Building Individual Brands with Place-of-Origin Information:

Implications for the Food Industry

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1. Introduction

Growing segments of world consumers seek better quality, healthiness and larger variety in their food consumption (Verbeke, 2005; IDDBA, 2008). As part of this process, consumers' attention for place-of-origin (POO) attributes as part of the demand of agri-food products is increasing (Grunert, 2005). The major dimension of POO attributes that have been studied in agricultural economics and marketing literature since the 1960s is country-of-origin (Dichter, 1962; Schooler, 1965; Peterson and Jolibert, 1995; Verlegh and Steenkamp, 1999; Balabanis and Diamantopoulos, 2004; Loureiro and Umberger, 2005; Ehmke et al., 2008) while in the last decade region-of-origin attributes have been studied separately, in relation with consumers' values for tradition and authenticity of agri-food products (Kuznesof et al., 1997; Tregear et al., 1998; Van der Lans et al., 2001; Van Ittersum and Candel, 2001; Van Ittersum et al., 2001; Scarpa et al., 2005).

These strands of the literature have primarily analyzed the impact of POO attribute information on consumers' product evaluation (e.g., Peterson and Jolibert, 1995; Verlegh and Steenkamp, 1999; Loureiro and Umberger, 2005) and the factors explaining how this impact varies, including consumers' characteristics (Knight and Calantone, 2000; Scarpa et al., 2005; Ehmke et al., 2008; Gao and Schroder, 2009), consumers' motivations (e.g., Verlegh and Steenkamp, 1999; Van der Lans et al., 2001; Loureiro and Umberger, 2005; Lusk et al., 2006) and product characteristics (e.g., Ward et al., 2003). While these studies found that POO attributes have a

significant impact, either positive or negative, on consumers' evaluation of a generic product, only a few studies analyzed how POO attribute information can differentiate an individual brand from the other brands within a product category. The problem of brand differentiation within a product category with a POO attribute - for example, differentiation of the brand Sun Maid California raisins from other California raisins (Crespi and Marette, 2002) - has been already tackled in the literature (Brester and Schroeder, 1995; Kaiser and Liu, 1998; Chung and Kaiser, 2000; Crespi and Marette, 2002). However, these studies are based upon estimations of the aggregate demand elasticity for various types of POO information, but they have not analyzed individual consumers' perceptions and buying intentions.

In this study, our purpose is to start filling this gap by analyzing which POO information, if any, has an exclusive impact on an individual brand and differentiate it from other brands within a product category with a POO attribute. Analyzing which POO information differentiates a brand from other brands with he same POO attribute has important implications for firms within an industry. As suggested by Crespi and Marette (2002), through POO information a firm owning a brand can create a competitive advantage over other firms selling products with the same POO attribute. This can be crucial as firms may not always cooperate with its neighbors to jointly increase consumers' evaluation for its POO, but they may also be forced to compete with them to get access to a limited number of buyers (Steenkamp and Van Trijp, 1996).

To analyze the impact of POO information on consumers' evaluation for an individual brand, we found appropriate to develop a theoretical framework that builds upon the theory of attitude formation, developed in psychology and largely applied to marketing (Fishbein, 1967; Fishbein and Ajzen, 1975; Lutz, 1991). According to the theory of attitude formation, consumers form their attitude towards a brand and ultimately their intentions to buy it not only by evaluating how

much they like each brand attribute, but also by assessing how strongly they believe that the brand is associated to each attribute (Fishbein, 1967; Lutz, 1991). Therefore, to improve the understanding of consumers' choice of individual brands with POO attributes, we analyze which POO information has an impact on consumers' belief strength of the association between the individual brand and the POO attribute, on their attitudes towards a brand and ultimately on their willingness to pay (WTP) a premium price for a brand relatively to its competitors in the market.

We test our proposed theoretical framework with data collected from 236 graduate students at Michigan State University through an internet-based experiment. In particular, we assess differences in respondents' beliefs, attitudes and WTP a premium price for a brand across groups receiving different sets of POO information with a series of paired t-tests and we analyze the relationship among these variables with a path model.

This paper is organized as follows. In section 2, we review the relevant literature on POO attributes and formation of attitudes. Building upon this literature, we present our theoretical framework and hypotheses in section 3. In section 4, we describe the method we use to test these hypotheses. Results are presented in section 5, while our conclusions are drawn in section 6.

2. Literature Review

2.1. Place-of-Origin Attributes

The concept of “place-of-origin” attributes has often been used in the literature (Moore, 1980; Hong and Wyer, 1990; Bertozzi, 1995; Van der Lans et al., 2001; Skuras and Vakrou, 2002) to generalize the analysis across country-of-origin attributes and region-of-origin attributes. Country-of-origin attribute are typically communicated through the phrase "made in” a specific country and they are an extrinsic product cue similarly to price, brand name or warranty, as none of these directly bear on product performance (Peterson and Jolibert, 1995). Region-of-origin attributes are similar extrinsic product cues that, differently from country-of-origin attributes, are usually strongly associated to culture, history and people of a geographical area (Kuznesof et al., 1997; Van der Lans et al., 2001). Wines, cheeses, onions, grapefruits, wooden furniture, perfumes, and cigars are all examples of products being marketed as national products (Centner et al., 1989; Kotler et al., 1993; Papadopoulos, 1993), but the same influence is expected in other places of origin such as regions and provinces (Balling, 1995; Hauser, 1993) but also trade zones and continents (Papadopoulos, 1993; Smith, 1993).

From the 1960s, many studies in marketing and agricultural economics literature have agreed that POO attributes may have a positive impact on consumers’ evaluation of products (Dichter, 1962; Schooler, 1965; Peterson and Jolibert, 1995; Verlegh and Steenkamp, 1999; Balabanis and Diamantopoulos, 2004; Loureiro and Umberger, 2005; Ehmke et al., 2008), but also a negative impact when country image is not favorable to consumers or when the image of the place does not fit with the product (Van Ittersum et al., 2001).

