Boycott or Buycott?: Internal Politics and Consumer Choices

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BOYCOTT OR *BUYCOTT*?: INTERNAL POLITICS AND CONSUMER CHOICES[1]

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Abstract

Do political tensions affect economic relations? In particular, does politics significantly affect consumer choices? Firms are often threatened by consumer boycotts that pretend to modify their business strategies and behavior. Sometimes these are caused by general political conflicts. The main objective of the paper is to study the consequences of political conflicts between Spain and Catalonia (a region of Spain) and the subsequent boycott calls on sales of Catalan sparkling wine (*cava*) in the aggregated Spanish market and also in different regions of the country. We use data from sales of sparkling wine in supermarkets and similar outlets. To determine with precision the boycott period we use data on the number of news about the issue that appeared in the main national Spanish daily newspapers. Although we present some preliminary evidence that the boycott calls affected the market share of Catalan *cava* in Spain, the results of our main econometric exercise indicate that, once we control for the time trends of the different varieties of sparkling wine, the boycott effects cease to be significant in the aggregate Spanish market. This does not necessarily mean that the boycott calls did not have any significant impact, because we actually find that the effects are very different in each regional market. As a matter of fact, our results indicate that the insignificant impact of the boycott calls at the Spanish aggregate level is a consequence of the combination of a negative impact of the boycott on sales of Catalan *cava* in some regions and the opposite effect in the Catalan market.

Keywords: Consumer boycott, wine sales, Political Economy

JEL classification codes: E400, D740, F140, J640

1. Introduction

Do political tensions affect economic relations? In particular, does politics significantly affect consumer choices? Firms are very often threatened by consumer boycotts that pretend to modify their business strategies and behavior with all sorts of different objectives held by boycotters (defense of the environment, protection of workers' rights, etc.).[2] Thus, consumers are called to change their purchase behavior in order to inflict economic harm to firms and convince them to modify their actions, which consumers may dislike for some reason.

Often things get more complicated than this and boycotts on firms are caused by more general political conflicts. A conspicuous example of this kind of boycotts arises when, due to interstate tensions, consumers from one country are called to boycott products imported from another country.[3] There are many instances of this kind of boycotts and economists have long disputed about their likely economic impact. On the one hand, free riding problems, common to any collective action phenomenon, are an obvious hurdle to significantly changing individual behavior.[4] On the other hand, though, consumers are sometimes led by their *animosity* against products and firms coming from a country that has somehow *offended* them and the country they belong to.[5]

There are several papers in the literature that try to measure the actual impact of boycott calls due to political conflicts on the international stage on patterns of consumer purchases of different products (see references below). However, to the best of our knowledge there is not any academic study which deals with the effects of boycott calls due to political tensions within a state, which is precisely the objective of our paper. We will concentrate on the examination of the consequences of boycott calls during episodes of intrastate political tensions in Spain on sales of Catalan sparkling wine (*cava*) in the Spanish market.

Catalonia is a relatively rich region in the northeastern corner of Spain, a southern European country (see Map 1). It has its own language and a long history of political conflicts with Spain about matters such as culture, language, education, taxation and public investments, autonomy and self-determination, etc. (see Paluzie, 2010). From time to time, when the political temperature rises, this leads to demands for greater autonomy (especially related to fiscal matters) and even secession from some sectors

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[2] Data cited in John and Klein (2003) show that 54% of top global brands are affected at some point by boycott calls. The increasing importance of social networking on the internet has contributed to make this a growing phenomenon.

[3] Friedman (1999) refers to this general kind of boycotts as *surrogate* or indirect boycotts. These are cases in which the offending party is not directly accessible to the boycotters, so they choose as target a different party which they believe can be forced to bring pressure to bear on the offending party.

[4] See John and Klein (2003) for a detailed analysis of the free-riding problem in the case of boycotts.

[5] The concept of *animosity* in international marketing is analyzed in Klein, Ettenson and Morris (1998). See Riefler and Diamantopoulos (2007) for a literature review of the subject.

of Catalan society. One of the reactions of some parts of Spanish society to these political demands from Catalan politicians and electorate has been to call for consumer boycotts against Catalan products.[6] Since more than 40% of Catalan exports go to Spain, the general idea behind this strategy is that, by hurting Catalan firms' economic interests, enough political pressure can be applied to Catalan political leaders and electorate to make them renounce their political pretensions.

**Map 1. Catalonia, Spain and Europe**

There have been several events that have spurred calls for this kind of boycotts lately (usually with very limited general impact): political elections in Catalonia and the setting up of new Regional Governments, negotiations between the Spanish and the Catalan governments on fiscal revenue sharing, the long process of political debates and negotiations that led to the approval of the new Statute of Autonomy for Catalonia (home-rule law) during the period 2005-2010 and, more recently, the declared intention of the Catalan Parliament to hold a self-determination referendum in November 2014. As a matter of fact, one of the boycott episodes with greater impact in the media took place from 2005 on, after the approval of the project of a new Statute of Autonomy in the Catalan Parliament (September 30th) and its subsequent negotiation with the Spanish political parties in the Spanish Parliament. This process triggered what some observers called the "*cava* boycott" (*cava* is the name of a popular sparkling wine which is mainly, but not only, produced in Catalonia). Although the call from the organizers was for a general boycott on many Catalan products, the truth is that a great deal of the mass media attention was devoted to this particular item. Figure 1, for instance, presents the number of news mentioning the Catalan *cava* boycott that appeared in the five leading Spanish newspapers during our period of interest (2001-2012).[7] [8] As it is clear from the figure, the boycott started at the end of 2004 (see

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[6] This has sometimes caught the attention of international media (see, for example, *New York Times* "A War of Words Over Catalonia Sets Off and War of Wine", March 13, 2006 and "As Secession Talks Swells in Catalonia, Business Leaders Remain Wary of Costs", October 16, 2013).

[7] As a matter of fact, there was an earlier precedent of a cava boycott which took place at the end of 2004. On November 26, a leading Catalan politician declared that, following a series of conflicts with the Spanish Government, Catalan individuals and organizations should withdraw their support to the bid of Madrid to organize the Olympic Games in 2012. This led to a general

footnote 7), had a sizeable impact in 2005 and 2006, becoming less relevant in 2007. From that year on, it can be considered that the presence of the boycott in the news was merely residual. To the best of our knowledge, there is not any academic study dealing with the consequences of this particular episode of boycott on sales of *cava* in the Spanish market. Our analysis will take into consideration important changes in the market structure of the sector that took place at the time and also affected sales of Catalan *cava*, such as the emergence of new forms of commercializing the cheapest types of *cava* (the growth of sales under private labels created by supermarket and hypermarket chains, for instance), the secular decline of the share of Catalan *cava* in the market for sparkling wine in Spain during the period (observed both before and after the boycott was in place) and the increase of consumption of French champagne, and the clear orientation of Catalan producers to devote a greater share of their production toward exporting to international markets.

Figure 1. Number of news that mention the Catalan *cava* boycott in five leading Spanish newspapers
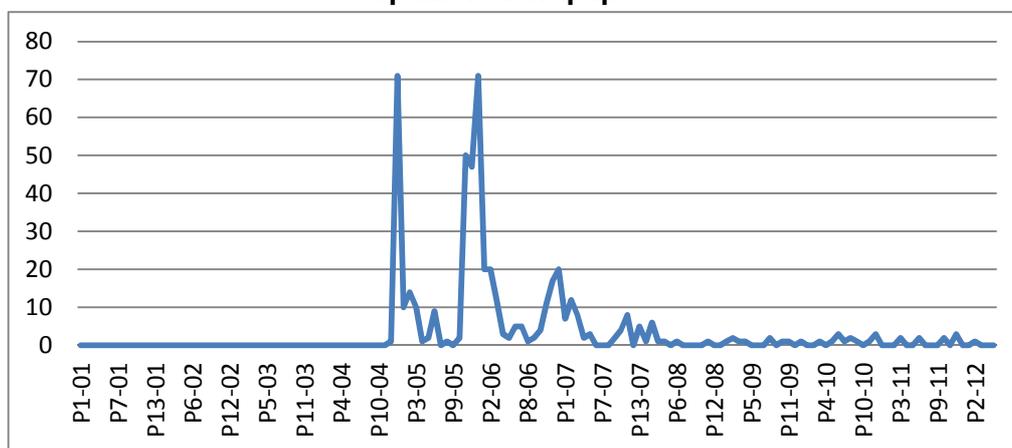
The main objective of the paper is to study the consequences of the boycott on sales of Catalan *cava* in the aggregated Spanish market and also in different regions of the country. There are several papers in the literature that study the impact of consumer boycotts due to international political disputes on different product sales. Several of them use, like ours, data of direct sales to consumers. Thus, Ashenfelter, Cicarella and Shatz (2007) and Chavis and Leslie (2009) study the case of French wine in the US during the Iraq war in 2003, which the French government strongly opposed. Pandya and Venkatesan (2013) look at the same historical episode, but concentrate on changes on a more diverse set of product categories sold in supermarkets. Hong et al (2011) examine the case of French automobiles in China during the Beijing Olympic Games in 2008, after a series of political clashes between the Chinese and French governments on the political situation in Tibet and human rights issues. Clerides, Davis and Michis (2013) study the case of American soft drinks and fabric detergent in seven Arab countries during the Iraq war, which unleashed a wave of Anti-American

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call to boycott Catalan products in Spain. The impact of this call on news about boycotts on *cava* is also clearly reflected in Figure 1.

