

Governance Regimes for Protected Geographic Indicators:
Impacts on Food Marketing Systems

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Abstract

Using a method based on historical narrative, we argue that the structure of governance regimes impacts the effectiveness of the marketing systems associated with protected geographic indicators. A protected geographic indicator is a form of communal intellectual property that is combined with privately held resources to enable the exclusive production and marketing of traditional specialty food and beverage products. We use two factors to differentiate between governance regimes: the heterogeneity of producer interests and capabilities and the level of communal control over production and marketing. Together these factors determine how committed producers are to participation and how strongly they coordinate their actions. Commitment and coordination in turn influence the quality and consistency of production, the effectiveness of promotion, the kinds of placement the product can achieve and the availability of price premiums. Commitment and coordination also help produce environmental and social benefits.

Introduction

This study examines the impacts of different forms of governance on protected geographic indicator (PGI) systems. These systems market food and beverage products made using traditional local methods (Barham, 2003; Paxson, 2010; Vandecandelaere, Arfini, Belletti & Marescotti, 2009). The modern protected geographic indicator is descended from the *Appellation d'Origin Contrôlée* system used for centuries to control the origin labeling of French wines. In contemporary usage a PGI designation is an internationally recognized form of intellectual property that limits the use of specific place of origin names and labels to producers located in that place and producing the specified traditional products. A PGI designation converts previously unclaimed resources (place of origin names) into communal property. A community controlling a PGI designation can exclude unqualified producers who try to use the name in any country that subscribes to the relevant international conventions. In addition to enabling the enforcement of rights, the implementation of a PGI designation changes the systems used to bring these products to market. How PGI systems are governed determines the impact of these changes, and thus changes the effectiveness PGI systems in delivering the outcomes intended by the agencies and communities that create them.

Layton, (2009) defines a marketing system as a network of individuals, groups and/or entities, embedded in a social matrix, linked directly or indirectly through sequential or shared participation in voluntary exchange of value, which jointly creates, assembles, transforms, and makes available assortments of products, services, experiences, and ideas, provided in response to customer demand. The implementation of a PGI designation alters the marketing system by limiting the type and number of actors in the network, defining products and production processes, and limiting the assortment produced. For convenience we call the resulting marketing

systems PGI systems. PGI systems represent an alternative to systems based on product and producer proliferation, anonymous sourcing, mass production, mass marketing and mass consumption (Layton & Grossbart, 2006; Mitchell, Wooliscroft & Higham, 2010; Varey, 2010).

Over the last three decades more than forty nations have completed PGI legislation to take advantage of international intellectual property rights frameworks. This trend has been facilitated by the Food and Agriculture Organization (FAO) and the World Intellectual Property Rights Organization (WIPO) of the United Nations; by the World Trade Organization (WTO); by the European Union; and by NGOs such as the Slow Food Foundation and OriGIn, a Swiss-based NGO that represents PGI producers. This support has been forthcoming because, in theory, PGI systems can help less favored rural communities (Parrot, Wilson & Murdoch, 2002) overcome sustainable development challenges by supporting local producers who are otherwise excluded from or exploited by global supply chains controlled by distant retailers or distributors. PGI systems have been established to help rural populations retain control over local resources, protect natural resources and biodiversity, stem the flight of young people to cities, support sustainable production systems, and establish traditional products in a wider range of markets, creating a more reliable income stream that is more equitably distributed within communities (Bowen & Zapata, 2009; Brunori & Rossi, 2007; El Benni & Reviron, 2009; Kizsos & Vakufaris, 2011; Tregear, Arfini, Belletti & Marescotti, 2007; Vandecandelaere et al., 2009).

Our principal argument is that the effectiveness of PGI systems depends to a large extent on the governance regimes deployed to control them. We define governance regimes in terms of the heterogeneity of producer interests and capabilities that the PGI organization accommodates and the level of communal control that the organization exerts over product and market decisions (Perrier-Cornet & Sylvander, 2000). Some governance regimes are relatively inclusive,

encompassing producers with a wide variety of interests and capabilities, while others are more exclusive, recognizing as qualified only limited numbers or kinds of producers. Governance regimes also vary in the level of communal control applied to marketing mix variables such as product, pricing, promotion and placement. Weak communal control leaves decisions concerning the marketing mix mostly to individual producers, while strong communal control governs these decisions collectively. The heterogeneity of producer interests and capabilities and the strength of communal control over production and market activity have opposing effects on the level of producer coordination and commitment, which in turn influences the effectiveness of the PGI system and also determines the extent to which a system delivers environmental and social benefits to communities.

We argue that producer coordination and commitment mediates the relationship between the structure of the governance regime and market outcomes because, in a PGI system, productive resources are private property. To benefit from the communal property created by a PGI designation, owners of private property need to commit resources to producing a reliable, high quality product and bring those products to market in a coordinated manner. This is easier when producers are fewer and more alike, but being too exclusive makes it difficult to establish a PGI system in the first place, as we describe in greater detail below. Because heterogeneity makes achieving high levels of producer commitment and coordination more difficult, the level of communal control is a concern. Even when producers are more alike, greater communal control may be desirable in order to improve producer commitment and coordination, and thus ensure product quality and a reliable, desirable consumer experience that can generate benefits for the community in the long run (Aubard, 2010; Barham, 2003; Kruijssen, Keizer & Giuliani, 2008; Ostrom, 1990; Vandecandelaere et al, 2009).

Our method is a form of historical narration (Abbott, 2004) in which we describe the general structure of PGI systems, how governance regimes differ, and how they function. Our approach is pragmatic because our intention is to develop a narrative of how PGI systems get to be the way they are, and from there to develop propositions about how the structure of governance alters the effectiveness of marketing systems used to implement them. In keeping with this method we describe our methods and sources before describing the past and current state of protected geographic indicators.

Methods

This study is possible because there are numerous case studies of PGI systems in publications and commissioned reports on rural development, sustainable food systems and food quality (Aubard, 2010; Bowen & Zapata, 2009; El Benni & Reviron, 2009; Gay, 2007; Kruijssen, Keizer & Giuliani, 2008; Lindkvist & Sanchez, 2008; Vandecandelaere et al., 2009). As shown in Table 1, this study draws on 80 product cases from 36 countries, published in 21 different studies and reports. Twenty nine of the cases in Table 1 come from outside the European Union, and the majority of the European cases come from less favored areas within the union (Parrot, Wilson & Murdoch, 2002).

INSERT TABLE 1 ABOUT HERE.

Our goal is to articulate a relatively simple theory that can be applied widely, and which may inspire new discussions and directions for further research. As a review of existing studies, our method for this paper has been reading, analyzing and organizing primary and secondary documents (Abbott, 2004), rather than acquiring data through archives, surveys, interviews or observation. This method is appropriate because what the study focuses on are the ideas and patterns found in the literature, rather than the details of specific local action.

The majority of the cases listed in Table 1 represent products that currently benefit from PGI status. Some of the non-EU cases have been accorded PGI status under the EU regulations, giving them protection in all of the member states. In at least one case (*Ciliegi di Lari*) the development process ended with the producers declining to pursue protected status (Tregar et al., 2007). Three of the products in the table have chosen to secure trademarks rather than GI status. In two cases the PGI designation has been contested in developed markets (Blue Mountain and Ethiopian coffee marks).

Most of these cases are published in reports to development agencies, in training materials, or in scholarly articles seeking to influence policy, rather than as articles concerned with theory development and testing. In our discussion of the patterns we observed in these cases, we have tended to emphasize cases reported by more than one source, but all of the cases listed in Table 1 have contributed to our understanding of these issues. By identifying themes that repeat across cases, we develop a generalized view of the structures, actors and institutions that connect PGI to marketing systems and their efficacy. This allows us to gain insights into how governance systems help PGI systems become economically self-sustaining and supportive of environmental and social justice.