When making their food choices, consumers may give value to POO attributes as cue of other product attributes, including food safety (Sanchez et al., 2001; Loureiro and McCluskey; 2000;

Loureiro and Umberger, 2005) and overall food quality (Olson, 1972; Verlegh and Steenkamp, 1999; Fotopoulos and Krystallis, 2001; Van der Lans et al., 2001), or they may give value to the origin of the product on its own because they have a positive attitude towards place of origin (Li and Monroe, 1992; Batra et al, 1999; Van der Lans et al., 2001; Van Ittersum et al., 2001). The choice of POO attributes may be motivated by consumers' ethnocentrism (Orth and Firbasova, 2003; Balabanis and Diamantopoulos, 2004), willingness to support their local economy or their willingness to have fresh food (Darby et al., 2008), when the place-of-origin of the product corresponds to the origin of the product, or by consumers' value for other POO tradition and authenticity (Lusk et al., 2006; Lusk, 2009). However, the impact of POO may vary according to various consumer characteristics (e.g., Bonnet and Simioni, 2001; Scarpa et al., 2005) and product characteristics (e.g., Agrawal and Kamakura, 1999; Ward et al., 2003).

These studies have analyzed the impact of adding a POO attribute on consumers' attitudes and buying intentions for a generic product, but not for an individual brand (Chao, 2001; Pecotich and Rosenthal, 2001; Piron, 2000; Verlegh and Steenkamp, 1999). However, in the marketplace brands can be more or less associated to the place of origin by consumers, according to the other brand attributes and to brand information, which act as signals of the POO attribute (Keller, 1993). Therefore, the impact of adding POO attributes on consumers' attitudes and buying intentions may vary significantly according to factors related to the individual brands. In this study, we attempt to integrate the extant literature by exploring which information influences the impact of POO attributes on consumers' beliefs, attitudes and intentions to buy a brand and so differentiates an individual brand from its competitors with the same POO attributes.

2.2. Attribute-Level and Brand-Level POO Information

To explore which information has an impact on consumers' belief strength of the association between a brand and the POO, we first distinguish between the concepts of *attribute-level POO information* and *brand-level POO information*. This distinction is similar to the distinction between generic advertising and branded advertising introduced by Crespi and Marette (2002). The

Attribute-level and brand-level POO information have the same ultimate goal, that is increasing consumers' evaluation and WTP for brands with the POO attribute, but differ as they provide fundamentally different messages to consumers. In particular, *attribute-level POO information* aims at increasing consumers' evaluations for brands with the POO attribute by emphasizing the benefits given by the POO attribute and creating associations between the POO attribute and other favorable attributes. For example, attribute-level information about California raisins aims at increasing consumers' evaluation for the attribute "California" when associated to the product "raisins". Also, this information aims at increasing consumers' beliefs that the attribute "California" is associated with other quality attributes such as "good flavor" and "eco-friendly".

On the other hand, *brand-level POO information* aims at increasing consumers' evaluations for brands with the POO attribute by strengthening consumers' beliefs that a particular brand is associated with the POO attribute and with other favorable attributes. For example, brand-level information about "Sun Maid Raisins" aims at increasing consumers' association between Sun Maid and California, as well as other favorable associations such as between Sun Maid and "good flavor" or between Sun Maid and "sunny land".

Promotion and advertising activities implemented by firms, inter-firm organizations or public entities can be classified as means to release attribute-level information or brand-level POO information, or potentially to release both.

Generic advertising, "place branding" and in large part also POO certifications and labels release attribute-level information, as they aim at increasing consumers' evaluation for POO attribute and at strengthening the association between the POO and other favorable attributes. When promoting a product with a POO attribute, such as California Raisins, generic advertising aiming at shifting consumer demand for the entire product category with that attribute (Brester and Schroeder, 1995; Kaiser and Liu, 1998; Chung and Kaiser, 2000; Crispi and Marette, 2002) and at creating a favorable product-country image (Van Gelder, 2003; Laroche et al., 2005, Lusk et al., 2006), whereas an image can be defined as a set of strong and consistent associations that reinforce each other (Keller, 1993). Generic advertising can be implemented both by a private firm, a private group of firms or by a public entity representing the firms within a territory.

Similarly, "place branding" (Kotler et al., 1993; Papadopulos and Heslop, 2002; Morgan et al. 2003; Iversem and Hem, 2008) are promotion activities aiming at building an image and reputation across all the products and services offered within the POO, assuming that there might be spillover effects across different products and services from the same POO. Place branding activities are usually implemented by multiple private actors within a POO as well as funded or sometimes even managed by public entity.

Information on POO certifications and labels, such as Protected Denominations of Origin in Europe (Van Ittersum et al., 2000; Bonnet and Simioni, 2001; Verbeke and Ward, 2006) or voluntary Country-of-Origin Labeling (COOL) (i.e., Loureiro and Umberger, 2005; Lusk et al., 2006; Verbeke and Ward, 2006), usually has a more ambiguous role in changing consumers'

perceptions. On one hand, POO certifications and labels are seals guaranteeing consumers that a specific branded product is indeed from the POO and is produced according to certain quality standards, and therefore would classify as brand-level information. On the other hand, most of the information on POO certifications and labels usually aims at convincing consumers that the entire product category with the POO attribute is controlled and selected according to high quality standards, and therefore classifies as an attribute-level information, as it aims at increasing consumers' evaluation for the POO attribute.

In marketing literature, the most cited example of means releasing brand-level POO information is a company's advertising of its brand(s). Pace Picante sauce from Texas, Coors beer from Colorado (Takor and Lavack, 2003) and Zespri kiwi from New Zealand (Beverland, 2004) are examples of brands with POO attributes that have been heavily publicized with mass media advertising. In these cases, advertising has created a strong consumers' association of the brand name, the company ownership or the source of components with the POO attribute. In the agri-food markets, another commonly cited means to release brand-level information are private third-party certifications (Farina and Reardon, 2000; Giovannucci and Reardon, 2000; Reardon et al., 2001; Konefal et al., 2005). Private third-party certifications are used by food manufacturers and retailers to provide quality, origin and safety assurance to their consumers and therefore to complement their brands (Hatanaka et al., 2005). Although they often proved to be effective, mass media advertising and private certification require a large financial investment which is unbearable by the large majority of agri-food firms aiming at differentiating their product from competitors.

