What’s in a Name? Information, Heterogeneity, and Quality in a Theory of Nested Names

I want to submit an abstract for:

Conference Presentation

Corresponding Author

Angelo Zago

E-Mail

angelo.zago@univr.it

Affiliation

University of Verona - Verona (Italy)

Co-Author/s

<table>
<thead>
<tr>
<th>Name</th>
<th>E-Mail</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jianyu Yu</td>
<td><a href="mailto:yujianyu@swufe.edu.cn">yujianyu@swufe.edu.cn</a></td>
<td>Southwestern University of Economics and Finance - Chengdu (China)</td>
</tr>
<tr>
<td>Zohra Bouamra-Mechemache</td>
<td><a href="mailto:Zohra.Bouamra@toulouse.inra.fr">Zohra.Bouamra@toulouse.inra.fr</a></td>
<td>Toulouse School of Economics - Toulouse (France)</td>
</tr>
</tbody>
</table>

Keywords

Labeling, information, collective labels, quality and wine.

Research Question

We aim to explain controversies and label proliferation, that are among the empirical regularities in collective labels in the wine industry.

Methods

We introduce an original model to investigate the choices of labeling strategies when firms can use both private (or national) brands and regional (or collective, e.g., PDO,).

Results

We find that different equilibria may emerge, according to the distribution of low and high quality producers, the degree of heterogeneity between producers, and the relative prevalence of unaware consumers.

Abstract

We propose a model to analyze the choice of different labeling strategies undertaken either privately or collectively. Agricultural producers can choose to build their own brand (i.e., private reputation). But in food markets, it is also common for otherwise independent firms to join collective labels (i.e., collective reputations), like EU’s geographical indications, such as Product of Designated Origins (PDO) and Product of Geographical Indication (PGI) (see, e.g., Menapace and Moschini, 2012).

Bonroy and Constantatos (2014) explain that labeling, “a policy statement of a government or other third party
that regulates the presentation of product-specific information to consumers”, represents a soft form of regulating high-quality products particularly effective when dealing with credence goods (Darby and Karni, 1973) or attributes. In essence, labels represent a collective approach to information problems (Lence et al., 2007). Brand-names, on the other hand, can be seen as labels certifying that a given product has been produced by a given firm. Thus, they represent an individual approach. Moreover, brand names are effective mechanisms to convey information when dealing with search and experience attributes, since they facilitate the building of reputation. However, given their self-labeling nature, they are unable to deal with asymmetric information over credence attributes.

Empirical papers have estimated the effects of different quality labels on market prices. First of all, consumers do have a preference for brand-names compared to no quality signals and are willing to pay a price premium (Bonnet and Simioni, 2001; Hassan and Monier-Dilhan, 2006). In addition, collective labels, such as EU’s PDOs, can add value to food products. A meta-analysis on 183 estimations (Deselnicu et al., 2013) concludes that PGI and PDO lead to an average premium of 13.3% (st. dev. 24.6%) for food products. It has also been shown that the willingness to pay for a PDO label depends on the level of quality of the product as well: Loureiro and McCluskey (2006) showed that for bovine meat cuts the PGI label is mostly valued by consumers for cuts of average quality. Similar evidence has been found in the US wine market (Costanigro et al., 2007).

Empirical evidence has also showed that different labels coexist, i.e., firms may choose more than one type of labels simultaneously, and have estimated their joint effects. According to Bonnet and Simioni (2001), the national brand can be more relevant to signal quality than a PDO label, at least for cheese. For the US wine industry, however, Costanigro et al. (2010) show that price effects of regional brands are greater than brand-names, at least for median wine prices. Moreover, consumers’ reaction to quality signals is heterogeneous, since the willingness to pay for PDO-labeled brands varies greatly in the population (Bonnet and Simioni, 2001) and with the price ranges (Costanigro et al., 2010).

Although the empirical literature has estimated the differentiated impact of coexisting quality labels for food products, on the theoretical side there are only few studies that take explicitly into consideration this coexistence. Many contributions have dealt with either brands (starting from Shapiro, 1983 to Menapace and Moschini, 2012) or collective labels (see, e.g., the seminal paper by Tirole, 1996 and a recent application to food markets by Winfree and McCluskey, 2005). To the best of our knowledge, there are only a handful of studies that consider the simultaneous use of different labels by firms. In the literature (see, e.g., Costanigro et al., 2010) the joint use of different labels is referred as nested names.

Costanigro et al. (2010) suggest a conceptual framework for jointly analyzing (and estimating) the effects of product, firm and collective reputations and find evidence consistent with a two-stage process in which consumers use collective reputations as a sorting device to reduce the number of more specific names on which they will collect additional information. Costanigro et al. (2012) devise a model of a differential game that blends Shapiro (1983)’s model of private brand and Winfree and McCluskey (2005)’s model of collective reputation. Using simulations, they find evidence consistent with Costanigro et al. (2010), i.e., private reputations become more valuable with respect to collective ones the more expensive the product is. In addition, they find that “dual reputation structures, with their combination of private and public incentives, are inherently prone to intra-regional controversies” (Costanigro et al., 2012: 262).

