

# Supply Chains and Rural Communities: Applying Terroir to American Rural Development

Joseph Molnar<sup>1\*</sup>, Jolene Glenn<sup>1</sup>

<sup>1</sup>*Department of Agricultural Economics & Rural Sociology.*

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**\*Corresponding author:** Joseph Molnar, International Agriculture, Department of Agricultural Economics and Rural Sociology Professor, 202 Comer Hall, Auburn University, Auburn, AL 36849; Tel: 334.663.2375; Email: molnajj@auburn.edu

## Abstract

Terroir is a French concept establishing the natural ecology, cultural history, and social organizations of a community create unique agricultural food products. This paper outlines the conceptual foundation for quality promotion in the in the supply chain of geographically differentiated agricultural products. It identifies production processes and pressures determining the current and potential change shaping the commodity chain. It delineates who and how value is added though all stages of production from farm to consumer. The significance of these types of crops in terms of economic as well as cultural value warrants high investment in insuring its terroir, identity, and quality. The actors involved in each stage of production are identified. Many products possessing terroir are advanced and protected by these social groups. The study is part of a larger research project concerning the terroir of Vidalia Onions and through quality and identity development, preservation of the economic and cultural assets of southern Georgia.

Through the decades there have been increased financial pressures on farmers as they face continually diminishing rates of return on their products and therefore incomes. Because agriculture is often the primary livelihood in rural communities, the success of farms is essential for sustainable communities. As localities are often bound to the economics of agriculture production, new mechanisms of food production must also address the problems of failing rural agricultural communities. While traditional attempts at improving the economic outlook for farmers and their communities have been focused on technological improvements of production and distribution efficiencies, there has been growing interests in redirecting the economic processes in agriculture Bowen and De Master 2011; Bowen and Zapata 2009). Creating products differentiated by quality though terroir can develop and shape agro-supply chains to benefit producers (Barham 2003; Murdoch, Marsden, & Banks 2002). Terroir is not well understood in the United States and could provide greater opportunities for producers to maintain the value of their products (Trubek 2008; Storey 2012).

Terroir is French concept that allows for the development of a unique and differentiated agriculture product through recognition of the distinctive local ecology and culture that contributes to its taste and quality (Barham, 2003; Paxson, 2010; Trubek, 2008).When protected by government policies, these products are described as geographically indicated products (Barham, 2003; Bèrard & Marchenay 2006; Trubek, 2008). For producers seeking to develop an agriculture product, this has value as it allows them to capitalize on what already exists. Farmers simply recognize the local soils, micro-climates, and natural inputs as well as the historical and culturally cultivation practices to find terroir. There is no need to change their habits or add additional steps of processing or even supply chain flow which has often been the means of adding value in the United States (Bowen 2010; 2011).

This paper outlines the conceptual foundation for quality promotion in the in the supply chain of geographically differentiated agricultural products. It identifies production processes and pressures determining the current and potential change shaping the commodity chain. It delineates who and how value is added though all stages of production from farm to consumer. The literature on agro-food supply chains suggests that geographically indicated products play a key role in shaping these chains, and increasingly so (Barham 2003; Murdoch, Marsden, & Banks 2002; Parrott, Wilson & Murdoch 2002;). Supply chains, as influenced by product quality, have a distinctive impact on rural community development in terms of its current state as well as potential improvements to these systems and communities.

## Supply Chains

Supply chains are both a theoretical and an applied part of the agro-food system directly influencing agriculturally based rural communities. Supply chains, sometimes called commodity or value chains, can be defined as “a network of labor and production processes whose end result is a finished commodity” (Hopkins & Wallerstein, 1986, p. 159). Sociologically, however, the supply chain and its significance takes on a more complex form as power and inequality are examined (Bair, 2005; Dixon, 1999; Murdoch,

Marsden, & Banks 2002). Vorley (2001, p. 3) writes, “The governance of supply chains hinges on controlling the means of co-ordination rather than the means of production,” such as the control and management of brands. The sociological analysis of supply chain governance focuses the relative ability of actors to influence the process (Smith, 2007). By recognizing these power and control elements of the supply chain, sociological analysis includes a more complete picture of actors and influences on production and distribution.

## Supply Chain Integration for Differentiated Products

In agriculture, modern economic forces have greatly shaped the supply chains of food production. Agricultural supply chains are generally efficient and synchronized in the organization of distribution and production (van Tilburg, et. al., 2007). Along with bulk production and shipping, and extremely high competition between producers as posed by downstream actors, these conditions result in inexpensive goods for consumers (Gibbon; Hayes, 2004). Vertical coordination is reflected in a rise in contracting, greater product differentiation, and the increased importance of supply chain relationships (Young & Hobbs, 2002). These organizational trends hold true for terroir product chains.