A Primer on Protected Geographic Indicators

There are several different geographic indicator marks in use, affording different levels of protection. Table 2 lists the categories defined by the European Union, variants of which are used worldwide. The weakest designation is Traditional Specialty Guaranteed (TSG). Relatively few products have been registered as TSG, since its protections are minimal. Two examples are *Jamon Serrano*, a traditional ham produced in Spain from “white footed hogs”, and recently, Neapolitan Pizza, which now can be applied only to a specific style of pizza. Products using a

TSG label can be produced anywhere, as long as they conform to the specification underlying the name. Protected Geographical Indicators (PGI) are defined as indications which identify a good originating in the territory of a TRIPs (the acronym for the WTO agreement on Trade Related aspects of Intellectual Property rights) signatory, or a region or locality in that territory, as having a given quality, reputation or other characteristic of the good is essentially attributable to its geographical origin. A PGI designation creates an enforceable right under TRIPs. The product has to originate (be produced) in the territory, but does not have to be uniquely linked to the territory. Two examples are *Turrón de Alicante*, a honey almond nougat typical of the Alicante region in Spain and Beacon Fell Traditional Lancashire Cheese, a traditional cheese from Lancashire, England. Protected Designation of Origin (PDO) marks correspond to the highly restrictive historical *Appellation d' Origin Contrôlée*. PDO designations are limited to products whose quality and characteristics are due exclusively or essentially to the geographical environment, including both natural and human resources. Many appellation wines that draw their character from a limited terroir, such as Médoc Bordeaux wine, fall into this category, as do other unique products such as Native Shetland Wool and *Guanxi mi you*, the pomelo fruit peculiar to Pinghe county in Fujian province, China. Because the Traditional Specialty Guaranteed mark affords little or no protection, when we refer to PGI designations we mean both PDO and PGI marks. Because PGI marks are less restrictive than PDO marks, they represent the minimum conditions for creating an enforceable right, and thus are the more general term.

INSERT TABLE 2 ABOUT HERE

PGI designations are intellectual property, supported by a specific type of marketing system. PGI designations are communal property resources (Hess & Ostrom, 2007), and are thus managed under a different logic than private property. A PGI designation is created on the basis

of a specified territory, for the benefit of the community, region and nation (Barham, 2003; Grote, 2009; Paxson, 2010). Place of origin is linked to the choice of what to produce and how to produce it. The creation of value is bound up with community by the fixed nature of agricultural production. More than other production, farming is tied to place. We discuss three aspects of PGI labels and systems before discussing governance regimes: PGI systems as marketing systems, PGI designations as intellectual property, and the functions of PGI designations.

PGI systems as marketing systems

Two kinds of constraint make PGI systems distinct from conventional marketing systems. First and most obvious is the emphasis on geographic location, traditional ingredients and traditional methods, which excludes most potential entrants from joining the system. Layton (2007), speaking of the marketing systems as object of study, observes that “Deciding which entities (individuals, groups, businesses, and networks) are to be included is an essential step in system specification or modeling, where the choices made define system boundaries and identify inputs and outputs.” Unlike many organically developed marketing systems, this decision is made explicit by the communities, agencies and institutions involved in establishing PGIs because it is a requirement for acquiring the property right. Geography determines which communities and institutions provide infrastructure to and derive benefit from PGI systems.

The second constraint is the restriction that limits the designation to specialty products, produced in traditional ways. The assortments offered by PGI systems are severely constrained, a limitation that is typically justified as a tradeoff for the exclusive rights granted to the label. Any PGI system is essentially a legalized marketing cartel, whose reach is limited to a single highly specified product category. The intention is that producers will excel within these narrow limits. This is both a requirement of the logic of valuing traditional production and a way to

accommodate the anti-competitive nature of PGI designations within the open competition that characterizes broader consumer markets.

PGI designations as intellectual property

International law only recognizes PGI labels that are created and administered as communal property under national law. National PGI legislation establishes rules for determining the boundaries of the protected region and establishes authorities charged with developing and monitoring the codes of practice that complete the connection between production and environment. The organization that holds controlling authority can be a government agency or a parastatal organization, such as a regional collective. The controlling organization alone has the right to take action to exclude or qualify producers, although third party certifiers are often used to verify qualifications. Rights to access and use the communal resource are not alienable by either the controlling organization or the members (Hess & Ostrom, 2007). The right to use a PGI designation cannot be sold or transferred.

Protected geographic indicators differ in several ways from ordinary trademarks and labels. Trademarks are defined as marks owned and protected by producers who use the trademark to identify and differentiate their goods and services. A trademark is intellectual property used to market products produced by a single entity. Labels (as the term applies in this study) are mandatory or voluntary certifying marks controlled by third parties that do not produce the products being certified. Examples of labels include the marks associated with ISO standards, California Certified Organic Farmers (CCOF) organic production marks and the European Union's Certification of Compliance registry for passenger cars. Many environmental labels have also acquired trademark status (Grote, 2009; Henson & Humphrey, 2010).

Geographic indicators are similar to trademarks because they are marks used by producers to identify and differentiate goods. Unlike trademarks created by firms, however, they represent traditional usage that was not originally identified with a single producer. In effect a PGI designation changes an unprotected name, appropriable by any producer, to a communal resource accessible only to qualified participants (Hess & Ostrom, 2007). This is why geographic labels that have already been appropriated into common use (such as Greek yogurt or Cheddar cheese) are difficult to convert into PGI designations. Geographic indicators are also like quality assurance labels because they indicate traditional, ‘typically’ higher quality products. This dual character has led to the development of separate treatment for PGIs under international law (Grote, 2009; Josling, 2006; Parrot, Wilson & Murdoch, 2002; WTO, 2009).

Functions of PGI labels

PGI labels serve two functions: property rights protection and quality assurance. The first function is to establish intellectual property rights that give PGI organizations, and through them communities, greater control over their traditional products by excluding non-qualified producers from using the label. The effectiveness of the organization in defending and developing a PGI label is critical to the development of market systems (Layton, 2009) that connect specialized traditional production and global consumer markets. Without defensible property rights in the designation, communities find it hard to justify investment in development of marketing system infrastructure (supply chain, promotion, placement, pricing and protection) that preserves local control of economic, social and environmental benefits (Aubard, 2010; Barjolle & Sylvander, 2000; Belletti et al., 1997; Brunori & Rossi, 2007; El Benni & Reviron, 2009; Kruijssen, Keizer & Giuliani, 2008; Vandecandelaere et al., 2009). This intellectual property rights function is explicitly codified in the international frameworks governing for geographic indicators.

How enforceable this right is depends to a large degree on how highly developed a nation's institutional infrastructure is. We define institutional infrastructure in terms of the political, economic and social matrix the system is embedded in (Layton, 2009). Institutional infrastructure is more highly developed when an economy enjoys political and social stability; transparency of government, particularly as concerns equitable arbitration for contract resolution and property rights; and economic and cultural systems that support markets, innovation and distribution of information (Khanna, Palepu & Bullock, 2010; Lundvall, Johnson, Andersen, Esben & Dalum, 2002). Institutional infrastructure also reflects the existence of related and supporting industries that facilitate particular kinds of economic activity (Porter, 2000). A more highly developed infrastructure makes it less costly to exercise property rights, and less costly to deploy more complex forms of governance (Khanna, Palepu & Bullock, 2010).

The second function of PGI labels is to serve as a quality assurance mark that helps consumers outside of traditional market areas make decisions about purchases of experience goods like wines or traditional foods (Gay 2007; Grote, 2009; Henson & Humphrey, 2010). This function, which is as equally necessary for the success of a PGI system as the property rights function, is not part of international law. Instead this function depends on product, promotion and placement. It is often assumed that to create benefits a PGI product needs to be placed into markets outside the region of origin. Expatriate communities represent a point of entry to external markets, but the goal is usually placement into wider consumer segments. In recent years this placement process has been facilitated by the recognition that some consumers in global markets put a premium on provenance and the social construction of the meaning of a product (Gamble & Taddei, 2006; Jacobsen, 2010; Josling, 2006; Marsden, Banks & Bristow, 2000; Moschini, Menapace & Pick, 2008; Parrot, Wilson & Murdoch, 2002). The quality

assurance function of a PGI label benefits from this broad social movement that values developing sustainable agriculture and rural economies through market-oriented action (Mitchell et al., 2010). PGI products are similar to fair trade products in that they appeal on the basis of experience qualities and because they help better the lives of producers. The idea that purchasing PGI products allows consumers to support less favored producers, whether they are from France, Benin or Thailand, connects with what Varey calls “welfare marketing” (2010), a system in which the development of quality of life for producers and consumers is paramount.

From a policy perspective one way to make this function more effective is to support the creation of more PGI marketing systems in order to place more PGI products in more global markets, in the hopes of creating positive spillover effects between products bearing a PGI labels. As more PGI products are created and widely distributed, consumers will become more familiar with the label, and if their experiences are positive, begin to value the label more. An important policy goal is therefore to create more genuinely higher quality PGI products, in order to create network effects that make all PGI designations more valuable.