[8] Each observation in Figure 1 corresponds to the number of news published during a four-week period.

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sentiment there. Fouka and Voth (2013) look at German car sales in Greece during the Euro crisis when Greek and German governments clashed over the terms of the European Union bailout of Greece.[9] A different approach is taken in Michaels and Zhi (2010), Davis and Meunier (2011), and Fuchs and Klann (2013) which focus on how political conflict and the worsening of public attitudes in different countries (sometimes even implying calls for boycotts) affect aggregate bilateral economic relationships (trade, investment flows, etc.). A recent paper by Fisman, Hamao and Wang (2013) study the impact of political tensions between Japan and China and subsequent boycott calls on the value of firms. As we have already mentioned, a common characteristic of all these studies is that they analyze boycotts triggered by political conflicts at the international level. Our paper instead deals with a different sort of consumer boycott, which has its origin in internal political and territorial struggles within Spain. To our knowledge this is the first paper that analyzes the impact on consumer purchases of a boycott motivated by strictly internal political problems, although it does it with a methodological approach similar to some of the papers mentioned above. Studying this and similar cases is relevant because it is not immediate that conflicts at national or international levels should give rise to the same type of reactions by consumers. One could argue, for instance, that the levels of animosity that lead to boycotts could be higher if the target companies are seen as foreign, making their success likelier in cases of international disputes.

The main body of data we use comes from Symphony IRI Group (Spain) and consists on four-week sales (revenues in euros and quantities in litres) in the Spanish market of different types of *cava* and related products (sparkling wine) running from 2001 to 2012. The data correspond only to sales in supermarket and similar outlets, overlooking other important distribution channels such as hotels, restaurants and more specialized shops. Moreover, the data is disaggregated for eight different territorial regions within the Spanish market. To determine with high precision the boycott period we use data on the number of news which mention the issue of the boycott and appear in the main national Spanish daily newspapers.

Although we present some preliminary evidence, supported by our data, that the boycott calls affected the market share of Catalan *cava* in the Spanish market, the results of our main econometric exercise indicate that, once we control for the time trends of the different varieties of sparkling wine, the boycott effects cease to be significant in the aggregate Spanish market. This does not necessarily mean that the boycott calls did not have any significant impact, because we actually find that the effects are very different in each regional market within Spain. As a matter of fact, our results indicate that the insignificant impact of the boycott calls at the Spanish aggregate level is a consequence of the combination of a negative impact of the boycott in some regions and a positive impact in the Catalan market. Thus, the boycott calls apparently triggered different consumers' reactions in different territories. While consumers in some Spanish regions followed it and reduced their purchases of Catalan *cava*, it seems that there was also an anti-boycott reaction of Catalan consumers which led them to increase their consumption of the product. The quantitative implications of the analysis are as follows. For the regions that suffered a negative impact, the boycott

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[9] See the table in Appendix 1 for more details about these papers.

amounted to a drop of revenues from sales between 5.8 and 9.8 percent over the period 2004-2007, depending on the region. For the regions that enjoyed a positive impact, the increase in revenues is estimated to be between 7.3 and 8.4 over the same period.

The rest of the paper is organized as follows. Section 2 describes the political background of the *cava* boycott calls, making explicit their timing and possible causes. Section 3 describes the data we use. Section 4 presents our econometric exercises and contains the main results of our work. A final section summarizes the arguments and concludes.

2. Political disputes between Catalonia and Spain and the *cava* boycott

The general issue of the interrelation between economic interdependence (trade and financial flows, migration and workers mobility, etc.) and the existence of political conflicts among different countries has always been of much interest for both economists and political scientists. A great deal of research, for example, has been devoted to establish the relationship between trade and war and military conflicts (a good example of this literature and relevant references can be found in Martin, Mayer and Thoenig, 2008). However, militarized disputes are only an extreme and relatively rare case of tension in the international political arena, which is more characterized by relatively minor events such as disagreements over policy issues, hostility between political leaders and negative public sentiments between citizens and social organizations of different countries. Davis and Meunier (2011) contains a survey of different papers that have addressed the issue of the relationship between economic interdependence and conflict in the field of political economy. Summing up their arguments, two general strands of literature can be highlighted: a) the papers that stress the "politics first" hypothesis, which suggest that the existence of political tensions with other countries may lead governments (and also other social organizations) to adopt policies that reduce mutual economic exchanges; and b) the contributions that put the accent on the "economics first" hypothesis, which emphasizes the fact that economic interdependence reduces conflict so that economics will prevail over politics.

A particular channel by which political hostilities may end up causing lower degrees of economic interdependence among countries is the alteration of consumer choices. Pandya and Venkatesan (2013) (see references therein) describe how the political and emotional reactions to international conflict may drive changes in consumer behavior and trigger waves of animosity against companies and products that consumers relate to a foreign country regarded as hostile. According to their description, political disputes may generate anger, desire for retaliation, and greater willingness to participate in punitive collective actions such as consumer boycotts.[10] This particular type of boycott is sometimes called *surrogate* boycott (see footnote 3). The companies

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[10] There is not much economic literature on consumer boycotts. Friedman (1999) is a general review of the issue. Baron (2001), John and Klein (2003) and Innes (2006) provide a more formal theoretical analysis.

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that are targeted by boycotters are not directly responsible for the *egregious* act that causes consumers' anger and, thus, have a very limited path of action to placate it. Moreover, even though boycott calls are generally directed to all products coming from the offending country, often only a few emblematic and representative items (or companies), very easily recognizable by a vast majority of consumers, end up being penalized in a substantial way.[11] These two circumstances make this class of boycotts particularly arbitrary from a company's point of view but, at the same time, might reduce the motivation of the consumers against the targeted company and the intensity of the boycott actions. Thus, boycotts of this type may also trigger waves of sympathy towards the targeted companies and products, therefore offsetting the boycott main intended effects. There are at least two general causes that may justify this: a) political opinions are not unanimous amongst consumers and, consequently, they do not all share the feeling of offense caused by the political actions of the foreign government. In fact, they may even choose to express their support to those actions through their augmented purchases of the boycotted goods; b) consumers regard the companies targeted by the boycotters as innocent victims of a political situation they did not contribute to create and are not able to terminate.[12]

Although so far we have only referred to political tensions at the international level, the logic of the arguments follows in cases of conflicts that take place within a country. Typically, some consumers may choose to express their disconformity with decisions taken by governments at regional or local level by refusing to purchase goods made by firms located in the geographic area whose governing body or electorate has offended them (Friedman, 1999, refers to many such cases in the United States). This also applies to the specific case we analyze in this paper. As we will see, the source of the political dispute that motivated the boycott call against Catalan goods in general and *cava* in particular was the approval by the Catalan Parliament of a new Statute of Autonomy for Catalonia and its posterior negotiation with the Spanish political parties in the Spanish Parliament, all this in a general historical context in which clashes between Catalan and Spanish governments and political parties had been relatively frequent.

Catalonia is a region in the north-eastern corner of Spain. It has its own language (Catalan, a Romance language) and culture and, since the restoration of democracy in Spain in 1978, has seen reestablished its own autonomous political institutions, which were suppressed by the Francoist military dictatorship after the Spanish Civil War (1936-39).[13] Since then, the political scenario in Catalonia has always had some

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[11] Examples of this type of phenomena abound: French wine and cars, Japanese and German cars, American soft drinks, Danish dairy products, etc. are some of the products most affected when boycotts have been organized against their respective countries of origin.