Identity-preserved supply chains are tightly governed supply chains intended to protect the integrity of a specialty, high value product (Young & Hobbs, 2002). For terroir products, they are used to insure shipments include only those products from certain geographies, though in the United States they are most often used to protect other types of high quality agricultural products (Young & Hobbs, 2002; Smith, 2007). There are high costs associated with constructing the infrastructure-- physical and organizational--necessary to protect terroir. The structures ensure that the quality of the terroir products will not be compromised before reaching consumers. They also encourage producers to grow products that need these protected channels of processing and distribution (van Tilburg, et al., 2007). Without these, value could be lost for all types of goods. Hence, contracting and strategic alliances in the supply chain are encouraged.

Contracting is one way which quality, particularly important for terroir products, can be managed through supply chain organization. While it can be used for commodity-type products, contracting is often associated with differentiated products such as terroir (Tilburg, et. al., 2007; Young & Hobbs, 2002). It is this concern, with quality as a motivating factor, that separates modern supply chain as buyer-driven instead of producer-driven and therefore between commodity and differentiated products.

Producer-driven supply chains encourage contracting in order to reduce production costs through specialization in capital instead of labor intensive processes, while buyer-driven supply chains stipulate contracting in order to regulate the quality attributes being produced by suppliers, which also allows for the control of price (Gibbon; Tilburg, et. al., 2007; Young & Hobbs, 2002). Retailers and distributors seek to ensure their reputations as a means to indicate to and inform consumers of quality (van Tilburg, et. al., 2007). These efforts to keep this communicable image of quality intact are intensive investments. By including quality requirements in production contracts, retailers and distributors maintain control of their investments and profits.

Contracts allow for greater communication between distributors and retailers, acting as translators for the demands of consumers though they might not always translate correctly, unintentionally or intentionally (van Tilburg, et. al., 2007; Young & Hobbs, 2002). Contracts also lead to a need for legal negotiation and dispute settlements (Young & Hobbs, 2002). The

contract quality requirements may be quite detailed and labor and input intensive making it unreasonable or impossible for some producers, particularly small and diversified farmers, to participate (Young & Hobbs, 2002). These elements, complicated negotiations and detailed stipulations, of contracts are problematic for small producers and are reasons for the thriving nature of large farms and, to be discussed later in this paper, the use of producer collectives in supply chains.

## Spot Markets

While contracting is common strategic alliances, a more fluid type of coordination than contracting, provide an alternative governance of supply chains. These professional agreements shift pressure on the upstream producers as these actors must delicately compete for these unofficial contracts. Strategic alliances can also limit access to markets (Young & Hobbs, 2002) impeding entry of small or diversified farms into the industry. It is important to note though that spot markets (where there are many producers with ready entry) do not ensure an economically or perceived viable price for agro-products (Young & Hobbs, 2002).

While true spot markets are a form of supply chain that is not heavily shaped by the power of its actors, most other vertical supply chains are. Producers are more likely able to form beneficial supply chains through new value added opportunities by forming producer groups, professional networks, or cooperatives. The pooling of product, production, and management makes them more effective as they become a larger actor in the supply chain (van Tilburg, et. al., 2007). These groups influence the contracts of vertical supply chains to ensure markets for all agro-products, but especially high-value differentiated items. This is necessary with increasing oligopolies and monopolies in vertical supply chains (Young & Hobbs, 2002).

The Agricultural Fair Practices Act (AFPA) of 1967 (Young & Hobbs, 2002) affords legal protection for these producer groups for participating in the market (Young & Hobbs, 2002). This is significant role for terroir products for which the coordination of quality between producers under a geographical name articulates the added value of the product. While this helps manage the power imbalances it does not mitigate the limitations that antitrust laws initiate. These, as well as the power imbalances in supply chains need to be reformed for effective farmer collectives to be formed.

Forming group marketing and other production association can develop the power of the farmer but also can create shortened supply chains. Shortened supply chains are a network of actors who function conceptually closer to one another, making communication and value more governable by each party (Marsden, 2000). It is the communications occurring through articulation of quality by both producers and consumers that allows products to become a differentiated thereby warranting a premium price (Marsden, 2000; Feagan, 2007). The more embedded or tied to place and culture a product becomes, the more exclusive (scarce) it becomes, an economically proven price push (Marsden, 2000). Short supply chains provide means for assigning valuing to nature, inserting perceived quality,

regionalism, and other constructions into food products (Marsden, 2000). Shortened supply chains generally establish positive gains for value-added, especially terroir products, on farm income not possible for other commodities (Marsden, 2000). Direct sales enterprises such as community supported agriculture programs and farmers markets are a few popular means for producers to control the information about their products, and therefore their prices (Feagan, 2007; Marsden, 2000; Paxson, 2010).

