ELSEVIER
www.elsevier.com/locate/worlddev

*World Development* Vol. 32, No. 5, pp. 725–743, 2004
© 2004 Published by Elsevier Ltd.
Printed in Great Britain
0305-750X/$ - see front matter

**doi:10.1016/j.worlddev.2003.11.008**

# The Globalization of Organic Agro-Food Networks

LAURA T. RAYNOLDS *
*Colorado State University, Fort Collins, CO, USA*

**Summary.** — This article analyzes the booming world trade in organic agro-foods such as tropical products, counterseasonal fresh produce, and processed foods. Research focuses on expanding South–North networks linking major US and European markets with major production regions, particularly in Latin America. Employing a commodity network approach, I analyze organic production, distribution, and consumption patterns and the roles of social, political, and economic actors in consolidating international trade. Organic certification proves central to network governance, shaping product specifications, production parameters, and enterprise participation. My analysis identifies key contradictions between mainstream agro-industrial and alternative movement conventions in global organic networks.
© 2004 Published by Elsevier Ltd.

*Key words* — organic, globalization, trade, commodity chains, certification, regulation

## 1. INTRODUCTION

Over the past two decades the organic agro-food system has been transformed from a loosely coordinated local network of producers and consumers to a globalized system of formally regulated trade which links socially and spatially distant sites of production and consumption. Global organic sales are estimated at roughly US$20 billion per year and are growing at close to 20% annually in major North American and European markets (Yussefi & Willer, 2003). Though organic products make up a minor share of the world food market, the proliferation of certified commodities and their increasing availability in mainstream supermarkets have made organics the fastest growing segment of the food industry. Escalating demand for organic foods in the global North has fueled burgeoning imports of tropical products, counterseasonal fresh produce, and commodities produced locally but in insufficient quantities. Though scholars and policymakers have remarked on the rising international organic trade, it has to date received little academic analysis.

This article helps address this lacuna, analyzing the economic, social, and political globalization of organic agro-food networks. The new international organic trade has two central strands, both supplying key markets in the global North. The largest strand is characterized by inter-core country trade, dominated by US exports to Europe and Japan, trade between European countries, and exports from Australia, New Zealand, and South Africa to the top markets. The second strand is comprised of periphery-core, or South–North, trade and involves a growing number of production sites, most importantly in Argentina, Mexico, the Dominican Republic, and other Latin American countries which ship to major Northern organic markets. This article focuses on the understudied South–North trade, since this best captures the increasing social and spatial distance inherent in the global organic agro-food system.

This investigation utilizes a commodity network approach to unravel the multifaceted, uneven, and often contested dimensions of globalization within the organic agro-food sector. This approach follows the lead of commodity chain research in analyzing global commodity flows and firm relations linking production, distribution, and consumption. Yet it responds to recent calls for a more nuanced analysis of the institutions and relations of power, emphasizing the role of social and

* This article has benefited from the constructive comments of the editor and anonymous journal reviewers and from research funded by The John D. and Catherine T. MacArthur Foundation, Program on Global Security and Sustainability. The views presented here are the responsibility of the author alone. Final revision accepted: 21 November 2003.

political, as well as economic, actors and actions in constructing, maintaining, and potentially transforming organic networks. Affirming the importance of this broadened approach, I find that social movements and state actors have been as important as economic firms in fueling and regulating the South–North organic trade. My analysis illuminates key contradictions within the global trade in "certified organic" commodities between mainstream market conventions—rooted in efficiency, standardization, and price competition—and alternative movement conventions—linked to personal relationships of trust, ecological diversity, and social justice. I conclude that while globalization has to date extended market conventions more rapidly than movement commitments, promising new initiatives are revitalizing movement norms and practices in global organic networks.

Given the relatively recent and rather unexpected growth in the organic trade, there are currently few sources of comparable international data upon which to base this analysis. National and international organizations responsible for collecting agricultural production, agro-food trade, and food consumption figures have traditionally not distinguished organic from conventional commodities. This analysis must thus piece together a wide range of data. While the paucity of crossnational data means that this should be viewed as an exploratory study, sufficient information is now available to permit analysis of the general parameters of production, distribution, and consumption in the South–North organic trade. Key sources used in this study include United Nations reports, national government documents from around the world, organic industry group and movement organization publications, and the growing secondary literature. Data from written sources are supported through the author's ongoing research on organic coffee and banana production in Latin America and the Caribbean.

## 2. GLOBAL ORGANIC COMMODITY NETWORKS

A vibrant development studies literature pursues related, though somewhat varied, commodity frameworks which analyze the interconnected processes of raw material production, processing, shipping, distribution, marketing, and consumption embodied in a commodity or set of related commodities. There are four complementary traditions, each of which highlights critical facets of producer consumer networks: commodity systems analysis focuses on national labor organization and relations (Friedland, 1984), commodity chain analysis focuses on worldwide temporal and spacial relations (Hopkins & Wallerstein, 1986), filiere analysis focuses on national political regulation and institutions (Lauret, 1983), while value chain analysis focuses on international business organization and profitability (Porter, 1990). [1] Gereffi (1994) outlines one of the most coherent and well-known approaches. His global commodity chain framework analyzes (a) the interlinking of products and services in a sequence of value-added activities, (b) the organizational and spatial configuration of enterprises forming production and marketing networks, and (c) the governance structure determining resource allocation along the commodity chain. The strength of commodity studies is well demonstrated in analyses of the global economic structure, spatial configuration, and social organization of agro-food (Bernstein, 1996; Dolan & Humphrey, 2000; Gibbon, 2001a; Hughes, 2000; Ponte, 2002a, 2002b; Raynolds, 1994; Talbot, 2002) and manufacturing networks (Dicken, 1998; Gereffi & Kaplinsky, 2001; Gereffi & Korzeniewicz, 1994; Henderson & Dicken, 2002).

Much of the commodity chain literature focuses on the governance structures defining the intercountry and interfirm distribution of financial, material, labor, and organizational resources. Research demonstrates how lead firms set and enforce production processes and schedules, product quantities and specifications, and firm participation (Humphrey & Schmitz, 2001). Governance structures prove particularly important in shaping the opportunities for product upgrading and the barriers to entry for firms across the commodity chain (Dolan & Humphrey, 2000; Fitter & Kaplinsky, 2001; Gibbon, 2001a; Kaplinsky, 2000; Talbot, 2002). Gereffi (1994, 1999) identifies two ideal types of governance in the manufacturing sector: traditional "producer driven" chains where the concentration of capital and proprietary knowledge allows producers to dominate the industry and increasingly prevalent "buyer driven" chains where brand-name distributors dominate the industry via their control over the design process and market access.

Recent studies extend Gereffi's producer/buyer driven analogy into the agro-food sector, suggesting that powerful buyers increasingly govern enterprise participation, production processes, and product specifications in international supply chains (Dolan & Humphrey, 2000; Fold, 2002; Gibbon, 2001a, 2001b; Ponte, 2002a; Talbot, 2002). While studies of lead firms in agro-food networks have proved insightful, they frequently challenge a simple dichotomous characterization of producer *vs.* buyer driven chains. First, the nature of lead firms appears to vary significantly. Among commodity chains which can be characterized as "buyer-driven," some are driven by large supermarket retailers, but others are dominated by processors, global branders, or international traders (Dolan & Humphrey, 2000; Gibbon, 2001a; Ponte, 2002a). Second, agro-food commodity networks are often characterized by important internal variations, with different types of enterprises dominating different segments or different regional strands within a given commodity chain (Fold, 2002; Ponte, 2002b; Talbot, 2002). [2] And third, the amount of control lead enterprises exert over conditions across agro-food commodity chains is variable, with some chains being much more strongly "driven" than others (Dolan & Humphrey, 2000; Gibbon, 2001a; Ponte, 2002a).

