Can music concerts boost nationalist identity?

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Abstract

Music and large-scale public events have long been used as part of nationalist projects, but their impact is unclear as those who engage may do so to express preexisting beliefs. We study whether attending nationalist concerts heighten nationalist identity in Croatia, where consumer behavior, i.e., purchase of nationally branded goods labeled 'Authentic Croatian' or 'Croatian Quality', provides a high frequency, individual-level revealed preference measure of nationalist identity. We first show a robust positive correlation at the store level between such goods and votes for right-wing political parties, which emphasize Croatian national identity. We then use loyalty card tracking to identify individuals who likely traveled to attend nationalist or non-nationalist music concerts. Using a regression discontinuity in time (RDiT) design, we show that attending concerts by a highly-political nationalist artist leads to an approximately three percentage point increase in the share of nationally branded goods purchased, a 17% increase from the mean, and a 0.19 standard deviation treatment effect. We find no similar impact on consumption after attending non-nationalist concerts or for attending concerts by a Herzegovinian singer who sometimes performs with Croatian nationalist artists.

(JEL: D02, D11, D72, D83, H40)

Key words: consumption, nationalism, public events, consumer behavior

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1 Introduction

Radical movements, including ones based on national identity, are increasing worldwide, with ramifications on political stability, conflict, and the rights of minorities. Given this context, is an individual's political identity, nationalist or otherwise, a permanent behavioral trait or susceptible to change under strong emotional impulses? Specifically, can public events induce emotional reactions to strengthen identity and change behavior? This question is especially pertinent as many nationalist and populist movements use large-scale public events to rally support (Snyder Jr. and Yousaf, 2020).

Historically, popular music has played a particularly central role in nationalist projects in many countries. (Bohlman, 2010; Gong, 2008; Gameel and El Ghetany, 2019; Baker, 2016). From 1911 to 1940, Chinese officials heavily utilized music to build China's national identity (Gong, 2008). Today, specific strands of popular music are strongly associated with nationalist politics in Croatia (Baker, 2016), Hungary (Feischmidt and Pulay, 2017), and Serbia (Archer, 2012). However, estimating the causal effect of music events on nationalist sentiment has been very difficult. Good measurements of nationalism at an individual level, which are also measured at high temporal frequency, are all but impossible to find.

Existing research on the impact of public events provides macro-level historical evidence, citing the simultaneous rise of specific themes in art and politics. A handful of recent quantitative studies of public events have focused on aggregate outcomes in their geographic or temporal vicinity, including changes in public opinion pre/post (Depetris-Chauvin et al., 2020), shifts in voting patterns (Snyder Jr. and Yousaf, 2020), differences in bureaucrat behavior (Grosjean et al., 2018), effects of political rallies (Grosjean et al., 2023) and consumption behavior before and after a political event such as Brexit (Nardotto and Sequeira, 2021). The closest to our paper are (Grosjean et al., 2023) and (Nardotto and Sequeira, 2021), which both use political events as instruments to estimate effects on racial biasing and consumption preferences. However, political events such as rallies or, in the case of (Nardotto and Sequeira, 2021) Brexit, come with explicit political content. In contrast, such content is not at the forefront of musical concerts.

While the idea of music concerts and artists being used as a medium for endorsing political ideas has a long history, more research is needed to explore their causal impact as political tools. We investigate whether musical concerts have the power to influence attendees' behavior

or if they only serve as a platform for individuals to express their pre-existing beliefs.

Why focus on concerts specifically? In the past, music has been used to circulate both right and left wing ideas, and its role in bringing together people of a similar ideology is well-studied. However, public music concerts, unlike rallies or sporting events, come in various flavors (e.g., nationalist rock vs. pop music), attract comparable large crowds, and, most importantly, are not broadcast over local media channels. These features of concerts allow us to evaluate their effects on identity without spillover effects.

Our research approach can be summarized as follows. First, we analyze a rich dataset comprising transaction-level records from over two billion shopping trips at a nationwide grocery store chain in Croatia from Jan 2015 to July 2016. This comprehensive dataset records the items consumers purchase on each trip, their prices, and the loyalty card information linked to each customer. Notably, Croatian grocery stores offer items with national branding, such as "Authentic Croatian" and "Croatian Quality" (CQ/CC), alongside their non-branded counterparts across various product categories. A few images of beer, meat, fruit jam, and cheese products commonly found in grocery stores with the logo are shown in the appendix. Notably, such logos promoting domestic goods are also seen in countries such as the United States and Great Britain . The availability of close substitutes, one with national branding and one without, makes changes in customers' consumption of nationally branded goods in response to treatment conditions, particularly informative.

Second, we present evidence of a robust correlation at the store level between the consumption of nationally branded products and support for right-wing political parties. This finding is consistent with the literature on political attitudes and consumption. This finding strengthens our argument that CQ/CC product consumption is a high-frequency, individual-level revealed-preference measure of nationalism. We note that additional motivations for consuming local or nationally branded goods could exist in other contexts. For example, environmentally conscious individuals might prefer buying local goods. However, in our context, the consumption of nationally branded goods has political significance and is correlated with right-wing ideology. Moreover, when we add right and left-wing vote shares to a simple model with store-level controls and county-fixed effects, the R^2 on the share of nationally branded goods purchased at the store level increases by 10% in 2011, 2015, and 2016. The results and additional details can be found in Appendix Table A.1. There is no similar increase in explained variance (i.e., no impact of vote shares) when predicting the

consumption of goods from any other nation of origin. In establishing that the consumption of nationally branded goods is a valid indicator of nationalist identity, we set the stage for the main results of our paper.

Next, we use a regression discontinuity in time (RDiT) design to show that attending concerts by a highly political nationalist artist leads to a 2.7 percentage point increase in the share of nationally branded goods purchased after the concert—a 13% increase from the mean and a 0.15 standard deviation treatment effect. We do this by using loyalty card information to identify individuals who likely traveled to attend nationalist or non-nationalist public musical concerts.

To assess whether shifts in the consumption of nationalist Croatian goods reflect changes in identity, we compare the shopping habits of travelers who attended nationalist concerts against several 'control' groups. We report differences between travelers to nationalist and non-nationalist concerts; differences between travelers to a sample of non-travelers from the travelers' home locations; differences between travelers and a random sample of individuals living in the vicinity of the concert venue.

All these comparisons consistently suggest that travelers to highly nationalist events experience a shock to their identity and consume more nationally branded goods after such events. Crucially, we find none of these effects on consumption for those attending non-nationalist concerts and no changes in consumption in product categories that do not offer nationally branded goods, even among nationalist travelers. The observed boost in consumption of nationally branded goods for nationalist travelers is not a function of goods being priced differently at concert locations; we restrict attention to purchases at travelers' home stores, and we show there is no evidence that stores shift their pricing in response to concerts, and we note that the effects persist for some time after the travelers have returned home.

Analyzing consumption patterns within product categories, we observe that the impact of attending a concert extends beyond concert-related items like beer and beverages. This influence is noticeable in additional non-concert-related products purchased at individuals' home locations. This finding is significant as it suggests the primary mechanism behind our treatment effect is not priming through the advertisement of concert goods at the concert venues.[1] Lastly, individuals who travel to nationalist concerts who were consuming below the

[1]The priming effect could potentially arise from observations of others consuming a particular brand of

median share of nationally-branded products in the pre-concert period demonstrate a 5% increase in their consumption after attending a nationalist concert, i.e., almost double the treatment effect observed for the full sample.

The remainder of the paper proceeds as follows. Section 2 briefly reviews the literature linking consumption choices and nationalist identity. Section 3 summarizes our data and provides the necessary institutional and Croatian context. Section 4 validates consumption as a revealed-preference measure of nationalist identity by showing a robust cross-sectional correlation between consumption of nationally branded goods and nationalist party vote share. Section 5 provides our main results on changes in consumption choices for those who attended nationalist public music events. Section 6 discusses how these results can contribute to understanding recent political events in the United States and worldwide.

2 Literature Review

2.1 The relationship between consumption and political identities

Since Akerlof and Kranton (2000) laid out a framework for introducing identity into models of economic decision-making, many scholars have found a strong correlation between consumption and ethnic or political identities. Fouka and Voth (2013) show that when anti-German sentiment spiked across Greece during the 2009 debt crisis, sales of German cars dropped more in areas affected by German reprisal killings during the Second World War. Clerides et al. (2015) show that purchases of some US consumer goods dropped in Arab countries during the Iraq War, which they attribute to the spike in anti-American sentiment at the time. Pandya and Venkatesan (2016) find that the market share of French-sounding products in US supermarkets declined during the 2003 French-American dispute over the invasion of Iraq. Cuadras-Morató and Raya (2016) study the response to calls to boycott Catalan sparkling wine, *Cava*, in response to the Catalan Parliament approving a 'Statute of Autonomy' in September 2005, finding that *Cava* sales dropped in non-Catalan areas, but rose significantly in Catalan regions. Moreover, exposure to Western broadcasts in former East Germany shifted consumer sentiment in favor of highly advertised goods (Bursztyn and Cantoni, 2016).

beer or through the advertising of specific product brands. We do not assert that product categories like dairy and breakfast are unlikely to be advertised at concert venues. Still, they are less likely to be consumed and advertised compared to products like beer.

These papers collectively provide strong reasons to expect that consumption choices reflect political sentiment to a certain extent.

In a related vein, another recent study relies on the link between consumption and identity for measurement. Atkin et al. (2021) study the malleability of identity by looking at the relationship between events such as religious violence and food consumption patterns in India, where ethnic and religious identities are tightly linked to dietary choices. Hindu traditions discourage beef and encourage vegetarianism, and Muslims refrain from pork. However, little quantitative literature directly addresses the impact of public music events on nationalist identity, even though there are several strong reasons to expect such an impact. Public musical performances are especially pertinent to the Croatian context because the local music industry systematically crafted a nationalist narrative around what would be called the "Homeland War" starting in 1991. We find multiple links in particular music genres to nationalism in this context (Baker, 2016).

Our study represents a novel effort to examine individual-level causal effects of public events on nationalist identity. Nevertheless, we acknowledge that it is not without its limitations. Our objective with this paper is to start a dialogue about how even those individuals who self-select into *treatment* (of nationalist performances) experience a shock to their nationalist identity beyond their baseline levels. Unfortunately, we are not able to disentangle the precise mechanisms through which public performances impact identity is a significant limitation. The 'treatment' encompasses multiple factors. During the concert, attendees may be influenced by the behavior of those around them, the lyrics they hear, or the advertisements displayed on venue walls, among other elements. Furthermore, when people travel to attend these events, they may do so with friends, and listen to similar music to generate excitement. Subsequently, they might spend the following day in the company of fellow concertgoers, further immersed in comparable music or viewing cellphone videos. This suggests that the treatment effects may extend beyond the immediate day of the performance. Our research cannot definitively discern whether the outcome is a result of priming, learning, or shifts in CQ/CC preferences triggered by lyrics, advertisements, disparities in product availability at concert locations, or variations in prices between CQ/CC and other goods.

Despite these limitations, our research significantly contributes to several strands of literature. First, we speak to the growing evidence that political identity is inextricably coupled with consumption choices. Recent research from Spain and the United States

(Cuadras-Morató and Raya, 2016; Pandya and Venkatesan, 2016) analyzes the impact of large-scale political shocks on consumer behavior. In the United States, DellaPosta et al. (2015) show a correlation between expressed political identity and self-reported consumption. Most papers covered in this review demonstrate that identity influences consumption, but none measure the individual-level impact of events that potentially affect identity and alter consumption.

Second, our results complement the literature examining how public events shape voter behavior. This topic takes on renewed importance after the 2021 attack on the United States Capitol, which directly followed a public rally by then-President Donald Trump and led many to question the overall stability of US democracy.[2] One study along this theme suggests that the impacts of such events are limited, even in extreme cases (Selb and Munzert, 2021). Another study, which looks at the effect of rallies held by presidential candidates since 2008, finds that large in-person gatherings generally made little difference in voting behavior, except for Trump campaign rallies (Snyder Jr. and Yousaf, 2020). Similarly, (Grosjean et al., 2023) find that Trump's political rallies during 2015 and 2016 increased racial biasing among law enforcement officers.

Our findings suggest a contrasting perspective. We propose that music events act as a catalyst, awakening latent beliefs and identities and consequently leading consumers to make distinct choices in resource allocation. In contrast to the approach by (Nardotto and Sequeira, 2021), who employed political events like Brexit to estimate national identity within consumption preferences, our study is the first to explore non-political events, specifically musical concerts, to explore this question. To be clear, we are not suggesting that individuals adopt nationalist identities *because of nationalist music events*; we think the opposite is most likely true. However, attending nationalist public events has a short-run effect on an important real-world outcome where consumers buy more goods that signal their nationalist identity.

Lastly, even short-term attitudinal shifts toward national identity may be important in certain contexts. Blouin and Mukand (2019) demonstrates the malleability of social identity by finding that exposure to messaging about national unity can reduce the importance of ethnicity. Moreover, Depetris-Chauvin et al. (2020) find that victories by national football

[2]Five people died during and shortly after the attack, at least 138 police officers were injured, and more than 600 people have been charged with federal crimes (Insider, 2021).

teams increase national identification and decrease intrastate violence even for a period of a few months. The authors suggest that even though the results are short-lived, they open a small window for productive political conversations. In the context of Croatia, scholars have argued that music plays a crucial role in politics. On one side, Glaurdić and Vuković (2015) also find long-lived effects of the experience of war, which had a positive effect on the support for EU membership and political allegiances, i.e., the history of security issues is still relevant in Croatian politics. On the other side, music concerts that affect nationalist identity could influence larger political outcomes such as elections Bonikowski et al. (2021) or influence policy decisions about immigration, which are known to be influenced by nationalist identity Ko and Choi (2022).

2.2 The relationship between political identity and music

Every summer, dozens of pop music acts tour Croatia. Many are mainstream acts from the Balkans and other parts of Europe, but a few are what can best be described as "nationalist rock." [3]

A few artists are widely known for emphasizing Croatian nationalism, anti-Serbian rhetoric, and focusing on the controversial elements of the nation's history. Many of these artists' songs, which include patriotic elements, have become an integral part of Croatian pop culture through radio broadcasts. Appendix Figure A.5 provides examples of what these artists' events look like, highlighting the central role of nationalist iconography in their acts. The most politically active such artist is Miroslav Škoro. Škoro is a *ethno musician*, celebrity figure and television show host with considerable political influence (Baker, 2016). In 2007, he joined the Croatian Democratic Union (HDZ in Croatian and the right-wing coalition in all of our analyses) won a seat in the parliament but resigned within a year. He is the founder and the first president of the conservative Domovinski Pokret or Homeland Movement party, which he established in 2020. In 2019 Škoro announced his candidacy for the Croatian 2019-20 presidential election. His campaign focused on constitutional reform and increasing presidential power. Škoro enjoys considerable popularity in Croatia and came in third place with about 24.45% of the votes in the aforementioned presidential race.

Our main analysis uses concerts by Škoro as the nationalist concerts because of his political

[3]The war between the former Yugoslav republics, which lasted from 1991 to 2001, gave rise to a genre of patriotic music and musicians that specialized in such content (Baker, 2010).

prominence and the fact that he held a significant number of concerts near grocery stores (a key factor in our strategy for identification of travelers) during our study period. In the main analysis, the treated shoppers are those that are assumed to have attended a performance by Škoro and, in doing so, received a boost to their nationalistic sentiment.

We also report results for travelers who attended two other nationalist musicians. The first is the rock band Thompson, which is most closely associated with the nationalist musical genre, which rose to prominence in the early 1990s during the war with Serbia (Vuletic, 2011). Thompson concerts during our study period often began with the *"Za dom Spremni!"* salute, which was used by the Nazi-allied ultranationalist Ustašhe organization, which was active from 1929-1945.The band performs songs such as *"Jasenovac i Gradishka Stara,"* which aggrandizes massacres by Ustašhe forces. Thompson has been banned from performing elsewhere in Europe multiple times.[4]

The third nationalist singer we analyze is Mate Bulić, a self-identified Herzegovinian singer (a region within Bosnia and Herzegovina) who performs Croatian folk music. Bulić has alluded to the reunification of parts of Bosnia and Herzegovina with Croatia in a music video (Baker, 2016, 116) and has performed with both Thompson and Škoro. But his music lacks the aggressive nationalism of Škoro and Thompson according to(Baker, 2016).[5]

The non-nationalist group comprises non-Croatian artists and Balkan musicians who have no history of pro-Croatian nationalistic content in their performances. They include: Ana Nikolić, a Serbian folk musician; Bajaga i Instruktori a popular Serbian and former Yugoslav rock band founded in 1984; Dino Merlin (Edin Dervišhalidovi ć), a Bosnian singer, songwriter, and one of the most commercially successful artist from former Yugoslavia; Saša Matić a Bosnian-Serbian pop-folk singer; and Zabranjeno Pušenje, a Bosnian new-wave garage rock band with folk influences founded in about 1980 in former Yugoslavia.