In shortened supply chain operations, the information is communicated not only through the name and label of the product as it would be done in traditional retailing (Ponte & Gibbon, 2005; Morris & Young, 2000; Paxson, 2010; Vagneron & Loeillet, 2009), but also through the close interaction of the producer and consumer. Producers should continue to innovate branding, labeling, and terroir that are not direct interfaces to obtain successful product differentiation over time and scale (Marsden, 2000; Paxson, 2010). Acknowledging that producer knowledge and abilities will be essential in establishing shortened supply chains, it will also become apparent that there needs to be structural supports, such as legal economic framework, education, and infrastructure necessary for building and sustaining these alternative and embedded supply chains.

## Rural Communities

Changes in the supply chain structures stemming from the demands for differentiated products impact the ability of producers in rural communities, the upstream firms, to profit and therefore contribute to the wellbeing of their communities. The primary means of ensuring producers, not retailers, gain value from agricultural products is product differentiation, such as terroir. Farmers must become price-makers which occur for other types of branded products (Hayes, 2004). Price-makers, because they are seen as producing unique and differentiated products, are able to demand a price which can cover costs and render profit (Hayes, 2004). Farmers need to reclaim the value of their products by developing the unique qualities of their products, ensure that these can be recognized as their labor inputs and not commandeered or overly associated with downstream brands, and collectively organize to help develop, enforce, and bargain for these products and producers against powerful downstream firms.

## Developing Differentiated Products

Producers need to develop products that are reliable and distinctive without the required standardization and production from retail and distribution firms. They need to be able to develop brands and labels to aid in communicating these qualities which are being demanded (Carolan, 2004; Morris & Young, 2000; Ponte & Gibbon, 2005; Vagneron & Loeillet, 2009). Additionally, they need to recognize these opportunities. Secondly, while many producers already strive to construct terroir, they need to be able to develop strong recognition by consumers (Paxson, 2010). This means creating knowledge for consumers and not allowing for items to be associated with the brands and images that are used by retailers and distributors (Carolan, 2004; Morris & Young, 2000; Ponte & Gibbon, 2005; Vagneron & Loeillet, 2009).

By being able to claim and maintain product identity attached to their work and innovation, not to distribution and displays of retailers, producers can greatly benefit from differentiating their products (Carolan, 2004). Terroir helps provide justification and a theme to develop a product and to structure labeling. Agricultural education does not typically promote this type of problem solving, value addition, and marketing to agriculturalists. Some argue for legal support for the education and development along with producer actions that must be taken to recognize terroir and capture economic value for farmers (Hilchey, 2009).

Because of the power imbalances in the supply chain and the strict contract demands of quality attributes are shifted upstream to producers; collectives need to be formed to concentrate and mobilize producers. Collectives have bargaining power (politically and economically) in the supply chain. They can also give support for creating innovative products, identities, and standards for these value-adding products (Hilchey, 2009). This last concept of support for producers through innovation, not just power, is key to maintaining control of the value of the product. These are typically and easily formed with terroir products as the geography classifies a group of individuals as having the same product.

## Legal Support: Development and Reforms

The development of clear and effective policies will allow these producers the flexibility to produce these differentiated products while maintaining ownership of the intellectual property. While the argument has been made thus far that the quality alone increases price and therefore profit for these producers the smaller the quality supplied the higher the price will be (Hayes, 2004). Limiting the number of producers through producer membership can be done legally through creating geographic limitations or other fixed quality inputs, control of property rights by the collective, as well as a fixed, specific quality of the product (Hayes, 2004). The profitability of these products may encourage individuals to produce more which would, too, depresses the prices of these products. These collectives need to be guided to create enough but not excess supplies of product (Hayes 2004). This can be done through regulations (Hayes, 2004) or could be done through a different set of policy reforms for product differentiation, such as agricultural education.

The legal framework must include other policy considerations such as that promoting education (appropriate human capital development). The public education system too needs to be developed to reflect the skills and knowledge required in the production and consumption of differentiated products. Producers wanting to capitalize on differentiated products also need to be better able to read the signals being sent from consumers directly (Hayes, 2004), instead of the traditional mediators of retailers and distributors. Most agriculture education and research is done through public universities but is focused on production efficiencies that generally promote yields. This is a process that only seeks to squeeze pennies from production instead of helping producers grasp value from consumers' demanding dollars. Terroir is the juxtaposition of this and therefore may not be welcome into agribusiness with open minds.

