign goods among US consumers. Specifically, we look at key trading partners, Mexico and Canada, a traditional ally, the UK, a traditional foe, Russia, and two nations about which we anticipate consumers would have political opinions, Israel and the Palestinian Authority.

We first examine the relationship between the four sentiments of interest, then turn to a comparison of the sentiments with general attitudes towards the countries selected for the study. We find that general sentiments are most negative towards Russia and the Palestinian Authority, which translates to lower WTP for grapes from these countries. We further find that political ideology and religion play key roles in both attitudes towards certain countries and corresponding WTP.

The results detailed in this paper prove to be tremendously important in considering how international relations and latent sentiments may play a role in determining how much can be charged for imported goods. For example, we find that across political ideologies, our sample of US consumers was unwilling to pay high prices for grapes from Russia. In fact, almost half of our respondents reported that they would not be willing to pay any price for such grapes and reported that their WTP was zero for them. This demonstrates a consequence of deteriorated relations with Russia which have been experienced in the US for

decades. It suggests that even if Russian produce was imported at competitive prices, it may be difficult for it to find a market in the US given American consumers' reported WTP.

More generally, these results suggest that latent sentiments of patriotism, nationalism, xenophobia, and economic patriotism play a crucial role in determining what American consumers are willing to pay for imported produce. Thus, such sentiments may work against open trade, leading to higher prices for consumers and greater demand for domestic products. This leads to important considerations for trade policy whereby national attitudes and sentiments must be considered when exploring from where imported goods should come if they are going to do well on the US market.

The COVID-19 outbreak and its devastating effect on economy, employment and imports have changes consumers' attitude toward globalization and localism. The fading of the "one village" view of the world may have a positive effect on consumers' willingness to support local production of produce and increase the discount consumer require for imports from countries that were not supportive enough during the current crises.

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