The prospect of protection from industrial competition while benefiting from a potentially valuable quality assurance mark is often sufficient incentive for the creation of a PGI designation. Once a designation is acquired, getting producers to fully commit to integrating their operations into the PGI system is an ongoing challenge. Failing to overcome this challenge can undermine the quality assurance function. If producers hold out resources or production, the system may never achieve sufficient scale to penetrate global markets and return benefits to the community. If producers do not coordinate their production and marketing activities, the quality assurance mark will be less reliable, reducing the benefits to all producers. As we discuss in the

following sections, producer coordination and commitment depend on the incentives created by governance regimes.

Governance Regimes for PGI Systems

We define governance regimes in terms of the heterogeneity of capabilities and interests among participating producers on one hand and the level of communal control over production and marketing decisions granted to the PGI organization on the other (Brunori & Rossi, 2007; Tregar et al., 2007; Vandecandelaere et al., 2009). The states of these factors are determined by design decisions taken during the process of establishing the PGI. The membership of a PGI system can be homogenous or heterogeneous, depending both on how inclusive the qualification specification implemented by the organization is. The level of communal control adopted by the organization is also the result of a negotiated process. Negotiation over who qualifies and the level of communal control sometimes continues beyond the initiation of the system. Stronger communal control appears to be more common in economies where institutional infrastructure is more highly developed, since this makes it less costly to resolve tensions between private property and communal rights.

Identifying the product and qualifying producers are essential steps in the PGI application and implementation processes (Vandecandelaere et al., 2009). Defining the product, geographical boundaries, controlling authority and code of practice that constitute a PGI system is a contentious process in nearly every case. The legal requirements for granting a protected indication demand that the effects of place, practice and material must be specifically and uniquely identified, without substantial objection from interested actors. In the reality of the application process, place, practice and material are seldom so well defined as to produce easy consensus. Producers with a variety of interests and widely different capabilities may insist on

being included. Tregar et al. (2007) discuss the case of *Culatello di Zibello*, in which tension between industrial and artisanal producers leads to a dual specification. Brunori & Rossi (2007) trace the long history of competing interests and distinct capability sets in the definition of the Chianti region that led to a pair of designations, Chianti and Chianti Classico (Gallo Nero). As a practical matter, while community members might wish to strongly restrict participation in the interests of narrow local economic interest or a desire for self-determination, the fact that local, regional or external resistance can undermine the success of an application process requires most creation processes, and thus the resulting organization, to be widely inclusive. As these examples suggest, a variety of interests must be accommodated through side deals or co-opted if the PGI is to become a reality. The more inclusive the initial processes are, the greater heterogeneity of interests and capabilities there will be among qualified producers.

Products requiring more processing steps are also more likely to have heterogeneous membership. Perrier-Cornet and Sylvander (2000) frame product based differences in terms of whether a PGI is sectoral or territorial. Territorial forms of governance have also been called a supply chain approach (Marsden, Banks & Bristow, 2000). Collective organizations in territorial regimes distribute power among a mix of producers from different stages of the supply chain (Brunori & Rossi, 2007; Tregar et al., 2007). The organization that controls a territorial regime is called an “inter-professional organization” in EU administrative codes and specifies qualifications at every stage of production. The purpose of territorial governance regimes is to maintain or develop multi-stage local activity systems which are of necessity heterogeneous. Examples of products produced under territorial governance include many animal products (e.g. Parmigiano-Reggiano cheese) or highly processed vegetable products such as olive oil because these require the involvement of farmers, processors and packers.

In contrast, a sectoral governance regime focuses on a single stage of the value chain, and centralizes power among producers at that stage. A good example of sectoral PGI governance comes from the Café de Colombia PGI. The controlling organization is the *Federación Nacional de Cafeteros de Colombia*, which is controlled by coffee growers, although some independent processors and shippers are also members. Another example is the winemaker syndicates that control most French and Italian wine PDOs (Brunori & Rossi, 2007; Perrier-Cornet & Sylvander, 2000). Growers who are not winemakers are represented, but usually have little voice because the PGI regulates winemaking rather than viticulture. Grapes have to be certified as coming from the protected region and being the right varieties but farm practice (tillage, fertilizer, etc.) is not regulated. In sectoral PGI systems producers tend to be more homogenous in what they do, but there are still likely to be differences in capabilities and interests between them.

PGI governance regimes can involve strong communal control, with collective determination of the distribution of benefits following from coordinated decisions about production volumes, pricing, promotion and placement. Communal control can also be weak, exerting little control over any aspect of the marketing system except in limiting the use of the label to qualified products. Because the level of communal control is the result of a negotiated process, it appears to be relatively independent of the heterogeneity of producer interests and capabilities. Although greater coordination along the supply chain would appear to be desirable in territorial PGI systems, weak governance is not uncommon (Arfini et al., 2003). In sectoral PGIs, communal control is often weaker when producers actively compete. The only examples of strong communal control in sectoral governance we found occur when producers pool their output (Deshpande, 2004). Weak communal control is by far more common than strong communal control in all types of PGI systems.

Propositions: The Impact of Governance Regimes on PGI Marketing Systems

We are now in a position to develop propositions about the impact of governance regimes on PGI marketing systems. As shown in Figure 1, we propose that the two elements that define governance regimes, the strength of communal control and the heterogeneity of producer interests and capabilities influence producer coordination and commitment, which in turn influences the PGI marketing system and the development outcomes that are the *raison d'être* for most new PGI systems. Our model has this form because, as we said in the introduction, a PGI system marries communal property in the form of the PGI designation to the private property that must actually be deployed for the system to work. For the combination of communal and private resources to create value, producers must be willing to coordinate their operations to some degree, and to commit those resources to production within the PGI system. It is important to recognize that participating in a communal scheme may expose producers' returns from private resources to opportunism, additional administrative costs, requirements for new investments and so on. Participation may also limit a producer's ability to make independent decisions, and thus limit producers' ability to act in their own self-interest. We first discuss the relationships between the two factors that constitute governance regimes and producer coordination and commitment, and then detail the ways that producer coordination and commitment enable the creation of value in the PGI system.

INSERT FIGURE 1 ABOUT HERE.

When the interests and capabilities of producers vary widely, on average producers will be less willing to tie themselves to each other or fully commit to working within the PGI system. This heterogeneity may be found within stages of the value chain, where producers may compete directly, and between stages, where incentives may vary from grower to processor to packer. In

both cases producers have to be aware of and guard against opportunism and the risk that other participants will appropriate returns to the producer's private resources.

Opportunism based on differences between producers within sector can take several forms. Producers who generate higher volumes may use the PGI as a means of protecting themselves from down cycles in commodity prices, but divert production into commodity markets when prices are up. Producers with lower capabilities may divert lower quality product into PGI systems, in hopes of free riding on the label, especially if higher quality producers are fully committed. Producers who improve quality and reliability are able to combat this by building their own brands on the backs of the collective, as seems to have been the case in the Beacon Fell cheese PGI (Tregar et al., 2007) and is often the case in wine PGIs (e.g. a single producer dominates a protected region). When one producer improves quality more than others, the product can carry the PGI label but the estate label creates more value and is difficult to free ride on. The benefits of the PGI become private rather than communal. When producers have differing capabilities and interests, there is an incentive for producers to compete with each other. Over time individualization of brand concentrates benefits in the hands of producers who are most likely to succeed anyway, making less capable producers more likely to opt out of participation.

Heterogeneity of producer capabilities and interests across supply chain stages also creates problems with coordination and commitment. The scale of production can vary greatly across different stages of the supply chain. Typically the downstream players of the supply chain such as processors and retailers have more power because they consolidate inputs from smaller upstream suppliers. In some new PGI systems value creation depends on the goodwill of a single processor or distributor, or is appropriated by producers with more effective methods or

resources (Aubard, 2010; Barjolle & Sylvander, 2000; Belletti et al., 2007; El Benni & Reviron, 2009; Lybbert et al., 2002). Kizos and Vakufaris (2011) discuss the Greek case of Lesvos Island olive oil and show how most of the value is appropriated by smaller bottlers who control access to high margin distribution. This often leads to producers becoming price takers who see no benefit from the additional costs of coordination and commitment.