[4]"Thompson was banned from performing in Switzerland multiple times, including in 2009. Their planned 2014 Berlin performance was canceled, and in 2017, they were banned from performing in Austria due to their extremism as well as in Slovenia." `https://en.wikipedia.org/wiki/Thompson_(band)#Banned_performances`.

[5]`https://en.wikipedia.org/wiki/Mate_Buli` "Is a Herzegovinian pop and folk singer, whose songs are influenced by his native Herzegovina region of Bosnia and Herzegovina."

3 Data

This section explains our data collection and processing. First, we outline how we identify nationally branded goods in Croatia. Second, we discuss how voting results and political attitudes are assigned to store catchment areas, a process essential to validating consumption as a measure of nationalist sentiment. Third, we describe our data on Croatian national and non-national concerts during our study period. Finally, we explain how we identify shoppers who traveled to these events, which allows us to link this type of public event to increased nationalist attitudes causally.

3.1 Nationally Branded Goods

We use the consumption of nationally branded products to measure nationalist identity. In Croatia, some products carry standard *Croatian Quality* (CQ) or *Croatian Creation* (CC) marks. Both marks are the intellectual property of the Croatian Chamber of Commerce (CCC).[6] [7]

Products with the visible and recognizable CQ/CC mark (shown in Appendix Figure A.2) signal that they are domestically produced. In order to match CQ/CC labels to specific item codes in the transaction records, we collected information on more than 170,000 products sold in Croatian supermarkets. We look at item codes, country of origin, CQ/CC marks, and standard nutritional data.[8]

There are labeled products available across a *wide range of product categories, and they typically have close substitutes without the CQ/CC label*. The supermarket chain categorizes its products into nine main sectors and fifty smaller categories. CQ/CC products make up a modest share of individuals' consumption at both levels of categorization. Out of the nine main sectors, 6 include CQ/CC products. The average share of CQ/CC per sector is about 4%, but there is considerable variation between sectors. Sectors containing "Packed Food" and "Fresh Food" have the highest percentage of CQ/CC shares, at 11%

[6] See `https://znakovi.hgk.hr/o-znakovima/`. The CQ and CC labels are "awarded to high-quality products and services of the Republic of Croatia that have emerged as a result of research and development activities, inventions, innovations and/or long-standing traditions."

[7] According to the CCC, the main motivation for introducing this labeling was that "Product labeling has a long history and has almost always had the economic significance of product protection and domestic production."

[8] We collect the data from the supermarket chain's website and `myfitnesspal.com`.

[INSERT FIGURE 1]

Overall, for the observed period—January 1, 2015, to August 1, 2016—sales of CQ/CC products represented approximately an average of 7.04% of total daily sales value (with a median of 6.5%) at the store level. Table 1 shows the total consumption per trip by store type and how much people typically spend, the CQ/CC consumption per trip by store type, and the differences by store size in CQ/CC percentage per trip. On average, shoppers spend about 37, 51, and 76 Croatian kunas per trip at small, medium, and large stores, respectively (a range of approximately $6-$12). The smaller the store, the higher the percentage of CQ/CC goods purchased, with 26%, 21%, and 17% of spending going toward these products per trip for small, medium, and large stores, respectively. Most shoppers (as tracked by loyalty cards) make a median of 2 weekly shopping trips to stores of all three sizes.

[INSERT TABLE 1]

While CQ/CC products are clearly labeled as being made in Croatian, other classifications may lack a label but could still be strongly linked to national identity. To account for this possibility, we classified the products into several groups by country of origin: Croatian, Serbian, and European Union (EU).[9] The cross-sectional analysis in the section below finds no relationship between right-wing voting and any other way of classifying goods as nationalist besides the standard CQ/CC labels.

3.2 Nationalist Voting at the Store Level

In Croatia, right-wing parties conventionally emphasize nationalist identities (Miščević, 2019). Therefore, we focus on right-wing vote share to proxy nationalist identities in the population. We categorize right-wing parties as members of the *Patriotic Coalition* formed in September 2015. Croatian Democratic Union (abbreviated HDZ in Croatian) led the coalition. It included center-right parties and several far right-wing parties such as the *Croatian Party of Rights Dr. Ante Starcevic* (HSP).[10] [11] We categorize left-wing parties as members of the

[9]The distribution of different countries of origin for the different product sectors is shown in Appendix Table A.3

[10]For a good summary, see `https://en.wikipedia.org/wiki/Patriotic_Coalition_(Croatia)`.

[11]Veselinović (2021) concludes that the HSP meets all three criteria of right-wing radicalism and hence can be considered a radical right party with elements of populism.

Croatia is Growing coalition. Social Democratic Party of Croatia (SDP) led the coalition.[12] Both RW and LW coalitions changed slightly in 2016, with the LW coalition renaming itself the People's Coalition. However, the major parties in each block remained the same.[13] [14]

We observed the performance of all parties at the 5,594 polling stations that were active in the following three parliamentary elections: December 4, 2011; November 8, 2015; and September 11, 2016. Polling locations are based on the Croatian Law on Electoral Units and have remained unchanged for the three election years.[15] Voting stations cater to a minimum of 7 to a maximum of 2,642 eligible voters, with a mean of 537 eligible voters. Appendix Figure A.4 shows the geographic distribution of voting stations in central Croatia against a backdrop of population density. Combining population density and voting data allows us to precisely measure local political preferences from 2011 to 2016.

To link voting patterns with consumption, we match stores to defined physical spaces, called catchment areas, where we can measure political sentiment through voting. Identifying the area each store serves requires us to account for different-sized stores that serve different purposes. The company whose data we use divides stores into three sizes based on square footage: large (72 stores in the country), medium (64 stores in the country), and small (692 stores in the country). The first two categories are "destination stores", which draw customers from a large area for major shopping trips. The latter are neighborhood convenience stores used to purchase smaller everyday goods.[16]

Examining the frequency with which people visit these stores helps illustrate the different kinds of shopping at different-sized stores. An average loyalty cardholder makes two weekly shopping trips to small stores with an average spending of 37.2 Croatian Kunas, or about $6. An average shopper also visits medium and large stores slightly less often (though the median number of trips is the same) but spends roughly 40% more at medium stores and

[12]For a summary, see `https://en.wikipedia.org/wiki/Restart_Coalition`

[13]According to Lalic and Grbesa (2015), the nature of divisions between HDZ and SDP is primarily linked to Croatian historical and ideological divisions and, to a much lesser extent, differences around economic and social topics.

[14]An excellent outline of small changes to the two coalitions can be found at `https://en.wikipedia.org/wiki/2016_Croatian_parliamentary_election`.

[15]The Croatian Law on Electoral Units has not changed since its inception in 1999. https://www.sabor.hr/hr/o-saboru/vazniji-propisi/zakon-o-izbornim-jedinicama-narodne-novine-broj-1161999-1422010

[16]Appendix Table A.5 shows aggregate spending and volume of transactions by store type for the observed period.

just over 100% more at large stores—approximately $8 and $12, respectively. We, therefore, calculate one set of store catchment areas for small stores and a second set for the combined set of medium and large stores (both of which can serve as destinations for bigger shopping trips), as seen in Figure 2.

[INSERT FIGURE 2]

Calculating vote shares for each store's catchment area is a two-fold process, as there are many more polling stations than stores, and the catchment areas for both do not line up neatly. We follow standard practice for processing comparable data in the US context. First, we define the physical catchment areas of both stores and polling stations through the standard approach of calculating Voronoi polygons.[17] Second, we intersect the store catchment areas with the polling station catchment areas to generate a set of "slices" and assign each slice the vote shares of its polling station. We then calculate the population share for each store in each slice using Worldpop gridded population data.[18] Store-level vote shares are the population-weighted average of the vote shares for the slices in the store's catchment area. We calculate vote shares separately for the catchment areas of small "daily trip" stores and larger destination stores, as they have overlapping catchment areas.[19] This process effectively accounts for any uneven population distribution across the polling station and allows us to assign political preference measures to grocery stores.

3.3 Treatment: Public Music Concerts

An ideal experiment measuring the impact of nationalist public events would randomly assign people to attend nationalist versus non-nationalist events, in which all aspects of the experience were held constant except for the presence or absence of nationalist content.Public music concerts are well-suited to our purpose for three reasons. First, such events have overlapping traits with typical large-scale political events, i.e., musical concerts use grandeur, disseminate charged content, and use narratives. Secondly, music events operate in a 'contained' place

[17]Similar approaches can be found in these papers: Fortune (1986), Aurenhammer (1991),Ricca and Simeone (2008).

[18]See `www.worldpop.org` for full details on these widely used data.

[19]Appendix figure A.4 visualizes how the small store Voronoi cells overlap with both polling station cells and the Worldpop data.

and time and are not as widely covered in the media as significant sporting events or major nationalist holidays, which allows us to identify individuals who could have received the treatment relatively accurately. Third, unlike large-scale political public events, concerts come in nationalist and non-nationalist varieties, allowing us, in principle, to distinguish the event attendance effect from the nationalist component.

During our treatment period, there were 14 concerts by Škoro (3,826 identified travelers) and 19 by non-nationalist musicians (6,282 identified travelers). In the appendix, we report results for travelers to the nine concerts by Thompson (588 unique travelers) and 13 by Bulić (3,341 unique travelers).

3.4 Identifying Travelers

Our next step is identifying shoppers who traveled to attend a nationalist or non-nationalist performance. We were able to identify 14 Škoro concerts from an extensive list of 700 concerts[20] in Croatia from 2015-2016. Similarly, we identify 19 non-nationalist concerts. The temporal distribution of concerts is also shown in A.8. A key selection criterion is that all concert venues must be within a 5km radius of one of our tracked grocery stores. The proximity to a grocery store is a necessary condition for identifying travelers.

Subsequently, we limited our analysis to loyalty cardholders, who represent approximately 56% of the total shopping volume at the receipt level. This is another necessary condition, as we can only track loyalty card holders and assign them a home location and, whenever relevant, appropriate traveler status when shopping outside their home location. A comparison of loyalty cardholders and non-cardholders is presented in Table 2.

[INSERT TABLE 2]

By utilizing a customer's loyalty card data, we determine the store location where the customer frequents the most during the entire study period, designating it as their "home location". The reliability of this approach hinges on whether people tend to shop in proximity to their residences (which correlates with their voting location). Our analysis of the loyalty card data associated with each sales record reveals that approximately 83% of cardholders exclusively visit up to three stores throughout the entire one-and-a-half-year study duration.

[20]The geographical distribution of concerts is visible in Figure A.7

Appendix Figure A.6 illustrates that roughly 50% of cardholders rely solely on a single store, small, medium, or large, for all their shopping needs during this period, for those who do visit two or three stores, around 70% of their shopping trips are concentrated in just one store. These statistics strongly imply that most shoppers primarily conduct a significant portion of their shopping near their residences. Lastly, there is no reason to expect that the share of consumption done in stores close to where one lives and votes will vary systematically with nationalist vote share, especially once we control for obvious potential confounders, such as population density and local geography.

Finally, any shopper who completed a purchase on the day of a concert at any grocery store located within 5 kilometers of the venue and whose home location is more than 25 kilometers away from that venue is labeled as a traveler. Based on the concert type, our dataset categorizes travelers into nationalist and non-nationalist groups. We have excluded travelers who attended both types of concerts from our analysis. This precaution prevents contamination of the treatment for individuals who may attend a concert of the opposite kind before or after the concert we are examining. In our final dataset, we have about 3,826 nationalist and 6,282 non-nationalist travelers, which are under one percent of the total number of loyalty card holders (around 1.1 million)

[INSERT TABLE 3]

Table 3 shows that travelers to nationalist and non-nationalist concerts are similar along all crucial dimensions of our analysis. Their average spending per shopping trip is 140 Croatian kunas (or about $19). The travelers are also similar in terms of their spending on CQ/CC products, the average share of CQ/CC in their baskets per shopping trip (about 21%), and their average number of 2.5 trips (and a median of 2 trips) to the store per week.

4 Cross-Sectional Results

This section studies the correlation between voting for right-wing nationalist parties and consuming CQ/CC goods. Our finding that consumption of nationally branded goods is strongly correlated with right-wing vote share supports its use as a revealed preference

measure of nationalist sentiment[21].

4.1 Unit of Analysis and Estimation

Our primary unit of analysis is the store catchment area. We define catchment areas using the Voronoi polygons formed by stores of similar size, as described above. We measured political preferences within each catchment area in 2011, 2015, and 2016 using data on votes at 5,594 polling locations that did not change between elections. Voting stations vary significantly in size, from 7 to 2,642 eligible voters, with a mean size of 537. Our underlying assumption in aggregating polling station-level returns is that the returns reflect political preferences at a highly localized level.

To assess the correlation between consumption choices and nationalist party vote share, we estimate the following model at the store level:

$$y_s = \alpha + \eta x_s + \gamma Z_s + \varepsilon_s, \tag{1}$$

Where y_s is the market share of nationally branded products in store s within product categories that have at least one CQ or CC product; x_s is the nationalist party vote share for store s; Z_s is a vector of economic and demographic controls for store s; and ε_s is the store-specific error term. We cluster standard errors at the county level by specific store types (21 counties $\times$ 3 types of store), county being the lowest level of electoral district for parliamentary elections. Z_s include whether the store was open on election day, the elevation of the store, standard deviation of elevation, in the catchment area rural, store size, stable nighttime illumination per capita (as a proxy for household income).

4.2 Results

There is a robust relationship between the nationalist party vote share and the consumption of nationally branded goods, as shown in Table 4. Panel A shows the simple conditional correlation between consumption and nationalist vs. non-nationalist vote share in each election. Columns 1, 5, and 9 show that consumption of nationally branded goods from 2015-16 consistently correlates positively with the nationalist party vote share. In 2015, the

[21]Note that to validate the use of purchasing behavior as a measure of nationalist sentiment, it is not necessary that sentiment causes the purchasing behavior, just that the correlation is robust.

election that most cleanly overlaps our data, a one percent increase in nationalist party vote share predicted a 0.039 percent increase in nationalist good consumption share. Columns 2, 3, and 4 show no similarly consistent pattern for goods produced in Croatia but not labeled CQ or CC, goods produced in Serbia but not labeled as such, or goods produced in the EU. These findings suggest that the result is unlikely to be an artifact of certain goods being produced in certain places.

[INSERT TABLE 4]

Panel B adds a rich vector of store-level controls, including the store size, location in a rural or urban area, topographical features, and a proxy for income based on nighttime illumination. If the results in panel A were spurious because, for example, stores in certain regions stocked more CQ/CC goods, then controlling for a wide variety of store-level traits would attenuate the results. The conditional correlations between nationalist consumption and nationalist vs. non-nationalist voting are essentially unchanged, suggesting that the results reflect some measure of the underlying political sentiment that drives voting.

5 Impact of Concert Events

The primary challenge in assessing music events' influence on political sentiments is measuring the outcomes accurately. While we can certainly examine survey results, the connection between responses and actual preference is ambiguous, particularly when dealing with sensitive questions. Voting data offers valuable insights as the traditional revealed-preference gauge of political sentiment. However, elections are infrequent, and votes are often anonymized, complicating the isolation of causal links between event attendance and political impact. In contrast, consumption patterns are observable during every shopping trip for the subset of customers who possess loyalty cards, providing a high-frequency revealed preference measure. Leveraging loyalty card data, we can also pinpoint customers who traveled to various events, enabling a direct comparison of CQ/CC consumption after a non-nationalist event compared to nationalist ones. When considered collectively, this comprehensive dataset opens new avenues for understanding the influence of public events.

5.1 No Changes in Prices around Concert Dates

To ensure any change in consumption is due to changes in demand, we need to rule out price effects, e.g., shopkeepers changing prices in response to shows. To account for this, we first exclude all shopping at concert locations. Second, we show that prices are balanced before and after the concert at the home locations in Figure 3. Lastly, travelers identified are under one percent of the total number of loyalty card holders. This justifies treating them as price takers whose preference shifts are unlikely to drive supply or prices at their home locations.

Because we are focused on within-individual changes over time at home locations, price differences between home and concert locations cannot drive the results. However, any substantial difference in prices between CQ/CC and other goods at home locations would indicate the products are not close substitutes. Figure 4 also shows that prices are balanced per category between CQ/CC and non-CQ/CC goods. A comparable figure for the balance in CQ/CC and non-CQ/CC prices at the concert location is shown in Appendix figure A.9.

There are no significant disparities in the price distributions between the primary categories for CQ/CC and non-CQ/CC products at home or concert store locations. We acknowledge the presence of substitution effects across and within product categories based on price changes within the consumption basket. For instance, a shopper attending a concert might transition from consuming beer to beverages if the price reduction is substantial. However, given that there is a supply of both CQ/CC and non-CQ/CC products within the beverages category, as we have demonstrated, shoppers consistently retain the option to choose between the two.