Analysis of commodity chain governance traditionally gives primacy to economic actors, treating political conditions as contextual (Kaplinsky, 2000). Gereffi (1995) notes that the institutional framework established by national and international policies shapes the capacities of lead firms. Yet within the agro-food sector—one of the most highly regulated sectors in the global economy—political forces are much more than contextual. As Ponte (2002a, 2002b) argues, political regulation is central to agro-food chain governance and guides both the intercountry and interfirm distribution of financial, technical, and other resources. Research documents the importance of international and national polices in regulating world trade, governing both the composition of agro-food exports from the global South (Gibbon, 2001a, 2001b; Mather, 1999) and their entry into markets in the global North (Dolan & Humphrey, 2000; Fold, 2001; Raynolds & Murray, 1998; Stevens, 2001). The intersection of political and economic forces in chain governance is clearly evidenced in the rising importance of standards and traceability requirements in restricting access to international markets (Reardon, Codron, Busch, Bingen, & Harris, 2001).

A number of authors broadly aligned with the commodity chain tradition have recently called for a more nuanced analysis of governance which identifies different sources, forms, and levels of control across the commodity chain (Dolan & Humphrey, 2000; Fold, 2002; Ponte, 2002a; Raikes *et al.*, 2000; Smith *et al.*, 2002). Responding to this call, I develop a commodity network approach which provides a less structuralist view of the complex relations linking production and consumption. A commodity network approach grows out of the global commodity chain tradition and maintains the critical analytical focus on issues of governance. Yet as outlined below, it draws also on contributions in consumption studies, network analysis, and convention approaches. While a commodity network framework is developed here in relation to recent innovations in the agro-food literature, there are parallel debates going on in the industrial literature and some key insights are clearly anticipated in early commodity studies. [3]

Though one of the major strengths of the commodity chain framework lies in the injunction to analyze relations from production to consumption, few studies give serious attention to actors and actions in the realm of consumption. To challenge this historically productionist bias in agro-food studies, Marsden and his colleagues have called for a "political economy of consumption" which reorients analysis from "commodity chains" to "food supply chains" (Marsden, Munton, Ward, & Whatmore, 1996; Marsden, Banks, & Bristow, 2000). The pursuit of a more balanced analysis of production and consumption relations is linked to an appreciation of the symbolic as well as material construction of commodities (Appadurai, 1986). Fine (1994), for example, explores the cultural as well as material relations embodied in the system of mainstream food provisioning. Developing these ideas further, scholars have analyzed how particular food categories, such as organic foods, are ideologically and materially constructed as "specialty foods" oriented toward "specialized consumers" (Morgan & Murdoch, 2000; Murdoch, Marsden, & Banks, 2000). Analysis of mainstream and specialized food networks highlights the potentially important role of individual and collective consumers, as well as economic and political actors, in

shaping meanings and practices across agro-food networks.

Moving from the language of commodity "chains" to commodity "networks," as I do in this article, helps portray the complex web of material and nonmaterial relationships connecting the social, political, and economic actors enmeshed in the life of a commodity. As a number of authors suggest, forgoing the "chain" analogy helps avoid an overly structural conceptualization of production, distribution, and consumption as a linear sequence of economic activities (Hughes, 2000; Smith *et al*., 2002). Network analysis builds on Polanyi's (1957) argument that market activities are never purely economic but are embedded in social norms and institutions which mediate their effects. In the current era, informational flows are seen as critical in shaping our "network society" (Castells, 1996). Research in economic sociology analyzes how individuals, firms, government authorities, and nongovernmental organizations (NGOs) are involved in economic transactions and how these different actors both shape and are shaped by network relations (Granovetter, 1985). The network concept is increasingly used in studies of the horizontal and vertical relations among global manufacturing firms (Henderson *et al*., 2002).

Within agro-food studies, network analysis often draws on less structuralist actor network approaches (Latour, 1993; Law, 1994). As Whatmore and Thorne (1997, p. 89) suggest, this perspective provides "an understanding of global networks as performative orderings (always in the making), rather than systemic entities (always already constituted)." Analysis focuses on how localized actors maintain agro-food networks across time and space (Lockie & Kitto, 2000). A network approach appears particularly critical in analyzing agro-food commodity areas which are strongly influenced by consumer groups and deeply embedded in nonmarket norms, such as expanding international networks for socially and environmentally "friendly" food, timber, and flowers (Barrientos, 2000; Blowfield, Malins, Maynard, & Nelson, 1999; Hughes, 2001; Raynolds, 2000). But while actor network analysis usefully describes how networks are discursively and materially maintained, it typically obscures network politics. I suggest that agro-food network analysis can refine its political edge by increasing its attention to governance—the analytical core of commodity chain analysis—where governance is understood not as a pre-existing structural feature of commodity chains, but as the relations through which key actors create, maintain, and potentially transform network activities.

Recent work on conventions can help frame such an analysis of governance, highlighting how social, political, and economic actors engage and enforce particular ideas and practices across commodity networks. Convention theory originates in the French literature (Allaire & Boyer, 1995; Boltanski & Thévenot, 1991; Eymard-Duvernay, 1995; Sylvander, 1995; Valceschini & Nicolas, 1995a) and has recently contributed to agro-food studies available in English (Daviron, 2002; Murdoch *et al*., 2000; Ponte, 2002a; Raynolds, 2002). This framework focuses on (i) the norms and values shaping divergent assessments of quality, (ii) the qualifications, rules, and procedures coordinating exchange relations, and (iii) the organizational forms which correspond to and uphold particular qualifications (Allaire & Boyer, 1995; Boltanski & Thévenot, 1991). Analysis of conventions—the constellations of ideas, practices, and institutions comprising and guiding relations of production, exchange, and consumption—is theoretically compatible with and complementary to an analysis of agro-food networks and their governance. [4]

Thevénot distinguishes between (1) commercial conventions, based on price, (2) domestic conventions, based on trust and drawing on attachments to place and tradition, (3) industrial conventions, based on efficiency and reliability linked to formal testing and standards, and (4) civic conventions, based on evaluations of general societal benefits. These four ideal types can help identify the differences between socio-economic modalities (Boltanski & Thévenot, 1991). Yet in actuality these constellations of quality assessment, enterprise character, and network coordination are continuously negotiated and may compete even within a given sphere (Allaire & Boyer, 1995; Eymard-Duvernay, 1995). As Raikes *et al*. (2000, p. 408) suggest, commodity networks "may be considered to be more or less coherent or articulated, depending upon the extent to which a single quality convention reigns."

Convention research in the agro-food sector focuses on the decline in the Fordist regime of mass production/consumption and the post-Fordist ascendance of "quality" in governing production and consumption (Ponte, 2002a; Valceschini & Nicolas, 1995a). In convention terminology, this turn toward quality, as

opposed to quantity, challenges the dominance of "commercial" principles rooted in price in coordinating agro-food networks. Quality dynamics fuel the rise of divergent standards and the differentiation of food products (Daviron, 2002; Ponte, 2002c; Valceschini & Nicolas, 1995b). Though product differentiation can be achieved while upholding the "industrial" norms, practices, and enterprises which comprise the modern agro-industrial system, research suggests that some specialty food networks may uphold "domestic" conventions rooted in personal trust and attachment to place—i.e., locally grown and regional appellation systems—or "civic" conventions rooted in assessments of broad social or ecological benefits—i.e., fair trade and organic systems (Ponte, 2002a; Raynolds, 2002). Convention studies argue that these alternative modalities are likely to be repeatedly challenged by entrenched traditional commercial and industrial conventions (Sylvander, 1995).

To date no major study has analyzed the ideas, practices, and institutions which comprise and coordinate the increasingly global organic agro-food network. It is to this task that I turn, pursuing the commodity network approach developed here to explore how key social, political, and economic actors initiated, maintain, and could potentially transform the substantial trade in organic commodities produced in the global South for consumption in the global North.