[12] Sometimes this phenomenon is referred as *buycott*. Ashenfelter, Ciccarella and Shatz (2007) refer to this possibility in the case of the boycott of French wine in the United States during the Iraq war. Many people in the United States were strongly opposed to the war and could have expressed this by modifying their purchases towards French goods.

[13] The Spanish Constitution (approved in 1978) favors a decentralized organization of the state and recognizes the right of regions to autonomy. Catalonia led the devolution process that, in the end, affected all Spanish regions (which are called *autonomous communities*). Broadly speaking, every region has a Statute of Autonomy which, together with the Constitution and other national laws, defines its powers and political organization.

important differences with respect to Spain. From the first election to the Catalan Parliament, held in 1980, to 2003 the regional Catalan government was in the hands of a long-term coalition of two centrist moderate nationalist parties (*Convergència i Unió*), while national Spanish parties, either with right or left wing orientation, always dominated the Spanish government. This motivated a situation in which political and legal disputes about jurisdiction of the governments on different matters, the distribution of fiscal revenues or the degree of devolution considered adequate by both governments were frequent.[14] In 2003 there was a change of government in Catalonia. Three left wing parties formed a new coalition: the regional branch of the Spanish socialist party, a nationalist pro-independence party, and a far left and green party. Nevertheless, this was not the end of the political disputes between the Catalan and the Spanish governments (the latter was conservative before March 2004 and socialist afterwards). In part as a result of this, a general agreement was reached in the Catalan Parliament to approve a new Statute of Autonomy in September 2005 (the three coalition parties plus *Convergència i Unió* agreed on the new proposal). The new law declared that Catalonia was a *Nation* and its basic objectives were to improve the fiscal position and safeguard the jurisdiction of the regional government on matters regarded important such as education. The approval of the new Statute was not very well received in Spain. There were political objections from the main Spanish parties, which considered that devolution was going too far, and also a noisy controversy about whether parts of the new law were contrary to the Spanish Constitution. It was in the middle of this strained political environment that the new Statute had to be discussed, amended and approved by the Spanish Parliament and, then, submitted to referendum to the Catalan electorate in June 2006.

Catalonia is economically the most important region of Spain, accounting for 18.8% of total GDP. It is also a relatively rich region since, with a population that represents only 15.7% of the Spanish total, the level of GDP per capita is substantially higher (19.7%) than average.[15] Higher income and the existing inter-regional redistribution mechanisms in Spain imply that there is a net fiscal transfer from Catalonia to other poorer regions in Spain, which is a matter that also generates a lot of political controversy. Official estimates from the Spanish government for year 2005 indicate that this represented a negative fiscal flow between 8.7 and 6.5% of Catalan GDP, depending on the methodological criterion used for its calculation. This figure was considered excessive for most Catalan political parties, especially considering that the redistribution system in Spain did not respect a rather obvious principle (sometimes referred as the *ordinality* principle): that richer regions with higher income should not lose positions in the ranking of fiscal capacity after equalization (see Paluzie, 2010, and Castells, 2013 for more details on these questions). One of the main objectives of the

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[14] During the period 1981-2014 the Spanish Constitutional Court had to deal with 1034 questions of jurisdiction brought forward by the autonomous communities. Of these, 37% came from the Catalan government (data provided by the Spanish government and available at http://www.seap.minhap.gob.es/publicaciones/centro_de_publicaciones_de_la_sgt/Periodicas.html).

[15] All these data correspond to 2013 and the source is the Instituto Nacional de Estadística (www.ine.es).

new Statute approved by the Catalan Parliament was to correct this situation and reduce the size of the yearly fiscal transfer. This was not well received in Spain and most Spanish political parties and part of the public opinion accused the proposal of lack of solidarity.

It was in the context of this strained political context that boycott calls appeared and were propagated in 2005. As we have seen before, there was a precedent in 2004 motivated by a different political event (see footnote 7). Our understanding is that successive boycott calls are evidence of a clearly deteriorated political climate in the country regarding the relationship between Catalonia and Spain. Although the main boycott calls were generally addressed to a vast variety of Catalan products, the truth is that the media and public attention were mainly devoted to the boycott against a very representative Catalan consumer product, *cava*, so that the boycott has been known as the *cava* boycott. In fact it is difficult to find reports about other products affected by a similar boycott at the time.[16]

Why a consumer boycott? The incident of 2004-05 was not the first of this kind in Spain. For instance, there were similar calls when a Catalan Statute of Autonomy was discussed in 1932, during the democratic period of the Second Spanish Republic (1931-39). Part of the explanation for this may be based on historical circumstances that influence collective attitudes. Catalonia has traditionally been regarded as the "factory" of Spain and Catalan firms and politicians supported protectionist policies in the past. From a political economy view, one could interpret that fiscal transfers from Catalonia were the compensation paid for Catalan producers to the rest of Spain in exchange for market protection from foreign competition. Although this logic does not apply any more (Spain has been part of the European Union since 1986), many in Spain still see the Catalan fiscal transfer as a fair compensation for all the commercial activity undertaken by Catalan firms in the Spanish market. Therefore, any intent of reducing the transfer is seen as a breach of a sort of contract and the obvious retaliation against this is to reduce the purchases of Catalan products. Although the percentage of Catalan exports that go to the Spanish market has gone down rather dramatically in the last twenty five years from 75% in 1987 to 43% in 2012, there still exist a widespread belief that consumer boycotts might be an effective channel to put pressure on Catalan electorate and politicians and make them think twice about some political moves that part of the Spanish population consider contrary to their interests. In any case, this kind of political reactions generated by the relation between Catalonia and Spain seem at odds of what happens in other countries with similar problems (Scotland and the U.K., Québec and Canada, Flanders and Belgium, etc.), where politically motivated boycott calls of this type are unheard of.[17]

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[16] More details about the *cava* boycott and related issues can be found in Cuadras-Morató and Guinjoan (2011) and Guinjoan and Cuadras-Morató (2011).

[17] On a more general basis it may be worth adding that the few studies of Social Psychology in Spain that investigate territorial attitudes and stereotypes conclude that the Spanish population (with the exception of Catalan residents) rank Catalan people as the least likeable (answers to questions such as "How do you like people from…?"). Moreover, Catalan people are the most rejected group of all (answers to question such as "Who would you like least as a coworker?"). The most comprehensive of such studies is Sangrador García (1996).

Was the *cava* boycott effective? Was it equally intense everywhere in Spain? News reports at the time claim that Catalan *cava* producers complained about lower sales, especially around the Christmas campaign in 2005. The media also reflects that the boycott was especially effective in some parts of Spain (Madrid, the political capital in the centre of the country, and Valencia in the Eastern side, are systematically mentioned as the most active places). Contrary to this, there were also indications that purchases of Catalan *cava* in Catalonia increased during the period, which might be evidence that Catalan consumers engaged in some sort of *buycott*. The following two sections of the paper analyze the available data and try to shed some light on these issues.

3. Description and analysis of the data

We use two different sources of data. First, we have data for sales of sparkling wine (*cava* and related products) in the Spanish market. The data comes from Symphony IRI Group (Spain) and correspond to sales of sparkling wine in supermarkets and hypermarkets (the firm collects the information from a universe of approximately 17.000 commercial outlets of this type).[18] These data fits well our research objective, which is to evaluate the impact of political events on the behavior of final consumers. However, it is less adequate to make a precise assessment of the boycott from the producers' point of view, because it leaves out the part of the production which is distributed through hotels and restaurants and also firms that elaborate gifts that companies offer to customers and employees (an important tradition in Spain, especially around Christmas).[19] The data are available both for quantities (litres) and revenues (euros) and consist of observations on sales for 13 four-week periods per year for the period spanning from 2001 to 2012 (although we only have the first four observations for the last year). This is a total of 147 time periods. In comparison with some of the papers mentioned in the Introduction, the relatively large number of years of our sample will allow us to introduce a detailed consideration of the long term time trends observed in the data, which end up being important for some of our results. The data indicate that sales of sparkling wine are highly seasonal in Spain and around 30% of the total value of sales takes place in the last four weeks of the year.

We do not have detailed observations for all brands of sparkling wine in sale in the Spanish market and some of the observations we have correspond to aggregate categories such as "French champagne", private label *cava* (*cava* commercialized under private labels by supermarket chains), non-Catalan *cava*, etc. There are 17 such categories in our database. To avoid confusion we will refer to these categories as

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[18] Different data published by the *Consell Regulador del Cava* (Cava Regulatory Board) shows that around 20% of *cava* is distributed in the Spanish market via hotels and restaurants. The same source indicates that, on average, the data we use in the paper correspond to 44% of all *cava* sold in the Spanish market during the period 2001-2012 (see Appendix 2).