Third-party endorsements and appraisals from actors with high reputation in the marketplace – such as chefs, cultural associations linked to particular territory, food experts and journalists –

are alternative means to provide positive information about an individual brand (Dean, 1999, Huffman et al., 2004; Andrew and Kim, 2007) and so can be classified as providing brand-level information. As theorized by Podolny (1993), actors with high reputation have a market status that can act as a quality signal of products and of product attributes. Third-party endorsements and appraisals from actors with high market status can isolate a brand from the others as these actors cannot endorse all the brands in the marketplace. However, if they would endorse too many brands, the third-party endorsers would risk losing their own reputation and credibility (Dean, 1999). Similarly to third-party endorsements, the information that a retailer or a buyer with high reputation and an image related to a place of origin, as well as the participation to events, food competitions and fairs related to a place of origin can classify as brand-level information (Aaker, 1991; Keller, 1993).

In this study, we analyze if attribute-level information differentiates a brand from its competitors with the same POO attribute or if brand-level POO information has a higher impact on consumers' beliefs, attitudes and intentions to pay a premium price for a brand relatively to its competing brands.

2.3. Consumers' Beliefs, Attitudes and Buying Intentions

According to the learning theory (Fishbein, 1967), consumers' attitudes towards a brand and their decision to buy it are driven by the evaluation of the individual brand attributes. In particular, based upon their prior beliefs and by processing new information, consumers form their evaluations for the single brand attributes and their beliefs that the brand is associated with the attribute (Fishbein, 1967). In the case of POO attributes, for example, consumers form their attitudes towards "Zespri" kiwi brand by assessing how much they like kiwi from New Zealand as well as how much they believe that the brand "Zespri" is really associated with New Zealand

kiwis. As POO attributes are credence attributes, which means that they are verifiable by consumers neither before nor after consumption (Darby and Karni, 1973), POO information play a key role in determining consumers' beliefs and, in turn, consumers' beliefs are crucial to establish their attitudes towards products.

However, researchers found that consumers' attitudes towards a brand do not predict buying behavior accurately (Fishbein and Ajzen, 1975). Instead, consumers' attitudes towards the action of buying the brand, moderated by their subjective norms, predict buying intentions much more accurately, as tested in the theory of attitude formation (Fishbein and Ajzen, 1975; Sheppard et al., 1988). Buying intentions predict behavior "unless intent changes prior to performance" or "unless the intention measure does not correspond to the behavioral criterion in terms of action, target, context, time-frame and/or specificity" (Sheppard et al., 1988). The intention of buying a brand has various dimensions. The most generally accepted is the willingness to do an effort to perform to the buying action (Fishbein and Ajzen, 1975; Eagly and Chaiken, 1993). The nature of such an effort may vary according to the context: it may be the WTP to obtain a product from that brand, the likelihood to pay a premium for that brand, or the likelihood to buy the product even if it is not sold in the most favorite purchasing location. A second key dimension of buying intentions is the choice of the brand among alternatives (Ajzen and Fishbein, 1980), which is the process of comparing and selecting among the intentions associated with each alternatives in the choice set.

3. Theoretical Framework

To analyze which POO information gives higher consumers' attitudes towards a brand and WTP a premium price and so differentiates a brand from all its competiting brands - including those

with the same POO attribute - we propose a theoretical framework that builds upon the learning theory of attitude formation (Fishbein, 1967) and the theory of reasoned action (Fishbein and Ajzen, 1975) (Figure 1).

First of all, we assume that both individual firms and collective organizations representing a POO can give attribute-level information, while we assume that only individual firms can give brand-level information. As a matter of facts, while collective organizations have the incentive of promoting the region they represent as a whole, they should have no incentive to promote individual brands within their region but not the others.

Therefore, we first develop hypotheses about attribute-level POO information. In particular, through the first two hypotheses (H1-H2), we tackle the initial questions: do firms giving attribute-level POO information create a benefit advantage for their own brand over the other brands? Therefore, should an individual firm give attribute-level POO information or should giving attribute-level information be an exclusive task of collective inter-firm organizations?

Similarly to previous literature on generic advertising and brand differentiation (Kaiser and Liu, 1998; Crespi and Marette, 2002), we hypothesize that attribute-level information, either given by an individual firm or an inter-firm organization representing some or all the firms within the POO, have no different impact on consumers' beliefs and attitudes towards competing brands within the same POO, and so does not create any differentiation among them. In particular, assuming that Firm A owns Brand A and Firm B owns Brand B, we hypothesize:

H1. **Given Firm A and Firm B being two firms from the same POO, attribute-level POO information given by Firm A has no different impact on consumers' attitudes towards Brand A than towards Brand B.**

H2. **Given Firm A and a collective inter-firm organization being from the same POO, attribute-level POO information given by Firm A has no different impact on consumers' attitudes for Brand A than attributet-level POO information given by the collective inter-firm organization.**

If we found that empirical evidence supporting these hypotheses, we would then imply that Firm A should not provide attribute-level information but should let a collective inter-firm organization give this information, whenever the latter exists (see Figure 2 and Figure 3).

Furthermore, we develop our third and last hypothesis (H3) to compare the impact of brand-level POO information and attribute-level POO information on consumers' beliefs and attitudes towards a brand. Similarly to Crespi and Marette (2002), who provide evidence that generic advertising giving attribute-level information reduce brand differentiation within firms of the same POO, we hypothesize that brand-level POO information has significantly larger positive impact on consumers' attitudes towards a brand than attribute-level POO information. However, we hypothesize that this would hold only when consumers have been previously exposed to some attribute-level POO information, no matter what is the source: consistently with Fishbein (1967), if consumers have strong brand origin associations relative to a place that they completely ignore, brand-level POO information may not have a high impact on consumers' attitudes. Therefore, we hypothesize that:

H3. **Once consumers have already received attribute-level POO information, the impact of brand-level POO information on consumers' attitudes towards a brand is higher than the impact of any further attribute-level POO information.**

If we found empirical evidence supporting this third hypothesis (see Figure 4), we would imply that a firm should give brand-level POO information to consumers rather than attribute-level POO information, whenever other firms or a collective inter-firm organization provides attribute-level POO information.

4. Methods

4.1. Sample and Product Selection

To test our hypotheses, we collected data through an internet-based experiment administered to 236 graduate students from Michigan State University. When sending an e-mail advertisement to recruit students to undertake the test, we voluntarily asked for people that "are interested in food from different places and cultures", as we wanted to attract respondents that are interested in learning and potentially buying new products from scarcely known places of origin.