[INSERT FIGURE 3]
[INSERT FIGURE 4]

5.2 No Changes for Non-Travelers at Concert Location Stores

Another potential concern is that stores shift their marketing in response to concerts. The incentive to do so would be strong near concerts, and thus, if such marketing changes were driving our results, we would expect to see shifts in non-traveler purchasing at concert locations. Figure 5 shows there is no change in the share of CQ/CC-labeled products in shoppers' baskets at stores in the proximity of the concerts for just the local population. This figure assuages some concerns that our treatment effects are not simply grocery stores

promoting or displaying CQ/CC goods differently when a nationalist performer is in the neighborhood.

[INSERT FIGURE 5]

5.3 Regression Discontinuity in Time

In this section, we conduct a regression discontinuity analysis in which time is the running variable, or an RDiT (Cook et al., 2002; Anderson, 2014; Jassal, 2020). Because our key outcome–consumption–is subject to within-week and seasonal trends, we control flexibly for time on either side of the event (Hausman and Rapson, 2018). We follow Calonico et al. (2020) for our primary bandwidth selection and also report estimates across multiple bandwidths. We use the RDiT specification as our primary approach, given that there is no obvious well-defined comparison group for those who travel to nationalist concerts. We check for the robustness of our results by conducting a Difference-in-Difference analysis to compare nationalist travelers to non-nationalities travelers directly (Appendix A.14), and two event studies compare nationalist and non-nationalist travelers to a random sample of shoppers from their home locations (Appendix A.15).

5.3.1 Modeling

We know the date c of a music event; we assume that for all dates $t < c$ the individual is not treated and that individuals who traveled for dates $t > c$ are treated. The causal treatment effect of the concert is the average conditional difference in the outcome variable (i.e., the share of nationalist products in their basket) across individuals. The observed outcome is $Y_i = Y_i(0) \cdot (1 - T_i) + Y_i(1) \cdot T_i$, where $T_i = 1(X_i \geq c)$ denotes treatment status and $Y_i(1)$ and $Y_i(0)$ are the potential outcomes with and without treatment, respectively, for each person i in the sample. The parameter of interest is the *Sharp RD average treatment effect*, estimated as:

$$\tau_{SRD} = \mathbb{E}[Y_i(1) - Y_i(0)|X_i = c].$$

Specifically, we use non-parametric local polynomial estimators to estimate RD treatment effects. Our strategy involved approximating weighted polynomial regressions of order 2 (as advised by Calonico et al. (2014)). The weighting scheme was determined by choice of

kernel function K(.) The kernel and the bandwidth (h) ensure a localized regression fit near the cutoff. We use Calonico et al. (2020) and the "rdrobust" package in R for bandwidth selection.

Following Calonico et al. (2014) and Calonico et al. (2019), we implement the covariate adjusted local linear RD model $\hat{\tau}$, which we estimate by running the kernel weighted least squares regression of Y_i on a constant T_i, X_i, and X_iT_i, using only units with $X_i \in [-h, h]$ and applying weights $K(\frac{Xi}{h})$

$$\hat{\tau} : Y_i = \alpha + T_i\hat{\tau} + X_i\hat{\beta_-} + T_iX_i\hat{\beta_+} + Z_i.\hat{\gamma}$$

The estimator $\hat{\tau}$ is the average treatment effect and the value of most interest, and it is numerically equivalent to the difference in intercepts that would be obtained from two separate weighted least squares regressions using observations on each side of the cutoff (with the same kernel and bandwidth). As specified earlier, time (X_i), the running variable, is binned in days for ease of calculation, and $Z_i \in \mathbb{R}$ are a discrete set of additional covariates.

Typically in cross-sectional RD designs, the treatment is assumed to be as good as random within a narrow bandwidth; thus, it is not necessary to add controls to correct for bias, but doing so can improve precision Lee and Lemieux (2010). In the RDiT setting, on the other hand, unobserved factors correlated with the running variable "time" may have discontinuous impacts on the potential outcome. Such factors are another reason we could not simply compare the shopping patterns of travelers one day before the threshold to the day after. The following Results section reports robust estimates with and without controls, which should be included in the RDiT design to prevent bias. We include additional controls for the following variables: day of the week, the number of trips to the supermarket in the month prior to the concert, average spending in the month prior to the concert, store type, and individual fixed effects to account for nationalist identity or political views.

5.3.2 Results

The graph presents results for all bandwidths from 7 to 31 days, increasing in intervals of two days. We exclude bandwidths smaller than seven days, as we intend to include as many shoppers in our analysis as possible. Small bandwidths at fewer than seven days cut the data to fewer than ten unique shoppers around some of our more rural concerts. Estimates for such

low numbers are imprecise and represent a specific shopper type that frequents the grocery stores. Moreover, there is a minor *weekly* temporal cyclic shopping pattern that surfaces irrespective of location, date, or traveler type; shopping levels on a Sunday, for example, are very different from those on a Wednesday. Arbitrarily shrinking the bandwidth to less than a week—for example, comparing the day before to the day after the concert—would lead to misleading comparisons. Figure 6 shows the variation in the estimated treatment effects for a wide range of bandwidth options. The nationalist travelers for most bandwidths over 15 days consistently show a large and statistically significant treatment effect—i.e., increased CQ/CC shares in their baskets. The non-nationalist travelers show a slight negative dip in CQ/CC consumption after a concert. However, these effects are not substantively or statistically meaningful and are indistinguishable from null effects.

[INSERT FIGURE 6]
[INSERT FIGURE 7]

Figure 7 below shows the consumption of nationalist products on a shopping trip by different travelers. Dots represent the average percentage of nationalist products by traveler type for each day. There is a clear uptick in the consumption of CQ/CC goods in the days following an event for *only those travelers who attended nationalist concerts*.[22]

Our identification strategy relies on the assumption that confounding factors are all smooth at the treatment threshold—i.e., any observed discontinuity captures the causal effect of the concert event on the traveler. Figure 8 demonstrates the smoothness in the running variable (time) for both kinds of travelers for other commodity categories that contain no CQ/CC products. Travelers to nationalist and non-nationalist concerts alike display no discontinuities on the day of the event when it comes to buying bakery products, generic household items, or beauty and personal care items. These categories were chosen specifically because they represent a significant proportion of buyers' baskets yet do not offer any goods specifically labeled as nationalist based on the criteria identified above.

[INSERT FIGURE 8]

The results of the local quadratic regression RD estimation are reported in Table 8 and visualized in Figures 7 and 8. We also report robust RDD estimates and confidence intervals,

[22]Note that the apparent downward trend in CQ/CC consumption for nationalist travelers is a result of the quadratic functional form.

calculated using larger robust bandwidths reported in the same tables above. These results suggest that for travelers to nationalist concerts, *the sharp RD treatment effect* τ is estimated to be 0.027—i.e., attending a nationalist charged concert increases the proportion of nationalist goods in one's basket by 2.7% points. Relative to the baseline buying patterns reported in Table 3, this demonstrates that shoppers experience a 0.15 SD nationalist treatment effect in the wake of attending these concerts, which is about a 13% increase above the mean CQ/CC shares in their consumption baskets.

[INSERT TABLE 5]

Table 8 displays the same results for travelers to non-nationalist concerts. None of these treatment effects are substantively or statistically indistinguishable from a null effect. The results are verified for various model fits. Conventional and robust results for the covariate-adjusted model are reported, and the effects are consistently indistinguishable from zero. The results imply yet again that our results are not simply the shop owners responding to the nationalist concert and displaying or promoting goods with the CQ/CC labels differentially.

Appendix Table 12 shows the results are substantively similar for attendees of Thompson concerts, though imprecisely estimated because these concerts tend to be in rural locations with few nearby stores, limiting our ability to identify travelers. Appendix Table 13 shows the RDiT for Bulić is negative but marginally statistically significant. These results suggest something about the more intense nature of Škoro and Thompson concerts, which is driving the result.

5.4 For which type of traveler do concerts amplify nationalist sentiment?

Comparing more nationalistically minded attendees (those who consume more CQ/CC products beforehand) to those who do not (who may be casual attendees) provides a way to examine if our treatment effects are the result of habit formation (i.e., developing a habit for a certain kind of beer served at concerts).

Table 6 and the figure 9 below show that travelers who consume under the mean amount of CQ/CC in their baskets *before* concerts respond more strongly to attending a nationalist concert. The treatment effects for casual attendees are double those reported in our main

results in Table 8 at 5% and estimated precisely. The same analysis for non-nationalist concertgoers is in the appendix table 9 and shows no increase in post-concert attendance for either type of consumer.

[INSERT FIGURE 9]

This suggests that attending nationalistic concerts reminds even casual attendees of their unrealized or latent sentiments and encourages them to express nationalism through purchases. The low pre-concert CQ/CC consumers have sufficient CQ/CC alternatives to opt into. The response by high pre-concert CQ/CC consumers may be limited by ceiling effects. The theoretical maximum CQ/CC purchases in our dataset are about 38% of the consumer basket.[23]. High pre-concert CQ/CC consumers already contain approximately 30% CQ/CC goods (see Figure A.12). These customers simply have much less room to move even if they feel more nationalist sentiment post-concert.[24]

[INSERT TABLE 6]

6 Product Category Level Analysis

We extend our analysis to discern which specific product categories within the consumption basket propel our findings.

As depicted in Figure 10, we narrowed our focus to the top four categories with the highest proportion of CQ/CC products: beer, breakfast items, dairy products, and non-alcoholic beverages. The remaining product categories contain less than 10% of CQ/CC products, substantially reducing the observations available for our regression analysis.

We estimate the following model at the product category level with individual and day-of-the-week fixed effects to account for unobservable variables at the individual level and weekly consumption trends.

$$Y_{it} = \alpha + \beta T_i + \theta_1(X_i) + \theta_2(w) + \epsilon_{it}.$$

[23]This approximate number assumes that a user is buying only CQ/CC goods in every possible sub-category. 45 out of 363 sub-categories have CQ/CC substitutes available, and the total spend in these sub-categories divided by the total spend in all categories gives us the estimate of 38%

[24]We thank one of our reviewers for this excellent suggestion

Here Y_{it} is the outcome of interest, i.e., the percent of CQ/CC for individual i at time t in a given category. The treatment group indicator T_i which is 1 if the observation is 14 days post-concert and 0 if 14 days pre-concert. The 14-day period was chosen to match the approximate bandwidth used in the regression discontinuity in time design. θ_1 and θ_2 and represents individual and day-of-week fixed effects. The β coefficient is reported below.

Our investigation reveals that two categories, breakfast items, and beer, exhibit the most pronounced effects within the consumption basket. Beer, in particular, is closely associated with concert attendance and is highly likely to be consumed at concert venues alongside non-alcoholic beverages among the four product categories examined. One plausible explanation for the strong effect of beer is the possibility of an oversupply of beer and other concert-related goods on the day of the event.

We present three compelling reasons why *the supply effect* is not the driving mechanism in our case. First, we tracked travelers' consumption for 60 days before and after the concert. While there may be a supply effect on the very day of the concert, perhaps at the venue, after the event, travelers shop at their home stores. The consumption of CQ/CC beer and other CQ/CC products remains high two to three weeks after the concert. Second, it is not due to a price effect, meaning that CQ/CC products are not necessarily cheaper on the concert day compared to non-CQ/CC identical products within the same product category. We provide a comprehensive price analysis at concert and home locations to support this claim. Third, even if we exclude beer from the consumption basket, the effect remains significant and positive, as evident in Table 7, Column 6.

Our analysis effectively discredits the notion that the supply effect on the day of the concert is the driving mechanism behind our results. However, out of an abundance of caution, we exclude all shopping from the concert day in Table 7.

[INSERT TABLE 7]
[INSERT FIGURE 9]

7 Discussion

How should we think about significant public events with a discernible partisan bias? Does attendance primarily reflect preexisting sentiments, essentially making crowd size an accurate proxy for collective attitudes? Or do such events have the capacity to shape and influence

political perspectives, serving as persuasive agents? Given the global surge of populist movements, these questions have gained new relevance, particularly because nationalist sentiments can impact individuals' capacity for collective action and reinforce distrust in established institutions.

In our analysis, public events unequivocally influence the political sentiments of attendees, beyond being platforms for expressing preexisting views. Furthermore, these effects are noteworthy, with the share of nationalist products consumed surging by nearly 13% (compared to mean) after attending a concert—an equivalent shift associated with a one-percentage-point increase in the vote share for nationalist parties.

Furthermore, we find that individuals who travel to non-nationalist concerts do not exhibit shifts in their consumption of CQ/CC products. There are also no discernible changes in consumption patterns for product categories lacking nationally branded items, whether among nationalist or non-nationalist event attendees. Treatment effects are most prominent in individuals with low pre-concert CQ/CC consumption patterns, who we assume have unrealized potential to express nationalism. Additionally, treatment effects extend beyond conventional concert goods like beer and are robustly observed in categories such as breakfast items and non-alcoholic beverages. We exclude all shopping from concert locations and on the concert day to avoid mechanical correlation. Our analysis also effectively rules out price effects as a potential mechanism by showing a price balance between CQ/CC and non-CQ/CC goods and a balance between before and after concerts.

We acknowledge our limitation in pinpointing *how* public events shift identity. Our dataset does not allow us to confidently claim if our results are due to peer, priming, salience, learning, or a combination of all these effects. Second, by design, individuals are actively selecting into the treatment. This is not an exogenous discontinuity we assume readers have encountered before. The treatment works through a bundle of mechanisms over a fuzzy discontinuity, making this an inherently complex problem. We hope future researchers can use our analysis as a springboard to explore these questions.

Our investigation does allow us to discard multiple competing narratives or questions to narrow down potential explanations. Firstly, do Croatian brands or grocery stores advertise around nationalist concerts, believing attendees to be a good audience for such appeals? While this could certainly be true, it does not seem to drive our results. If there were additional efforts by brands to advertise, we would observe some effects on the local population shopping

in the vicinity of the concerts. But as Figure 5 and Table 8 show, no such effect is observed in the non-travelers. If the advertisement is placed inside the venue, our data do not enable us to disentangle it from any other persuasion mechanism. However, we exclude all shopping on the concert day and only include observations from a traveler's home location. For the same reason, even if grocery stores prominently display some CQ/CC goods when a nationalist concert is happening in its vicinity, it does not affect our conclusions.

Note that we do not argue that the treatment is restricted to only the day of the concert. For the RDiT, we used performance day as the cutoff. However, travelers are still watching videos of the performance, interacting with other travelers after the event, and listening to the artist's music in the car on the way over. The results from the event study (Appendix A.17), which are analyzed weekly, give us more confidence in our conclusions that there is a significant change in consumption for those who attend nationalist performances. Our results are also robust to excluding the day before and the day after the concert. Lastly, we analyze behavior after travelers have returned home by restricting the analysis to only observations at shoppers' home locations.

Would the location of nationalist concerts in more rural areas impact our findings? It is plausible that far-right nationalist musical events are held in rural areas where far-right voters are prevalent. Consequently, stores in such rural areas may carry a more extensive inventory of CQ/CC products than in urban locations. In fact, we rely on the correlation between political identity and shopping preferences to establish CQ/CC purchases as a valid measure of nationalism (see Table 4). However, we are faced with a data limitation: we cannot confirm whether stores in rural or right-wing locations indeed stock more nationally branded goods, as we only have access to purchase data, not store stock data.

Differential stocking across areas cannot drive our results, as our main findings rely on within-individual differences in travelers' purchases at their home locations. Also, note that Figure 3 shows these stores maintain consistent pricing before and after treatment events.

Lastly, does it matter that individuals select into treatment and can display anticipation effects? It probably does; however, that is tangential to our conclusions. The RDiT approach is conceptually much more similar to an event study than regression discontinuity design Hausman and Rapson (2018). In a cross-sectional RD, the density test ((McCrary, 2008)) is a good check for selecting into treatment, sorting, and anticipation effects. When time is the running variable, it is impossible to test discontinuities in the conditional density for time

around the threshold. As recommended by (Hausman and Rapson, 2018), we can check for discontinuities in other variables at the threshold, and the results are presented in Figure 8. These results show no discontinuous jumps in product categories where identity could not be expressed, i.e., no CQ/CC labeled goods.

8 Conclusion

Our paper investigates whether music concerts can be an instrument for shaping national identity-related preferences. Concerts are complex events that combine many features but happen on a well-defined date. Regression discontinuity in time analysis around those dates shows there are clear within-individual increases in consumption of nationally branded goods for those who attend nationalist concerts but not for those attending non-nationalist ones. And there are no similar shifts for purchase shares by country of origin, which is not clearly labeled.

Our results have several implications for the study of politics and economics. First, it introduces a useful proxy: consumption choices in settings where goods have clear political valence offer a valuable resource for understanding the impact of cultural and political events. Second, it foregrounds evidence to test theory: high-resolution consumer loyalty data can be used to separate sub-populations to enable deeper hypothesis testing. Third, it highlights evidence to track political mood: the kinds of data we use enable near-continuous measurement of political sentiment, which facilitates understanding of how quickly treatment effects decay.