[19] See Nueno (2006), who argues that an important part of the impact of the boycott was due to the behavior of firms in these distribution channels rather than final consumers.

varieties of sparkling wine. A more detailed description of our data can be found in Appendix 2.

For our purposes, the most relevant distinction we will make in the data is between **Catalan *cava***, which we will define as *cava* which is clearly perceived to be produced in Catalonia, and the **rest of sparkling wine**, which includes *cava* produced in other parts of Spain, private label *cava* (although most of it is produced in Catalonia), and other sparkling wines such as French champagne, Granvas wines (natural sparkling wine different from *cava* whose second fermentation takes place not in bottle but in large metallic containers) and others (see Appendix 2 for details). Catalan *cava* has a large, although clearly declining, share in the market for sparkling wine both in revenues and quantities during the period (Table 1). This secular reduction in share is largely due to two different factors: 1) the increase of very cheap *cava* sales commercialized under private labels; and 2) the increase in the sales of French Champagne, a comparatively very expensive product. This observed increasing trend in the consumption of Champagne and the cheapest varieties of *cava* occurs for all the years of our sample, that is, before, during and after the years which we identify as the "boycott years" (see Table 2). It will be crucial for our objectives to disentangle the effects of political tensions and subsequent calls for boycotts during the period 2004-2007 and the long term trend effects we observe for the whole period, whose causes should be attributed to very different factors.

Table 1. Market share of Catalan *cava* (as % of Spain total sparkling wine market)

Year	Revenues (euros)	Quantities (litres)
2001	82.93	77.98
2002	81.64	76.96
2003	80.80	75.21
2004	79.48	73.68
2005	76.10	70.58
2006	73.87	68.18
2007	73.18	65.92
2008	72.01	62.77
2009	71.46	62.14
2010	71.01	62.23
2011	69.96	61.53

Table 2. Market share of French champagne and private label *cava* (as % of Spain total sparkling wine market)

	Revenues (euros)		Quantities (litres)	
Year	Champagne	Private labels	Champagne	Private labels
2001	5.81	7.53	0.89	14.71
2002	6.30	7.12	0.99	14.47
2003	6.71	7.97	1.03	16.87
2004	7.73	8.53	1.16	18.41
2005	9.27	9.07	1.38	19.59
2006	11.06	9.30	1.73	20.89
2007	11.51	9.82	1.87	23.15
2008	11.30	10.91	1.88	25.72
2009	11.67	11.66	1.95	27.53

| 2010 | 12.13 | 11.81 | 2.02 | 27.90 |
| 2011 | 12.79 | 12.44 | 1.99 | 29.01 |

Cava is a sparkling wine which is mainly produced in Catalonia. According to the information released by the *Cava Regulatory Board*, only 159 municipalities in Spain form the area where *cava* can be produced. Of those, 133 are in Catalonia and 26 in the rest of Spain. The most recent available data (2013) on the number of firms producing *cava* reveals that there are a total of 246 companies producing cava, but only 25 of these are located outside Catalonia.[20] Not surprisingly, the share of non-Catalan cava in our data is very small for all years, reaching a maximum in 2007 (Table 3 shows the share of non-Catalan *cava* as percentage of total *cava* sales in our data). Nevertheless, it seems clear that there is a sizeable increase in the relative importance of the non-Catalan cava sales during the period of the boycott (2004-2007).

Table 3. Market share of non-Catalan *cava* (as % of Spain total *cava* market)

Year	Revenues (euros)	Quantities (litres)
2001	0.90	1.02
2002	0.88	1.06
2003	0.74	0.89
2004	0.78	0.94
2005	1.41	1.60
2006	1.55	1.73
2007	1.56	1.84
2008	1.51	1.76
2009	1.54	1.74
2010	1.34	1.50
2011	1.01	1.11

There are several features of the structure of the *cava* sector which are worth mentioning. First, there are two clearly dominant firms, both selling *cava* under different brands, which together have a share much higher than 50% of total sales. Their share of the market, though, has dramatically decreased throughout the period (see Table 4 for a percentage of sales of cava by the two dominant firms in the market). The fact that this fall has been much more acute for quantities than revenues it is a clear indication that the two firms have been concentrating their sales in the higher price segments, probably as a consequence of the growing competition of private label and other brands in the lower end segment. The rest of the sector has a very atomistic structure: there are two median-sized firms (which are clearly specialized in the opposite segments of the market) and a large number of small firms which together have a share of the market for *cava* which is around 5% (in quantities) (see Appendix 2 for a more detailed description of the data).

Table 4. Market share of the two dominant firms (as % of Spain total *cava* market)

Year	Revenues (euros)	Quantities (litres)
2001	79.48	76.24
2002	78.87	76.01
2003	77.84	73.54

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[20] All these (and additional) information can be found at http://www.crcava.es/english/inicio.htm.

2004	76.49	71.02
2005	73.03	66.80
2006	71.93	65.77
2007	70.70	63.49
2008	69.71	60.44
2009	67.48	57.07
2010	66.00	54.37
2011	64.54	51.54

Second, the main source of growth of the sector lately has been the foreign market. The sector exports 66.4% of its production (2012), but this percentage was only 51.6% in 2001 and 33.9% in 1990. Germany, the United Kingdom, Belgium, the United States and Japan are the main export destinations.[21] This, together with the fact that more or less half of the domestic sales take place in the Catalan market, make the potential impact of a boycott in the Spanish market much less important today than a few years ago.

The data is also disaggregated by eight different territories in Spain (see Map 2) which include the two main metropolitan areas (Madrid, in the geographical centre of Spain and political capital of the country, and Barcelona, the main city in the region of Catalonia) and six other regions which group all Spanish provinces (except the Canary Islands) according to geographical criteria which do not correspond exactly to administrative and political divisions in Spain.

Map 2. Spanish regions for disaggregated data
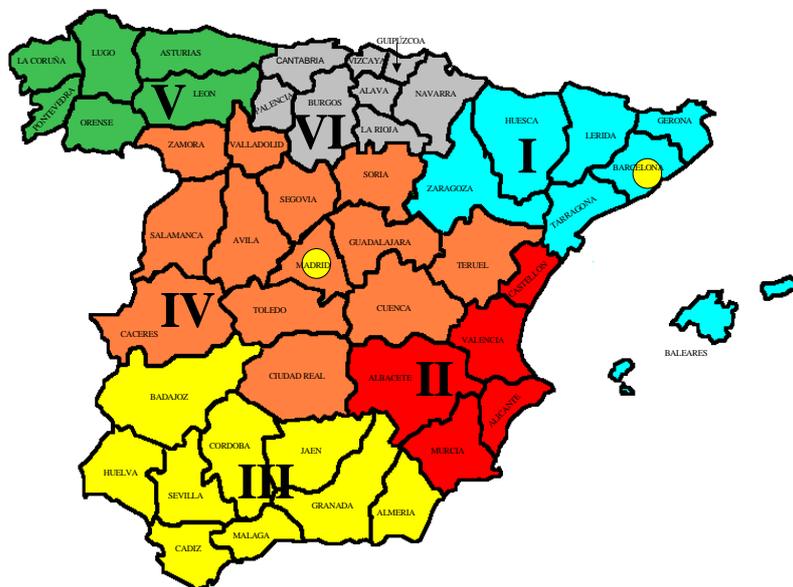
These regions have very different relative size with respect to the whole Spanish market for sparkling wine. Table 5 shows the relative size of each region in our data. This disaggregation of the data will be very useful for our purposes, since news reports

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[21] Information released by the *Cava Regulatory Board*.

at the time of the boycott reflected a very different behavior of consumers in each region. Not surprisingly, they did not echo any negative effect of the boycott in the Metropolitan Area of Barcelona and Region I, which includes the rest of Catalonia.[22] As a matter of fact, the boycott calls could even have had a positive impact on purchases of Catalan *cava* in Catalonia.[23] The other six regions are where the boycott is more likely to have had a more significant repercussion. According to some news reports published at the time, the Metropolitan Area of Madrid and Region II (of which Valencia is the main town) are the zones where the boycott had the largest effects.[24] [25]

Table 5. Relative size of each region in the market for sparkling wine (2001-2012)

Region	Revenues (euros)	Quantities (litres)
MAB[*]	19.9%	19.9%
Region I	26.4%	27.1%
Region II	14.4%	15.6%
Region III	10.5%	10.3%
MAM[**]	8.7%	7.1%
Region IV	3.8%	4.0%
Region V	5.4%	5.3%
Region VI	10.9%	10.7%

[*]MAB: Metropolitan Area of Barcelona

[**]MAM: Metropolitan Area of Madrid

The second main source of our data comes from counting the number of news which mention the issue of the *cava* boycott and appeared in the five leading Spanish newspapers at the time.[26] We take this measure ("total number of news") as a way of

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[22] Region I includes the whole region of Catalonia except the Metropolitan Area of Barcelona, the community of the Balearic Islands and two (Huesca and Zaragoza) of the three provinces of the community of Aragón. Some additional available data makes us think that more than half of the sales (in euros) of Catalan cava in Region I correspond to Catalonia.