To perform such an experiment, we chose our products of interest using three key criteria. First, we looked for products that, when associated to a particular POO, are completely unknown to our sample. In this way, we hope to give information treatments to respondents that have very weak prior beliefs regarding to the products associated to the POO attribute, as respondents' prior beliefs may largely vary according to their individual experiences. As we expect that prior beliefs are weak, we could assume that respondents' initial beliefs and attitudes towards an unknown product with POO attribute are very similar to each other. Second, we looked for products that are quite regularly used by the majority of consumers, although their familiarity towards the product may largely vary. Third, we looked for products that are commonly promoted with POO information, both by individual firms and national or regional collective associations of producers.

We finally choose Creole cream cheese from Southern Louisiana (USA) and extra-virgin olive oil from Riviera Ligure (Italy) as our products of interest. We found that 85% of our respondents consume olive oil and 75% of them consume cream cheese at least once a month. However, only four of them have heard before about olive oil from Riviera Ligure and only seven of them have heard before Creole cream cheese from Southern Louisiana. Therefore, we assumed that our sample has some basic knowledge of and involvement with olive oil and cream cheese, while they have very weak prior beliefs on these products when associated to places of origin such as Riviera Ligure and Southern Louisiana.

4.2. Experimental Procedure

The experiment has been conducted in June 2009. Respondents were recruited through an email advertisement by the researcher, with the support of the MSU Office of the Registrar. Each respondent undertook a questionnaire divided in an initial demographics section plus two sections with information treatments and measurements. Each section of the experiment is used to collect data to test different hypotheses.

In the initial demographics section, respondents were asked preliminary questions about their age, gender, ethnic group and nationality, as well as their initial attitude towards and their use of olive oil and cream cheese. In the first section, we collect data on the impact of product-level information (H1 and H2). Respondents were divided in four groups: the first group of respondents received firm A's attribute-level POO information treatment and their POO beliefs, attitudes and buying intentions for Brand A were measured. The second group of respondents received the same treatment as the first group, but their POO beliefs, attitudes and buying intentions were measured for Brand B, which has the same POO attribute. The third group of respondents received a collective inter-firm organization's attribute-level POO information

treatment and their POO beliefs, attitudes and buying intentions for Brand A were measured. Finally, the fourth group received only a brief description of the product with the attribute, and their POO beliefs, attitudes and buying intentions for both Brand A and Brand B were measured. Both firm A's and collective inter-firm organization's attribute-level POO information were manipulated with a 5-row very positive description of the product together with an information about a POO certification of the product that, as assumed, provided attribute-level information. Consumers' belief strength of the association between the POO and the brand was measured with a single seven-point Likert-scale item (strongly disagree/strongly agree). Consumers' attitudes were measured with a similar seven-point Likert-scale item, from very negative to very positive. Consumers buying intentions were measured with an individual question such as "Would you pay a premium to have brand A rather than another brand from the same place-of-origin?", where the possible answers were yes, no or "I don't know".

In the second section of the questionnaire, we collected data on the impact of brand-level POO information and attribute-level POO information on consumers' beliefs, attitudes and WTP a premium price. First of all, the group of respondents that did not receive any attribute-level POO information in section 1 of the experiment received it, such that every respondent received some attribute-level POO information before the start of section 2. Therefore, respondents were divided in two groups: the first group of respondents was given another firm (say, Firm C)'s product-level POO information, and then their POO beliefs, attitudes and buying intentions for Brand C were measured as in section 1. The second group of respondents was instead given Firm C's *brand*-level POO information, and then their beliefs, attitudes and buying intentions for Brand C are measured as in section 1. Brand-level information consists of a set of endorsements to Brand C from a set of information sources (including three sources among private 3rd party

certifiers, distributors, chefs, journalists, tasters or non-governmental organizations). The brand-level and attribute-level information treatments on olive oil from Riviera Ligure are reported in Figure 5 and 6.

4.3. The Model

Data collected from the first two sections of the questionnaire have been analyzed with a paired t-test and with a path model based on a system of regressions that establish the relationship among the measured variables.

The paired t-test across groups was used to simply compare the means of the groups that received different information treatments. By estimating the statistical significance of the differences between the group receiving attribute-level POO information and the group receiving no information treatment, we could understand if, on average, attribute-level POO information has a significant impact on respondents' beliefs, attitudes and buying intentions. Similarly, by estimating the difference between the group receiving attribute-level POO information and the group receiving brand-level POO information, we could understand if one of the two types of POO information is associated, on average, with higher beliefs, attitudes and buying intentions. In this analysis, we find appropriate to statistically compare group means and do not take into account individual differences across subject as group are assumed to be very homogeneous in terms of their initial attitudes towards the selected products, although the demographic differences across subjects persist.

To understand the relationship among beliefs, attitudes and WTP a premium price for the brand in each group, we ran a multi-group path model based on the following set of equations:

$$WTPA = \alpha_1 AttA + e_1 \quad (1)$$

$$AttA = \alpha_2 POOBelA + \beta_2 FlavBelA + e_2 \quad (2)$$

$$FlavBelA = \alpha_3 POOBelA + e_3 \quad (3)$$

whereas *POOBelA* stands for respondents' beliefs that the brand is from the POO, *FlavBelA* stands for respondents' beliefs that the branded product has a good flavor, *AttA* are respondents attitudes towards the brand and *WTPA* stands for the willingness to pay a premium price for the brand. Errors are identified as e_1, e_2, e_3 and e_4. Notation is similar to identify variables measuring beliefs, attitudes and buying intentions for Brand B and Brand C, too. In order to analyze whether the relationships among variables were significantly different across groups or not, this model was run simultaneously for the four groups that received different information treatments and we finally performed a Lagrange Multiplier (LM) test.

5. Results

5.1. The impact of attribute-level place-of-origin information on consumers' attitudes

First of all, by comparing group means with a paired sample t-test, we find evidence that consumers' beliefs, attitudes and WTP a premium for a brand are on average significantly higher when the brand owner gives place-of-origin (POO) attribute-level information than when no place-of-origin information is given (see Table 1). In the case of Riviera Ligure olive oil, the average consumers' attitude towards the brand is 5.6 out of 7 when the information is given, while it is approximately 5.0 when no information is given. In the case of Southern Louisiana cream cheese, the average consumers' attitude towards the brand is 4.77, while it is 4.32 when no information is given. This means that, when consumers have never heard before about a product from a certain place, attribute-level information given by a firm has on average a positive impact on consumers' POO and flavor beliefs, attitudes towards the brand and the WTP a premium compared to other brands. This result holds across the two products under examination, Riviera

Ligure olive oil and Southern Louisiana cream cheese, although the difference is more significant in the case of olive oil than in the case of cream cheese. In the case of cream cheese, there is no significant difference across consumers' beliefs that the brand has good flavor.