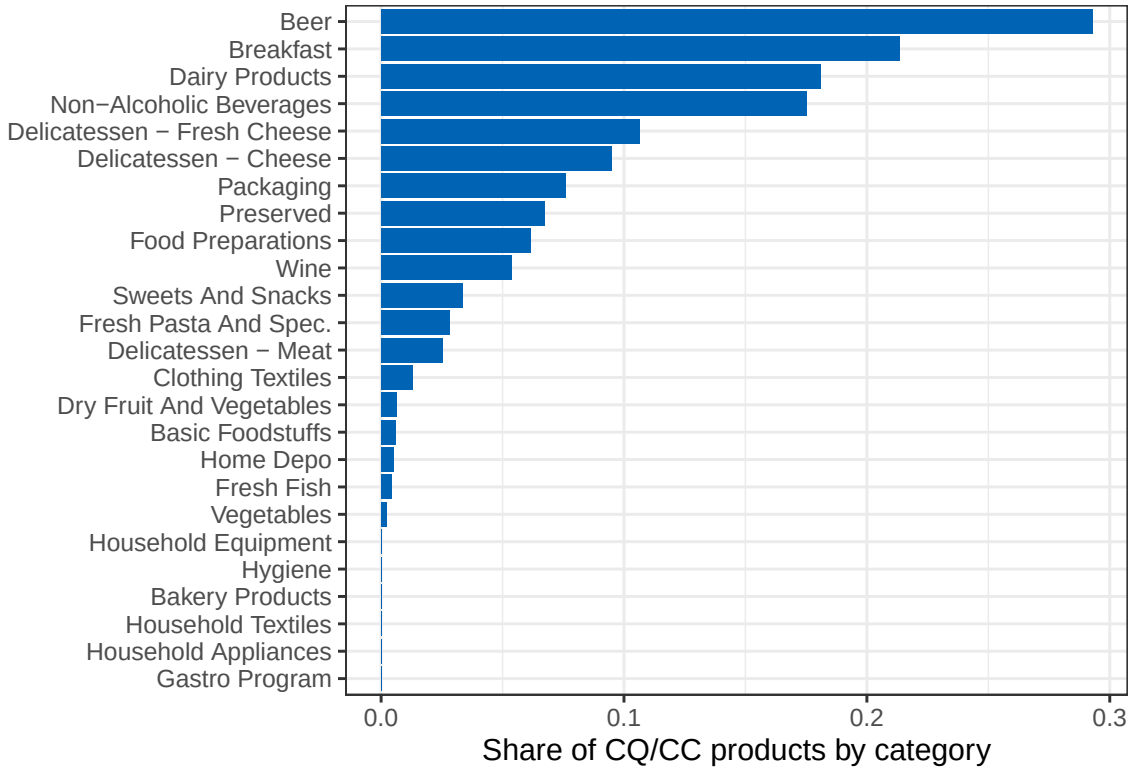
How does this evidence impact our understanding of politics and consumption? We argue that nationalism is subject to short-term fluctuations with abundantly real political and economic consequences. Nationalist events may play a meaningful role in shifting political sentiment. Attending such events has an impact beyond self-selection; it shapes concrete resource allocation choices. Given the long association of folk music with progressive politics in the US and Europe, it should not be surprising that music is a powerful tool that can be used to rally people and send political messages. Strategic actors have and will continue to alter the political context using such tools. Our results suggest treatment effects equivalent to a one-percentage-point increase in nationalist party vote share. Well-placed concerts and conversations around the time of elections have the potential to swing the tide in the

nationalist elites' favor. Moreover, we could not find any equivalent left-wing performers or treatment effects that could level the playing field.

Grosjean et al. (2023) demonstrate the impact of political rallies on the conduct of police officers. In their context, political rallies serve as vehicles for directly disseminating political messages. In contrast, our study reveals how musical events, which primarily aim to provide entertainment rather than promote political messages, can significantly influence the formation of consumption preferences, specifically those associated with national identity. While historically, music has been an effective propaganda tool, we are the first to demonstrate its influence on consumption preferences.

Figures

Figure 1: Share of Croatian Quality and Croatian Creation products by product categories

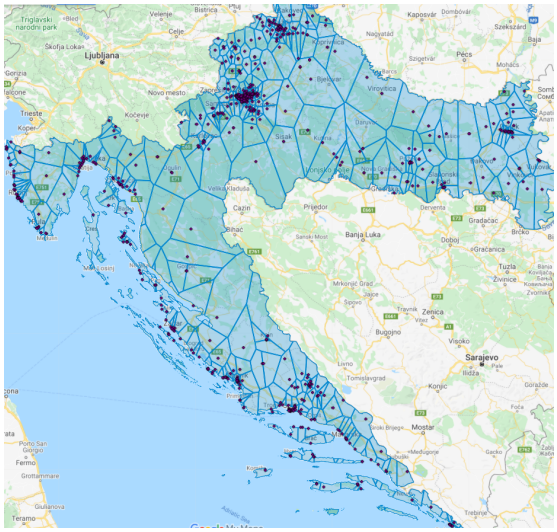


Note: The figure depicts the average share of CQ/CC products sold in every product category from January 1, 2015 to August 1, 2016. Chain management defines the categories, which are constant during the observed period.

Figure 2: Store catchment areas by store size

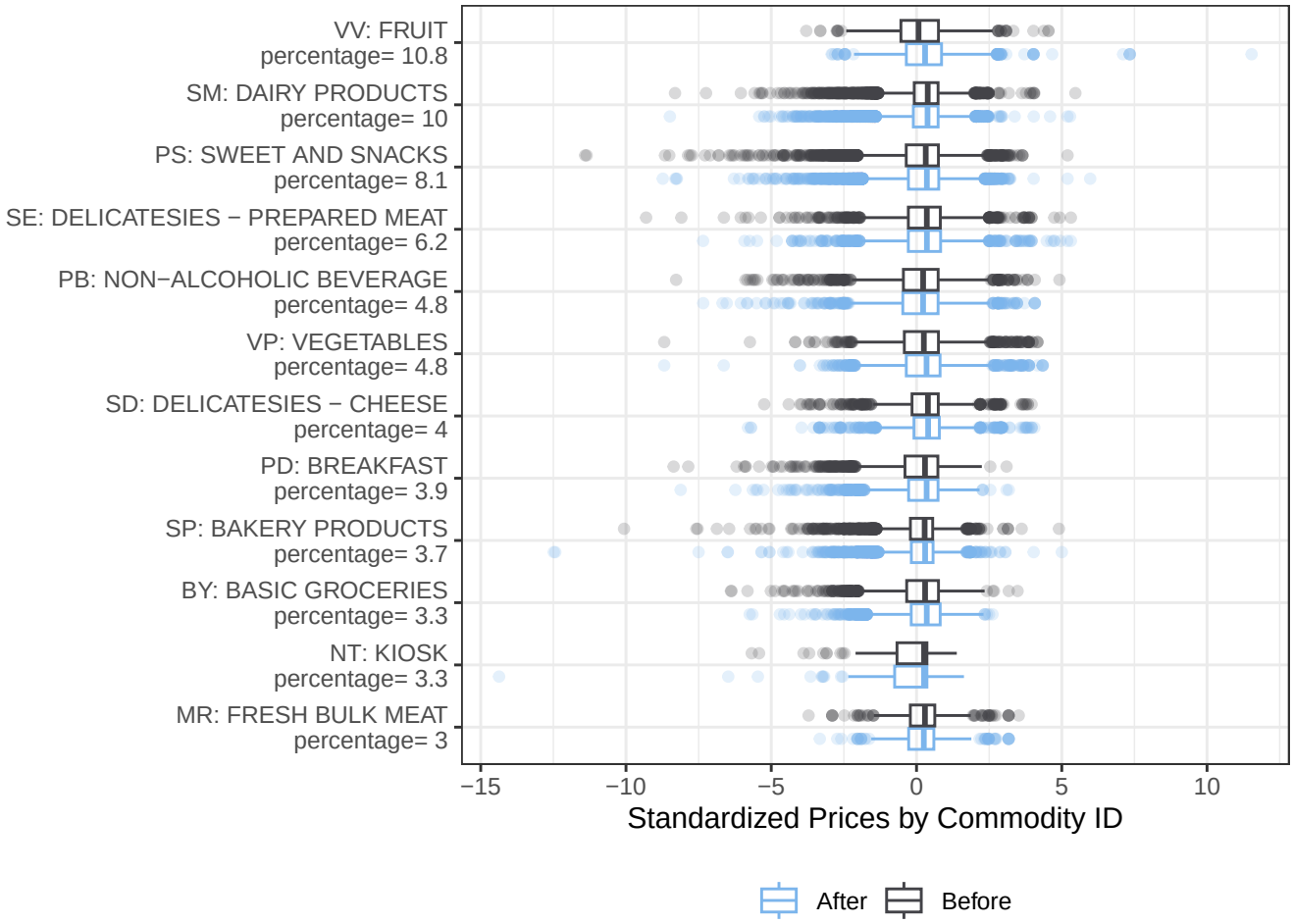
(a) Destination stores

(b) Small stores



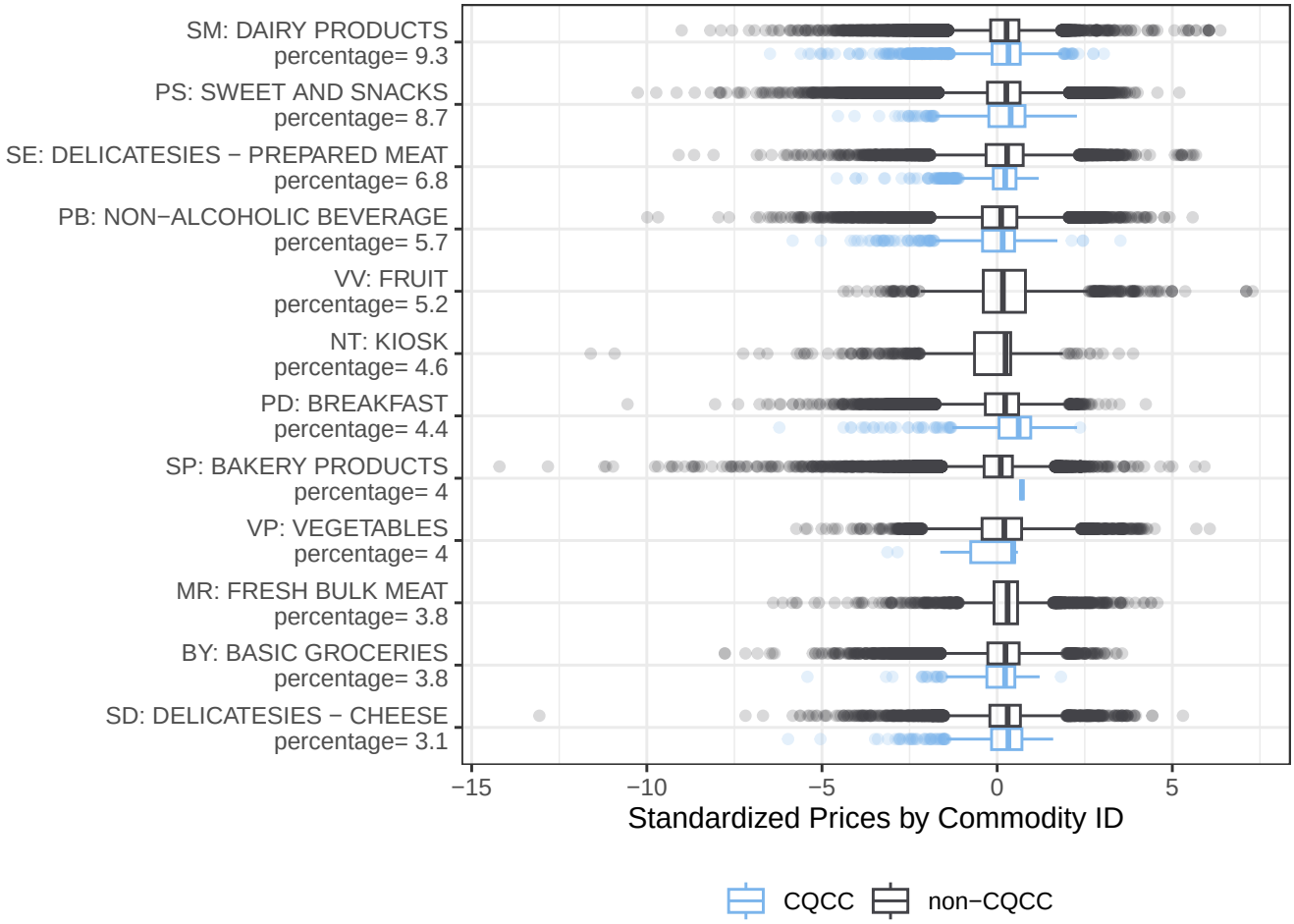
Note: The figure depicts Voronoi polygons for our two store types: Large destination stores and medium-size stores together (N= 132) are shown in panel A. Small stores (N= 589) are shown in panel B. Section 3.2. provides a detailed methodological discussion for such a division.

Figure 3: Price distribution for product categories before and after the concert at home locations



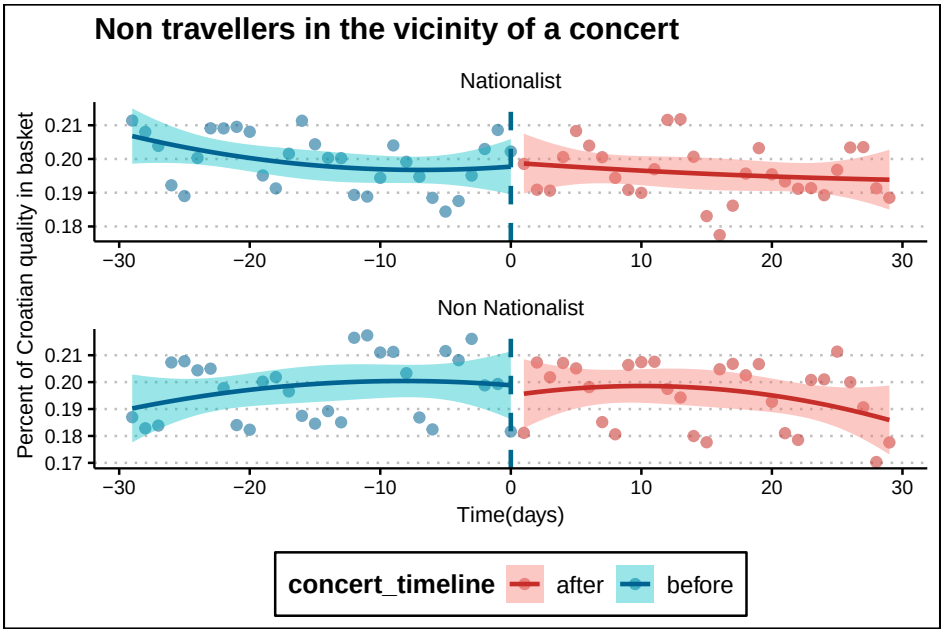
Note: The figure shows a price balance per product categories before and after the concert. A figure focusing only on the categories that have significant CQ/CC labels is attached in the appendix.

Figure 4: Price distribution for CQ/CC vs. other goods at home locations



Note: The figure shows a balance in prices between CQ/CC and non-CQ/CC goods at the home location. Some categories, such as bakery, have negligible CQ/CC goods present.

Figure 5: Non-Travelers and general public in the vicinity of concerts and their CQ/CC consumption share before and after concerts

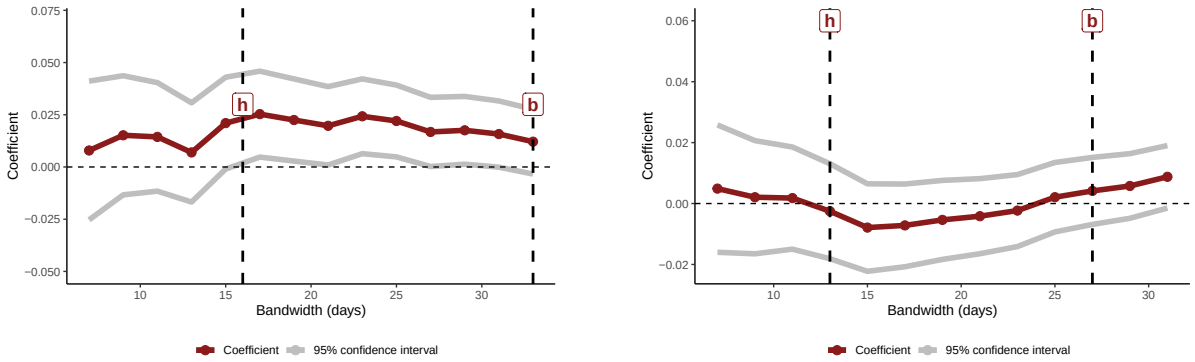


Note: The graph shows a quadratic regression fit on both sides of the concert (day=0) event. The dependent variable is the proportion of CQ/CC products in the consumption basket per grocery store trip. The points in the graph represent the average that day for all the non-travelers who shopped in the grocery stores in the vicinity of concerts. The shaded area represents 95% confidence interval of the fit.