## 3. THE INSTITUTIONALIZATION AND REGULATION OF THE GLOBAL ORGANIC TRADE

The organic concept has hybrid international roots: its key principle—that healthy ecological systems promote agriculture—is often attributed to a British writer reflecting on Asian peasant farming. Yet organic meanings and practices have been defined largely in the global North. Methods of organic, or what the Europeans call ecological, farming were initially developed by isolated individuals and groups in Europe, North America, and Japan. Northern movements in the 1960s popularized organic ideas, criticizing the destructive nature of agro-industrial practices and creating local production/distribution/consumption systems linking small-scale organic farms, distribution via food cooperatives, box schemes, and farmers markets, and wholesome diets. Diverse local initiatives have promoted what convention theorists refer to as domestic and civic conventions, based on personal trust, local knowledge, ecological diversity, and social justice, directly countering traditional industrial and commercial conventions based on efficiency, standardization, and price competition (Arce & Marsden, 1993; Miele, 2001; Murdoch *et al.*, 2000). Over recent decades Northern organic initiatives have been consolidated and institutionalized, often reasserting mainstream agro-industrial conventions which threaten the movement's alternative principles, enterprises, and exchange relations (Guthman, 1998; Tovey, 1997).

The consolidation of organic meanings and practices was extended internationally with the 1972 founding of the International Federation of Organic Agriculture Movements (IFOAM) by groups from Great Britain, France, Sweden, South Africa, and the United States. IFOAM established a singular organic definition based on farm management practices involving the use of natural methods of enhancing soil fertility and resisting disease, the rejection of synthetic chemical fertilizers, pesticides, and pharmaceuticals, and the protection of ecosystems. [5] Acceptance of this organic definition has spread with IFOAMs recent expansion to include members from 100 countries. IFOAMs roots remain visible in its European headquarters and the continued domination of its executive board by Northern affiliates, but 75% of its 750 individual and institutional members are now based in the global South (FAO, 1999a). Though its current policies reflect entrenched Northern priorities, IFOAMs democratic structure allows its new Southern membership to influence the organization's future (IFOAM, 2003a).

IFOAM, like many national organic groups, embodies sharp contradictions between its original movement-oriented and more recent market-oriented organic norms and practices. [6] IFOAM (2003a) maintains its holistic movement-oriented mission: "Our goal is the worldwide adoption of ecologically, socially and economically sound systems that are based on the principles of Organic Agriculture." But its "major aims and activities" include key market-oriented functions such as establishing international organic standards and certification procedures and promulgating the international equivalency of organic quality claims.

IFOAMs role in the governance of organic agro-food networks hinges largely on its

international promotion of certification systems established by Northern producers and organizations to regulate organic quality and consolidate markets (Allen & Kovach, 2000; Guthman, 1998). IFOAM's (2003b) efforts to define and enforce "certified-organic" quality specifications bolster industrial and commercial conventions at the expense of organic movement-oriented domestic and civic values, practices, and institutions on three major fronts. First, IFOAM promotes the codification of formal written standards which restrict organic practices in accordance with generalized rules rather than socio-ecological sustainability criteria. Organic standards are defined largely through the specification of acceptable and unacceptable agricultural production inputs, undermining more holistic civic or locality specific organic norms and practices. Second, IFOAM upholds rigorous third-party monitoring which enforces uniform practices across organic networks and elevates industrial claims of scientific measurement and objective oversight over domestic forms of network coordination based on trust and local knowledge. IFOAMs industrial style verification, auditing, and documentation procedures are widely applied, even beyond the 59 IFOAM accredited organic certification agencies which certify a third of world trade (Van Elzakker, 2000). Third, IFOAM extends traditional commercial conventions by promoting the superiority of "certified-organic" labeled products over all other (naturally occurring or industrially derived) foods, cementing a singular organic quality claim which can be advertised to capture price premiums and market shares.

Initially promulgated by IFOAM and national private voluntary certification organizations, organic standards, inspections, and certifications are increasingly regulated by government authorities. European governments established laws regulating organic certification and labeling in the 1980s (Michelsen, 2001; Tovey, 1997). The European Union (EU) harmonized these regulations, setting organic criteria for crop and livestock production following IFOAM standards (Barrett, Browne, Harris, & Cadoret, 2002). In the United States, states also became involved in organic certification as the market expanded in the 1980s (Guthman, 1998; Klonsky, 2000). Conflicts between market and movement orientations have been clearly evident in the recent effort to formulate US national organic standards, with agro-industrial interests lobbying for weak standards and consumer/movement groups fighting to maintain organic principles.[7] Arguments regarding the importance of international equivalency in bolstering US exports dissipated pressures to undermine organic standards (Chapman, 2000; Zygmont, 2000a) and the 2002 US federal rules largely uphold EU and IFOAM criteria. Japan, Canada, Australia, New Zealand and many other Northern countries have recently established similar standards, harmonizing rules and procedures across the world's major organic markets (Campbell & Liepins, 2001; Zygmont, 2000b).

In 1999 the United Nations Codex Alimentarius Commission reasserted at an international level the authority of standards, monitoring, and certification in governing organic agro-food networks. Codex's organic standards largely follow EU and IFOAM specifications (Schmid, 2000). Codex promotes technical production norms and industrial verification procedures, defining organic as a "labelling term that denotes products that have been produced in accordance with organic production standards and certified by a duly constituted certification body or authority" (FAO/WHO, 2001). This definition ignores the organic movement's civic and domestic principles and affirms the position of commercial and industrial conventions in shaping global organic norms, enterprises, and exchanges. Codex unifies the global market and promotes trade by requiring that its 160 member countries accept imports certified as organic according to Codex guidelines, irrespective of national regulations. Table 1 outlines organic standards institutionalized by IFOAM, major Northern governments, and now Codex.

In the global South interest in regulating organic quality claims has come largely from producers seeking access and legitimacy in Northern markets. Producers in Latin America, Africa, and Asia have joined with exporters and certifying organizations to form organic trade associations which work with Northern distributors to create South–North trade circuits (Scialabba, 2000). Many of these individuals and groups have joined IFOAM to enhance their position in Northern markets. Since internationally traded items lose their valuable organic labels if they do not adhere to import country or Codex standards, organic trade associations in the South have typically supported local certification systems which apply Northern standards.

Table 1. *Basic organic standards*

| | |
|---|---|
| Conversion | At least a 1 year conversion period before start of annual production cycle; 2 years for perennials |
| Certification and monitoring | Initial inspection followed by annual visits to each farm unit by monitors from accredited certifying organization |
| Documentation | Map and list of registered fields. Complete records of farm input use and yields |
| Planting material | Must be chemically untreated; no genetically modified organisms (GMOs) |
| Fertilizers | Organic soil enhancing processes must be used. No synthetic fertilizers or sewage sludge |
| Plant and disease control | Use of synthetic herbicides, fungicides, and pesticides prohibited except those on approved list |
| Livestock | Feed must be 100% organic; use of antibiotics prohibited. Some restrictions on animal concentrations |
| Transport and handling | Chain of custody must be maintained: no co-mingling with non-organic products |
| Processing | No irradiation. Synthetic additives can be used from approved list |
| Labeling | Products labeled organic must have >95% organic inputs |

*Sources*: IFOAM (2003a), FAO/WHO (2001) and FAO/ITC/CTA (2001).

Six Asian and two Latin American countries in the global South have already instituted national organic standards; many other countries are now developing standards (Herrmann, 2003). Organic policies in most Southern countries share three major goals: (a) securing a place for traditional exports in the face of increasingly competitive international markets, (b) offsetting declining prices for primary exports by tapping lucrative new markets for labeled commodities, and (c) preserving foreign exchange by reducing imports of expensive agro-chemicals. Many governments in Latin America (e.g., the Dominican Republic, Mexico, Costa Rica, Chile, and Argentina) and some in Asia and Africa (e.g., Turkey, Tunisia, Egypt, Ghana, India, and Korea) directly or indirectly subsidize organic exports (Scialabba, 2000). The Argentinian government has gone furthest to bolster exports by instituting European organic rules and gaining designation as the only Southern country on the European Union's six member list of "third-countries" permitted access to the EU market without additional inspections (Zygmont, 2000b).