[23] *La Vanguardia*, a newspaper published in Barcelona, had a piece in January 5, 2006 under the headline "The *cava* counterboycott of Catalans increases sales by 10% in Christmas". Interestingly, this does not seem to be the outcome of an organized *buycott* call promoted by some social group.

[24] An example of this is the article untitled "Consumers from Madrid and Valencia led the boycott against Catalan *cava*" published in *ABC*, a newspaper published in Madrid, on February 15, 2006.

[25] As far as we know the only published survey that explores this issue by asking a sample of Spanish population (not including Catalan residents) about their boycotting behavior was carried out at the end of 2009 by the Universitat Oberta de Catalunya (UOC). The particular question asked was "If Catalonia started a process leading to a referendum, would you give support to a boycott against Catalan products?", to which 20.9% of respondents answered "Yes" and 75.7% "No". Although there is not a perfect match between the territorial divisions used in the survey and in our data, we can establish an approximate order of preference for boycotting based on the percentage of respondents who chose "Yes" in each territory: Region IV (27.4 – 26.2), Region III (23.4), MAM (20.4), Region V (18.4), Region II (17.7), and Region VI (13.1).

[26] These are *El País*, *El Mundo*, and *ABC* (published in Madrid) and *La Vanguardia* and *El Periódico* (published in Barcelona). Although there were changes in the order in the ranking, these were the five most read papers in Spain for the whole period 2001-2012. Together they

approximating the actual timing of the boycott and the fact that they have a strong positive correlation suggests that it is a reasonable proxy for the boycott call (Table 6).[27] Figure 1 shows the distribution of the number of news from 2001 to 2012. It allows us to divide our period of study into three different subperiods, which are: 1) three years *before* the boycott (2001-2003); 2) four years *during* which the boycott had a relevant impact (2004-2007)[28]; and 3) five years *after* the boycott (2008-2012).

Table 6. Correlations between news appeared in different newspapers

	La Vanguardia	El Mundo	El País	Abc	El Periódico
La Vanguardia	1				
El Mundo	0.60	1			
El País	0.52	0.40	1		
Abc	0.82	0.78	0.52	1	
El Periodico	0.94	0.66	0.57	0.89	1

Table 7 presents what happened to the market share of Catalan *cava* (as percentage of total sparkling wine sales) in two different periods of time, the *boycott* period (2004-2007) and the *no-boycott* period, which is defined as the years before 2004 and after 2007. The table shows the average annual drop in the market share (both for revenues and quantities) of Catalan *cava* in two different markets. First, what we call the Catalan market (CAT), which comprises the MAB and Region I, and, second, the so-called Spanish market (SPA) which comprises the rest of the territories. It is clear from the information conveyed in Table 7 that the reduction in market share took place both in the *boycott* and the *no-boycott* period in both territories. Although the two markets show a similar behavior in quantitative terms during the *no-boycott* period, it seems clear that the reduction in the Spanish market was more intense during the *boycott* period, while in the Catalan market the difference between the two periods was much smaller. Then, there seems to be some preliminary evidence that the boycott, as expected, affected the market share of Catalan *cava* in the Spanish market and did not have any significant effect in the Catalan market.

Table 7. Average annual reduction in market share of Catalan *cava*

	Boycott	*No-boycott*	REGION
REVENUES	-2.7	-0.8	SPA
	-0.8	-0.9	CAT
	-1.9	-0.9	TOTAL
QUANTITIES	-2.9	-1.1	SPA
	-1.6	-1.3	CAT
	-2.3	-1.2	TOTAL

represent a quota of 42% of national newspaper market. The source of this information is the *Encuesta General de Medios* (Media General Survey) (available at www.aimc.es).

[27] We follow a similar approach to Chavis and Leslie (2009), Fouka and Voth (2013), and Pandya and Venkatesan (2013) on this.

[28] Although we include year 2004 in the boycott period, it is clear that this started only in the last period of the year (see footnote 7).

4. Econometric analysis

In order to explore more systematically the intuition derived from the information contained in Table 7 we estimate a model of the revenue share of Catalan *cava* sales in the sparkling wine market, taking advantage of the disaggregation of our data. In particular, we use four-week observations (13 periods per year) for the eight different geographical markets contained in our database. The model we estimate is the following:

$$RS_{tpj} = \beta_0 + \varphi B_{tp} + \delta T_t + \sum_{p=1}^{p=13} \alpha_p P_p + \sum_{j=1}^{j=8} \beta_j A_j + u_{tpj} \tag{1}$$

where RS_{tpj} is the Catalan *cava* revenue market share in year t, period p and area j; T_t is the year (a linear trend variable); P_p is the period of the year, which accounts for seasonality; A_j is the geographical market; and B_{tp} is a boycott variable which is specified as the "total number of news" measure we have defined in section 3. φ, δ, α_p and β_j, are the estimated coefficients and u_{tpj} is the disturbance term, which follows the usual assumptions[29].

Column 1 in Table 8 shows the results of the estimation of equation (1). The coefficient of the boycott variable is negative and statistically significant. This result indicates that, once we control for seasonal effects and area differences, there is a drop in the market share of Catalan *cava* which could be attributed to the boycott activity. As expected, the sign of the time trend coefficient is also negative and statistically significant, confirming some of the conclusions derived from the observation of Table 7.

There is a big caveat with this kind of exercise, however. As it is shown in Tables 2, 3, and 4, different varieties of sparkling wine experience very different time trends during the period 2001-2012 and the estimation of model (1) does not make use of the information disaggregated by variety, therefore assuming a common time trend for all. To correct for this problem and check whether it is relevant for our results, we propose the estimation of the following linear equation, adding variety variability:

$$RS_{tjpi} = \beta_0 + \alpha_{it} + \eta \Pr_{tjpi} + \varphi B_{tpi} + \sum_{j=1}^{j=8} \beta_j A_j + \sum_{p=1}^{p=13} \mu_p P_p + u_{tjpi} \tag{2}$$

where the dependent variable is now the revenue market share of sparkling wine for year t, period p, area j and variety i (RS_{tpji}); α_{it} are variety-year fixed effects; $\Pr_{tpji}$ is the price of every variety for every year, period and area[30]; P_p is the period; A_j is the geographical market; and B_{tpi} is a boycott variable which takes the value "total number of news" when the variety i belongs to the Catalan *cava* subset and 0 otherwise. φ, η,

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[29] White robust standard errors were computed.

[30] Prices are calculated dividing revenues by quantities for each observation (year, period, area and variety).

μ$_p$, and β$_j$, are the estimated coefficients and u_{tjpi} is the disturbance term, which follows the usual assumptions.