Figure 6: Robust results for a range of bandwidth choices

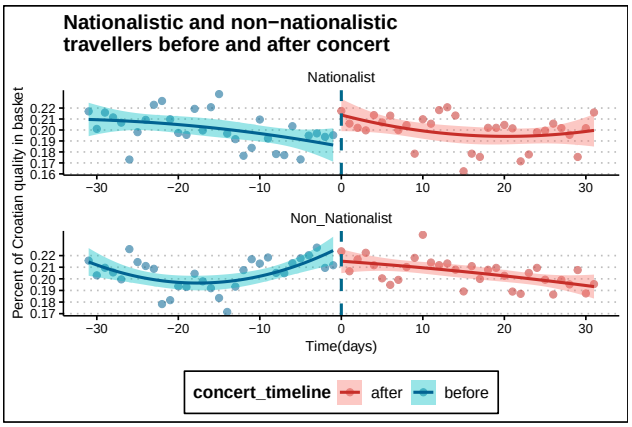
(a) Nationalist Travelers

(b) Non-Nationalist Travelers



Note: The graphs above show the effect of increasing the bandwidth (in days) around the cutoff on the RD treatment effect. The solid lines show the estimate of τ from section 5.2.1 for larger bandwidths. "h" represents the optimal bandwidth based on the MSE criteria, and "b" is the optimal bandwidth according to the bias bandwidth.

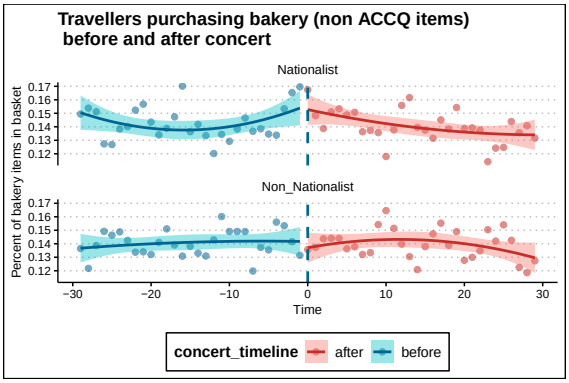
Figure 7: Travelers' CQ/CC consumption share before/after concerts



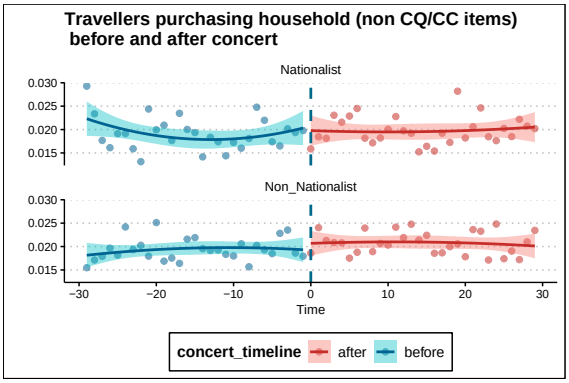
Note: The graph shows a quadratic regression fit on both sides of the concert (day= 0) event. The dependent variable is the proportion of CQ/CC products in the consumption basket per grocery store trip. The points on the graph represent the average that day for all the travelers only from their home locations and exclude shopping from concert locations. The shaded area represents 95% confidence interval of the fit.

Figure 8: Product categories that have no CQ/CC goods

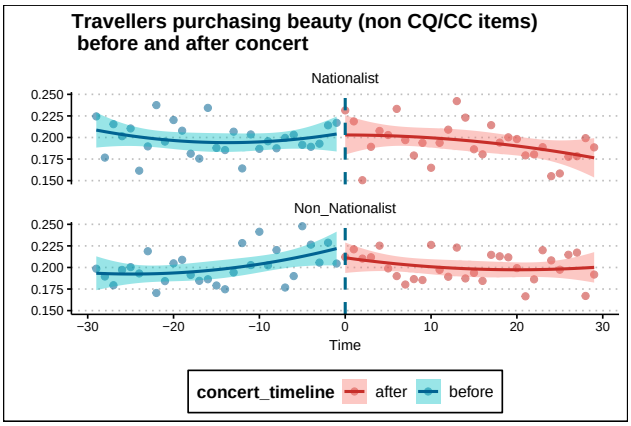
(a) Bakery Goods



(b) Household items

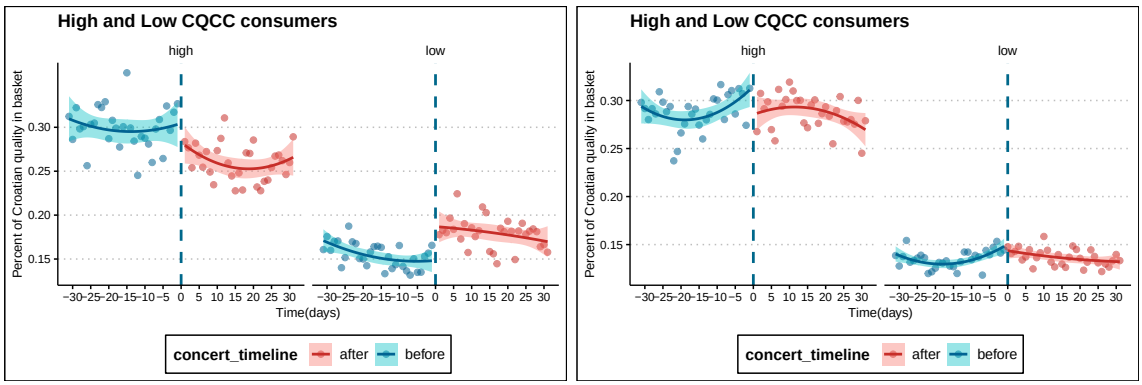


(c) Beauty and personal care



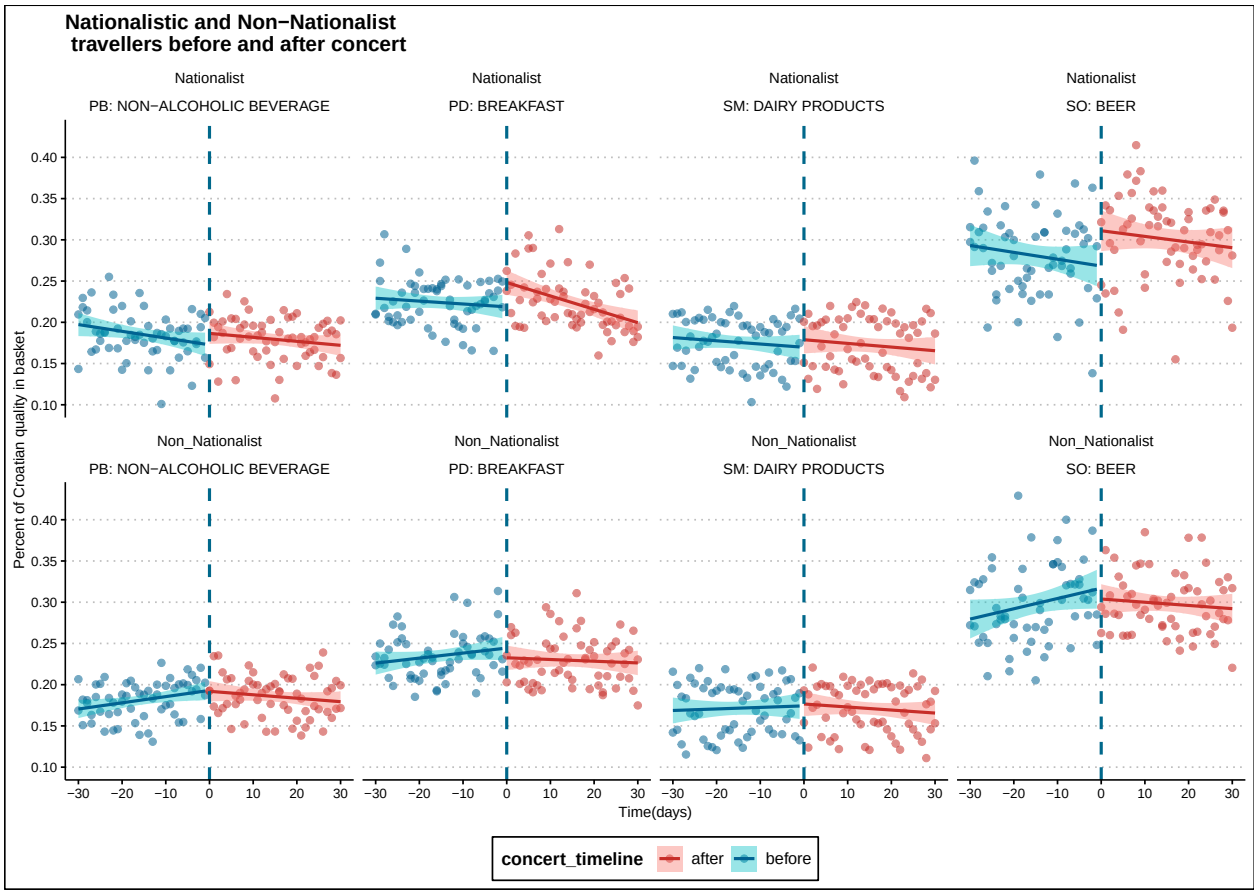
Note: The graph shows quadratic regression fits on both sides of the concert (day=0) event. The dependent variable is the proportion of CQ/CC products in the consumption basket per grocery store trip. The points in the graph represent the average CQ/CC for both types of travelers. These figures demonstrate smoothness in the running variable for categories that do not contain any CQ/CC products—i.e., no discontinuous jumps in product categories where travelers cannot express their nationalist sentiments due to the lack of equivalent CQ/CC product labels. The shaded area represents 95% confidence interval of the fit. None of these categories have a significant RdiT coefficient.

Figure 9: Treatment effect heterogeneity by pre-concert CQ/CC consumption for nationalist and non-nationalist travelers



Note: The following figures show the percentage of CQ/CC goods in the baskets of higher than or lower than median CQ/CC consumption pre-concert. The left panel shows nationalist travelers and the right panel shows non-nationalist travelers.

Figure 10: Product category level analysis for nationalist and non-nationalist travelers



Note: The following figures show the percentage of CQ/CC goods in the baskets of travelers 14 days before and after the concert, focusing on the product categories that contain a significant proportion of CQ/CC goods.

Tables

Table 1: Summary statistics on spending and store types

Store Type	Type	Mean	SD	Median	Min	Max
Store - Small	Total	37.2	31.2	27.3	0.01	320
Store - Medium	Total	50.9	43.0	37.7	0.00	382
Store - Large	Total	76.3	69.5	53.5	0.00	655
Store - Small	CQ/CC	15.5	14.1	11.0	0.01	128
Store - Medium	CQ/CC	17.7	18.7	12.0	0.01	176
Store - Large	CQ/CC	22.1	24.7	14.0	0.01	294
Store - Small	CQ/CC Share	0.26	0.20	0.20	0.00	1.00
Store - Medium	CQ/CC Share	0.21	0.18	0.15	0.00	1.00
Store - Large	CQ/CC Share	0.17	0.16	0.12	0.00	1.00
Store - Small	No of trips	1.84	0.94	2	1	20
Store - Medium	No of trips	1.57	0.64	2	1	9
Store - Large	No of trips	1.65	0.74	2	1	15

Note: All statistics are calculated at the receipt level for the full sample. The first three rows present summary statistics on spending across all products. The 4th to 6th rows present summary statistics only for CQ/CC products. The 7th to 9th rows calculate average shares of CQ/CC products by value. The 10th to 12th row calculates the average number of trips per week by loyalty card holders.

Table 2: CQ/CC consumption by loyalty card holders vs. all other shoppers

Customer	Store Size	Variable	Mean	SD	Median	Min	Max
Loyalty Card Holders	Store-Small	Total	102.41	436.59	75.19	0.05	141909.25
		CQ/CC	17.92	147.11	11.96	0.01	63323.42
		Share of CQ/CC	0.23	0.20	0.17	0.00	1.00
	Store-Medium	Total	145.00	230.42	98.99	0.16	32647.71
		CQ/CC	19.86	25.61	12.44	0.03	1152.67
		Share of CQ/CC	0.20	0.18	0.14	0.00	1.00
	Store-Large	Total	237.51	347.48	158.79	0.06	64142.65
		CQ/CC	25.40	41.95	15.64	0.01	6543.12
		Share of CQ/CC	0.16	0.16	0.11	0.00	1.00
Non Loyalty Card Holders	Store-Small	Total	70.83	244.21	43.49	0.11	76504.00
		CQ/CC	16.77	93.62	10.49	0.03	47271.86
		Share of CQ/CC	0.40	0.31	0.29	0.00	1.00
	Store-Medium	Total	114.43	217.24	68.95	0.25	29122.56
		CQ/CC	19.93	36.61	11.69	0.06	3919.56
		Share of CQ/CC	0.31	0.28	0.20	0.00	1.00
	Store-Large	Total	170.84	253.95	102.96	0.24	24961.35
		CQ/CC	23.13	42.73	12.89	0.07	5007.70
		Share of CQ/CC	0.24	0.25	0.15	0.00	1.00

Note: Total spending, CQ/CC spending in Croatian kunas, and proportion of CQ/CC per receipt for loyalty card-holding shoppers vs. other shoppers in the full sample.

Table 3: Shopping behavior at home stores

Traveller	N	Variable	Mean	SD	Median	Min	Max
Nationalistic	3,826	Total	145.1	157.6	101.3	0	6933
		CQ/CC	21.4	25.5	13.58	0	552
		Share CQ/CC	0.21	0.18	0.15	0.00	1.00
		Number of trips	2.44	0.68	2.00	1.00	38.00
Non-Nationalistic	6,282	Total	134.1	139.3	94.4	0	3749
		CQ/CC	20.4	25.6	15.2	0	1065
		Share CQ/CC	0.21	0.19	0.15	0.00	1.00
		Number of trips	2.52	0.69	2.00	1.00	29.00
Non-Traveller	1,126,524	Total	135.4	181.8	82.4	0.00	140734
		CQ/CC	19.8	29.4	11.9	0.01	26402
		Share CQ/CC	0.23	0.19	0.16	0.00	1.00
		Number of trips	1.91	0.68	1.00	1.00	343.00

Note: The table provides summary statistics for three groups: individuals traveling to nationalist concerts, non-nationalist concerts, and individuals identified as non-travelers. For every category, row 1 is the total amount of spending in Croatian Kunas, row 2 is the total amount of spending in Croatian Kunas for CQ/CC products, row 3 is the share of CQ/CC spending, and row 4 is the number of visits to a "home store".

Table 4: Voting for RW/LW Parties and Consumption by Country of Origin

PANEL A - no controls

	2011				2015				2016			
	(1) CQCC	(2) CRO	(3) SERB	(4) EU	(5) CQCC	(6) CRO	(7) SERB	(8) EU	(9) CQCC	(10) CRO	(11) SERB	(12) EU
Right wing	0.037**	0.027	-0.004**	-0.034***	0.039***	0.002	0.001	0.005	0.039***	0.004	0.001	0.006
	(0.013)	(0.015)	(0.001)	(0.009)	(0.008)	(0.010)	(0.001)	(0.006)	(0.009)	(0.010)	(0.001)	(0.006).
Left wing	-0.010	0.020	-0.004**	-0.029***	-0.005	-0.007	0.001	0.014	-0.006	-0.005	0.001	0.015*
	(0.012)	(0.014)	(0.001)	(0.008)	(0.011)	(0.013)	(0.001)	(0.007)	(0.010)	(0.011)	(0.001)	(0.007)
Constant	0.065***	0.902***	0.009***	0.074***	0.058***	0.919***	0.006***	0.048***	0.058***	0.917***	0.006***	0.048***
	(0.008)	(0.009)	(0.001)	(0.005)	(0.006)	(0.007)	(0.001)	(0.004)	(0.006)	(0.007)	(0.001)	(0.004)
N	721	721	721	721	721	721	721	721	721	721	721	721
R^2	0.057	0.004	0.015	0.021	0.063	0.001	0.004	0.006	0.059	0.002	0.002	0.008

PANEL B - with controls

	2011				2015				2016			
	(1) CQCC	(2) CRO	(3) SERB	(4) EU	(5) CQCC	(6) CRO	(7) SERB	(8) EU	(9) CQCC	(10) CRO	(11) SERB	(12) EU
Right wing	0.011	-0.004	-0.003	-0.013	0.027*	-0.005	0.002*	0.011*	0.030*	0.003	0.001	0.008
	(0.023)	(0.017)	(0.002)	(0.012)	(0.010)	(0.011)	(0.001)	(0.006)	(0.011)	(0.009)	(0.001)	(0.006)
Left wing	-0.025	-0.003	-0.003*	-0.014	-0.014	-0.013	0.001	0.017*	-0.009	-0.001	0.000	0.011
	(0.023)	(0.014)	(0.001)	(0.009)	(0.015)	(0.014)	(0.001)	(0.007)	(0.017)	(0.012)	(0.001)	(0.007)
Constant	0.076***	0.940***	0.007***	0.050***	0.065***	0.944***	0.005***	0.033***	0.061***	0.937***	0.005***	0.036***
	(0.014)	(0.008)	(0.001)	(0.006)	(0.005)	(0.007)	(0.001)	(0.004)	(0.005)	(0.006)	(0.001)	(0.005)
N	721	721	721	721	721	721	721	721	721	721	721	721
R^2	0.234	0.508	0.067	0.367	0.240	0.510	0.063	0.370	0.239	0.509	0.060	0.367

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Note: Variables RW and LW for 2011, 2015, and 2016 represent the share of votes for the right-wing and left-wing parties at the store catchment level. Columns (1)-(12) represent the share of consumption of products of different types and countries of origin at the store catchment level. CQ/CC represents the share of CQ/CC products. CRO represents the share of other Croatian products. SERB represents the share of Serbian products. EU represents the share of EU products. The baseline category is other parties. Controls used are: whether the store was open on the election day, elevation, std elevation, rural, store size, stable nighttime illumination per capita (as a proxy for household income). SE are clustered at the county x store size level.