From the multi-group path analysis (see Table 4) we find that, when a firm gives POO attribute-level information, consumers' POO beliefs have a positive impact on their attitudes both directly and because POO is a cue of good flavor. This holds for both the products studied, although Table 4 shows only the results on olive oil. Ultimately, consumers' attitudes towards a brand have a positive impact on WTP a premium for it. This is consistent with many studies in agricultural economics, which theorizes that place-of-origin attributes have both a direct and indirect effect on consumer WTP (e.g., Van der Lans, 2003, Dentoni et al., in press), as well as in marketing literature (Fishbein and Ajzen, 1975, Rao and Monroe, 1989). On the other hand, when no POO information is given, POO beliefs have an impact only directly on attitudes towards the brand, but POO does not infer a better flavor. This makes sense, as consumers receive no information saying that the product from such a POO has a good flavor, but they may still like the combination of the POO with the product, which creates a direct positive impact on their attitude towards the brand and on their WTP a premium. The overall goodness-to-fit of the multi-group path model is acceptable, as the chi-square p-value = 0.472 and the RMSEA has a confidence interval between 0 and 0.148, and after the Lagrange Multiplier (LM) test no equality constraints among covariates is removed.

5.2. Spillover effects of attribute-level place-of-origin information on competing brands

We analyze if attribute-level information about a place of origin given by a firm has a positive spillover on competing brands from the same place of origin by comparing group means with another paired sample t-test (see Table 2). After receiving the same information, the first group is

measured beliefs, attitudes and WTP a premium for a brand mentioned in the information treatment (Brand A), while the second group is posed the same questions about a competing brand from the same place of origin (Brand B).

Results on such a spillover effect differ across Riviera Ligure olive oil and Southern Louisiana cream cheese. Differently from our hypothesis (H1), in the case of olive oil, we find consumers' attitudes towards Brand A, which is mentioned in the information treatment, are significantly more positive than Brand B. On the other hand, consumers' WTP a premium for Brand A is not significantly higher than consumers' WTP a premium for Brand B, although the difference between probabilities of WTP a premium across brands is 13% (see Table 2). Also, we find that consumers' attitudes and WTP a premium for Brand B is on average not significantly higher than attitudes and WTP for a brand when no attribute-level information is provided. Instead, as we hypothesized (H1), in the case of cream cheese consumers' attitudes towards Brand A and Brand B do not differ significantly (see Table 2), and they are on average both significantly higher than consumers' attitudes when no place-of-origin information is provided. The only statistically significant difference between consumers' perceptions on Brand A and Brand B cream cheese regards their place-of-origin beliefs.

Therefore, these results give evidence that attribute-level POO information on cream cheese has a spillover effect on other brands from the same place of origin, but this does not happen in the case of olive oil. This suggest that providing attribute-level POO information individually can be an effective marketing strategy for an olive oil company that aims at differentiating from other companies' brands with the same POO attribute, while this seems not to be the case in the context of cream cheese.

Finally, from the multi-group path analysis (see Table 4) it results that, when given place-of-origin attribute-level information from a brand owner and asked to evaluate a different brand from the same place of origin, consumers use the POO information as a cue of good flavor while their POO beliefs do not have a direct impact on their attitudes towards the product. This holds across both the products of our study. This makes sense, as consumers learn from the information they receive that the POO attribute is associated with good flavor and so they apply this knowledge to other brands that have the same POO attribute. On the other hand, since they received no information about the brand they are asked to evaluate, the direct association between their POO beliefs and attitudes remains weak.

5.3. The impact of attribute-level place-of-origin information from a collective organization

We analyze if attribute-level POO information from a collective organization has a different impact on consumers' beliefs, attitudes and WTP a premium from the same type of information from an individual firm by comparing the means of two groups of respondents (see Table 3). Again, the results differ across the two products under analysis, Riviera Ligure Olive oil and Southern Louisiana cream cheese.

In the case of cream cheese, as we hypothesized (H2), the impact of attribute-level information does not vary significantly if the POO information comes from an individual firm or from a collective organization. Consumers' beliefs, attitudes and WTP a premium of respondents receiving attribute-level information from a collective organization are slightly but not significantly higher than the same values of respondents that received attribute-level information from an individual firm. On the other hand, in the case of olive oil, beliefs, attitudes and WTP a premium for a brand is significantly higher when they receive information from an individual firm relatively to when they receive information from a collective organization (see Table 3).

Therefore, these results provide evidence supporting hypothesis 2 (H2) only in the case of cream cheese, but not in the case of olive oil. This suggests that a marketing strategy where place-of-origin attribute information is given to consumers collectively would be more appropriate in the case of a product such cream cheese than in the case of a product such olive oil. In the case of olive oil, it seems that firms aiming at differentiation from competing brands can have an advantage by providing generic place-of-origin attribute information individually.

From the multi-group path analysis (see Table 4) we find that, when consumers receive attribute-level information from a collective organization, their POO beliefs have a direct impact on their attitudes towards the brand in the case of olive oil (see Table 4), while the POO attribute is used as cue of good flavor in the case of cream cheese. In the case of both these products, consumers' attitudes towards the brand have a positive impact on their WTP a premium for it.

5.4. The impact of brand-level place-of-origin information

The last step of our analysis consists in comparing the impact differential of place-of-origin attribute-level and brand-level information in the case that consumers are already aware of the product with the place-of-origin (see Table 5). In other words, we tackle the question: which between attribute-level information, such as "the olive oil from my region is excellent", and brand-level information, such as "my individual olive oil brand from my region is excellent", has a more positive impact on consumers' beliefs, attitudes and WTP a price premium?