Column 2 of Table 8 shows the results of the estimation of model (2). As shown there, the coefficient of the boycott variable now is positive, although not statistically significant. A possible interpretation of this outcome is that our previous results (estimations of model (1)) were affected by some sort of aggregation bias. Once we control for variety-year fixed effects, which we have hypothesized that may be very relevant because different varieties have very different time trends, there is no observable boycott effect in the whole Spanish market. In other words, in the previous model the boycott variable not only captured the effects due to the boycott to Catalan *cava*, but also the effects due to differences in time trends between varieties. Now, when we isolate the boycott effect from the variety effect, the former becomes insignificant in the whole Spanish market. Can we infer from this that the *cava* boycott did not have any impact at all? The answer is not. In column 3 of Table 8 we show the results corresponding to the estimation of the same model introducing iterations between the boycott and geographical area variables. This allow us to check for the possibility that the boycott had different effects in each geographical area, something our analysis in sections 2 and 3 makes very plausible. As a matter of fact, this is precisely what our results indicate. Taking the MAB as the reference area, there is a significant reduction in market share due to the boycott in Region II, Region III, and MAM. In all of these cases the absolute value of the negative (and significant) coefficient of the iteration (boycott*region) is higher than that of the positive and also significant coefficient of the boycott variable. For Region IV the absolute value of the two coefficients is almost identical, which is indicative of a negligible impact of the boycott. There is also clear evidence of a positive effect of the boycott on the market share of Catalan *cava* in the two regions that form the Catalan market, MAB and Region I, which is consistent with the reports about the existence of a *buycott*. Things seem less clear for Regions V and VI. The estimated coefficients of the interaction variable in these two cases are negative (although statistically insignificant), but we can conclude that there is not evidence of a negative impact of the boycott on the market share of Catalan *cava* varieties in these two territories. To sum up, we find evidence of some boycott effect (or at least a reduction in the market share during the boycott period) in Regions II, III, and MAM and, on the contrary, of some *buycott* in the MAB and Region I. The evidence is more mixed for the rest of the markets, but it is safe to conclude that there is little indication of a negative impact of the boycott on market shares there.[31]

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[31] A different empirical strategy (followed, for instance, by Ashenfelter, Cicarella and Shatz, 2007 and Clerides, Davis and Michis, 2013) consists on estimating a similar model using as boycott variable a dummy which takes value 1 for the boycott period and 0 otherwise. In Table A1 in Appendix 3 we present the results obtained from performing such exercise, taking three different boycott periods (they all start at the end of 2004 and finish, respectively, at the end of 2005, 2006 and 2007). As it is clear from the table the overall outcome of the exercise is qualitatively similar to our results. The main differences are that the coefficients of the dummy variable have lower statistical significance and that no evidence is found now of a negative impact of the boycott for the MAM.

We use the price as a regressor as in Pandya and Venkatesan (2013). The coefficient of the price variable is positive and statistically significant. Nevertheless, it turns out that the results of our estimations are not sensitive to the exclusion of the price variable, something which is also reported in Ashenfelter, Ciccarella and Shatz (2007), Chavis and Leslie (2009) and Clerides, Davis and Michis (2013) (see Table A2 in Appendix 3).

From this point on we take model 2 with interactions as our baseline specification and introduce a few points which we think are worth discussing. First of all, we will use the results of the estimation of the model to be more explicit about the actual impact of the boycott activity in the different regions we consider. Next, we also check the robustness of our main results to changes in the definition of Catalan *cava*, the time period of our sample, and the dependent variable of the model, introducing alternative possibilities such as quantity market shares and revenue and quantity levels. Finally, as in Chavis and Leslie (2009), we examine the effectiveness of the boycott for varieties of sparkling wine in two different price categories, estimating our baseline model separately for subsamples of high and low-value varieties.

Table 8: Determinants of market share of revenues

VARIABLES	Model (1)	Model (2)	Model (2) with iterations
Boycott	-0.000522***	1.43e-05	0.000279***
	(0.000117)	(3.88e-05)	(8.54e-05)
Price		0.00646***	0.00645***
		(0.000555)	(0.000554)
*Iteration (ref:MAB*boycott)*			
MAM*boycott			-0.000404***
			(9.70e-05)
Region IV*boycott			-0.000281**
			(0.000121)
Region II*boycott			-0.000528***
			(0.000104)
Region I*boycott			-2.01e-05
			(0.000103)
Region V*boycott			-0.000188
			(0.000124)
Region VI*boycott			-0.000191

			(0.000136)
Region III*boycott			-0.000503***
			(0.000155)
Trend	-0.01346***		
	(0.00034)		
Observations	1,176	19,992	19,992
Adjusted R-squared	0,974	0.831	0.832

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Measuring the actual impact of the boycott

The estimates shown in Table 8 are not a very intuitive indication of the actual magnitude of the boycott in the different regions. Following Chavis and Leslie (2009), the exercise we describe in the following lines has the objective of presenting a clearer view of the impact of the boycott implied by the estimates of our model. In order to do this, we take the estimated coefficients and compute the predicted market share for all Catalan *cava* varieties given the boycott (predictions from the model) and without the boycott (predictions from the model under the assumption that the coefficients of the boycott variables -number of news and number of news iterated by area- are 0). We then compute the difference between the two numbers and take it as an approximation of the impact of the boycott to the predicted market share for all Catalan cava varieties, which varies along periods and areas. This is originally computed as the drop of the market share for Catalan *cava*, in percentage points, but can be more meaningfully expressed as the percentage of reduction of total revenues. This is what is presented in Table 9. Column 1 shows the percentage reduction of revenues in the four-week period of our sample in which the impact of the boycott is strongest ("peak of the boycott"). Of course, by construction of the model this period is the same for all the regions and coincides with the moment in which the published number of news about the boycott was greatest (last period of year 2005). We only present the data for the five regions for which we have convincing evidence of boycott (Region III, Region II and MAM) or *buycott* (MAB and Region I).

Table 9 also displays the percent of lost revenues in each region due to the boycott, again basing our calculations on the counterfactual described before. This measure obviously depends on the assumptions we make about the length of the boycott. Since our boycott variable ("total number of news") is clearly decreasing and, hence, so is the impact of the boycott each period, clearly the longer the boycott it is assumed to last, the lower its average impact will be. Columns 2, 3, and 4 in Table 9 present our results for three different alternatives of the length of the boycott.

Table 9. Actual impact of the boycott (in %)

	Peak of the boycott 13-2005	Boycott 1 13-2004/13-2007	Boycott 2 13-2004/13-2006	Boycott 3 13-2004/13-2005
Region III	-34.9	-9.8	-14.1	-21.0
Region II	-39.3	-8.9	-12.2	-18.0
MAM	-16.9	-5.8	-7.8	-11.1
MAB	24.5	8.4	11.1	15.1
Region I	23.4	7.3	9.5	12.9

Alternative definition of Catalan cava

So far we have left private label *cava* out of the general category of **Catalan** *cava*, but this could lead to the wrong conclusions in our analysis if, at least to some extent, Spanish consumers held the perception that this type of *cava* comes from Catalonia (which is actually true, although this is information consumers generally cannot find easily when shopping). If this is the case, a consumer boycott to Catalan *cava* should also affect this variety. In order to check whether our conclusions are much affected by our specific definition of **Catalan** *cava*, we present in the Table A3 in Appendix 3 (columns 1 and 2) the results of our estimation when we include private label *cava* in the general category of **Catalan** *cava*. Qualitatively the results we obtain are identical to what was presented in Table 8. In the model without iterations the boycott dummy variable is not significant, just as before. Once we introduce iterations in the model Region III, Region II and MAM are again the only areas where the boycott calls clearly cause negative effects.

Alternative length of the sample

As in many other countries, macroeconomic conditions changed dramatically in Spain at the end of year 2008. This marked the end of a long phase of economic bonanza and the beginning of a period characterized by either negative or very low economic growth rates and important increases of the unemployment rate. In order to check that this structural change is not affecting our results in a relevant way, we repeat our baseline estimation excluding from our sample the period 2009-2012, when the macroeconomic scenario had been radically altered. As it can be seen in Table A3 (column 3) in Appendix 3 our results remain qualitatively unchanged.

Alternative dependent variables: Quantity share, revenue logs and quantity logs

As an additional robustness check exercise, Table 10 presents the estimation of our baseline model using three alternative dependent variables: the quantity market share, and revenues and quantities (in logs). In all three cases the boycott variable is positive, although it is only significant at the 5% level when the dependent variable is in logs (both quantities and revenues). The results are compatible with the prevalence of boycotting behavior in Region II and III, but the main difference is that now the coefficient of the variable (boycott*MAM), although negative, is clearly not significant. The fact the that it is much harder to find the negative effects of the boycott in the MAM once we use these three alternative dependent variables is compatible with the fact

that the boycott there implied mainly the replacement of Catalan *cava* with a much more expensive product (French Champagne), as we will see in detail in the next subsection of the paper. As expected, the coefficient for the variable price is negative and statistically significant in the cases of quantities (both logs and market shares). For the case of revenues (in logs) the coefficient for the price variable is not statistically significant.