This brief analysis of the institutionalization of the global organic sector points to the intersecting roles of social movement groups, economic firms, and legal authorities in governing organic agro-food networks through powerful certification systems based on formal standards, monitoring, and labeling. Developed first in the global North, IFOAM has taken the lead in advancing "certified-organic" standards and monitoring procedures in international arenas. National and multinational government regulations bolster the authority of organic certification systems and consolidate the world market for certified products. Certification systems set and enforce production and product specifications in countries of the global South exporting organics to Northern markets. Quality dynamics are, as convention theory suggests, pivotal in shaping the South–North organic trade. Despite the organic movement's historical commitment to domestic and civic values, rooted in personal trust, local knowledge, ecological diversity, and social justice, organic certification appears to reassert industrial and commercial quality conventions, based on efficiency, standardization, bureaucratization, and price competitiveness. Understanding how these competing conventions are negotiated and embodied within the norms, practices, and institutions which comprise global organic networks requires more detailed analysis of consumption and production spheres.

## 4. ORGANIC DISTRIBUTION AND CONSUMPTION

The world market for certified organic foods is estimated to be worth US$23–25 billion in 2003 and is growing at roughly 19% per year (Kortbech-Olesen, 2003, p. 21). Though organic products make up a minor share of the world market, soaring sales particularly in the United States and Europe have made organics the fastest growing segment of the global food industry (FAO/ITC/CTA, 2001). The

South–North trade in certified organic commodities is experiencing, and is projected to continue to experience, the most rapid growth (FAO, 1999a). Organic consumption and distribution trends in major Northern markets are clearly shaping the rise, configuration, and future trajectory of global organic networks.

Global organic market growth is consumer led and can be attributed largely to increasing demand among a growing number of Northern consumers concerned about health and, to a lesser degree, environmental issues (ITC, 1999; Kortbech-Olesen, 2002). Initially the domain of a counterculture minority, organic consumption has spread to a larger, more mainstream, population seeking to avoid pesticides and other food contaminants. In the 1990s organic sales soared as consumer confidence in agro-industrial foods was eroded by (a) proliferating pharmaceuticals, like recombinant bovine growth hormone (Bgh) and genetically modified organisms (GMOs), in dairy and crop production and (b) food scares involving large-scale outbreaks of "mad cow" disease and dioxin and *E. coli* food contamination (DuPuis, 2000). Consumer distrust of conventional food supplies remains high, particularly in Europe (Miele, 2001). Around the world people buy organic food because they see it as safer for themselves, for farmers, and for the environment (FAO, 2000). Though organic certification is not based on explicit health claims, the majority of consumers identify organic labels as symbols of food safety and quality. For example, 80% of US shoppers report purchasing organics for health reasons; 67% cite additional environmental concerns (OTA, 2001).

European organic markets have expanded the most rapidly over the past decade due to relatively high consumer consciousness, massive food scares, and popular rejection of GMOs. Europeans currently consume half of all the organic products sold worldwide (Willer & Richter, 2003, p. 79). As noted in Table 2, Germany has the largest market, followed by the United Kingdom, Italy, and France. Though organic growth has begun to slow in the most mature markets, European sales are still rising by 10% per year. Organics have acquired the greatest market share (over 2% of food sales) in Switzerland, Denmark, and Austria. With per capita expenditures of US$72 per year, the Danes lead the world in organic purchases (Willer & Richter, 2003, p. 80). The United States has by far the largest national market for organic products (valued at roughly US$12 billion) and the highest current growth rates (reaching 20% annually). One-third of US consumers currently buy organic products and organics now comprise 2% of the food market (Haumann, 2003). Organic sales in the United States have extended in recent years beyond the so-called "true naturals" or "hippie activists" to include a much larger group of affluent and well educated "health seekers" (Hartman Group, 2000). Canada has recently joined the ranks of major organic markets, with growth trends similar to those in the United States. Japan also has an important emerging organic market.

Table 2. *Major international organic markets*

| Country | Estimated retail sales 2003 (US$1,000,000) | Annual growth rate of retail sales (%) |
|---|---|---|
| United States | 11,000–13,000 | 15–20 |
| Germany | 2,800–3,100 | 5–10 |
| United Kingdom | 1,550–1,750 | 10–15 |
| Italy | 1,250–1,400 | 5–15 |
| France | 1,200–1,300 | 5–10 |
| Canada | 850–1,000 | 10–20 |
| Switzerland | 725–775 | 5–15 |
| Netherlands | 425–475 | 5–10 |
| Japan | 350–450 | – |
| World total | 23,000–25,000 | |

*Source*: ITC, 2003 data cited in Kortbech-Olesen (2003, p. 24).

Organic products were once largely produced locally, but despite impressive growth in domestic production, demand in North America and Europe far outstrips supply. Though preferences for local organic food persist, Northern countries are increasing their reliance on organic imports, particularly from the global South (FAO/ITC/CTA, 2001). As markets have grown, the range of organic items demanded has increased: moving beyond local seasonal produce and bulk grains, to include a wide array of tropical products (such as bananas, coffee, tea, cocoa, and spices), counter-seasonal produce (such as apples, pears, lettuce, and asparagus), frozen and canned produce, meat, eggs, milk, cheese, and processed foods (such as baby food, pasta, ketchup, and fruit drinks). European organic imports are high, comprising 70% of sales in the United Kingdom, 60% in Germany and the Netherlands, and 25% in Denmark (Lohr, 1998, p. 1126). Europe imports large quantities of organic tropical products, counter-seasonal produce,

and grains from the global South, with additional imports from other Northern countries (Zygmont, 2000b). The United States is both a major organic exporter and importer: exporting goods to Europe, Canada, and Japan and importing tropical and counterseasonal products from the global South (Haumann, 2003). Due to limited domestic production, Canada and Japan rely heavily on organic imports.

In recent years, mainstream distributors have greatly increased the availability of domestic and imported organic commodities throughout the North, with supermarket sales representing the most dynamic area of market growth (Yussefi & Willer, 2003). Once supplied only by alternative movement venues such as farmers markets, box schemes, and small food coops, organic products have made dramatic inroads in conventional distribution channels. Most major supermarket chains and many institutional suppliers now offer organics, taking advantage of their popularity and their 20–40% price premiums (FAO/ITC/CTA, 2001, p. 6). Yet as noted in Table 3, distribution patterns remain varied. In the United States, 62% of organic sales are handled by natural food stores. Though this category includes numerous food coops, sales are concentrated in a few big upscale chains like Whole Foods and Wild Oats. Conventional supermarkets are also augmenting their sales and now hold a third of the US organic market. Farmers markets and other direct sales outlets are thriving, but they account for only a fraction of US sales (Dimitri & Richman, 2000). In Europe, movement-oriented outlets continue to play a more important role (FAO/ITC/CTA, 2001; Miele, 2001). Small alternative shops remain very popular and handle fully 96% of organic sales in the Netherlands. Farm stalls and box schemes are flourishing in many parts of Europe and account for over a quarter of the German organic market. Yet mainstream supermarkets are clearly increasing their hold over European organic markets (Willer & Richter, 2003). Supermarkets dominate sales in Switzerland and the United Kingdom and control 90% of sales in Denmark. Supermarkets also appear to be taking the lead in developing organic markets in Canada and Japan (Kortbech-Olesen, 2003).