Again, we find a fundamental difference between olive oil and cream cheese. In the case of olive oil, beliefs, attitudes and WTP a premium are on average significantly higher when respondents receive brand-level information relatively to when they receive attribute-level information. As a matter of facts, respondents' attitudes towards an olive oil brand have an average of 5.29 when brand-level information is provided versus an average of 4.78 when attribute-level information is

provided. Consequently, 27% of respondents receiving brand-level information are willing to pay a price premium for the olive oil brand, while only 6% of respondents are willing to pay a price premium for the olive oil brand after receiving attribute-level information. This supports our hypothesis 3 (H3). On the other hand, there is very limited impact differential between respondents receiving brand-level and attribute-level information in the case of cream cheese. As a matter of facts, WTP a premium price for a cream cheese brand when receiving brand-level information is higher only by 9%, which correspond to a statistical significance at 90% level. Moreover, in the case of cream cheese respondents' beliefs and attitudes do not differ significantly when brand-level or attribute-level POO information is provided (see Table 5).

From the multi-group path analysis (see Table 6) it results that, when brand-level information is provided, consumers' POO beliefs have both a direct effect on their attitudes towards the brand and an indirect effect mediated by their flavor beliefs. Ultimately, consumers' attitudes have an impact on their WTP a premium for the brand. Instead, when respondents that are already aware about the place-of-origin attribute associated to the product again receive attribute-level information, their attitude towards the brand does not have a positive impact on their WTP a price premium for it. These results hold across olive oil and cream cheese. However, the overall goodness-to-fit is not very high, as Chi-Square p-value equals to 0.020 with the 90% RMSEA Confidence Interval is between 0.051 and 0.218. No equality constraint among covariates of the two groups is removed after conducting a LM test.

6. Conclusions

Demand for food with place-of-origin attributes is increasing globally, as consumers look for higher quality, safety and variety in their dishes. Agricultural economics and marketing literature

explored the effect of generic advertising and collective certification schemes on consumers' evaluations for an entire place-of-origin product category, but rarely studied how a firm can create a competitive advantage for its individual brand relatively to the others within the same place-of-origin.

Borrowing from the theory of attitude formation developed in the field of psychology, in this study we attempted to start filling this gap by analyzing which place-of-origin information increases consumers' beliefs, attitudes and buying intentions for an individual brand while differentiating it from the other brands from the same place-of-origin. We introduced a distinction between attribute-level and brand-level place-of-origin information, which differ in the objective of their messages. While the former aims at increasing consumers' evaluation towards the place-of-origin attribute, the latter strengthens the association between a specific brand and the place-of-origin.

We found that the impact of attribute-level information and brand-level information on consumers' beliefs, attitudes and buying intentions strongly varies across products. While in the case of olive oil, attribute-level place-of-origin information provided individually differentiates a brand from the others of the same place-of-origin, the same does not happen in the case of cream cheese. Therefore, olive oil firms can obtain an individual market advantage by giving positive information about their region as an olive oil region individually, while cream cheese firms should give the same information collectively to reduce costs, as giving such information individually does not seem to have an impact. Moreover, olive oil firms aiming at differentiating their product from the other should explore the opportunity of giving brand-level information to their potential consumers, as this provides significantly higher beliefs, attitudes and WTP a

premium price for their brand. On the other hand, the strategy of giving individual brand-level information seems to be less effective in the case of cream cheese.

We believe these results could be generalized further from the specific cases of products such as olive oil and cream cheese. Further research should explore the possibility that credence goods, i.e. products whose quality is highly associated to their credence attributes, would behave similarly to olive oil, while experience goods, i.e. products whose quality is more associated to the tangible quality attributes (such as flavor, color, texture), would behave similarly to cream cheese in this study.

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Appendix 1 - Figures

Figure 1 – Relationship between consumers' beliefs, attitudes and WTP a Premium

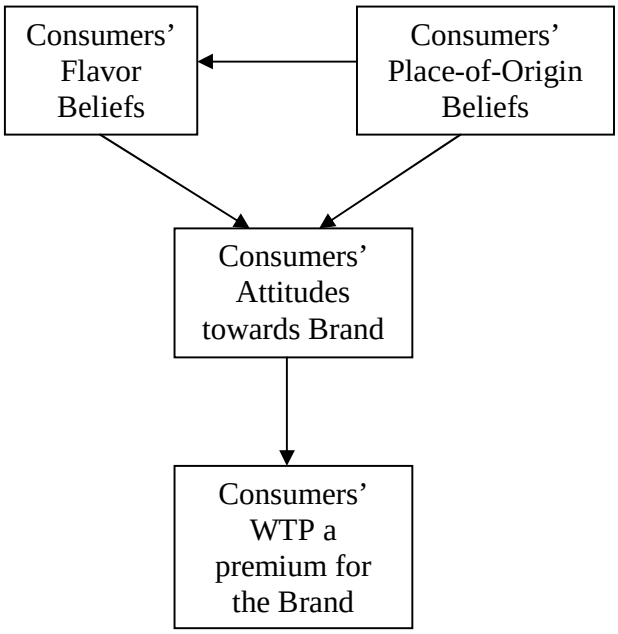

Figure 2 – The impact differential of Firm A's attribute-level information on consumers' attitudes towards Brand A and Brand B, a competing brand from the same place-of-origin (POO)

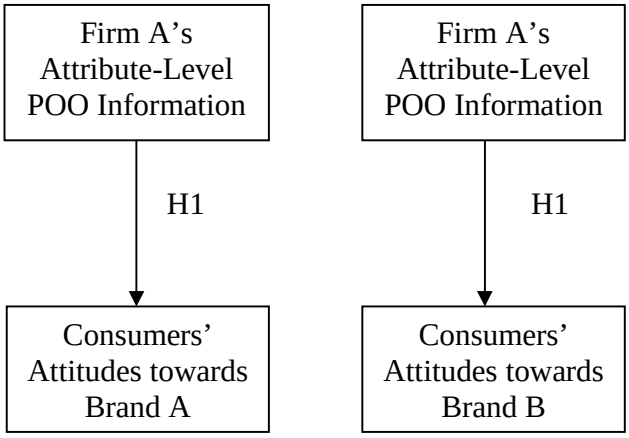

Figure 3 – The impact differential of attribute-level information from Firm A and from a Collective Organization promoting the place-of-origin (POO) on consumers' attitudes towards Brand A