Table 5: RDiT results for nationalist travelers, non-nationalist travelers and non-travellers in the vicinity of the concert respectively.

	Nationalist Traveler		Non-Nationalist Traveler	
	Conventional	Robust	Conventional	Robust
Coefficient(τ)	0.023	0.027	-0.009	-0.010
SE	0.010	0.012	0.010	0.012
z	2.621	2.242	-0.881	-0.835
p>$\|z\|$	0.030	0.025	0.378	0.403
95% CI	[0.002,0.045]	[0.004,0.052]	[-0.030,0.011]	[-0.036,0.014]
N	22,427		36,806	
RDD bandwidth(h)	16.31		11.32	
Bandwidth bias(b)	33.42		20.65	
	Non-Traveler(Nationalist)		Non-Traveller(Non-Nationalist)	
	Conventional	Robust	Conventional	Robust
Coefficient(τ)	-0.013	-0.018	-0.013	-0.013
SE	0.016	0.018	0.013	0.015
z	-0.839	-1.025	-0.997	-0.918
p>$\|z\|$	0.407	0.306	0.318	0.358
95% CI	[-0.046,0.018]	[-0.053,0.016]	[-0.038,0.012]	[-0.043,0.015]
N	3,649,852		2,919,684	
RDD bandwidth(h)	3.75		9.2	
Bandwidth bias(b)	4.5		8.85	

Note: Column 1 and 2 show the local polynomial and covariate adjusted point estimations of τ average treatment effects at the cutoff in our sharp-RD setting. We also report robust bias-corrected average treatment effects and standard errors. Here the outcome of interest Y_i is the percentage of CQ/CC goods in a traveler's basket. X_i is the running random variable—i.e., days to concert, which determines treatment assignment for each traveler in the sample, and T_i is the treatment status—i.e., before ($T_i = 0$) or after ($T_i = 1$) the concert. We report the Mean Squared Error (MSE) optimal bandwidth (h) and the bias bandwidth (b), which are used for conventional and robust calculations, respectively. We used day week, and customer ID FE for every column. This analysis covers 3,826 nationalist travelers and 6,282 non-nationalist travelers. This analysis only includes shopping at home locations.

Table 6: Heterogeneous treatment effects: nationalistic travelers who have an below-average consumption of CQCC products for the pre-concert period demonstrated a stronger treatment effect after the concert

	Above average CQCC attendees		Below average CQCC attendees	
	Conventional	Robust	Conventional	Robust
Coefficient(τ)	-0.027	-0.029	0.055	0.056
SE	0.017	0.020	0.011	0.013
z	-1.611	-1.457	5.025	4.345
p>$\|z\|$	0.010	0.145	0.000	0.000
95% CI	[-0.061,0.006]	[-0.070,0.010]	[0.034,0.077]	[0.031,0.082]
N	11,943		10,484	
RDD bandwidth(h)	14.44		17.17	
Bandwidth bias(b)	26.62		31.81	

Note: The table shows heterogeneous treatment effects observed in our sample of nationalist travelers. Columns 1 and 2 show the conventional and robust point estimations of τ average treatment effects at the cutoff in our sharp-RD setting. Here the outcome of interest Y_i is the percentage of CQ/CC goods in a traveler's basket. X_i is the running random variable—i.e., days to concert, which determines treatment assignment for each traveler in the sample, and T_i is the treatment status—i.e., before ($T_i = 0$) or after ($T_i = 1$) the concert. We report the Mean Squared Error (MSE) optimal bandwidth (h) and the bias bandwidth (b), which are used for conventional and robust calculations, respectively. We used day week, and customer ID FE for every column. This analysis only includes shopping at home locations.

Table 7: Category Level Analysis

	Dependent variable: CQCC percentage in basket per category					
	Including individual FE and day of the week FE					
	(All Categories)	(Non-Alcoholic)	(Breakfast)	(Dairy)	(Beer)	(All but beer)
Post Concert	0.022***	0.038***	0.079***	0.011*	0.076**	0.021***
	(0.004)	(0.010)	(0.017)	(0.006)	(0.034)	(0.004)
Observations	7,234	1,356	823	3,020	314	6,920
Adjusted R^2	0.310	0.488	0.475	0.281	0.457	0.314
Residual Std. Error	0.142	0.122	0.137	0.124	0.174	0.137

Note: This analysis excludes shopping at superstores and shopping done on the day of the concert. The difference in difference analysis shown in the above section covers 2,047 nationalist travelers who appeared in the panel both 14 days before and after the concert. The drop in the number of travelers compared to RD tables comes from some consumers not shopping in the 14 days before or after the concert but shopping in the 60 days before or after the concert.

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A Appendix

A.1 Variation in consumption explained by LW and RW vote share

Panel A - Right and Left wing vote share

	(2011) CQCC	(2011) CRO	(2011) SERB	(2011) EU	(2015) CQCC	(2015) CRO	(2015) SERB	(2015) EU	(2016) CQCC	(2016) CRO	(2016) SERB	(2016) EU
R^2	**0.324**	0.590	0.119	0.473	**0.330**	0.596	0.117	0.478	**0.330**	0.593	0.116	0.476

Panel B - Store and Country Fixed Effects

R^2	**0.296**	0.585	0.113	0.463	**0.296**	0.585	0.113	0.463	**0.296**	0.585	0.113	0.463

Note: Columns (1)-(12) report the percent of variance explained (R^2) for consumption share of products by country of origin at the store level. CQ/CC represents the share of CQ/CC products. CRO represents the share of other Croatian products. SERB represents the share of Serbian products. EU represents the share of EU products. Panel A shows the R^2 for models predicting consumption shares in 2015-16 using LW and RW vote shares in different election years (2011, 2015, or 2016), along with store size and county fixed effects ($Y_s = \beta_0 + LW_s + RW_s + county_{FE} + storesize_{FE} + \epsilon_s$). Panel B reports the reduced model predicting consumption shares using only store size and county fixed effects ($Y_s = \beta_0 + county_{FE} + storesize_{FE} + \epsilon_s$). We report the standard F-test for the significance of the change in R^2 from the short regression to the long regression.

A.2 Croatian Quality and Croatian Creation products logos

Note: Logos sourced from the Croatian Chamber of Commerce website: `https://znakovi.hgk.hr/kako-steci-pravo-uporabe-znaka/`

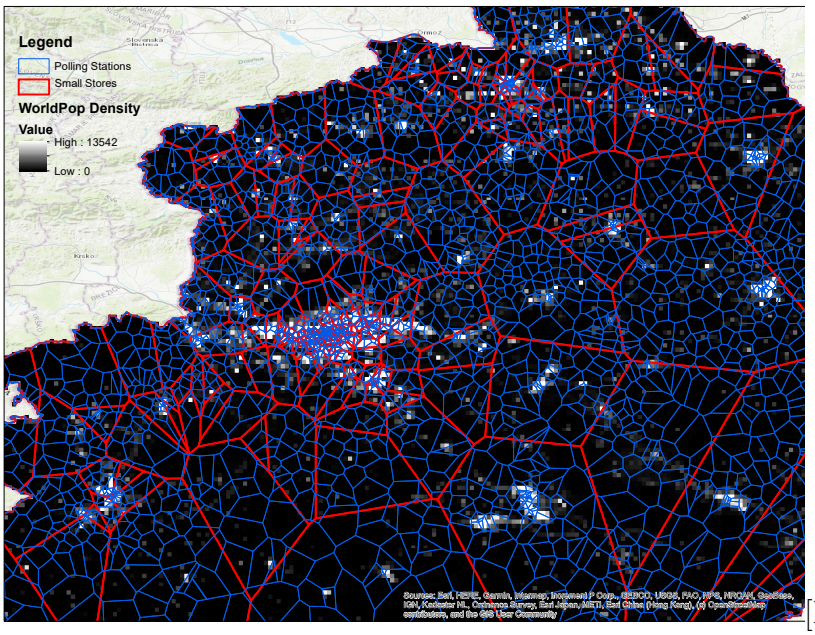
A.3 The distribution of different countries of origin for the different product sectors

Commodity sector	BA	EU	HR	MK	NON EU	RS	SI
Packaging			100.00				
Office Supplies			100.00				
Meat	0.00	1.36	98.52		0.09		0.03
Nutrition 1	0.43	2.08	95.06	0.00	0.05	1.66	0.73
Nutrition 2	0.93	25.77	40.26	0.15	29.48	1.07	2.34
Packaged Food	0.52	7.32	90.13	0.76	0.37	0.70	0.19
Fresh Food	0.24	6.43	92.78	0.00	0.04	0.01	0.49
Wholesale			98.83		1.17		
Fruit and Vegetables	4.34	5.10	89.77		0.00	0.78	0.00

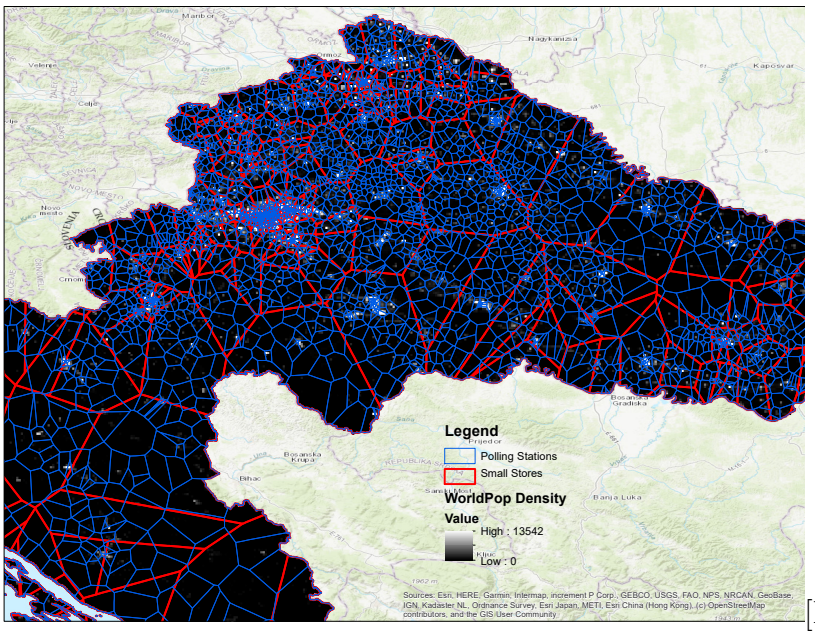
Note: Rows are sectors of products and columns are countries of origin of products. (BA - Bosnia and Herzegovina; EU - European Union; HR - Croatia; MK - Republic of Macedonia; RS - Republic of Serbia; SI - Republic of Serbia; SI - Slovenia)

Figure 11: Products with the CQ/CC logo from Croatian grocery stores

A.4 Polling stations and small stores with population density



[H]



[H]

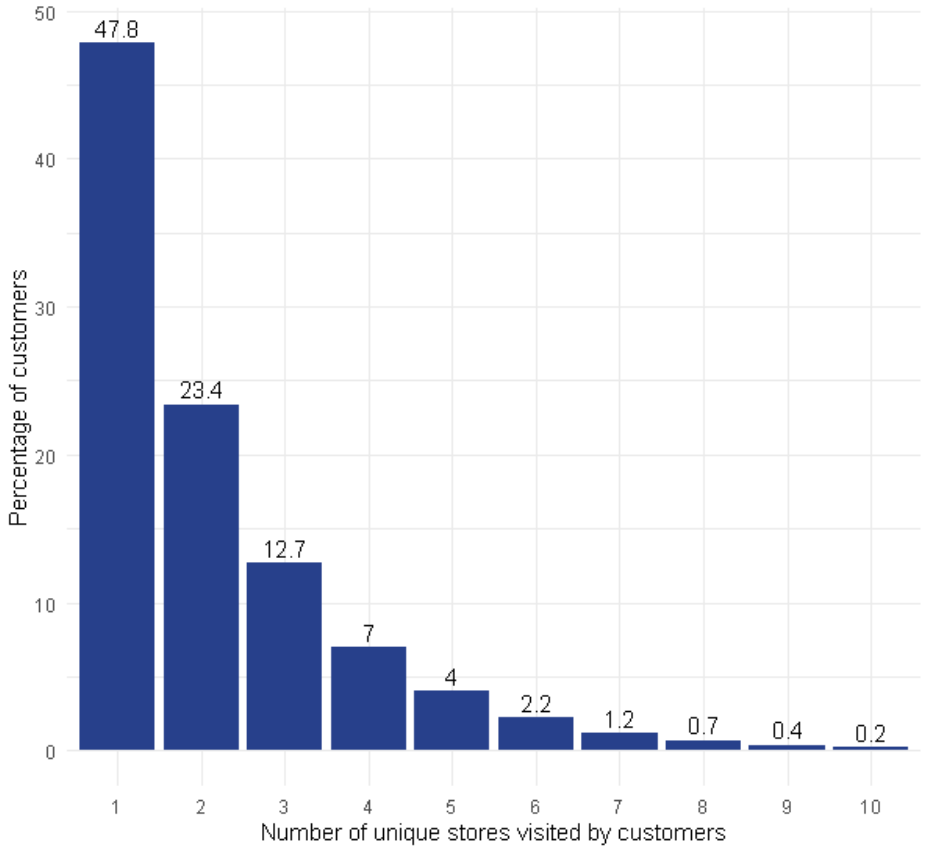
Note: Red lines represent Voronoi polygons for stores, while blue lines represent Voronoi polygons for polling stations. We used WorldPop data to map population density and this ranges from black color=0 to white color=13,542 individuals per square kilometer. Detailed methodology is provided in Section 3.2.

A.5 Receipts, revenues, and average spending across store types

Storetype	**Receipts**		**Revenues**	
	Total	%	Total	%
Small	164,965,919	60.8	7,929,075,278	43.9
Medium	36,492,122	13.4	2,586,427,568	14.3
Large	70,059,171	25.8	7,552,238,942	41.8
Total	271,517,212	1	18,067,741,788	1

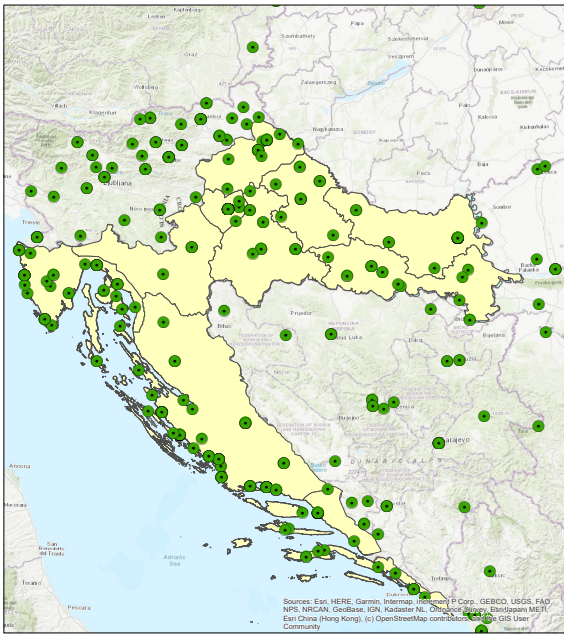
Note: Column 1 is in number of receipts. Column 2 is in Croatian kunas.

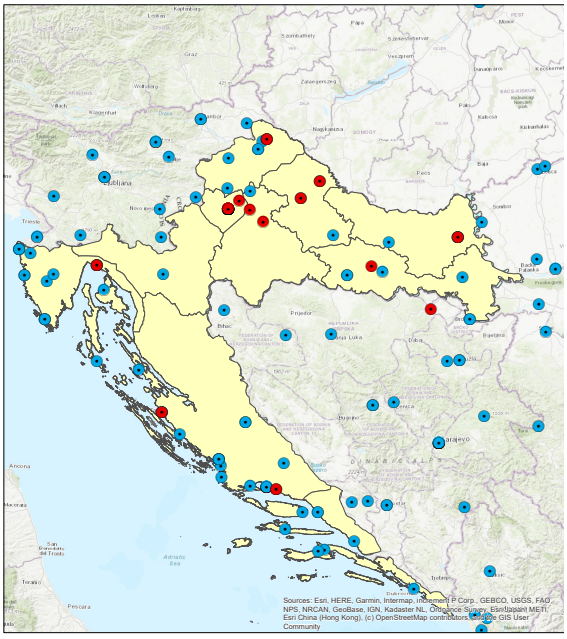
A.6 Number of stores visited per consumer for the entire period



Note: The graph shows the frequency distribution of the number of unique stores that the loyalty card holders visit between January 2015 to August 2016. Approximately 50% of card holders visit only one stores (small, medium, and large) for all of their shopping needs during the one and a half year study period. Of those who visit two or three stores 70% of their visits are to only one store. Overall, 83% of card holders visit only up to three stores(small, medium, and large) for all of their shopping needs.