This problem can be exacerbated by the expansion of a PGI to incorporate larger geographic regions. The result of a large geographic footprint has often been the industrialization of PGI production. The geographic limits of PGIs are often more inclusive than the name indicates (Guieu, 2009; Perrier-Cornet & Sylvander, 2000; Vandecandelaere et al., 2009). Melo (2010) shows how expanding the geographic footprint undermined the exclusiveness of the Cacao Arriba PGI system in Ecuador. Bowen and Zapata (2009) and El Benni and Reviron (2009) discuss the case of the Mexican PGI for tequila. The area of the tequila PGI are is very large (all or part of 5 states) and the code of practice addresses only the source and percentage of agave, aging requirements and location of production. Because the PGI covers only the distillation process and not growing, this is a sectoral governance system (El Benni & Reviron, 2009). Because the whole supply chain is not part of the PGI system, traditional methods have been squeezed out as large distillers acquire real estate that gives them the right to the label. The large region and differing capabilities of agave producers expose many small growers to a boom and bust cycle that leaves them at the mercy of distillers.

While these same effects can be felt in a small homogenous group of producers, the intimacy and proximity of producers in small regions makes social control of opportunism and appropriation more effective (Ostrom, 1990). This is seen most clearly in small PGI's where individual producers compete directly with each other (Tregar et al., 2007). For example, most

French PGI wines are labeled by appellation and producer estate. This provides a strong element of traceability that reduces the risk of free riding (Raynaud & Valeschini, 1997; Stearns, 2010). Proximity creates an environment where participants have means to monitor each other closely. Even in large PGIs with multiple processing stages, PGI organizations can be designed to increase the homogeneity and proximity of producers. For example large cheese PGI systems such as *Formaggio Parmigiano-Reggiano* and *Gruyère de Comté* have a consortium form in which producers at each stage belong to local cooperatives and interact mostly with neighbors.

As Lindkvist and Sanchez (2008) point out, ‘excessive social proximity’ lends itself to increased reporting on neighbors who cheat (see also Ostrom, 1990). This enables small, self-contained, relatively homogenous communities to rein in opportunism and appropriation without a formal commitment of rights to a collective organization. In many societies this kind of communal or clan control (Ouchi, 1981) is the traditional mechanism for regulating communal and common pool resources (Ostrom, 1990). The common threads in these cases lead us to conclude that designing a PGI system to include producers with a wide variety of capabilities and interests will make it less likely that producers will fully coordinate operations into the PGI, or commit fully to PGI production.

Proposition 1: The heterogeneity of producer capabilities and interests will be negatively related to the average level of producer coordination and commitment to the PGI system.

Designing PGI systems for greater communal control of production and marketing decisions is a means to offset these problems and increase producer coordination and commitment, and thereby improve system outcomes. Although it seems self-evident that qualification standards that favor heterogeneity in producer interests and capabilities are likely to increase the difficulty of establishing strong communal control mechanisms, some of the most

heterogeneous PGI systems have strong communal control while some very homogenous ones present very weak communal control mechanisms. The two constructs are thus relatively independent in practice as well as concept.

As shown in Figure 1, we think there are two paths through which stronger communal control influences producer coordination and commitment. First there is a direct effect. We expect there to be positive but diminishing returns to communal control, since while very low levels of communal control will do little to encourage coordination and commitment, too much control may lead producers to withdraw resources as their self-interests are supplanted by collective decisions. For any PGI system we would therefore expect the strength of communal control to have optimal effects at levels short of full collectivization. In some sense this proposition is speculative because it is based in large part on the absence of cases where control over PGI production and marketing is fully centralized. No PGI system is a full hierarchy in Williamson's sense (1985) and neither are there any centrally planned collectives in the totalitarian sense. In some French PGI systems that also use a *Label Rouge* quality assurance mark¹, production and marketing are highly coordinated by means of negotiated contracts but these leave producers free to keep some qualifying resources out of the PGI system.

There is considerable evidence among our cases that where communal control is weak, producers are much more likely to withdraw resources from the PGI system. Weak communal control can lead to over-production and the intrusion of industrial practice into the PGI, which drives down prices to a level where the costs of participating in the PGI are greater than the benefits. Brunori and Rossi (2007) describe the case of the Chianti wine PGI, where the absence

¹ Label Rouge is a French quality assurance label that is awarded to products whose 'unique conditions of production or manufacture provide reliably superior quality.' It is often acquired in conjunction with a PGI designation, and by definition involves high levels of communal control and coordination between many types of producer. It has been most effective in the provision of poultry products.

of communal control led first to mass production, which was followed by quality degradation and eventually by falling prices and producer exit. They contrast this with the more rigorously controlled Chianti Classico, which retained both its value and the commitment of its producers. Melo (2010) describes a similar process in the case of Cacao Arriba, which originally created a price premium through coordinated production and marketing. The price premium attracted the interest of unqualified large scale producers, who negotiated the expansion of the geographic footprint and weakening of communal control. This was followed by a reduction in coordination and product quality, the erosion of the price premium and the diversion of qualifying resources into other crops. In the case of Lesvos Island olive oil (Kizos & Vakufaris, 2011) many qualifying producers prefer to avoid the costs of participation because the large cooperative processors that handle their crops have not been induced to adapt their operations achieve the level of process quality is required to meet demand in the higher margin markets PGI oils are targeted at. To induce higher levels of processor coordination, the PGI organization would have to orchestrate production and marketing throughout the value chain. Where strong communal control of production and marketing exists, as in many French poultry and meat PGIs, coordination along the value chain has resulted in high levels of producer coordination and commitment and contributed to market success. This leads us to our second proposition.

Proposition 2: The strength of communal control over production and marketing decisions will have a positive but diminishing relationship to the level of producer coordination and commitment to the PGI system.

The strength of communal control can reduce the negative effects of producer heterogeneity on producer coordination and commitment. As we have already argued, when producer interests and capabilities are homogenous, producer coordination and commitment will

be comparatively high. Adding stronger communal control over production and marketing to a homogenous system may not produce sufficient benefits compared to justify the additional costs of organizing. Stronger communal control might reduce some abuses of free-riding and appropriation by strong competitors, but this would tend to drive these stronger producers out of the system rather than help them conform (Guieu, 2009).

The argan oil PGI in Morocco (El Benni & Reviron, 2009) provides a further illustration of ways that communal control alters the effects of producer heterogeneity. The PGI organization includes Moroccan distributors, mechanized cooperatives that produce standardized higher quality oil for international channels and the artisanal women's cooperatives based in Berber clans that were the original object of the development process. The difference in interests and capabilities between the two types of processor has produced an imbalance in participation and benefits. The artisanal cooperatives are mostly reduced to supplying limited quantities of hand processed oil to traditional markets, while the mechanized cooperatives and distributors serve global markets through bulk exports that do not capture value added. The value of artisanal PGI products is diminished if the production narrative is dominated by industrial producers pushing small producers out. In addition the argan oil system depends almost entirely on common pool resource rights (Ostrom, 1990). The women of the Berber clans have traditional rights to gather fruit from trees that grow mostly on public lands. Because access by other harvesters is also possible, and because there is little monitoring of the remote locations where harvest occurs, there is no central control of resource extraction, increasing the threat that the resource will be over exploited. There is also no central control of quality or promotion. As Lybbert and his co-authors (2002) demonstrate, these factors limit the capacity of the project to generate sustainable development, because they concentrate power in the hands of buyers. Because the major buyers

of argan oil are outside the system, they have little incentive to limit their purchases, which is likely to accelerate degradation of the basic resource as collection and extraction efforts intensify to meet global demand (El Benni & Reviron, 2009; Lybbert et al., 2002). Stronger communal control of the supply chain by bringing all extraction, processing and distribution into the system would be a more effective way to manage the resource, and the organization that controls the argan PGI is moving in that direction. A similar case can be made for the Mexican tequila PGI, where the lack of communal control minimally constrains the behavior of distillers in their relationships with growers (Bowen & Zapata, 2009).

In contrast, strong communal control has induced high levels of commitment in PGIs where producers are very heterogeneous. The consortium form of European cheese PGI systems accommodates differences in scale, time horizons, and capabilities by organizing producers at each stage of the value chain and giving each stage effective representation in the governing body. These organizations gain local control over opportunism and practice while giving up local control of marketing decisions. French multistage poultry PGIs have solved the problem of coordinating production and marketing across the supply chain by placing decisions in the hands of a central council that sets volumes and prices and controls promotion and placement. These systems combine small scale local producers into cooperatives that match the scale of much larger processors and distributors, without handing the power to the larger partner. Café de Colombia achieves similar levels of control by pooling output, although this PGI system has recently begun to allow some locations and estates to market even more specialized premium products because benefits from this distinction are shared with the community at large. The social cohesiveness of members, supported by PGI rules that accommodate adaptation to local conditions contribute to the efficacy of this PGI.