Table 10. Determinants of quantity shares, revenues (logs) and quantities (logs)

VARIABLES	Quantity Share	Revenue (log)	Quantities (log)
Boycott	0.000283***	0.00481**	0.00492**
	(8.24e-05)	(0.00193)	(0.00194)
Price	-0.00235***	-0.00660	-0.167***
	(0.000273)	(0.0108)	(0.0116)
*Iteration (ref:MAB*boycott)*			
MAM*boycott	-7.61e-05	-0.00110	-0.00123
	(0.000105)	(0.00215)	(0.00216)
Region IV*boycott	-0.000245**	-0.00199	-0.00181
	(0.000118)	(0.00235)	(0.00236)
Region II*boycott	-0.000536***	-0.0148***	-0.0149***
	(9.99e-05)	(0.00219)	(0.00220)
Region I*boycott	-1.80e-05	-0.00222	-0.00213
	(0.000101)	(0.00251)	(0.00254)
Region V*boycott	-6.98e-05	0.00296	0.00273
	(0.000138)	(0.00259)	(0.00263)
Region VI*boycott	-0.000159	-0.00507**	-0.00421*
	(0.000135)	(0.00219)	(0.00220)
Region III*boycott	-0.000318**	-0.00840***	-0.00871***
	(0.000154)	(0.00256)	(0.00258)
Observations	19,992	19,992	19,992
Adjusted R-squared	0.852	0.837	0.827

Robust standard errors in parentheses

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

The final exercise will consist in estimating the baseline model segmenting the sample according to the average value of the different varieties of sparkling wine. We have two general kinds of sparkling wine in our sample: 7 high-value varieties (8,232 observations) and 10 low-value varieties (11,760 observations), as categorized in Appendix 2.

We can observe significant differences when we look at the results for the two samples (Table 11). The main difference resides on the fact that, while the results of our estimation for high value sample point to a strong impact of the boycott in MAM, the same is not true when we look at the low value sample, for which the coefficient of the variable (boycott*MAM) is not significant. This seems consistent with a pattern of boycott in MAM in which French Champagne is substituted for relative expensive varieties of Catalan *cava*. The same pattern does not seem to operate for the low value varieties of sparkling wine. In a less pronounced way the same pattern seems dominant in Region III, although in this case the coefficient of the variable (boycott*Region III) is only significant at a 5% level for the high value sample and is clearly significant for the low value sample, although its absolute value is lower than the estimate of the boycott variable. This is in contrast with what we observe for Region II. This is the only region for which the boycott appears to affect both low and high value varieties of Catalan *cava*. The values of the estimated coefficients, though, imply that the impact of the boycott for the case of expensive varieties of Catalan *cava* will be substantially lower in Region II than in Region III and MAM, clearly in contrast with what we can observe in Table 9 for the whole sample.

Table 11. Determinants of market share of revenues by type of variety

VARIABLES	Share revenue High-value	Share revenue Low-value
Boycott	0.000302*	0.000252***
	(0.000182)	(5.69e-05)
Price	0.00969***	-0.00412***
	(0.000690)	(0.000403)
*Iteration (ref:MAB*boycott)*		
MAM*boycott	-0.000880***	-6.73e-05
	(0.000212)	(6.13e-05)
Region IV*boycott	-0.000407	-0.000201***
	(0.000268)	(6.74e-05)
Region II*boycott	-0.000595***	-0.000475***
	(0.000226)	(6.74e-05)

Region I*boycott	-6.63e-05	1.80e-05
	(0.000217)	(7.15e-05)
Region V*boycott	-0.000179	-0.000208***
	(0.000276)	(6.65e-05)
Region VI*boycott	-0.000138	-0.000290***
	(0.000303)	(6.50e-05)
Region III*boycott	-0.000898**	-0.000221***
	(0.000356)	(7.44e-05)
Observations	8,232	11,760
Adjusted R-squared	0.807	0.785

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

5. Conclusions

In their pioneering article, Ashenfelter, Ciccarella and Shatz (2007) studied the incidence of the international political quarrel between France and the U.S. caused by the war in Iraq on American consumer choices. More specifically, they analyzed whether the boycott calls heard in the U.S. media at the time affected sales of French wine in the American market. Pointedly, they asked in the subtitle of their paper "Does Politics Really Affect Commerce?". There are other studies in the literature (to which we refer in the Introduction) that study this and related episodes, but they all share the common feature that they are related to political disputes at the international level. A contribution of our paper to this literature consists in analyzing a case of a consumer boycott due to political struggles within a state. Following Ashenfelter, Ciccarella and Shatz (2007) we could add a subtitle to our paper which read "Does Internal Politics Really Affect Commerce?".

In particular the paper analyzes what has been known as the *cava* boycott in Spain. The approval in September 2005 of a new project of Statute of Autonomy for Catalonia by the Catalan Parliament and its subsequent negotiation with the Spanish political parties in the Spanish Parliament caused a great deal of political controversy in the country. Partly as a consequence of this, there were boycott calls against Catalan consumer products, although most media attention was devoted to a particularly popular item: Catalan sparkling wine (also known as *cava*). Although other countries in the world experience political disputes which could be deemed similar to those between Catalonia and Spain (Scotland and the U.K., Québec and Canada, Flanders and Belgium, etc.), boycott calls seem a very particular feature of the Spanish scenario. It is relevant to assess the impact on consumer choices of these calls caused by internal motivations and compare them with similar episodes provoked by international conflicts. In particular, the ongoing political situation in Spain makes it likely that

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Catalan firms may have to confront new boycotts organized by some sectors of Spanish society sometime in the future, especially taking into account that the levels of political confrontation between the Catalan and Spanish governments are bond to increase due to the announced intention of the Catalan Parliament to hold a self-determination referendum in November 2014, something that has the complete opposition of the Spanish Parliament and government.

The results of our analysis indicate that the boycott had little impact in the aggregate Spanish market, but that this was the result of different behavior of consumers in different regional submarkets. Thus, Catalan consumers counteracted the boycott calls and, relative to a long term time trend of diminishing consumption, increased their purchases of Catalan *cava* during the boycott years. Consumers from some regions in Spain, particularly in the South and the East coast and also Madrid in the case of our main empirical specification, decreased their purchases of Catalan *cava* during the period. Finally, we do not observe a clear negative impact of the boycott in the consumption choices of residents in the rest of regions in Spain. We leave for future research a more detailed consideration of the sociological and political elements that could explain the different boycotting behavior in the different Spanish regions.

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Appendix 1. Synoptic table: empirical literature on the effect on consumers purchases of trade boycotts due to international political disputes

PAPER	EVENT	PRODUCT	DATA	MAIN CONCLUSIONS
Ashenfelter, Ciccarella and Shatz (2007)	The French opposition to the Iraq war (2003) triggered calls of boycott against French products in the U.S. market	French wine	Four-week wine sales in supermarkets in 64 major U.S. markets from September 2001 to May 2003	There was no boycott effect and sales of French wine in the U.S. stayed on trend (secular decline)
Chavis and Leslie (2009)	The French opposition to the Iraq war (2003) triggered calls of boycott against French products in the U.S. market	French wine	Weekly wine sales in supermarkets in four U.S. markets (Boston, Houston, Los Angeles and San Diego), from December 2001 to November 2003	The boycott lasted six months during which sales are estimated to be 13% lower
Hong et al (2011)	Before and during the Beijing Olympic Games (2008) there were a series of political clashes between the Chinese and French governments on the political situation in Tibet and human rights issues. This motivated boycott calls against French products in the Chinese market	French cars	Monthly sales of all domestically produced non-commercial cars marketed in China from December 2004 to March 2009	The effects of the boycott were of short duration (two months), but had a large impact during the period (a reduction of 25-33% of sales of French automobiles)
Clerides, Davis and Michis (2013)	The Iraq war (2003) unleashed a wave of Anti-American sentiment in several Arab countries and motivated boycott calls against U.S. products in these countries	US soft drinks and fabric detergent	Monthly sales of soft drinks and bimonthly sales of fabric detergent in nine Arab markets. The period covered varies across countries, but for most countries goes from 2002	In seven of the nine countries there is a statistically significant relative drop in sales of U.S. soft drinks. In contrast, there is very little evidence of a relative decline of sales in the case of U.S. detergent sales

			to 2005	
Fouka and Voth (2013)	The debt crisis in the Eurozone (starting at the end of year 2009) triggered clashes between the Greek and German governments over the terms of the European Union bailout of Greece and motivated calls against German products in the Greek market	German cars	Monthly number of new passenger vehicles registered during the period between January 2008 to August 2012	Boycott calls reduced sales of German automobiles in general during the conflict months (6 out of 56 in the sample). These reductions were significantly greater in the prefectures where the German army had committed large-scale massacres during the Nazi occupation period (1941-44).
Pandya and Venkatesan (2013)	The French opposition to the Iraq war (2003) triggered calls of boycott against French products in the U.S. market	Supermarket French items	Weekly supermarket sales of 8644 brands across 27 categories of grocery products in the U.S. market for years 2002 and 2003	Sales of French "sounding" brands declined during the weeks with more media coverage of the boycott