Table 3. *Organic distribution systems in major markets*

| Country | Conventional super markets (%) | Natural food and specialty stores (%) | Direct and other sales (%) |
|---|---|---|---|
| United States | 31 | 62 | 7 |
| Germany | 26 | 46 | 28 |
| Great Britain | 74 | 15 | 11 |
| Italy | 23 | 60 | 17 |
| France | 38 | 46 | 16 |
| Switzerland | 57 | 21 | 22 |
| Netherlands | 2 | 96 | 2 |
| Denmark | 90 | 2 | 8 |

*Source*: Hamm and Michelsen (2000) and OTA (2000) data cited in Willer and Yussefi (2001, pp. 71, 85).

The mainstreaming of organic foods in Northern markets has critical implications for the governance of domestic and international supply networks, delimiting acceptable production processes, product specifications, and types of enterprise participation. Organic items sold in alternative outlets continue to come largely from small, often local, producers oriented toward domestic and civic movement values (DeLind, 2000; Marsden *et al*., 2000). But organic items sold in mainstream markets are typically sourced via conventional distribution chains which uphold industrial and commercial conventions rooted in efficiency, standardization, and price competitiveness (Dimitri & Richman, 2000). The power of supermarkets to dictate terms for food suppliers—including organics—is greatest in the United Kingdom where three retailers control the market (Dolan & Humphrey, 2000). Tesco and Sainesbury each command over 30% of organic sales (Morgan & Murdoch, 2000; Rowan, 2000). Since both market largely via house-brand lines, these UK retailers virtually rule their national and international organic supply networks: "not only dictating product specifications and quality but also the planting, harvesting, packaging, transportation, and delivery of products" (FAO/ITC/CTA, 2001, p. 196). Organic chain of custody requirements facilitate distributor control upstream to the point of production and aid broader retailer efforts to impose traceability regulations in international food markets (Reardon *et al*., 2001). In the United States, where food retailing is not so clearly monopolized, supermarkets vie with powerful agro-food corporations for control over mainstream organic supply networks. Transnational corporations like Heinz, Gerber, and General Mills have recently become major players in the organic food industry (Rowan, 2000). Agro-industrial corporate products, often disguised using bought

out "natural sounding" brand names, are increasingly found in mainstream US retail outlets alongside house-brand organic lines. Though US-based agro-food corporations and retailers do not have as much control over their supply networks as UK supermarkets, following conventional business practices, they typically bypass local organic sources and establish strategic alliances and supply contracts with national and international producers and shippers to ensure large, continuous, and inexpensive organic supplies (Dimitri & Richman, 2000).

While Northern organic market growth has been fueled by mounting consumer distrust of the agro-industrial food system, that growth has paradoxically fostered the rise of conventional agro-industrial norms, practices, and market relations in national and international organic networks. Dominant agro-industrial production and retail corporations control growing mainstream organic markets, upholding industrial and commercial conventions in the establishment of large-volume, highly regimented, long-distance supply networks and the sales of standardized (often processed) products for affluent consumers. Formal legally sanctioned organic certification standards and monitoring procedures help tighten corporate control across commodity networks, while organic labels facilitate sales in anonymous retail venues. But despite the mainstreaming of organics in major markets, movement oriented organic distribution systems appear to be thriving. Dedicated consumers continue to support alternative organic networks which promote domestic and civic conventions and supply small quantities of nonstandardized wholesome foods. In sum, what we appear to be seeing is a bifurcation between market- and movement-oriented organic distribution systems and consumers.

## 5. ORGANIC PRODUCTION AND TRADE

Over the past decade, production of certified organic commodities has grown rapidly throughout the global South, with 90 countries now producing organic goods in commercial quantities, the vast majority for export (ITC, 1999). Escalating organic demand, particularly in Europe and North America, has generated a dynamic South–North trade worth an estimated US$500 million in 1997 (Blowfield *et al.*, 1999). The South–North organic trade is growing, and is expected to continue to grow, at over 20% per year (FAO, 1999a, 1999b). Consumption preferences and institutional relations in the North configure the shape and trajectory of certified organic export sectors in the global South, in many ways reproducing conventional global trade patterns and inequalities.

Table 4 outlines the geographic spread and composition of organic production in the global South. Eighteen African and Middle Eastern countries engage in organic production and, as in other high-value sectors, virtually all certified output is exported to Europe or the United States. Uganda and Turkey lead the region in certified area and producer numbers:

Table 4. *Organic production and export characteristics in regions of the global South*

| | Africa and Middle East[a] | Asia[b] | Latin America[c] |
|---|---|---|---|
| Number of organic producer countries | 18 | 20 | 23 |
| Organic hectares | 254,826 | 583,192 | 4,886,967 |
| Number of organic enterprises | 57,510 | 60,404 | 110,661 |
| Major commodities | Cotton, dried fruit, fresh fruits & vegetables, herbs, spices, coffee, cocoa, sesame, honey, sugar, nuts, tea, oil crops | Tea, cotton, coffee, herbs, spices, rice, fresh fruits & vegetables, soybeans, honey, nuts, sugar | Coffee, cocoa, sugar, tea, cotton, fresh & processed fruits & vegetables, grains, soybeans, nuts, honey, herbs, spices, oil crops, meat |

*Sources*: Compiled from CEDOPEX (1999), ITC (1999) and Yussefi and Willer (2003).

[a] Does not include South Africa.

[b] Includes the former Soviet Union and Papua New Guinea; but not Japan, Australia, or New Zealand.

[c] Includes South and Central America, Caribbean, and Mexico; but not Cuba.

Uganda is a major producer of organic fresh fruits and vegetables and coffee; Turkey is the world's largest supplier of organic cotton (Marquardt, 2001; Walaga, 2003). With production in 20 countries, Asia surpasses Africa and the Middle East in the number of organic hectares and enterprises. China and the Ukraine, followed by India and Indonesia, are the major organic producers. Again the vast majority of organic products are exported to Europe, Japan, and the United States (in that order), though domestic markets are emerging. China is a major diversified organic supplier with annual sales worth US$15 million; India is a key exporter of organic spices and tea (Masuda, 2000; Thiers, 2002).

Latin America represents the hub of certified organic production in the global South, with roughly as many organic hectares and producers as Asia, Africa, and the Middle East combined. Latin America has 21% of the world's certified land (4.9 million hectares) and 19% of the world's organic enterprises (110,000 producers). Table 5 outlines sectoral characteristics in Latin America's top producer countries. [8] Argentina has the greatest organic area—with three million certified hectares (1.89% of its farm land)—and certified land has grown 550 fold over the past decade (Lernoud, 2003). Brazil and Mexico also have large and rapidly expanding certified areas, representing 0.08 and 0.13% of their cultivated land. Organic acreage is smaller in Central America and the Caribbean, but it represents a larger share of farm area in Costa Rica, the Dominican Republic, Guatemala, and El Salvador (2.00%, 0.40%, 0.33%, and 0.31% of acreage respectively). While 85% of Argentina's organic land is in large expanses of animal pasture (Foguelman & Montenegro, 1999), smaller crop enterprises predominate in the rest of the region, explaining why the majority of organic producers are found in Mexico, Peru, Brazil, and the Dominican Republic.