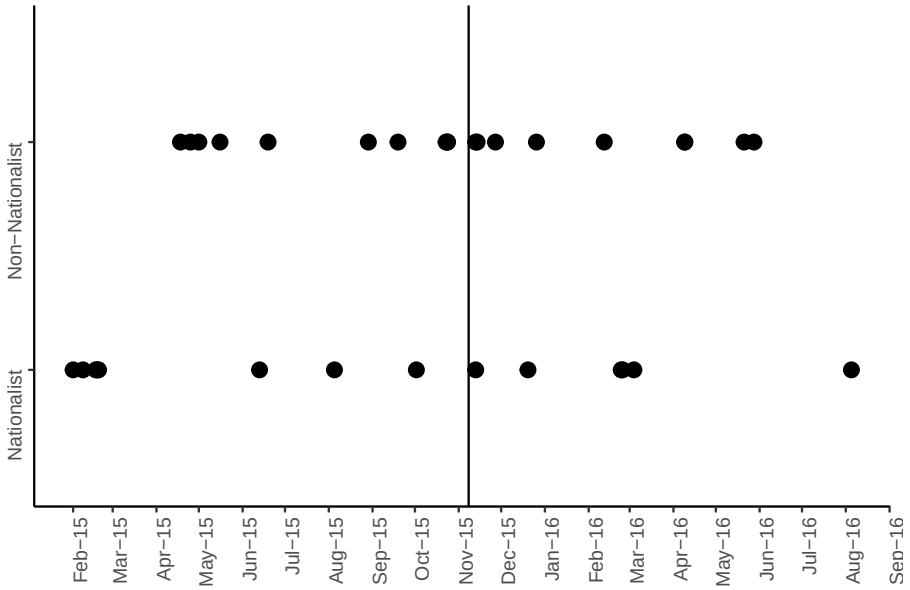
A.7 Concert Locations





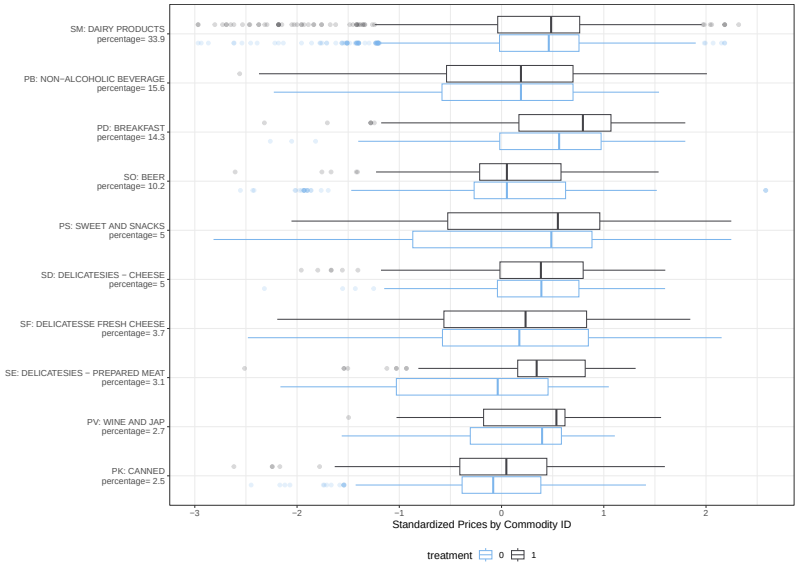
Note: The first figure shows the full set of major performances in the region during 2015-2016. The second figure shows the nationalist performances in red (Miroslav Škoro) and the non-nationalist performances in blue (Bajaga i Instruktori, Zabranjeno Pusenje, Ana Nikolic, Sasa Matic, Dino Merlin). Every performance by these artists that was within Croatia is in the final analysis.

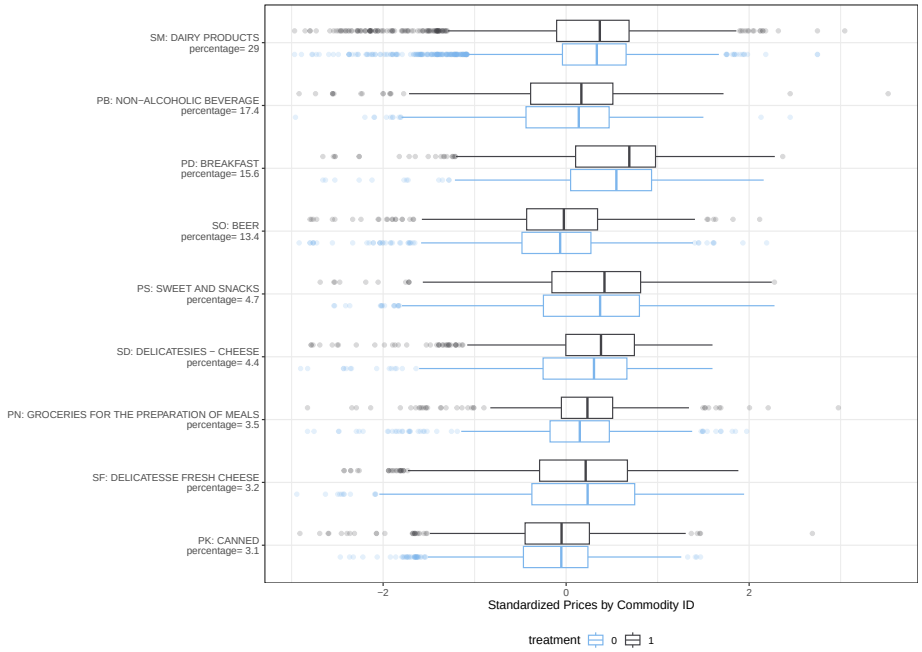
A.8 Temporal Distribution of Concerts



Note: The graph displays a timeline of concerts analyzed in the study, categorizing them as nationalist (Miroslav Škoro) and non-nationalist (Bajaga i Instruktori, Zabranjeno Pušenje, Ana Nikolić, Saša Matić, Dino Merlin). A vertical line marks the election date of November 8, 2015. The timeline doesn't show a clear temporal clustering of nationalist concerts around the election period.

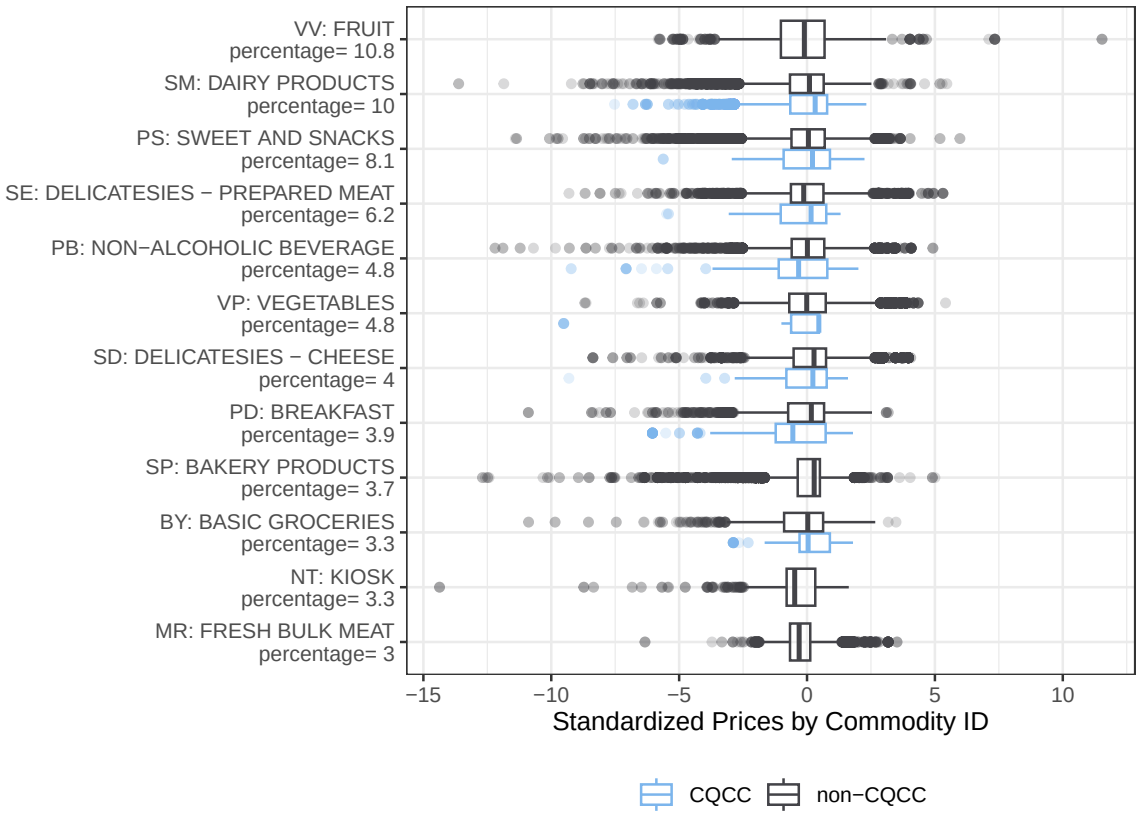
A.9 Balance in prices before and after the concert





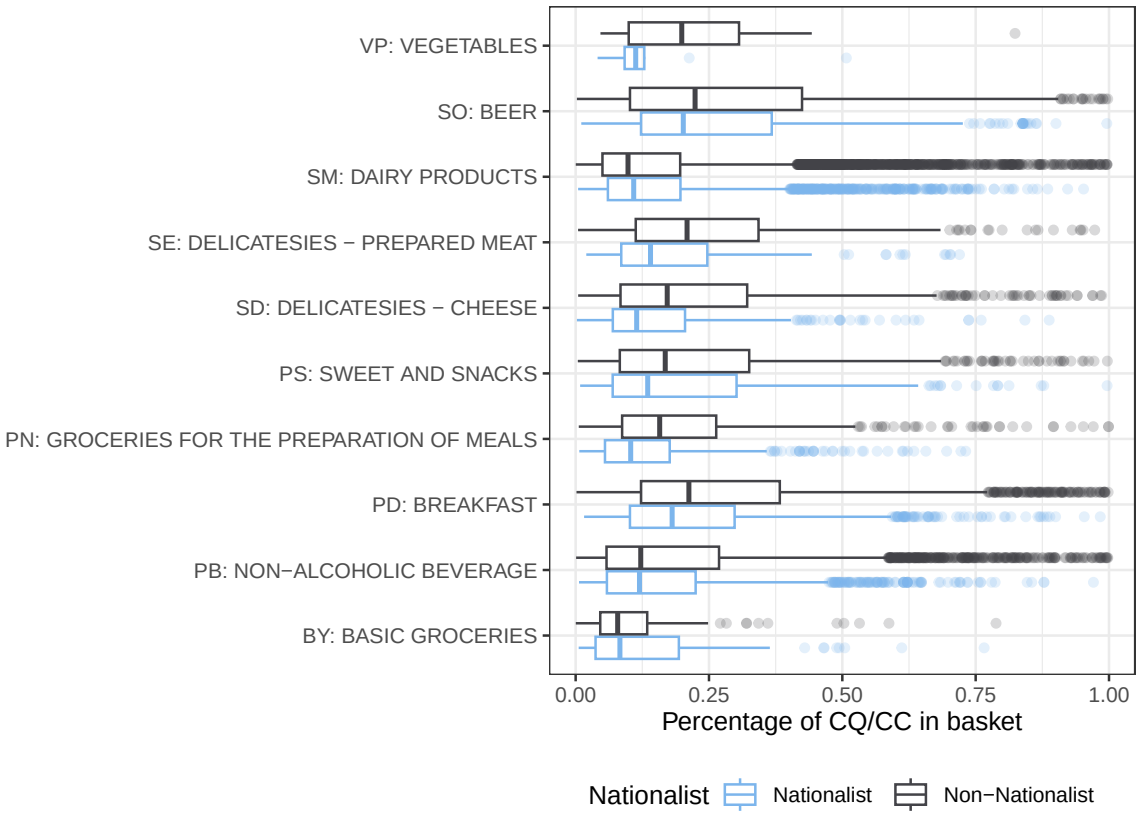
Note: The first figure shows the balance in prices before (0) and after(1) the concert, at the concert location stores. The second figure shows the balance in prices at the home locations (the only difference between the second figure and Figure 3 in section 5.1 is drilling down into only the categories that contain CQCC). All purchases at the concert location and on the day of the concert have been excluded in the RDiT analysis shown in the main results.

A.10 Balance in prices between CQCC and non-CQCC categories at concert location



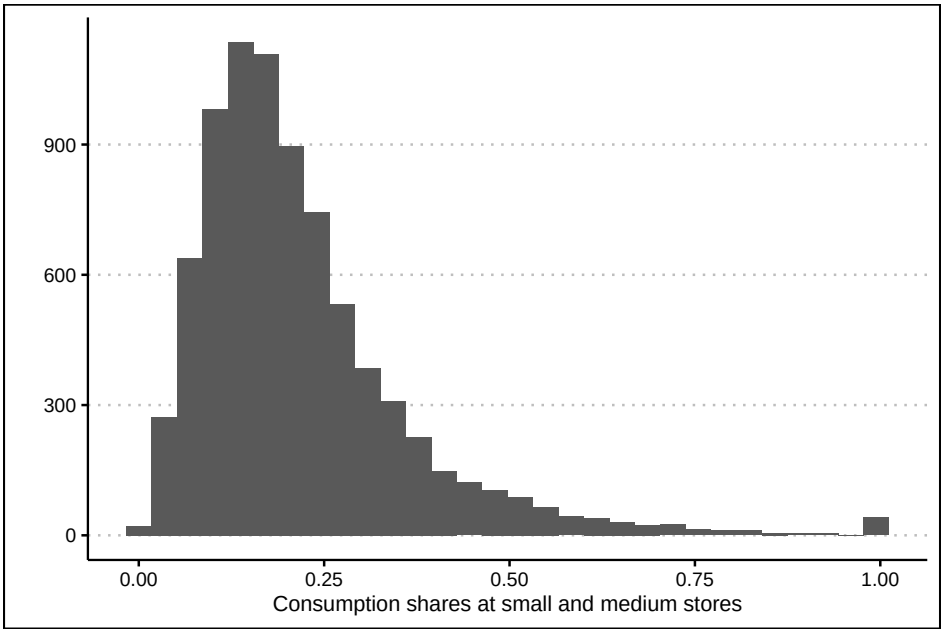
Note: The figure shows the balance in prices between CQCC and non-CQCC at the concert location. All purchases at the concert location and on the day of the concert have been excluded in the RDiT analysis shown in the main results.

A.11 The balance between nationalist and non-Nationalist travelers



Note: The figure shows the percent of CQCC in the baskets of nationalist and non-nationalist travelers in the 60-days pre-concert across product categories.

A.12 Distribution of consumption shares at small and medium stores



Note: This figure shows the distribution of CQ/CC shares at small and medium stores per traveler. CQ/CC percentage per trip is aggregated to create a mean value per customer.

A.13 Placebo RDiT and use of CQ/CC as a measure of nationalism

The following results corroborate using CC/CQ as a proxy of nationalist identity. In addition to the results presented in Table 4, we examine whether there are shifts in consumption post-treatment by any other way of categorizing nationalist goods. Below, we see no impact of classifying goods based on country of origin. Even Croatian-made goods, when not accompanied by the CQ/CC label, do not demonstrate any surges post-treatment.