Controversial choices and label proliferation are thus among the empirical regularities we aim to explain. For this purpose, we introduce an original model to investigate the choices of labeling strategies when firms can use both private (or national) brands and regional (or collective, e.g., PDO,) labels, that is when they use nested names. First, our model is consistent with previous literature, where many papers, as reviewed by Bonroy and Constantatos (2014), assume that without labels consumers cannot distinguish product’s quality because of the credence nature of many attributes. Labels indeed reduce asymmetry of information between firms and consumers and thus transform credence attributes into search or experience attributes. For the label to be an efficient tool to signal the quality and the reputation of products, consumers must rely on a certification body. As shown by Auriol and Schilizzi (2003), a credible quality signal can be achieved through an independent body (third party certification). Second, consistently with many other papers, we use a model with vertical differentiation on the demand side. Third, regarding the production side, we take into account the heterogeneity of firms: some produce higher quality than others, and quality can be either exogenously or endogenously determined. However, when a group of producers form a collective label, they are usually homogeneous within
the group (see, e.g., Fishman et al., 2008). Our model introduces some distinctive features as well. First of all, we distinguish consumers into two main types, aware and unaware (Varian, 1980), and we assume that brand-names and collective labels work differently. Individual brands help firms to be recognized by aware (or expert) consumers, by means of building reputation. In other words, for a fraction of consumers in the market, the good (or attributes) has the nature of an experience good. On the other hand, collective labels allow firms to be recognized by unaware consumers. Non-expert consumers, one may argue, probably cannot discern a single firm from the others, but can handle a signal of average quality coming from a regional brand. Therefore, we do not consider only the cost-sharing benefits of the collective label (like, for instance, in Marette et al., 1999 or Crespi and Marette, 2001), but rather extend the focus on the information that brands and labels may provide to different consumers. These effects of individual and collective brands are consistent with formulated hypotheses and empirical findings (see, e.g., Costanigro et al. (2010; 2012)) and match recent trends. For instance, regarding the US market for young consumers, industry practitioners suggest “not to enter the US market alone, but grouped with other wine producers with the same regional identity […] because if the Y-generation (those born between 1980 and 2000) likes to explore and is ready to learn about different wines, at the same time they do not want to work too hard at it” (LARVF, 2015).

We find that different equilibria may emerge, according to the distribution of low and high quality producers, the degree of heterogeneity between producers, and the relative prevalence of unaware consumers. When low quality producers control the group managing the collective label, they prefer to have a uniform collective label because they benefit the most from the efforts of high quality producers. These latter, on the other hand, may find it profitable to join forces with lower quality producers because with the collective label they can reach the unaware consumers and in any case indirectly induce the low quality producers to adopt a stricter quality standard.

The second main feature of our set-up is that we model explicitly the decision-making process within the group of producers that manages the collective brand, producers that we recognize explicitly as being heterogeneous. Most of (if not all) the models in the labeling literature consider two types of producers, but once the label is introduced it usually leads to a market segmentation between high and low quality producers (Bonroy and Constantatos, 2014), where producers within each segment are homogeneous. In Fishman et al. (2008), for instance, the high-quality producers establish a collective label to separate from low quality firms, i.e., it is a separation model in the sense of Bar-Isaac and Tadelis (2008).

We consider two types of producers: a high-quality type, committed to always produce high quality products, and an opportunistic type that can choose the quality level of her products. The group is formed by both high and opportunistic types, which together try to separate from the commodity market’s low type via the collective label. However, within the group the opportunistic type tries to “imitate” the high quality, so that our set-up contains elements of both separation and imitation models. In addition, within the group decisions are taken according to majority’s rule, and thus the relative importance of high quality and opportunistic types is critical in determining the rules, i.e., the minimum quality standard, adopted at the group’s level.

We find that when heterogeneity increases, for the high quality producers the uniform label is less profitable compared to a situation of nested names, that is either the creation of sub-labels within the group or the establishment of individual brands by high quality producers. Moreover, if producers cannot price discriminate across consumers, with high heterogeneity it may be profitable to “take separate routes”, i.e., to use separate labels by different producer types.

These additional features of the model, in particular the explicit treatment of heterogeneity, allow us to explain some of the issues that characterize regional brands and food industries world-wide. For instance, there are controversies that reached the media regarding the choice of quality standards within regional brands, controversies that would not emerge with homogeneous producers within the groups. In addition, there are controversies that reached the media regarding the choice of quality standards within regional brands, controversies that would not emerge with homogeneous producers within the groups. In addition, there are different instances of regional brands that allow further (mostly geographical, but not only) differentiation among producers, which may imply different quality standards. In the Chianti Classico PDO, for instance, in 2014 the Consorzio di Tutela, i.e., the body representing the wine producers belonging to the PDO, has introduced “Gran Selezione”, that is a selection of the best wines produced within the PDO. The introduction of further differentiation within a regional brand is neither unique to Italy nor to the wine sector, even though in this latter we can find the most sophisticated cases, as we document in the next section. In the
US, for instance, we can find the American Viticultural Areas (AVA). Furthermore, there can be also sub-AVAs, like for example in Oregon, with significant effects on wine market prices that are capitalized into land values (Cross et al., AER, 2011).

Our model can fruitfully take into account the decision process within the collective labels. Moreover, the results are consistent with the issues relevant in many food industries and with the evidence we documented, in particular the coexistence of private and collective labels, the differentiation within collective labels, and the label fragmentation and proliferation. In addition, we show that it is not the nature of nested names, i.e., the coexistence, that is conflict-prone, but that conflicts may be embedded in some labels, notably the uniform collective ones, since they cannot reconcile the incentives of different producers when heterogeneity is high.