Over 80% of Latin America's organic output is exported, reproducing the region's historical dependence on agro-export markets and vulnerability to global market fluctuations. Data

Table 5. *Latin American certified organic production and exports*

| Country | Certified hectares[a] | Certified growers[a] | Exports (US $)[b] | Major export commodities[c] |
|---|---|---|---|---|
| Argentina[d] | 3,192,000 | 1,900 | 20,000,000 | Pears, apples, corn, soybeans, wheat |
| Brazil[e] | 275,576 | 14,866 | | Soybeans, sugar, oranges, coffee, tea |
| Mexico[f] | 143,154 | 34,862 | 70,000,000 | Coffee, bananas, apples, vegetables, sesame |
| Peru | 84,908 | 19,685 | | Coffee, cotton |
| Paraguay | 61,566 | 2,542 | | Soybeans, sugar |
| Bolivia | 19,634 | 5,240 | | Cocoa, coffee, nuts, grains, dried fruit |
| Dominican Republic[g] | 14,963 | 12,000 | 21,000,000 | Bananas, coffee, cocoa, mangos, coconuts |
| Guatemala | 14,746 | 2,830 | | Coffee, bananas, cashews, fruits, vegetables |
| Costa Rica[h] | 8,974 | 3,569 | | Bananas, coffee, blackberries, sugar, palm |
| Nicaragua | 7,000 | 2,000 | | Coffee, cotton, neem, beans |
| El Salvador | 4,900 | 1,000 | | Coffee |
| Chile[i] | 3,300 | 300 | 4,000,000 | Asparagus, kiwis, raspberries, pumpkins, honey |

*Sources*: CAPOC (2001), CEDOPEX (1999), Crucefix (1998, p. 6), FAO (2000), FAS/USDA (1999), FAS/USDA (2000a), Foguelman and Montenegro (1999), Fonseca and Wilkinson (2003), Garcia (1997), ITC (1999), ProChile (2001) and Yussefi and Willer (2003).

[a] Area figures and producer numbers are from Yussefi and Willer (2003).

[b] Exports figures are from listed country sources.

[c] The top five exports are from Crucefix (1998, p. 6) and listed country sources.

[d] Additional data come from CAPOC (2001) and Foguelman and Montenegro (1999).

[e] Additional data come from FAS/USDA (1999) and Fonseca and Wilkinson (2003).

[f] Additional data come from FAS/USDA (2000a).

[g] Additional data come from CEDOPEX (1999) and FAO (2000).

[h] Additional data come from Garcia (1997).

[i] Additional data come from ProChile (2001).

on export earnings are incomplete, but Mexico appears to lead the way with US$70 million in revenues. In terms of their contribution to the national economy, organic exports are the most significant in the Dominican Republic, where they represent 10% of agro-export and three percent of total export earnings (CEDOPEX, 2001). In Argentina organic export earnings are less important in both absolute and relative terms. Breaking somewhat with the region's historical reliance on US markets, most Latin America organic exports go to fill mounting demand in Europe and only secondarily to the United States. [9]

Latin America exports a broader array of organic products than any other region (see Tables 4 and 5). Coffee is the region's best established and widely grown organic commodity, but the fastest growth appears to be in newer exports of organic fresh fruits and vegetables, meat and dairy products, and processing ingredients (FAO/ITC/CTA, 2001). National organic export composition follows conventional agro-export patterns: Argentina, Brazil, and Chile ship large quantities of counterseasonal fresh produce, soybeans, and grains; Mexico, Costa Rica, El Salvador, Guatemala, Nicaragua, and the Dominican Republic export large volumes of coffee and bananas. Yet many countries have acquired a much stronger position in the organic trade than they hold in overall world markets: Mexico produces roughly a third of the world's organic coffee (Rice, 2001); the Dominican Republic produces more than half of the world's organic bananas (CEDOPEX, 1999); Brazil and Paraguay together supply almost three-quarters of the world's organic sugar (Buzzanell, 2000). Upholding conventional trade patterns, most Latin American organic agro-foods are exported in unprocessed bulk form, so that the substantial profits derived from processing and packaging accrue to enterprises in Northern consuming countries.

It is often assumed that small-scale producers will be the ones to participate in expanding organic export sectors, due to organic farming's labor-intensive nature and compatibility with traditional peasant practices (Crucefix, 1998). Most peasant farmers in Latin America follow basic organic production expectations and avoid applying expensive agro-chemicals, making it relatively easy to meet organic conversion requirements (Meier, 1999; Nigh, 1997). But farm output cannot be exported as organic unless producers uphold official organic documentation, auditing, and certification procedures. Organic certification imposes bureaucratic and industrial conventions which typically counter the traditional norms and practices of peasant producers.

The work and expense of organic certification creates a major barrier to entry for small-scale Latin American producers wishing to enter organic export networks and take advantage of the 30–40% organic price premiums (Crucefix, 1998). Certification standards and procedures reflect their Northern origins and are difficult to maintain under Southern conditions (Barrett *et al*., 2002; Mutersbaugh, 2002). First, because organic production methods and standards fail to address tropical agro-ecological realities. Second, because the extensive farm level records required for certification are burdensome for farmers who are typically only semi-literate. Third, because farm inspections are expensive since farmers often have small, dispersed, un-mapped holdings. To ensure that organic certification meets international requirements, most certification in Latin America is carried out by foreign agencies, amplifying the costs. [10] IFOAM has developed an internal control system for small-scale producer groups using (a) local teams to communicate criteria, assist in record keeping, and do yearly plot inspections and (b) monitors from accredited certifying agencies to oversee local controls and do annual spot visits to a sample of parcels. But even using this system, organic certification is much more onerous and expensive for producers in the South than in the North, with certification costs often representing 5% of farm sales (Rundgren, 2000). Research in Mexico finds that for poor coffee producers to participate in organic networks they must have strong cooperatives able to collectivize the work and costs of certification (Bray, Plaza Sanchez, & Contreras Murphy, 2002; Mutersbaugh, 2002; Nigh, 1997; Rice, 2001) and that often these cooperatives use resources derived from their involvement in social movement-based Fair Trade networks to pay for certification (Raynolds, 2002).

Despite the affiliation between peasant farming practices and those of organic farming, large-scale commercial producers benefit from important socioeconomic advantages in producing certified commodities. As a result organic, like conventional, agriculture in Latin America appears to involve a large number of small farms and a small number of large corporate enterprises. Organic farming is the most

concentrated in Argentina, where economies of scale are accentuated in beef production and where foreign investment is high (FAS/USDA, 2000b). The largest 3% of enterprises control 23% of Argentina's organic acreage (Foguelman & Montenegro, 1999). The Mexican organic sector is much less concentrated due largely to the importance of small-scale upland coffee production. Ninety-five percent of Mexican producers are small growers who together cultivate 89% of the organic area (FAS/USDA, 2000a). In the Dominican Republic, small-scale producers dominate production of organic bananas, coffee, and cocoa (El Exportador, 1999).

The rising importance of mainstream retailers and food corporations in Northern organic markets is reinforcing the position of big producers in Latin America able to guarantee large continuous supplies of standardized goods. Since organic goods increasingly enter the same commercial networks as their conventional counterparts, they are similarly affected by economies of scope and scale. Small-scale producers entering organic export networks are subject to tighter control by distributors than producers of nonorganic items given the lack of local market alternatives, small number of organic distributors, and rigorous chain of custody requirements. Small-scale producers of bulk commodities—such as coffee and cocoa—typically sell to export companies that can fill large orders by consolidating supplies. While most Mexican small organic producers enter these bulk commodity export networks (FAS/USDA, 1999), some have been able to engage in specialty coffee networks maintained by Fair Trade groups (Raynolds, 2002). Export supply networks in organic fresh fruits and vegetables are the most tightly controlled since packing, shipping, and retailing must be carefully integrated to ensure product quality at the point of sale. Stringent supply chain requirements are bolstering concentration in many segments of the organic produce trade (FAO/ITC/CTA, 2001). This is clearly evident in the organic banana sector where quality expectations—based largely on uniformity and appearance—are increasing and price competition is on the rise. Global branders such as Dole Foods are taking advantage of their standardized quality, market position, and vertically integrated structure to capture growing mainstream organic markets, but as in the coffee sector smaller producers continue to predominate in alternative social movement oriented Fair Trade organic banana networks (Raynolds & Murray, 1998).