Proposition 3: The strength of communal control over production and marketing decisions will moderate the negative relationship between producer heterogeneity and the level of producer coordination and commitment to the PGI system, such that communal control will only slightly improve coordination and commitment in homogenous sets of producers, but will positively influence producer coordination and commitment in heterogeneous sets of producers.

As Figure 1 shows, we expect producer coordination and commitment to mediate the relationship between the factors that define the governance regime and the outcomes of marketing and production activities. This mediation is part of our model because, as we have indicated previously, the governance regime can have little effect on outcomes if it does not influence producer commitment and coordination. While there might be direct effects of the governance regime factors on outcomes, we would expect them to be suppressed by the inclusion of producer commitment and coordination, and difficult to interpret if we left the mediating effect of producer commitment and coordination out of the model. This is partly because our model is presented as static for the sake of clarity. If we made the model dynamic we would expect feedback from the outcome variables to influence producer commitment and coordination even if the governance regime was static. More success would lead to more commitment and more success, making the relationship between the governance regime factors and the outcomes more obscure, especially in a cross sectional look at the population of PGI systems.

Proposition 4. The level of producer commitment and coordination will mediate the relationships between the outcomes and the combined effects of the strength of communal control and producer heterogeneity.

We expect producer coordination and commitment to positively influence the effectiveness of PGI marketing system activities. Higher levels of producer coordination and

commitment help ensure that joint promotion efforts are supported by reliable product quality. Higher levels of producer coordination and commitment should increase the scale of production, facilitating wider placement and acceptance of PGI products in global markets. Higher levels of producer coordination and commitment should lead to more uniform pricing and a more uniform limited assortment. A limited assortment reduces consumer choice, but it would also reduce uncertainty about the product experience. All or some of these outcomes are undermined if producers withhold resources or fail to coordinate under a PGI umbrella.

These results occur because, as we noted earlier, the effectiveness of the quality assurance function of a PGI label depends on reliable high quality and coordinated promotion, and consistent placement and pricing that reduce consumer uncertainty before and after the initial experience. The quality assurance function will also be more effective if consumers motivated by the impact of their consumption on producer welfare see that producers are more committed to and fully coordinated within the PGI system, since this is a powerful indication that the system is delivering benefits to producers and through them to their communities.

Proposition 5: The level of producer commitment to and coordination in a PGI system will be positively related to the quality and consistency of the system's product assortment, and the success of promotion, pricing and placement efforts.

Figure 1 also shows that we expect producer commitment and coordination to be positively related to social and environmental benefits. When producers commit resources and coordinate actions, we expect that opportunism and misappropriation will be controlled. This implies that returns to private resources will flow to resource holders and returns to the production and marketing system (e.g. returns generated by synergy and a coherent presentation) will be distributed fairly among all of the actors, rather than claimed by the most powerful actors.

This outcome is most visible in PGI regions where strong communal control has produced high levels of commitment and coordination over many years. Rural regions such as Parma and Reggio Emilia (home of Parmigiano-Reggiano) have benefited for decades from a population of prosperous and stable small scale producers largely because they have been able to control the use of the name and the production and marketing of the product communally.

Environmental benefits are also self-evident in these regions, where farmland has been preserved from industrial encroachment and farming practice has maintained traditional methods. While it is true that PGI designations often lend themselves to monoculture farming, which is a hallmark of industrial agriculture, the use of traditional varieties and livestock strains contributes to biodiversity on a larger scale. Similarly, while emissions from PGI operations may be greater than subsistence farming, communal coordination of the scale of operations and communal commitment to use of traditional methods prevents the accumulations of waste and total emission loads that result from industrial farming (such as fertilizer run-off) or concentrated animal feeding operations.

Proposition 6: The level of producer commitment to and coordination in a PGI system will be positively related to the equitable distribution of benefits in the community.

Proposition 7: The level of producer commitment to and coordination in a PGI system will be positively related to the environmental sustainability of the system.

Discussion and Conclusion

Our analysis suggests that for PGI systems to be effective, designers have two options. They can create systems based on compact regions, populated by producers whose qualifications, capabilities and interests are relatively homogenous, or create systems in which the level of communal control is sufficient to overcome the adverse effects of participant heterogeneity but

still offer a degree of flexibility to producers. These factors influence the level of producer commitment and coordination, which in turn change the effectiveness of the marketing system by supporting collective promotion efforts, increasing the consistency of the assortment and making it possible to place the product more widely in consumer markets. We think that this would tend to make pricing more uniform, and price differentials more directly attributable to quality. Under 'lemon' pricing logic (Akerlof, 1970), if consumers lack the information to differentiate between products, prices overall are likely to be constrained if buyers know that some PGI goods are inferior. It should be more effective to have uniform quality and pricing.

We have argued that the design of governance regimes influences the outcomes of the marketing system indirectly. PGI systems combine communal intellectual property with the private resources of producers. The exercise of communal control and the variety of producers influence the willingness of producers to commit resources to PGI production and coordinate that production with competitors, buyers or suppliers. Producer commitment and coordination create value in part because consumers who value producer welfare may be persuaded by the communal involvement of producers in the governance of the system. They also create value by facilitating consistent promotion and placement and by changing the scale and reliability of production. Producer commitment and coordination in PGI systems also produce social and environmental benefits. They keep small scale producers, including family farms, on the land, using methods that are less damaging than those of industrial food systems. Commitment and coordination help channel benefits to producers fairly, and through them to the community. Commitment and coordination enable self-determination of how the local economy functions.

If a PGI system is intended to produce benefits for producers participating in regional supply chains, or for regions where producers have varying interests and capabilities, stronger

communal control becomes essential. If a PGI system is intended to protect small scale homogenous artisanal production, low levels of communal control may be appropriate. Producers are more able to monitor each other and to coordinate their offerings through market means. The PGI organization becomes a third party arbiter in the enforcement of rights with little role in the effectiveness of the system. The products of these homogenous small scale systems have historically been effective in markets. The wine PGI systems where this form is prevalent have traditionally enjoyed significant market share in global markets, but this dominance is being challenged by non-PGI products that emphasize winemaker's skills and varieties rather than the protected region (Gamble & Taddei, 2007). This trend may be exacerbated by PGI producers who 'produce to rule,' meeting only the minimum qualifications of the system. These producers free ride in safety and enjoy the benefit of the label without producing a superior product.

Other actors play a role in establishing PGI systems and the actions they take can influence the choice of governance regime. Agencies that help develop PGI systems often do so to support sustainable rural development. These agencies tend to favor weak governance and heterogeneous producer bases because doing so greatly facilitates the co-optation of a variety of producers whose objections might prevent the system from being established. Since most agency supported PGI projects aspire to do much more than simply protect a place of origin name – to create economic development through access to global markets, to create incentives for environmental stewardship, and to maintain and enhance rural communities – it may be impossible to avoid being inclusive of producers with widely varying interests and capabilities. If this is the case, the implication is that development agencies must find a way to move beyond low levels of communal control. Up to the present creating systems with heterogeneous producer

bases and low levels of communal control has not delivered the desired results (Arfini et al., 2003; Aubard, 2010; Melo, 2010).

In some projects it may be possible to facilitate the creation of consortium style governance by bringing together local producers within each of the sectors concerned with the PGI. Establishing local sectoral cooperatives within a PGI that covers multiple stages of processing would tend to lead to stronger communal control of production and marketing, because sector cooperatives, rather than each producer, would participate in negotiating volumes, prices, practices and promotions. This would require the explicit resolution of competing interests within each sector and their subordination to the interests of the whole. For example, in the argan oil PGI system resolving the differences of interest and capability that separate different kinds of cooperatives might lead to better conservation of the resource, a coordinated effort to recapture value added activities from outside buyers, and a more equitable distribution of benefits (El Benni & Reviron, 2009; Lybbert et al., 2002).

Actors other than development agencies can influence the level of commitment and coordination producers exhibit. If a single entity controls any stage of the supply network, the willingness of producers to commit and coordinate depends on that entity's goodwill. When Starbucks is the major purchaser of single origin coffee or a firm like Honest Tea or Aveda is the only buyer of a community's unique product, then conflict arises between the rights of the community and power of the purchaser. The purchaser's brand and the PGI mark come into conflict, and unless the PGI system present a strong coordinated response, the buyer is likely to come out on top.