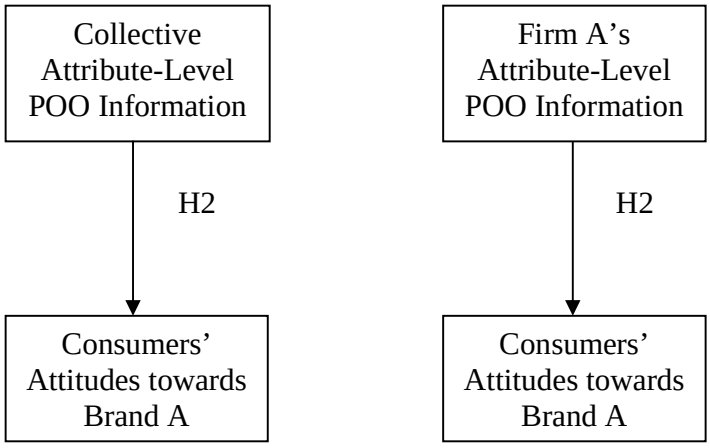

Figure 4 - The impact differential of Firm A's attribute-level information and brand-level information on consumers' attitudes towards Brand A

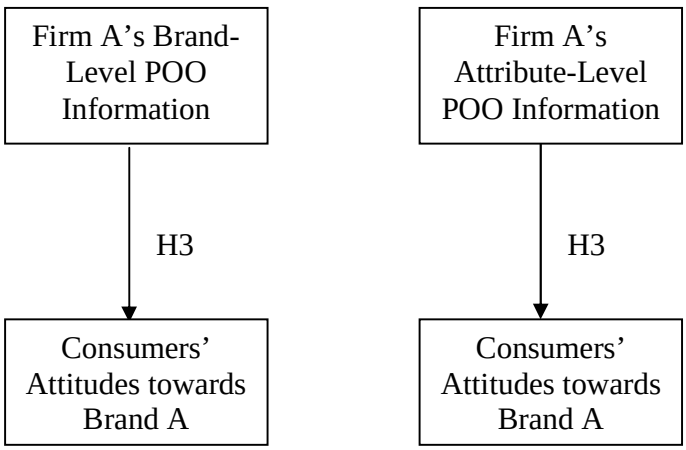

Figure 5 – Brand-Level POO Information Treatment on Riviera Ligure Olive Oil

Now please read this other piece of information on an extra-virgin olive oil.

The Cipriani Hotel in Venice, the Orient Express luxury train, the Splendido Hotel in Portofino, the Quirisana Hotel in Capri… "Costa dei Rosmarini" is a delicate extra-virgin olive oil from Riviera Ligure chosen by the best Chefs and the most elegant Hotels in Italy. "Costa dei Rosmarini" has been also received a special mention from the famous Michelin restaurant guide. It has been already chosen by top gourmet shops such as Whole Foods, Harrods in London and La Grande Epicerie in Paris.

This is the result of four decades of work and passion for olives of the Petrelli family, that obtains their "Costa dei Rosmarini" extra virgin olive oil from the most healthy and carefully selected olives of Riviera Ligure.

Figure 6 – Attribute-Level POO Information Treatment on Riviera Ligure Olive Oil

Now please read this other piece of information on extra-virgin olive oil.

From Capo Cervo to the border with France, Riviera Ligure is a continuum of bays, traditional ports and rocks on the sea that suddenly become valleys and mountain peaks. Riviera Ligure’s history is rooted in a tradition in which the production of olive oil has played a central role for thousands of years. The “taggiasca” tree produces a unique olive and imparts Riviera Ligure olive oil with a full, delicate and well-rounded flavor, and a deep color.

Here in Riviera Ligure, everything is different. Time does not matter. Also people are different: they built miles of stone walls to sustain stripes of cultivations all along the steepest mountains. They found the space for little squares of land among mountains, and took care of the hard soil for centuries to plant olives. And this produced a wonder: the extra-virgin olive oil.

In this magnificient land, Riviera Ligure, the Petrini family produces the "Costa dei Rosmarini" extra-virgin olive oil.

Appendix 2 – Tables

Table 1 –Difference in consumers' beliefs, attitudes and WTP a premium for "Brand A" between groups receiving attribute-level place-of-origin information from "Firm A" and no information

	Mean	Std. Dev.	t	Sig. (2-tailed)
Olive Oil from Riviera Ligure (n=56)				
ATT_{ainfo}-ATT_{noinfo}	0.643	1.182	4.07	0.000***
$POOBEL_{ainfo}$-$POOBEL_{noinfo}$	0.804	1.420	4.24	0.000***
$FLABEL_{ainfo}$-$FLABEL_{noinfo}$	0.357	1.407	1.90	0.063*
WTP_{ainfo}-WTP_{noinfo}	0.179	0.636	2.10	0.040**
Cream Cheese from Southern Louisiana (n=57)				
ATT_{ainfo}-ATT_{noinfo}	0.456	1.310	2.63	0.011**
$POOBEL_{ainfo}$-$POOBEL_{noinfo}$	0.281	1.264	1.68	0.099*
$FLABEL_{ainfo}$-$FLABEL_{noinfo}$	-0.035	1.149	-0.23	0.818
WTP_{ainfo}-WTP_{noinfo}	0.105	0.409	1.94	0.057*

***,**,*: Significant respectively at 99%, 95% and 90%.

Table 2 –Difference in consumers' beliefs, attitudes and WTP a premium for "Brand A" and for "Brand B" after receiving attribute-level place-of-origin information from "Firm A"

	Mean	Std. Dev.	t	Sig. (2-tailed)
Olive Oil from Riviera Ligure (n=61)				
$ATTA_{ainfo}$-$ATTB_{ainfo}$	0.426	1.575	2.11	0.039**
$POOBELA_{ainfo}$-$POOBELB_{ainfo}$	0.393	1.574	1.20	0.056*
$FLABELA_{ainfo}$-$FLABELB_{ainfo}$	0.016	1.678	0.07	0.939
$WTPA_{ainfo}$-$WTPB_{ainfo}$	0.131	0.644	1.59	0.117
Cream Cheese from Southern Louisiana (n=56)				
$ATTA_{ainfo}$-$ATTB_{ainfo}$	0.054	1.212	0.33	0.742
$POOBELA_{ainfo}$-$POOBELB_{ainfo}$	0.375	1.054	2.66	0.010**
$FLABELA_{ainfo}$-$FLABELB_{ainfo}$	0.054	1.182	0.34	0.736
$WTPA_{ainfo}$-$WTPB_{ainfo}$	0.000	0.504	0.00	1.000