## Development through Quality: Terroir in the United States

Flavor, safety, reliability/standardization, price, processing/cultivation, special varieties, irregularities, organics (environmentalism), regionalism, localism (face-to-face marketing), competitive pricing, and branding are all ways to create product differentiation. Many of these are more subject to becoming commodities such as organics or even local products because their supply is not as subject to caps or ceilings, which is economically necessary for successful profit generation from product differentiation (Hayes, 2004).

### Terroir Products

Terroir products, because they are place-based, are created by a group of individuals, a collective of farmers with a shared ecology and culture/history. This naturally establishes these producers as a collective in order to create a product at a sustainable quality, having defined and clear qualities (Paxson, 2010), as well as the political and economic presences to negotiate for contracts and policies. Additionally, since these groups are 'naturally' formed and limited by ecological/cultural boundaries, small farmers have better opportunities to enter the supply chain and have market access. It also helps sustain, particularly, small producers in a global and therefore high quality demanded supply chain as they can, collectively as small producers, generate enough product without getting too large as individuals to have downstream actors be interested in having these products fit in the supply chain (Hayes, 2004).

What make terroir products an attractive option, other than just creating branded or co-op produced products, is the potential long-run benefits for rural communities that extend far beyond the economic realm. Terroir functions as a product with value because of the value that consumers assign to taste first and foremost and then the cultural rationality and heritage of the product (Paxson, 2010). This is a cultural phenomenon that is embedded in the socialization of the individual, as it is in French culture. Because this is not an innate ability of knowledge, there are concerted efforts afforded to develop this through formal, non-formal, and informal education (Paxson 2010; Trubek, 2008). This was also cultivated by national promotion of regional areas to express the treasures of France in order to develop national identity and domestic economic opportunities (Trubek, 2008). Political regionalism, however it is important to note, does not make terroir. Terroir needs taste or else it becomes a simple marketing/informational scheme such as California Grown Campaign or Irish Label Meats. Taste quality has been a key obstacle which has kept this concept away from the United States agriculture and policies regarding it. Differentiating product through terroir provides not only value added for producers but also helps in developing identity and community for those who not only produce the product but also those who consume it (Paxson, 2010; Trubek 2008).

### Power Conflicts and Terroir Products: Will the Downstream Lose?

If supply chains, regardless of consumer tastes or demands, are functions of powers of dominant agro-food processors, why

would they be willing to support supply chain shifts based around terroir products which reallocate power to farmers, increasing their dependence on others and profit share? First, through an increase of the number of these products on the market, retailers/distributors can enhance their range of specialty products (Smith, 2007). Additionally, a rise in concerns for socially and environmentally aware consumers has prompted corporate interest in these issues. They are expected to participate in the issues that the public deems important much like an individual citizen. These firms have been expected to become gate-keepers down the supply chain (Smith, 2007). In other words, consumers expect retailers to take and share responsibility and stewardship through the supply chain. With this are benefits for public relations and corporate risk management (Smith, 2007). The benefits of this extend financially as a general marketing plan but also result in gained revenues, especially for leading firms (Smith, 2007).

### Conclusions

The case studies researched by Duncan Hilchey (2009), a frontrunner in cataloging and analyzing exclusive agricultural lands in the United States, on what terroir is and could be in the United States have identified much of what has been discussed above. The most successful of these are part of producer groups who process, distribute, and market these differentiated products. They have outlined quality requirements within themselves. Few of these products have marketing orders and many are produced more as commodities than specialty products. These products all have far greater potential as value added products if they embrace the concept of terroir. Nearly all these products lack strong development of quality distinction as intellectual property that need to be recognized by consumers and producers respectively for the greatest value to be achieved by both parties.

Many of the products Hilchey (2009) outlines are already unique compared to the general commodity systems still struggle with the problems of modern agriculture and failing rural communities. Coupling the tightening of supply chains through vertical integration with the expanding demands of consumers as well as retailers and distributors, farmers may not be equipped to control their chances at profitability in the market and the supply chain and therefore their contributions to the success of their communities. Enabling producers to create and capture the value of terroir products can provide an opposing outcome to this trend. This can be achieved through education (building human capital) and providing effective legal structure in order to apply this capital in meaningful ways. With these two elements established, ownership of the unique qualities will enable the value to be captured by the owners, the farmers. Because agriculture is the primary industry in many rural areas, capturing this value and therefore profits, the livelihoods of the community members and, therefore, communities will be improved and shifted toward greater sustainability.

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