Appendix 2. Description of the data on sparkling wine

There are many producers, commercial brands and specific products within brands in the sparkling wine market in Spain. However, our database does not provide with all the detailed information at product or brand level. In fact, the available observations correspond to 17 aggregate *varieties* as follows. We have information on sales of *cava* corresponding to nine different brands of **Catalan *cava*** owned by the two market leader firms and sales by the two midsized, also Catalan, companies. The rest of Catalan cava is grouped under another variety. There are two other varieties of *cava* which are left out of the **Catalan *cava*** category, namely non-Catalan *cava* (which is *cava* produced in other regions of Spain) and private label *cava* (*cava* commercialized under private labels by supermarket chains, independently of their origin). We also have observations on French Champagne, Granvas wines (natural sparkling wine different from *cava* whose second fermentation takes place not in bottle but in large metallic containers) and, lastly, a final miscellaneous variety that corresponds to products not included in the previous varieties. The following list summarizes the information and it also includes information about the relative importance of each variety in the market (both for revenues and quantities). Each variety is also classified as high value or low value if its average value (revenue divided by quantity) is respectively higher or lower than the average value of the whole sample.

<u>List of varieties of sparkling wine in the database</u>

Catalan *cava*

From company A (one of the market leaders)

		% Revenues	% Quantities
1. *Cava* brand A1	High value	26.4	18.4
2. *Cava* brand A2	Low value	5.1	6.9
3. *Cava* brand A3	Low value	1.9	3.8
4. *Cava* brand A4	Low value	1.2	1.8

From company B (one of the market leaders)

5. *Cava* brand B1	High value	19.8	19.0
6. *Cava* brand B2	Low value	2.2	3.5
7. *Cava* brand B3	Low value	1.7	2.5
8. *Cava* brand B4	Low value	1.3	1.8
9. *Cava* brand B5	High value	1.9	1.4
10. *Cava* brand C	High value	5.7	2.1
11. *Cava* brand D	Low value	1.6	2.7
12. Other Catalan *cava*	High value	6.1	4.6

Rest of sparkling wine

13. Private label *cava*	Low value	9.9	22.0
14. Non-Catalan *cava*	Low value	1.2	1.4

15. French Champagne	High value	9.9	1.4
16. Granvas	Low value	2.1	4.7
17. Other sparkling wine	High value	2.0	2.0

A different source of data is the *Consell Regulador del Cava* (*Cava* Regulatory Board), which is always the source quoted in news reports about the boycott and its consequences. This is annual data on all *cava* sold in the Spanish market and includes *cava* sold in supermarkets and other type of shops, served in hotels and restaurants and distributed through firms specialized in preparing and delivering gifts from companies to workers and customers, which is an important tradition in Spain (especially around Christmas). For the sake of comparison between the two sources we present in the following figure the two time series corresponding to the data released by the *Consell Regulador del Cava* (CRC) and our data (aggregated by years) of purchases of *cava* (which includes varieties 1-14 in the list above).

Figure. *Cava* sold in the Spanish market (number of bottles)
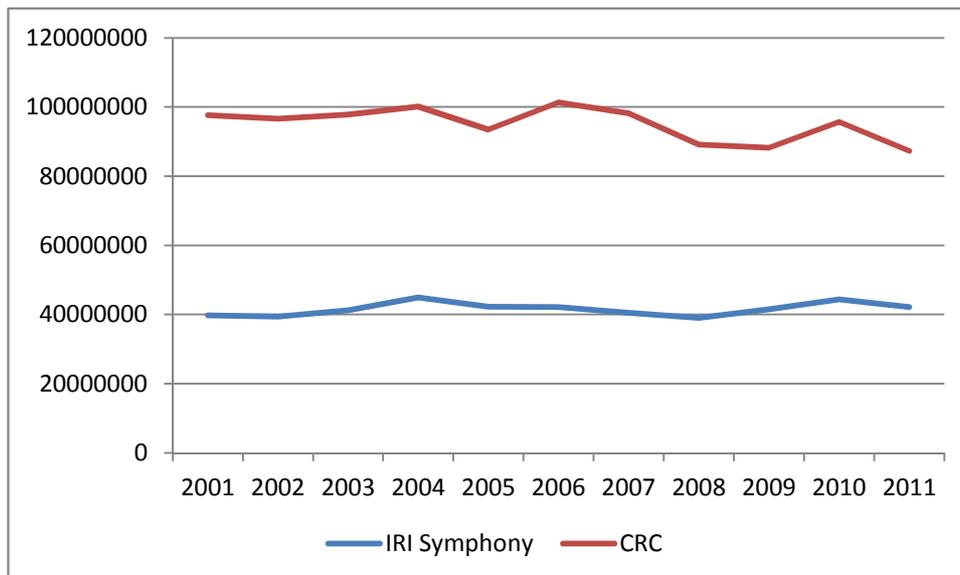
Appendix 3. Additional robustness checks

Table A1. Determinants of market share of revenues using a dummy boycott variable

VARIABLES	Boycott dummy variable 2004-2007	Boycott dummy variable 2004-2006	Boycott dummy variable 2004-2005
Boycott	0.0142***	0.0127**	0.0112**
	(0.00504)	(0.00515)	(0.00551)
Price	0.00647***	0.00648***	0.00649***
	(0.000549)	(0.000552)	(0.000554)
*Iteration (ref:MAB*boycott)*			
MAM*boycott	-0.0146***	-0.0119***	-0.00968***
	(0.00217)	(0.00251)	(0.00352)
Region IV*boycott	-0.0105***	-0.00775***	-0.00584
	(0.00233)	(0.00280)	(0.00406)
Region II*boycott	-0.0197***	-0.0167***	-0.0149***
	(0.00228)	(0.00266)	(0.00375)
Region I*boycott	-0.000509	2.15e-07	0.000279
	(0.00245)	(0.00287)	(0.00400)
Region V*boycott	-0.00770***	-0.00723**	-0.00476
	(0.00253)	(0.00294)	(0.00412)
Region VI*boycott	-0.00802***	-0.00727**	-0.00673
	(0.00287)	(0.00341)	(0.00489)
Region III*boycott	-0.0235***	-0.0223***	-0.0195***
	(0.00281)	(0.00337)	(0.00475)
Observations	19,992	19,992	19,992
Adjusted R-squared	0.833	0.832	0.832

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A2. Excluding the price variable as regressor

VARIABLES	Model (2)	Model (2) with iterations
Boycott	1.22e-05	0.000286***
	(3.88e-05)	(8.94e-05)
*Iteration (ref:MAB*boycott)*		
MAM*boycott		-0.000415***
		(0.000101)
Region IV*boycott		-0.000289**
		(0.000124)
Region II*boycott		-0.000529***
		(0.000107)
Region I*boycott		-2.91e-05
		(0.000107)
Region V*boycott		-0.000188
		(0.000125)
Region VI*boycott		-0.000223
		(0.000138)
Region III*boycott		-0.000520***
		(0.000157)
Observations	19,992	19,992
Adjusted R-squared	0.831	0.830

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A3. Robustness checks

VARIABLES	Private label *cava* as Catalan *cava*	Private label *cava* as Catalan *cava* (with iterations)	Sample 2001-2008
Boycott	1.52e-05	0.000250***	0.000266***
	(3.89e-05)	(8.45e-05)	(8.56e-05)
Price	0.00646***	0.00645***	0.00788***
	(0.000555)	(0.000554)	(0.000662)
*Iteration (ref:MAB*boycott)*			
MAM*boycott		-0.000363***	-0.000379***
		(9.59e-05)	(9.69e-05)
Region IV*boycott		-0.000243**	-0.000258**
		(0.000120)	(0.000121)
Region II*boycott		-0.000470***	-0.000495***
		(0.000103)	(0.000104)
Region I*boycott		-1.68e-05	-1.96e-05
		(0.000102)	(0.000103)
Region V*boycott		-0.000164	-0.000166
		(0.000124)	(0.000125)
Region VI*boycott		-0.000169	-0.000173
		(0.000135)	(0.000137)
Region III*boycott		-0.000449***	-0.000460***
		(0.000154)	(0.000156)
Observations	19,992	19,992	14,144
Adjusted R-squared	0.831	0.832	0.839

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1