Every scenario we have discussed leads to the conclusion that appropriate levels of communal control are essential to the functioning of PGI systems. Greater communal control is

also consistent with the goals of development agencies and other advocates for environmental and social justice. Higher levels of communal control impinge on the property rights of individual producers, but since the intellectual property is managed collectively, the important norm of community self-determination is not violated. Producers surrender control because the collective can do what most producers cannot – develop the product, circumvent opportunistic behavior and manage the brand. The advantage of communal control is that when it is matched with collective intellectual property rights and managed within the framework of national and international law, PGI systems may have a greater potential for creating sustainable rural development than do individual rights resulting from private property. When each producer is free to act as they will within the limits of the code of practice, quality will be uneven and benefits will flow primarily to intermediaries or producers who would be competitive anyway. Only by bringing a mix of stakeholders together within a strong governance regime can a project guarantee equitable distribution of benefits within a community. Paradoxically this means that although PGI products are tied to place, the crucial issue is not place but collective action and co-creation (Lusch & Webster, 2011; Varey, 2010).

Most of what we advocate here is not feasible under United States trademark law (Barham, 2003; Josling, 2006; Stearns, 2010). The United States is not a Lisbon signatory and has largely opted out of the applicable parts of TRIPs. The United States Patent and Trademark Office is nominally open to granting geographic trademarks to collectives, such as “100% Florida orange juice”, but the ease with which such applications are objected to means that few marks that grant exclusive use of origin names are actually registered. Despite this there is an active and growing movement promoting place of origin food products in North America (Barham & Chazoule, 2006; Hammin & Marrucci, 2008; Jacobsen, 2010; Paxson, 2010; Slow

Food Foundation, 2011). Although many products are sold only into local markets (Barham, Banks & Bristow, 2000), there is a growing movement toward co-production that can lead to something approaching a strong territorial model. . The Caves at Jasper Hill (Jacobsen, 2010) represents a co-creation model in which producers cooperate with a processor in a way that ensures equitable allocation of the benefits of selling into national markets. Local Vermont cheese makers can develop their own brands and benefit from being associated with the Jasper Hill Farm brand. The emergence of craft malt producers using locally grown heritage grains may provide the basis for regional coproduction of beer (Smith, 2012). More generally ‘new generation’ cooperatives such as Country Natural Beef and Land O’Lakes have begun to vertically integrate into value added processing to create greater benefits to their members. Because this integration often means opening cooperatives to partners in different parts of the supply chain, the question of who benefits from this expansion of activity is also relevant. An important direction for future research in this area is to examine the question of whether any homologue of a PGI system is actually feasible under United States law. We think the best practices of PGI governance have already begun to inform the management of a variety of cooperatives in the United States.

This study has described PGI systems and derived propositions concerning the ways that the design of governance regimes alters the elements and outcomes of the associated marketing systems. A marketing system is a “network of individuals, groups and/or entities, embedded in a social matrix, linked directly or indirectly through sequential or shared participation in voluntary exchange of value, which jointly creates, assembles, transforms, and makes available assortments of products, services, experiences, and ideas, provided in response to customer demand (Layton, 2009).” What our theory proposes is that the composition of the upstream

network of individuals groups and entities that produce PGI products, and the organization of linkages between them can change the nature of participation and the effectiveness of downstream activities. These relationships depend on outside actors such as consumers, development agencies and intermediate buyers, and on the institutional infrastructure each system is embedded in. Each of these helps determine how willing individual producers are to commit resources to PGI production and coordinate activities under communal control. The extent and coordination of participation determine what is possible in terms of delivering PGI products to consumer markets.

References

- Abbott, A. 2004. *Methods of Discovery: Heuristics for the Social Sciences*. New York: W.W. Norton.
- Akerlof, G. A. 1970. The Market for "Lemons": Quality Uncertainty and the Market Mechanism, *The Quarterly Journal of Economics*, 84 (3) - 488-500.
- Arfini, F., Tregar, A., Ness, M., Corcoran, K., Marescotti, A. & Bertoli E. 2003. *OLP characteristics, evolution problems and opportunities*. Work Package 5, European Union concerted action QLK-2000-00593, DOLPHINS, <http://www.origin-food.org/cadre/careport.htm>, Accessed December 26, 2011.
- Aubard, A. 2010. The use of geographical indications to promote economic development: Issues, opportunities, policy options. Presented at *ACP regional workshops on Geographical Indications*, Cape Town, April-May 2010.
- Barham, E. & Chazoule, C. 2006. Charlevoix Lamb: The First IGP in North America? 10 Years of Territorial Development. Presented at the *SINER-GI project Plenary Meeting*, September 2006, Montpellier.
- Barham, E. 2003. Translating terroir: the global challenge of French AOC labeling. *Journal of Rural Studies*. 19: 127–138.
- Barjolle, D. & Sylvander, B. 2000. Some Factors of Success for Origin Labeled Products in Agri-Food Supply Chains in Europe: Market, Internal Resources and Institutions. *Proceedings of the EAAE Seminar*, Wageningen.
- Belletti, G., Burgassi, T., Manco, E., Marescotti, A., Pacciani, A. & Scaramuzzi, S. 2007. The impact of geographical indications (PDO and PGI) on the internationalisation process of agro-food products. *Proceedings of the EAAE Seminar*, Bologna.

- Bowen, S.& Zapata, A. V. 2009. Geographical indications, terroir, and socioeconomic and ecological sustainability: The case of tequila. *Journal of Rural Studies*. 25: 108–119
- Brunori, G. & Rossi, A. 2007. Differentiating countryside: Social representations and governance patterns in rural areas with high social density: The case of Chianti, Italy. *Journal of Rural Studies*, 23:2, 183-205
- Casabianca, F., de Sainte Marie, Ch., Prost, J.A. & Dubeuf, B. 1996. Involving Farmers in Institutionalization Procedures: The Case of AOC Unions. *Proceedings of the Second European Symposium of the Association of Farming Systems Research and Extension in Granada, Spain, 1996*, Doppler, W. & Calatrava, J. (Eds.)
- Deshpande, R. 2004. Café de Colombia. Case 9-502-024. Harvard Business School Press.
- El Benni, N. & Reviron, S. 2009. *Geographical Indications: Review of seven case-studies worldwide*. 2009/15 NCCR TRADE Working Papers. www.nccr-trade.org
- Fanatico, A. & Born, H. 2002. Label Rouge: pasture based poultry production in France. *National Sustainable Agriculture Service*. <http://attra.ncat.org/attra-pub/PDF/labelrouge.pdf>.
- Gamble, P. R.& Taddei, J-C. 2007. Restructuring the French Wine Industry: The Case of the Loire. *Journal of Wine Research*, 2007, Vol. 18, 3: 125–145.
- Gay, S. H. (Ed.) 2007. *Economics of Food Quality Assurance and Certification Schemes managed within an Integrated Supply Chain*. European Commission, Joint Research Centre, Institute for Prospective Technological Studies. http://ec.europa.eu/agriculture/quality/certification/index2_en.htm.

- Grote, U. 2009. Environmental Labeling, Protected Geographical Indications and the Interests of Developing Countries. *The Estey Centre Journal of International Law and Trade Policy*.10: 94-110.
- Guieu, J-M. 2009. Limites Des Limites Et Contrôle Des Appellations d'Origine. *Contemporary French and Francophone Studies*. 13, 4 : 445–452.
- Hess, C. & Ostrom, E. 2007. “Introduction: An Overview of the Knowledge Commons” in *Understanding Knowledge as a Commons: From Theory to Practice*, Charlotte Hess and Elinor Ostrom (Eds), (Chapter 1) Cambridge MA; MIT Press
- Hammin, E. M. & Marrucci, D. J. 2008. Ad hoc rural regionalism. *Journal of Rural Studies*. 24: 467–477.
- Henson, S. & Humphrey, J. 2010. Understanding the Complexities of Private Standards in Global AgriFood Chains. *Journal of Development Studies*. 46: 1628-1646.
- Jacobsen, R. 2010. *American Terroir: Savoring the Flavors of Our Woods, Waters and Fields*. New York: Bloomsbury.
- Josling, T. 2006. The War on Terroir: Geographical Indications as a Transatlantic Trade Conflict. *Journal of Agricultural Economics*, 57: 337–363.
- Khanna, T., Palepu, K. and Bullock, R. 2010. *Winning in Emerging Markets: A Road Map for Strategy and Execution*. Harvard Business Press.
- Kizos, T. & Vakufaris, H. 2011. Valorization of a local asset: The case of olive oil on Lesbos Island, Greece. *Food Policy*, 36: 705-714.
- Kruijssen, F., Keizer, M. & Giuliani, A. 2008. Collective action for small-scale producers of agricultural biodiversity products. *Food Policy* 34: 46–52.