Review of existing data on organic production in the global South suggests that the composition and trajectory of this sector is fundamentally driven by consumer preferences and institutional relations in the North. Legally sanctioned certification rules and procedures play a critical role in governing enterprise participation and production processes, constructing significant barriers to entry for poor Southern producers. The rise of mainstream retailers and food corporations in organic markets is encouraging the growth of large scale corporate producers that uphold industrial and commercial conventions in meeting mounting product volume and standardized quality expectations. In the face of increasing competition, the position of small-scale peasant producers that uphold civic and domestic norms, values, and conventions appears to depend in large measure on their integration into social movement oriented Fair Trade distribution networks and alternative Northern sales outlets.

## 6. CONCLUSIONS

This study demonstrates the strength of a commodity network framework in analyzing the ideas, practices, and institutions which comprise and coordinate the increasingly global organic agro-food sector. This approach maintains the global commodity chain framework's traditional strength in analyzing commodity flows and firm relations across production, trade, and consumption (Gereffi, 1994), yet responds to recent calls for a more trenchant analysis of relations of governance (Dolan & Humphrey, 2000; Ponte, 2002a; Smith *et al.*, 2002). Drawing on contributions in consumption, network, and convention studies, a commodity network approach sharpens analysis of (a) the power of symbolic and discursive, as well as material, relations in configuring producer/consumer transactions, (b) the multiple social and political, as well as economic, actors and actions which comprise and control commodity networks, and (c) the quality conventions which shape meanings, govern exchanges, and concentrate power in commodity networks.

A commodity network framework provides analytical purchase on the multiple institutions and power relations which shape the

South–North organic trade through horizontal and vertical ties. My findings bolster arguments for moving beyond a buyer/producer driven dichotomy to analyze variations in the nature of lead firms, in regional trade circuits, and in the forms and extent of regulation (Dolan & Humphrey, 2000; Gibbon, 2001a; Ponte, 2002a). In the organic trade, the participation of firms—along with production and commodity characteristics—is governed in large measure by certification institutions and requirements. Organic certification involves powerful relations of control initiated largely by Northern social movement groups and legally sanctioned by national and multinational government authorities. As convention theory suggests the power of certification is rooted in the politics of "qualification" (Thévenot, 1995), the ability to define quality attributes, measures, and rewards. In the global organic trade, Northern-based certification systems cement a singular definition of certified-organic quality, impose rigorous production and documentation requirements on Southern producers, and bar noncompliant producers from lucrative export networks.

In short, certification represents a powerful new form of network governance which is rooted in social, legal, and bureaucratic institutions, yet serves in many ways to accentuate traditional economic inequalities between firms and countries. Onerous and expensive organic certification requirements create significant barriers to entry for poor Southern producers and encourage the concentration of organic production and price premiums in the hands of large corporate producers. Powerful corporate retailers and branders also benefit from organic certification, since chain of custody and documentation requirements facilitate their control over suppliers and organic labels facilitate their participation in mainstream markets. These conclusions appear to apply also to proliferating certification systems in the international trade of marine products, timber, flowers, apparel, footwear, textiles, and other items (Barrientos, 2000; Gereffi, Garcia-Johnson, & Sasser, 2001; Hughes, 2001). As in organics, these Northern initiatives (i) reproduce global inequalities, through the imposition of new qualifications and auditing systems on Southern producers and (ii) deepen firm inequalities, through the imposition of certification costs on producers and the concentration of market advantages in the hands of corporate enterprises.

This study demonstrates the utility of convention theory concepts (e.g., Boltanski & Thévenot, 1991) in analyzing the quality norms, rules, and institutional arrangements fueled by the global expansion in certified organic markets and the resilience of the organic movement's founding principles. Early organic initiatives embodied domestic and civic values of trust, place-based knowledge, ecological diversity, and social justice, upheld through networks involving small-scale organic farms, face-to-face exchanges, and conscientious consumers. As the South–North organic trade has grown—increasing the geographic and social distance between producers, distributors, and consumers—these alternative values, institutions, and exchanges have been increasingly challenged by commercial conventions rooted in economic competition. Organic certification strengthens this challenge through the imposition of industrial norms of bureaucratic efficiency embodied in standards, auditing, and labeling. The rise of commercial and industrial conventions is clear in organic distribution and consumption—where the fastest growth is in mainstream retailing, based on large-volume, regimented, supply systems—and in organic production and trade—where the fastest growth is in large-scale corporate entrants pursuing organics as a high-value niche market. Yet my research finds that organic civic and domestic values are also thriving, as evidenced in the proliferation of alternative organic retail outlets, in the rising number of conscientious consumers purchasing organics, and in the small-scale producers which continue to dominate many organic commodity areas. These findings reaffirm the theoretical importance of analyzing quality as a contested terrain negotiated within and between commodity networks (Murdoch *et al.*, 2000; Ponte, 2002a; Raikes *et al.*, 2000; Sylvander, 1995).

In policy terms, this study points to ways in which the organic movement's founding quality conventions can be re-asserted in organic networks. While much of the literature on the preservation of organic movement values adopts a localist stance, this article suggests that movement norms can be extended globally by linking small-scale peasant producers and conscientious consumers. In the realm of production, barriers to entry for peasant producers—who often already uphold organic movement values—should be reduced by shifting certification costs downstream and empowering local producers to fulfill moni-

toring tasks. In the realm of consumption, the mounting consumer consciousness which is driving the growth of the organic trade should be tapped and movement values encouraged. The viability of these changes is already being demonstrated in Fair Trade networks (Raynolds, 2002). Producers, consumers, and IFOAM acknowledge the convergence between the holistic social and ecological values of the Fair Trade and organic movements (IFOAM, 2003c). Given IFOAMs increasing global representation and demonstrated ability to shape the organic trade, it may be well positioned to further promote these values, but to do so it must move beyond standard-based certification to promote conventions rooted in society-wide benefits. If successful, organics could provide useful lessons for newer certification initiatives which espouse progressive goals but similarly undermine these values through their industrial and commercial practices.

## NOTES

1. For analysis of the similarities and differences between these schools of thought, see Friedland (2001), Raikes, Jensen, and Ponte (2000), and Smith *et al.* (2002).

2. The risks in overgeneralizing the nature of chain governance is evident in characterizations of agro-food chains as retailer-led which draw exclusively on British data (e.g., Dolan & Humphrey, 2000; Marsden, Flynn, & Harrison, 2000), downplaying the more limited power of food retailers in other national markets.

3. For example, Hopkins' and Wallerstein's (1986) conceptualization of commodity chains as comprised of temporally and spatially overlapping labor processes anticipates elements of network theory. Similarly, filiere analysis like convention analysis focuses on the rationalities and institutions organizing commodities (Raikes *et al.*, 2000; Wilkinson, 1997).

4. For further discussion of the lineage of convention theory and its links to commodity chain and related frameworks, see Raikes *et al.* (2000) and Wilkinson (1997).

5. IFOAM (2003a) gives this definition: "Organic agriculture is an agricultural system that promotes environmentally, socially and economically sound production of food, fibre, timber, etc. In this system soil fertility is seen as the key to successful production. Working with the natural properties of plants, animals and the landscape, organic farmers aim to optimise quality in all aspects of agriculture and the environment."

6. It is beyond the scope of this paper to detail the historical tensions between market and movement orientations within IFOAM, but these tensions clearly revolve (as convention theory suggests) around competing definitions of organic quality.

7. For example, agro-industries tried unsuccessfully to have genetically modified organisms, sewage sludge, and nuclear irradiation allowed under the US Organic Foods Production Act.

8. Since no official data are available for most countries, Table 5 presents data from sample surveys and producer group estimates. Appropriate caution should be taken in drawing conclusions from this table.

9. Though only 11% of Argentinian and 26% of Dominican organic exports go to US markets, 70% of Chilean exports do (CAPOC, 2001; CEDOPEX, 1999; ProChile, 2001).

10. Though low, the number of accredited organic certifiers located in the South is increasing.

## REFERENCES

Allaire, G., & Boyer, R. (1995). *La grande transformation*. Paris: INRA.