Table 8: RDiT results for nationalist travelers when categorizing goods by other labels

	Europe		Serbia	
	Conventional	Robust	Conventional	Robust
Coefficient(τ)	-0.010	-0.013	0.037	0.042
SE	0.009	0.011	0.022	0.026
z	-1.083	-1.206	1.636	1.569
p>$\|z\|$	0.279	0.228	0.102	0.117
95% CI	[-0.030,0.009]	[-0.036,0.009]	[-0.007,0.081]	[-0.011,0.095]
N	29,255		3,926	
RDD bandwidth(h)	18.06		13.22	
Bandwidth bias(b)	33.95		25.21	
	Bosnia and Herzegovina		Croatian but not CQ/CC	
	Conventional	Robust	Conventional	Robust
Coefficient(τ)	0.015	0.017	0.008	0.010
SE	0.019	0.022	0.005	0.006
z	0.795	0.759	1.547	1.694
p>$\|z\|$	0.426	0.448	0.122	0.090
95% CI	[-0.022 , 0.053]	[-0.027 , 0.062]	[-0.002 , 0.020]	[-0.002 , 0.023]
N	4,562		82,505	
RDD bandwidth(h)	17.40		12.65	
Bandwidth bias(b)	30.40		25.72	

Note: Column 1 and 2 show the local polynomial and covariate adjusted point estimations of τ average treatment effects at the cutoff in our sharp-RD setting. We also report robust bias-corrected average treatment effects and standard errors. Here the outcome of interest Y_i is the percentage of CQ/CC goods in a traveler's basket. X_i is the running random variable—i.e., days to concert, which determines treatment assignment for each traveler in the sample, and T_i is the treatment status—i.e., before ($T_i = 0$) or after ($T_i = 1$) the concert. We report the Mean Squared Error (MSE) optimal bandwidth (h) and the bias bandwidth (b), which are used for conventional and robust calculations, respectively. We used day week, and customer ID FE for every column. This analysis covers 3,826 nationalist travelers and only includes shopping at home locations. All shopping on the concert day is excluded. Europe includes Austria, Belgium, Switzerland, Czechia, Germany, Spain, Hungary, Italy, Netherlands, Poland and Slovenia. The rest of the European countries are under 1% of the originating location in our product dataset.

A.14 Treatment effect heterogeneity by pre-concert CQ/CC consumption in non-nationalist travelers

Table 9: Heterogeneous treatment effects: Non-nationalistic travelers who have an below-median consumption of CQCC products for the pre-concert period vs those with above median consumption

	Above average CQCC attendees		Below average CQCC attendees	
	Conventional	Robust	Conventional	Robust
Coefficient(τ)	-0.019	-0.021	-0.003	-0.003
SE	0.015	0.018	0.008	0.009
z	-1.191	-1.114	-0.392	-0.313
p>$\|z\|$	0.196	0.267	0.695	0.754
95% CI	[-0.050 , 0.010]	[-0.056 , 0.015]	[-0.019 , 0.013]	[-0.022 , 0.016]
N	19,689		17,985	
RDD bandwidth(h)	11.92		12.26	
Bandwidth bias(b)	26.62		20.78	

Note: The table shows heterogeneous treatment effects observed in our sample of nationalist travelers. Columns 1 and 2 show the conventional and robust point estimations of τ average treatment effects at the cutoff in our sharp-RD setting. Here the outcome of interest Y_i is the percentage of CQ/CC goods in a traveler's basket. X_i is the running random variable—i.e., days to concert, which determines treatment assignment for each traveler in the sample, and T_i is the treatment status—i.e., before ($T_i = 0$) or after ($T_i = 1$) the concert. We report the Mean Squared Error (MSE) optimal bandwidth (h) and the bias bandwidth (b), which are used for conventional and robust calculations, respectively. We used day week, and customer ID FE for every column. This analysis only includes shopping at home locations.

A.15 Relationship between right-wing vote share from the closest polling station and CQ/CC percentage at the store level

Table 10

	Dependent variable:
	Right-wing vote share
CQCC percent	1.209***
	(0.335)
Constant	0.183***
	(0.026)
Observations	8,303
Adjusted R^2	0.001
Residual Std. Error	0.734 (df = 8301)
F Statistic	13.028*** (df = 1; 8301)
Note:	*p<0.1; **p<0.05; ***p<0.01

Note: The table shows the correlation between the average CCCQ percent in the basket at the store level and right-wing voting in the nearest polling station.

A.16 Screenshots captured from social media from nationalist concerts

These images were captured from social media but were eventually taken down by moderators.

Figure 12: Spirit of a nationalist event

A.17 RDiT analysis excluding the day before and the day after the concert

In addition to the event study analysis, the results below demonstrate that the effects persist even after excluding the days before and after the concert. This should ameliorate any concerns about using the concert day as the cutoff for the RDiT analysis.

Table 11: Results are robust to excluding the day before, the day of the concert and the day after the concert

	Conventional	Robust
Coefficient(τ)	0.025	0.029
SE	0.0125	0.014
z	2.011	2.120
p>$\|z\|$	0.044	0.034
95% CI	[0.001,0.051]	[0.002,0.058]
N	22,066	
RDD bandwidth(h)	15.61	
Bandwidth bias(b)	34.73	

Note: The table shows heterogeneous treatment effects observed in our sample of nationalist travelers. Columns 1 and 2 show the conventional and robust point estimations of τ average treatment effects at the cutoff in our sharp-RD setting. Here the outcome of interest Y_i is the percentage of CQ/CC goods in a traveler's basket. X_i is the running random variable—i.e., days to concert, which determines treatment assignment for each traveler in the sample, and T_i is the treatment status—i.e., before ($T_i = 0$) or after ($T_i = 1$) the concert. We report the Mean Squared Error (MSE) optimal bandwidth (h) and the bias bandwidth (b), which are used for conventional and robust calculations, respectively. We used day week, and customer ID FE for every column.

A.18 Thompson and Bulić Results

Table 12: Results for Thompson

	Conventional	Robust
Coefficient(τ)	0.027	0.029
SE	0.0256	0.0304
z	1.063	0.944
p>$\|z\|$	0.288	0.345
95% CI	[-0.023,0.077]	[-0.031,0.089]
N	3704	
RDD bandwidth(h)	18.32	
Bandwidth bias(b)	31.16	

Note: The table shows the RDD estimates for Thompson performances. Here the outcome of interest Y_i is the percentage of CQ/CC goods in a traveler's basket. X_i is the running random variable—i.e., days to concert, which determines treatment assignment for each traveler in the sample, and T_i is the treatment status—i.e., before ($T_i = 0$) or after ($T_i = 1$) the concert. We report the Mean Squared Error (MSE) optimal bandwidth (h) and the bias bandwidth (b), which are used for conventional and robust calculations, respectively. We used day week, and customer ID FE for every column.

Table 13: Results for Mate Bulic

	Conventional	Robust
Coefficient(τ)	-0.0241	-0.0268
SE	0.0142	0.0171
z	-1.699	-1.570
p>$\|z\|$	0.089	0.116
95% CI	[-0.052,0.004]	[-0.060,0.007]
N	18,164	
RDD bandwidth(h)	14.64	
Bandwidth bias(b)	25.54	

Note: The table shows the RDD estimates for Mate Bulic performances. Here the outcome of interest Y_i is the percentage of CQ/CC goods in a traveler's basket. X_i is the running random variable—i.e., days to concert, which determines treatment assignment for each traveler in the sample, and T_i is the treatment status—i.e., before ($T_i = 0$) or after ($T_i = 1$) the concert. We report the Mean Squared Error (MSE) optimal bandwidth (h) and the bias bandwidth (b), which are used for conventional and robust calculations, respectively. We used day week, and customer ID FE for every column.

A.19 Difference in Difference Results

How does attending a nationalist concert affect CQ/CC consumption *amongst travelers*? The DID design compares travelers to nationalist concerts to travelers of non-nationalist concerts.

$$Y_{it} = \alpha + \theta G_i + \gamma I_t + \beta(G_i \times I_t)$$

Here $Y_{i,t}$ is the outcome of interest i.e the percent of CQ/CC for individual i at time t. In this basic DID setup we have only one pre-treatment period i.e $t = 0$ and $t = 1$ is the post-treatment period. The treatment group indicator G_i which is 0 for non-nationalistic travellers and 1 for nationalist travellers. Time indicator I_t, which is one if post-treatment and 0 otherwise. The β coefficient on the interaction between the treatment group and the time indicator gives us the DID estimator τ_{DID}.

Table 14: Difference in Difference estimates for nationalistic as compared to non-nationalistic travellers attending concerts

	Base	Individual covariates	Day FE	Individual FE
Post Concert Dummy	0.001	0.001	0.001	0.001
	(0.003)	(0.003)	(0.003)	(0.003)
Nationalistic Traveller	-0.014^{***}	-0.015^{***}	-0.026^{***}	-0.034
	(0.003)	(0.003)	(0.006)	(0.181)
Post Concert Dummy:				
Nationalistic Traveller	0.020^{***}	0.020^{***}	0.020^{***}	0.020^{***}
	(0.005)	(0.005)	(0.005)	(0.005)
Constant	0.201^{***}	0.196^{***}	0.193^{***}	0.093
	(0.002)	(0.004)	(0.005)	(0.072)
Observations	27,845	27,736	27,736	27,736
R^2	0.001	0.002	0.003	0.422
Adjusted R^2	0.001	0.002	0.002	0.182
Residual Std. Error	0.186	0.185	0.185	0.168
	(df = 27841)	(df = 27729)	(df = 27724)	(df = 19585)

*p<0.1; **p<0.05; ***p<0.01

Note: The dependent variable is the percentage of CQ/CC consumption. The columns show the difference in difference estimates for nationalistic as compared to non-nationalist travellers for two weeks before and after a concert (1) Simple difference-in-difference baseline (2) Baseline with individual-level covariates (3). Baseline with individual-level covariates and day week fixed effects (4) Baseline with individual-level covariates, day week fixed effects, and individual fixed-effect

A.20 Event Study Results

We conduct an event-study analysis to demonstrate that the change in CQ/CC consumption shows a spike only amongst travelers attending nationalist concerts. This is akin to a DiD design with staggered treatments where the timing of the treatment assignment can vary across units. We estimate the following non-parametric difference in difference model:

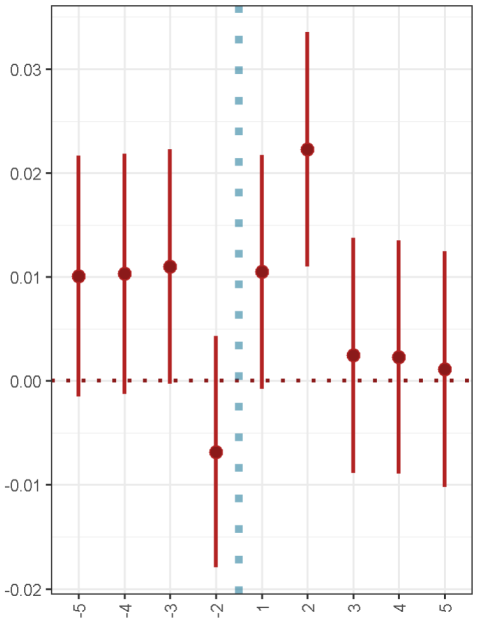
$$Y_{i,t} = \beta_0 + \sum_{w=-5}^{w=5} \beta_{N_w}(W_w \times N_i) + \sum_{w=-5}^{w=5} \beta_{NN_w}(W_w \times NN_i) + \sum_{w=-5}^{w=5} \beta_{NT_w}(W_w) + \delta_i + \phi_t + d_t + \epsilon_{i,t}$$

Here $Y_{i,t}$ is the outcome of interest i.e the percent of CQ/CC for customer i in trip t. N_i and NN_i are binary variables that indicates if a traveller went to a nationalistic or non nationalist concert. The main coefficients of interest are the interaction term β_{N_w} and β_{NN_w} shown below which give you the difference for nationalistic and non nationalistic concert goers in each week (W_t) relative to non travellers and reference week (-1). β_{NTw} denotes the difference in relative weeks compared to the omitted week for non travellers. ϕ_t and δ_i are the week and customer fixed effects. We also include controls for 'day of the week' (d_t) and week of the year fixed effects.

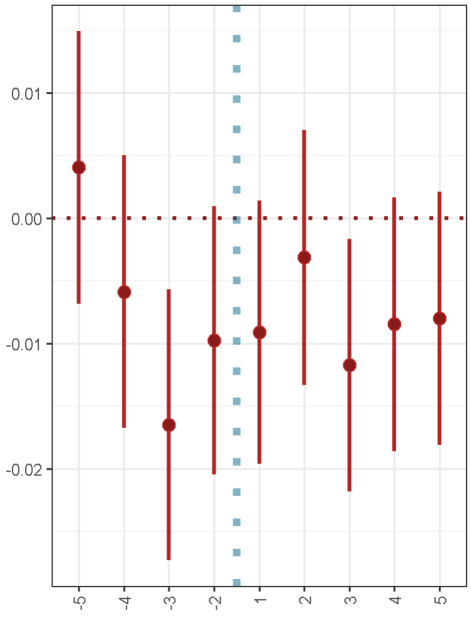
Here β_N for all time periods $n > 0$ represents the average effect of the nationalist concert n weeks after it has occurred. We expect that we should find evidence of $\gamma_n > 0$ for a few weeks after the concert but no such effects for β_n

Figure 13: Event study graphs

(a) Nationalist Travelers



(b) Non-Nationalist Travelers



Note: The graph presents the changes in CQ/CC consumption as regressed on a set of week dummies around the "event," i.e., nationalist concert. Thus the graph shows the changes in CQ/CC consumption over time compared to a random sample of non-concert going shoppers drawn from the home locations of travelers.

B Appendix

B.1 Nutrition Analysis

We utilized the FitnesPal app and gathered nutrition data from product packaging for approximately 12,000 products, depending on the specific product category. We collected over 50 product characteristics for each product, with the most common nutritional facts being protein, fat, carbohydrates, and dietary fibers. Additionally, we calculated the variable 'price per measure,' which standardizes the price in Croatian Kunas for kilogram, piece, and liter measurements.

Figure 1 illustrates the average proportion of CQ/CC products sold within each category from January 1, 2015, to August 1, 2016. In Table 15, we analyzed nutritional data for product categories with the highest percentage of CC/CQ products. We compared CQ/CC and non-CQ/CC products within each category based on their nutritional content and price per kilogram, liter, or piece. Nutritional content is measured in grams of protein, fat, carbohydrates, and dietary fiber per 100 g/ml product.

Our analysis revealed no systematic differences between CQ/CC and non-CQ/CC products within each product category. On average, CQ/CC products had higher prices in non-alcoholic beverages and sweet/snack categories but lower prices for dairy products and beer. Similarly, regarding nutritional content, the levels of the four primary nutritional groups (protein, carbohydrates, fat, and dietary fibers) are higher for CQ/CC products in some categories and lower in others. Few of these differences are statistically significant at the 95% level in this sample.

It's essential to clarify that we are not asserting that there are no taste or flavor distinctions at a granular product level, as such differences often exist. Instead, our analysis shows that the disparities between CQ/CC and others products are not driven by systematic distinctions in nutritional content, such as low-fat or high-protein options, or price.

Table 15: Nutrition Analysis on Product Level

(a) Dairy products

	mean	sd	count
NON-CCCQ			
Protein	10.344	16.059	499
Fat	14.585	21.373	519
Carbs	15.859	20.157	483
Fibers	4.687	9.526	359
pricepmeasure	31.697	29.849	238
CCCQ			
Protein	6.395	13.493	39
Fat	11.092	22.060	39
Carbs	11.167	18.900	39
Fibers	8.184	15.205	13
pricepmeasure	12.623	10.106	39
Total			
Protein	10.058	15.909	538
Fat	14.341	21.420	558
Carbs	15.508	20.086	522
Fibers	4.809	9.770	372
pricepmeasure	29.011	28.693	277
N	617		

(b) Non-alcoholic Beverages

	mean	sd	count
NON-CCCQ			
Protein	9.322	16.887	388
Fat	7.958	15.029	388
Carbs	17.656	21.459	440
Fibers	4.099	7.988	274
pricepmeasure	17.673	31.208	321
CCCQ			
Protein	18.515	30.800	33
Fat	4.273	14.932	33
Carbs	43.719	39.106	32
Fibers	1.526	3.405	19
pricepmeasure	34.568	23.910	23
Total			
Protein	10.043	18.470	421
Fat	7.669	15.036	421
Carbs	19.423	23.935	472
Fibers	3.932	7.796	293
pricepmeasure	18.802	31.035	344
N	611		

(c) Beer

	mean	sd	count
NON-CCCQ			
Protein	19.705	28.775	78
Fat	12.295	18.012	88
Carbs	19.125	21.860	73
Fibers	4.549	9.168	82
pricepmeasure	25.987	15.243	63
CCCQ			
Protein	2.700	4.644	10
Fat	7.929	16.818	14
Carbs	7.000	10.371	10
Fibers	5.583	14.482	12
pricepmeasure	16.730	3.207	8
Total			
Protein	17.773	27.650	88
Fat	11.696	17.836	102
Carbs	17.664	21.146	83
Fibers	4.681	9.906	94
pricepmeasure	24.944	14.681	71
N	165		

(d) Sweets and Snacks

	mean	sd	count
NON-CCCQ			
Protein	12.536	17.699	1800
Fat	14.851	17.665	1860
Carbs	34.072	28.696	1767
Fibers	5.262	10.686	1549
pricepmeasure	98.672	84.902	616
CCCQ			
Protein	6.264	5.875	22
Fat	24.774	20.096	23
Carbs	46.777	21.911	22
Fibers	4.389	5.894	9
pricepmeasure	135.600	71.354	18
Total			
Protein	12.460	17.616	1822
Fat	14.972	17.724	1883
Carbs	34.228	28.652	1789
Fibers	5.257	10.663	1558
pricepmeasure	99.720	84.722	634
N	2055		