- Layton, R.A. 2009. On Economic Growth, Marketing Systems, and the Quality of Life. *Journal of Macromarketing* 29: 349-362.
- Layton, R.A. & Grossbart, S. 2006. Macromarketing: Past, Present, and Possible Future. *Journal of Macromarketing* 26: 193-213.
- Lindkvist, K. B. & Sanchez, J. L. 2008. Conventions and Innovation: A Comparison of Two Localized Natural Resource-based Industries. *Regional Studies*, 42: 343–354.
- Lundvall, B-Å., Johnson, B., Andersen, Esben S. & Dalum, B. 2002. National systems of production, innovation and competence building. *Research Policy*. 31: 213-231.
- Lusch, R. F. & Webster, F. E. Jr., 2011. A Stakeholder-Unifying, Cocreation Philosophy for Marketing. *Journal of Macromarketing*, 31(2) 129-134.
- Lybbert, T. J., Barret, C.B. & Narjisse, H. 2002. Market-based conservation and local benefits: The case of argan oil in Morocco. *Ecological Economics* 41: 125–144.
- Marsden, T., Jo Banks, J. & Bristow, G. 2000. Food Supply Chain Approaches: Exploring their Role in Rural Development. *Sociologia Ruralis*, 40 (4): 424-438.
- Melo, C. J. 2010. Left Behind: A Farmer's Fate in the Age of Sustainable Development. FIU Electronic Theses and Dissertations. Paper 331. <http://digitalcommons.fiu.edu/etd/331>
- Mitchell, R. W., Wooliscroft B. & Higham, J. Sustainable Market Orientation: A New Approach to Managing Marketing Strategy. *Journal of Macromarketing* 30: 160-170.
- Moschini, G., Menapace, L. & Pick, D. 2008. Geographical indications and the competitive provision of quality in agricultural markets. *American Journal of Agricultural Economics* 90(3), 794–812.
- Ostrom, E. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge University Press

- Ouchi, W. G. 1981. *Theory Z: How American Business Can Meet the Japanese Challenge*. Addison-Wesley.
- Parrot, N., Wilson, N. & Murdoch, J. 2002. Spatializing quality: Regional protection and the alternative geography of food, *European Urban and Regional Studies* 9(3): 241–261.
- Paxson, H. 2010. Locating Value in Artisan Cheese: Reverse Engineering Terroir for New-World Landscapes. *American Anthropologist*, 112: 444–457.
- Perrier-Cornet, P. & Sylvander, B. 2000. Firms, coordinations et territorialité : Une lecture économique de la diversité des filières d'appellation d'origine. *Économie rurale*. N° 258: 79-89.
- Porter, M.E. 2000. Location, Competition, and Economic Development: Local Clusters in a Global Economy. *Economic Development Quarterly*, 14: 15-34.
- Quingaisa, E.& Riveros, H. 2007. *Estudio de Caso: Denominación de Origen “Cacao Arriba”*. Quito, EC, IICA. <http://orton.catie.ac.cr/repdoc/A7704E/A7704E.PDF>, Accessed December 31, 2011.
- Raynaud, E. & Valeschini, E. 1997. Competition regulation against quality policy: The « label rouge » in the French poultry industry. *EAAE Seminar* - Parma, June.
- Roseboom, J. & Magdelaine, P. 2008. *Case Study: Label Rouge Chicken*. European Commission, Joint Research Centre, Institute for Prospective Technological Studies. http://ec.europa.eu/agriculture/quality/certification/index2_en.htm.
- Slow Food Foundation, 2011. http://www.slowfoodfoundation.org/pagine/eng/presidi/cerca_presidi.lasso?-id_pg=11#risultati

- Smith, P. A. 2012. Malters Bring Terroir to the Beer Bottle. *New York Times*, June 12, 2012.
<http://www.nytimes.com/2012/06/13/dining/small-malting-companies-revive-a-dormant-craft.html>, accessed September 15, 2012.
- Stearns, D. 2010. On (Cr)Edibility: Why Food In The United States May Never Be Safe. *Stanford Law & Policy Review*. 21:245-275.
- Tregear, A., Arfini, F., Belletti, G. &Marescotti, A. 2007. Regional foods and rural development: The role of product qualification. *Journal of Rural Studies*, 23:1, 12-22.
- Vandecandelaere, E., Arfini, F., Belletti, G. &Marescotti, A. 2009. *Linking people, places and products: A guide for promoting quality linked to geographical origin and sustainable geographical indications*, 2nd edition. New York: Food and Agriculture Organization of the United Nations (FAO) and SENER-GI
- Varey, R. J.2010. Marketing Means and Ends for a Sustainable Society: A Welfare Agenda for Transformative Change. *Journal of Macromarketing*, 30(2) 112-126.
- Westgren, R. E. 1999. Delivering food safety, food quality, and sustainable production practices: The Label Rouge Poultry System in France. *American Journal of Agricultural Economics*. 81: 1107-1111.
- Williamson, O. 1985. *The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting*, New York: The Free Press

Figure 1. Theoretical Model

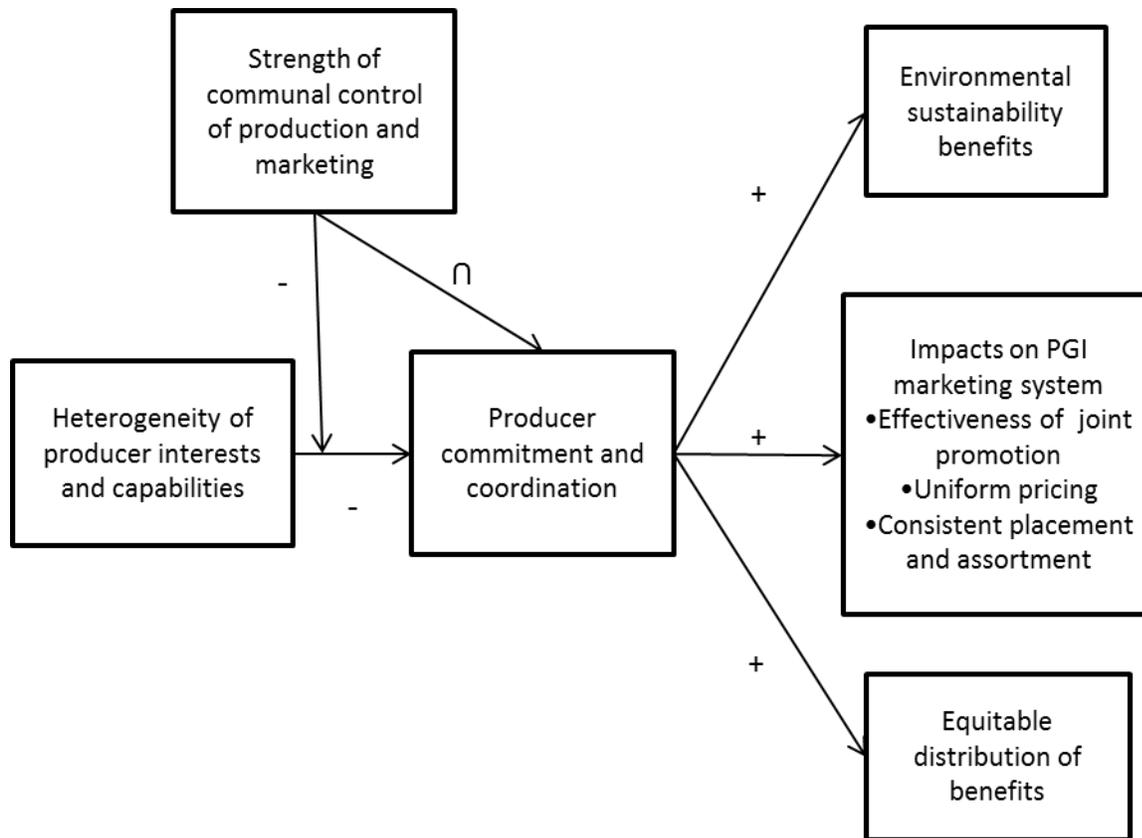


Table 1: Cases and studies.