**,*: Significant respectively at 95% and 90%.

Table 3 – Difference in consumers' beliefs, attitudes and WTP a premium for "Brand A" between groups receiving attribute-level place-of-origin information from "Firm A" and from a Collective Organization

	Mean	Std. Dev.	t	Sig. (2-tailed)
Olive Oil from Riviera Ligure (n=57)				
ATT_{ainfo}-$ATT_{collainfo}$	0.860	1.597	4.06	0.000***
$POOBEL_{ainfo}$-$POOBEL_{collainfo}$	0.544	1.548	2.65	0.010**
$FLABEL_{ainfo}$-$FLABEL_{collainfo}$	0.368	1.676	1.66	0.103
WTP_{ainfo}-$WTP_{collainfo}$	0.263	0.552	3.60	0.001***
Cream Cheese from Southern Louisiana (n=57)				
ATT_{ainfo}-$ATT_{collainfo}$	-0.298	1.336	-1.68	0.097*
$POOBEL_{ainfo}$-$POOBEL_{collainfo}$	-0.123	1.428	-0.65	0.519
$FLABEL_{ainfo}$-$FLABEL_{collainfo}$	-0.175	1.429	-0.93	0.358
WTP_{ainfo}-$WTP_{collainfo}$	-0.017	0.551	-0.24	0.811

***,**,*: Significant respectively at 99%, 95% and 90%.

Table 4 – The relationship between consumer beliefs, attitudes and WTP a premium across groups receiving attribute-level place-of-origin information (Olive Oil)

Group receiving Attribute-Level Place-of-Origin Information from Firm A					
Dep. Variable	*Indep. Var. 1*	*Coefficient*	*Indep. Var. 2*	*Coefficient*	*Error*
$FLABEL_{ainfo}$	$POOBEL_{ainfo}$	0.652**			0.758
ATT_{ainfo}	$FLABEL_{ainfo}$	0.396**	$POOBEL_{ainfo}$	0.395**	0.695
WTP_{ainfo}	ATT_{ainfo}	0.389**			0.921
Group receiving Attribute-Level Place-of-Origin Information from Firm A					
Dep. variable	*Indep. Var. 1*	*Coefficient*	*Indep. Var. 2*	*Coefficient*	*Error*
$FLABELB_{ainfo}$	$POOBELB_{ainfo}$	0.726**			0.687
$ATTB_{ainfo}$	$FLABELB_{ainfo}$	0.512**	$POOBELB_{noinfo}$	0.277	0.674
$WTPB_{ainfo}$	$ATTB_{ainfo}$	0.350**			0.937
Group receiving Attribute-Level Place-of-Origin Information from a Collective Organization					
Dep. variable	*Indep. Var. 1*	*Coefficient*	*Indep. Var. 2*	*Coefficient*	*Error*
$FLABEL_{collainfo}$	$POOBEL_{collainfo}$	0.764**			0.646
$ATT_{collainfo}$	$FLABEL_{collainfo}$	0.119	$POOBEL_{collainfo}$	0.739**	0.552
$WTP_{collainfo}$	$ATT_{collainfo}$	0.220**			0.975
Group receiving no Place-of-Origin Information					
Dep. variable	*Indep. Var. 1*	*Coefficient*	*Indep. Var. 2*	*Coefficient*	*Error*
$FLABEL_{noinfo}$	$POOBEL_{noinfo}$	0.747**			0.665
ATT_{noinfo}	$FLABEL_{noinfo}$	0.277	$POOBEL_{noinfo}$	0.471**	0.711
WTP_{noinfo}	ATT_{noinfo}	0.407**			0.914
Overall Goodness-to-Fit: P-Value for the Chi-Square Statistic = 0.472; 90% RMSEA Conf. Int. = (0.000; 0.148)					

**: Significant respectively at 95%.

Table 5 – Difference in consumers' beliefs, attitudes and WTP a premium for a Brand C between groups receiving attribute-level POO information and brand-level information from Firm C

	Mean	Std. Dev.	t	Sig. (2-tailed)
Olive Oil from Riviera Ligure (n=113)				
ATT_{binfo}-ATT_{ainfo}	0.504	1.356	3.95	0.000***
$POOBEL_{binfo}$-$POOBEL_{ainfo}$	0.451	1.452	3.31	0.001***
$FLABEL_{binfo}$-$FLABEL_{ainfo}$	0.628	1.415	4.72	0.000***
WTP_{binfo}-WTP_{ainfo}	0.212	0.472	4.79	0.000***
Cream Cheese from Southern Louisiana (n=113)				
ATT_{binfo}-ATT_{ainfo}	0.142	1.302	1.16	0.250
$POOBEL_{binfo}$-$POOBEL_{ainfo}$	0.071	1.266	0.60	0.553
$FLABEL_{binfo}$-$FLABEL_{ainfo}$	0.009	1.326	0.07	0.944
WTP_{binfo}-WTP_{ainfo}	0.089	0.560	1.68	0.096*

***,*: Significant respectively at 99% and 90%.

Table 6 – The relationship between consumer beliefs, attitudes and WTP a premium across the groups receiving place-of-origin attribute-level information and brand-level information (Olive Oil)

Group receiving Attribute-Level Place-of-Origin Information from Firm A					
Dep. Variable	*Indep. Var. 1*	*Coefficient*	*Indep. Var. 2*	*Coefficient*	*Error*
$FLABEL_{ainfo}$	$POOBEL_{ainfo}$	0.645**			0.764
ATT_{ainfo}	$POOBEL_{ainfo}$	0.429**	$FLABEL_{ainfo}$	0.334**	0.721
WTP_{ainfo}	ATT_{ainfo}	0.085			0.996
Group receiving Brand-Level Place-of-Origin Information from Firm A					
Dep. variable	*Indep. Var. 1*	*Coefficient*	*Indep. Var. 2*	*Coefficient*	*Error*
$FLABEL_{binfo}$	$POOBEL_{binfo}$	0.557**			0.831
ATT_{binfo}	$POOBEL_{binfo}$	0.576**	$FLABEL_{binfo}$	0.298**	0.623
WTP_{binfo}	ATT_{binfo}	0.330**			0.944
Overall Goodness-to-Fit: P-Value for the Chi-Square Statistic = 0.020; 90% RMSEA Conf. Int. = (0.051; 0.218)					

**: Significant respectively at 95%.