Product Case	References	Country	Protected GI
Abricot Luizat de Valais	Barjolle & Sylvander, 2000	Switzerland	Yes
Agneau de Quercy	Barjolle & Sylvander, 2000	France	Yes
Argan oil	Aubard, 2010 El Benni & Reviron, 2009 Lybbert, Barret & Narjisse, 2002	Morocco	Yes
Azeite de Tras-os-Montes PDO	Arfini et al., 2003	Portugal	Yes
Baena olive oil	Gay, 2007	Spain	Yes
Bavarian Beer	Arfini et al., 2003	Germany	Yes
Beacon Fell Traditional Lancashire Cheese	Arfini et al., 2003 Tregar et al., 2007	United Kingdom	Yes
Beaufort cheese	Casabianca et al., 1996	France	Yes
Blue Mountain coffee	Aubard, 2010	Jamaica	Yes
Boerenkaas	Gay, 2007	Netherlands	No
Boeren-Leidse met Sleutels	Barjolle & Sylvander, 2000	Netherlands	Yes
Brocciu cheese	Casabianca et al., 1996	Corsica	Yes
Cacao Arriba	Melo, 2010 Quingaisa & Rivera, 2007 Vandecandelaere et al., 2009	Ecuador	Yes
Café de Colombia	Deshpande, 2004. El Benni & Reviron, 2009 Vandecandelaere et al., 2009	Colombia	Yes
Café de Costa Rica	El Benni & Reviron, 2009	Costa Rica	Trademark
Cantal	Barjolle & Sylvander, 2000	France	Yes
Carienna Wine	Arfini et al., 2003	Spain	Yes
Charlevoix lamb	Barham & Chazoule, 2006	Canada	Yes
Chianti Classico wine	Brunori & Rossi, 2007	Italy	Yes
Chivito Criollo del Norte	Vandecandelaere et al., 2009	Argentina	Yes
Ciliega di Lari	Arfini et al., 2003 Tregar et al., 2007 Vandecandelaere et al., 2009	Italy	No
Coffee of Kintamani	Vandecandelaere et al., 2009	Indonesia	Yes
Gruyere de Comté cheese	Barjolle & Sylvander, 2000 Gay, 2007 Vandecandelaere et al., 2009	France	Yes
Cotija cheese	Vandecandelaere et al., 2009	Mexico	Yes
Culatello di Zibello	Arfini et al., 2003 Tregar et al., 2007	Italy	Yes

Product Case	References	Country	Protected GI
Dehesa de Extremadura	Gay, 2007	Spain	Yes
Etivas	Arfini et al., 2003	Switzerland	Yes
Feta	Barjolle & Sylvander, 2000	Greece	Yes
Fontina	Barjolle & Sylvander, 2000	Italy	Yes
GariMissè	Vandecandelaere et al., 2009	Benin	No
Gruyère	Barjolle & Sylvander, 2000 Vandecandelaere et al., 2009	Switzerland	Yes
Habanos de Cuba	El Benni & Reviron, 2009	Cuba	Yes
Ham ofUzice/Zlatibor	Vandecandelaere et al., 2009	Serbia	Yes
Harrar and Sidamo coffee	Aubard, 2010	Ethiopia	No
Jamon de Teruel	Barjolle & Sylvander, 2000	Spain	Yes
Jenhua ham	Vandecandelaere et al., 2009	China	Yes
Jersey Royal potatoes	Barjolle & Sylvander, 2000	United Kingdom	Yes
Kampong Speu palm sugar	Vandecandelaere et al., 2009	Cambodia	Yes
Kampot pepper	Vandecandelaere et al., 2009	Cambodia	Yes
Korgho cloth	Aubard, 2010	Cote d'Ivoire	No
Label Rouge poultry	Fanatico& Born, 2002 Raynaud & Valeschini, 1997 Gay, 2007 Westgren, 1999	France	Sometimes
Lardo di Colonnata	Vandecandelaere et al., 2009	Italy	Yes
Lesovos Olive oil	Kizos & Vakufaris, 2011	Greece	Yes
Limon de Pica	Vandecandelaere et al., 2009	Chile	Yes
Loire Valley AOC wines	Gamble & Taddei, 2007	France	Sometimes
Madagascar Vanilla	Aubard, 2010	Madagascar	No
Maiz Blanco de Cuzco	Vandecandelaere et al., 2009	Peru	Yes
Mamou Chile	Vandecandelaere et al., 2009	Cameroon	No
Merville pommes de terre	Barjolle & Sylvander, 2000	France	Yes
Mongolian cashmere	El Benni & Reviron, 2009	Mongolia	Trademark
Nakornchaisri Pummelo	Vandecandelaere et al., 2009	Thailand	Yes
Neuland pork	Gay, 2007	Germany	No
Noorde Hollandse Edammer	Barjolle & Sylvander, 2000	Netherlands	Yes
Nyons olive oil	Barjolle & Sylvander, 2000	France	Yes
Olio Olivo Chianti Classico	Belleti et al., 2007	Italy	Yes
Olio OlivoToscano Extra-Virgin	Belleti et al., 2007 Arfini et al., 2003	Italy	Yes
OpperdoezerRonde	Barjolle & Sylvander, 2000	Netherlands	Yes
Pampa Gaucho da Campanha	Vandecandelaere et al., 2009	Brazil	Yes

Product Case	References	Country	Protected GI
Parmagiano-Reggiano	Barjolle & Sylvander, 2000 Gay, 2007 Vandecandelaere et al., 2009	Italy	Yes
Pecorino Toscano	Belleti et al., 2007	Italy	Yes
Penja white pepper	Aubard, 2010	Cameroon	No
Peza olive oil	Barjolle & Sylvander, 2000	Greece	Yes
Pico Duarte coffee	Vandecandelaere et al., 2009	Dominican Republic	Yes
Prosciutto di Parma	Barjolle & Sylvander, 2000	Italy	Yes
Prosciutto Toscano	Belleti et al., 2007	Italy	Yes
Queso Chontaleño	Vandecandelaere et al., 2009	Nicaragua	Yes
Rooibos	Aubard, 2010 El Benni & Reviron, 2009 Vandecandelaere et al., 2009	South Africa	Trademark
Roquefort	Arfini et al., 2003	France	Yes
Salumi Tipici Piacentini	Arfini et al., 2003	Italy	Yes
Schobenrau Senel asparagus	Arfini et al., 2003	Germany	Yes
Scotch Beef	Arfini et al., 2003	United Kingdom	Yes
Scotch Lamb	Barjolle & Sylvander, 2000	United Kingdom	Yes
Tarueau de Camargue	Arfini et al., 2003	France	Yes
Tequila	Bowen & Zapata, 2009 El Benni & Reviron, 2009 Vandecandelaere et al., 2009	Mexico	Yes
Ternasco de Aragon	Barjolle & Sylvander, 2000	Spain	Yes
Terrincho cheese	Arfini et al., 2003	Portugal	Yes
Turriabla cheese	Vandecandelaere et al., 2009	Costa Rica	Yes
Uvs sea buckthorn	Vandecandelaere et al., 2009	Mongolia	Yes
West Country Farmhouse Cheddar	Barjolle & Sylvander, 2000	United Kingdom	Yes
Zagora mela	Barjolle & Sylvander, 2000	Greece	Yes

Table 2: The Geographic Indicators of the European Union

Label	EU definitions per Council Regulations (EC) No 510/2006 and No 509/2006
<p>Protected Designation of Origin (PDO) Also Appellation de Origin Controlee (AOC)</p> <p>Examples: Native Shetland Wool; <i>Guanxi mi you</i>; Banyuls wine</p>	<p>"designation of origin" means the name of a region, a specific place or, in exceptional cases, a country, used to describe an agricultural product or a foodstuff:</p> <ul style="list-style-type: none"> - originating in that region, specific place or country, - the quality or characteristics of which are <u>essentially or exclusively</u> due to a particular geographical environment with its inherent natural and human factors, and - the production, processing and preparation of which take place in the defined geographical area - only groups can apply.
<p>Protected Geographic Indication (PGI)</p> <p>Examples: <i>Turrón de Alicante</i>; Beacon Fells Traditional Lancashire Cheese</p>	<p>"geographical indication" means the name of a region, a specific place or, in exceptional cases, a country, used to describe an agricultural product or a foodstuff:</p> <ul style="list-style-type: none"> - originating in that region, specific place or country, and - which possesses a specific quality, reputation or other characteristics <u>attributable</u> to that geographical origin, and - the production and/or processing and/or preparation of which take place in the defined geographical area. - only groups can apply.
<p>Traditional Specialty Guaranteed (TSG)</p> <p>Example: Jamon Serrano, Neapolitan Pizza</p>	<p>"traditional specialty guaranteed" means a traditional agricultural product or foodstuff recognized by the Community for its specific character through its registration under this Regulation</p> <p>Only groups can apply. They must specify the name (with or without reservation of the name); provide a description of the product, production method, ingredients, a reference basis, "the key elements that prove the product's traditional character" and minimum requirements and procedures to check the specific character.</p>