Allen, P., & Kovach, M. (2000). The capitalist composition of organic: The potential of markets in fulfilling the promise of organic agriculture. *Agriculture and Human Values, 17*(3), 221–232.

Appadurai, A. (1986). Introduction: Commodities and the politics of value. In A. Appadurai (Ed.), *The*

*social life of things*. Cambridge: Cambridge University Press.
Arce, A., & Marsden, T. (1993). The social construction of international food. *Economic Geography, 69*, 293–311.
Barrett, H. R., Browne, A. W., Harris, P. J. C., & Cadoret, K. (2002). Organic certification and the UK market: Organic imports from developing countries. *Food Policy* (27), 301–318.
Barrientos, S. (2000). Globalization and ethical trade: Assessing the implications for development. *Journal of International Development, 12*(4), 559–570.
Bernstein, H. (1996). The political economy of the maize filiere. *Journal of Peasant Studies, 23*(2&3), 120–145.
Blowfield, M., Malins, A., Maynard, B., & Nelson, V. (1999). *Ethical trade and sustainable rural livelihoods*. Kent, UK: Natural Resources and Ethical Trade Programme.
Boltanski, L., & Thévenot, L. (1991). *De la justification: Les économies de la grandeur*. Paris: Gallimard.
Bray, D. B., Plaza Sanchez, J. L., & Contreras Murphy, E. (2002). Social dimensions of organic coffee production in Mexico: Lessons for eco-labeling initiatives. *Society and Natural Resources, 15*(5), 429–446.
Buzzanell, P. (2000). *Organic sugar: Short term fad or long term growth opportunity?*. London: Buzzanell & Associates.
Campbell, H., & Liepins, R. (2001). Naming organics: Understanding organic standards in New Zealand as a discursive field. *Sociologia Ruralis, 41*, 21–39.
(CAPOC) Cámara Argentina de Productortes Orgánicos Certificados (2001). Situación actual de la producción orgánica en la Argentina. Available: http://www.organic.com.ar.
Castells, M. (1996). *The rise of the network society*. Oxford: Blackwell.
(CEDOPEX) Centro Dominicano de Promoción de Exportaciones (1999). La agricultura orgánica en la Republica Dominicana. El Exportador, 27 (special issue).
(CEDOPEX) Centro Dominicano de Promoción de Exportaciones (2001). *Boletín estadístico*. Santo Domingo: CEDOPEX.
Chapman, N. (2000). Food standards matter in the global market. *Prepared Foods, 169*(5), 38–41.
Crucefix, D. (1998). *Organic agriculture and sustainable rural livelihoods in developing countries*. Bristol: Soil Association.
Daviron, B. (2002). Small farm production and the standardization of tropical products. *Journal of Agrarian Change, 2*(2), 162–184.
DeLind, L. (2000). Transforming organic agriculture into industrial organic products: Reconsidering national organic standards. *Human Organization, 59*(2), 198–208.
Dicken, P. (1998). *Global shift: Transforming the world economy* (third ed.). New York: Guilford Press.
Dimitri, C., & Richman, N. (2000). *Organic food markets in transition*. Greenbelt, MD: Winrock International.
Dolan, C., & Humphrey, J. (2000). Governance and trade in fresh vegetables: The impact of UK supermarkets on the African horticulture industry. *Journal of Development Studies, 37*(2), 145–176.
DuPuis, E. M. (2000). Not in my body: rBGH and the rise of organic milk. *Agriculture and Human Values, 17*, 285–295.
El Exportador Dominicano (1999). Plantaciones del norte, banano y piñas orgánicos. *El exportador Dominicano, XXVII*(115), 40–41.
Eymard-Duvernay, F. (1995). La négociation de la qualité. In F. Nicolas & E. Valceschini (Eds.), *Agro-alimentaire: Une économie de la qualité* (pp. 39–48). Paris: INRA.
(FAO) Food and Agriculture Organization (1999a). *Organic agriculture* (COAG/99/9). Rome: FAO.
(FAO) Food and Agriculture Organization (1999b). *The market for "organic" and "fair-trade bananas"* (CCP:BA/TF 99/7). Rome: FAO.
(FAO) Food and Agriculture Organization (2000). *Food safety and quality as affected by organic farming*. Rome: FAO.
(FAO/ITC) Food and Agriculture Organization/International Trade Centre/Technical Centre for Agricultural and Rural Cooperation (2001). World markets for organic fruit and vegetables. Rome: FAO.
(FAO/WHO) Food and Agriculture Organization/World Health Organization (2001). Codex guidelines for the production, processing, labeling and marketing of organically produced foods. Rome: FAO.
(FAS/USDA) Foreign Agricultural Service/United States Department of Agriculture (1999). *Organic farming in Brazil*. Available: http://www.fas.usda.gov.
(FAS/USDA) Foreign Agricultural Service/United States Department of Agriculture (2000a). *Mexico: The Mexican market for organic products.* Mexico City: FAS/USDA.
(FAS/USDA) Foreign Agricultural Service/United States Department of Agriculture (2000b). *Argentina: Organic food report*. Buenos Aires: US Embassy.
Fine, B. (1994). Towards a political economy of food. *Review of International Political Economy, 1*, 519–545.
Fitter, R., & Kaplinsky, R. (2001). Who gains from product rents as the coffee market becomes more differentiated? *IDS Bulletin, 32*(3), 69–82.
Foguelman, D., & Montenegro, L. (1999). Producción y productores agropecuarios orgánicos. *Realidad Económica, 160/161*, 110–118.
Fold, N. (2001). Restructuring of the European chocolate industry and its impact on cocoa production in West Africa. *Journal of Economic Geography, 1*, 405–420.
Fold, N. (2002). Lead firms and competition in "bipolar" commodity chains: grinders and branders in the global cocoa-chocolate industry. *Journal of Agrarian Change, 2*(2), 228–247.
Fonseca, M. F., & Wilkinson, J. (2003). As Oportunidades e os desfios da agricultura organica. Unpublished manuscript.
Friedland, W. (1984). Commodity systems analysis: An approach to the sociology of agriculture. In H. K. Schwarzweller (Ed.), *Research in rural sociology and*

*development* (pp. 221–235). Greenwich, CT: JAI Press Inc.
Friedland, W. (2001). Reprise on commodity systems methodology. *International Journal of Sociology of Agriculture and Food, 9*(1), 82–103.
Garcia, J. (1997). La agricultura orgánica en Costa Rica. *Acta Academica, 20*, 74–83.
Gereffi, G. (1994). The organization of buyer-driven global commodity chains. In G. Gereffi & M. Korzeniewicz (Eds.), *Commodity chains and global capitalism* (pp. 95–122). Westport, CT: Praeger.
Gereffi, G. (1995). Global production systems and Third World development. In B. Stallings (Ed.), *Global change, regional response: the new international context of development*. Cambridge: Cambridge University Press.
Gereffi, G. (1999). International trade and industrial upgrading in the apparel commodity chain. *Journal of International Economics, 48*(1), 37–70.
Gereffi, G., Garcia-Johnson, R., & Sasser, E. (2001). The NGO-industrial complex. *Foreign Policy* (July/Aug), 56–65.
Gereffi, G., & Kaplinsky, R. (2001). The Value of Value Chains. Special Issue of *IDS Bulletin, 32*(3).
Gereffi, G.& Korzeniewicz, M. (Eds.). (1994). *Commodity chains and global capitalism*. Westport CT: Greenwood Press.
Gibbon, P. (2001a). Upgrading primary production: A global commodity chain approach. *World Development, 29*(2), 345–363.
Gibbon, P. (2001b). Agro-commodity chains. *IDS Bulletin, 32*(3), 60–68.
Granovetter, M. (1985). Economic action and social structure: The problem of embeddedness. *American Journal of Sociology, 91*(3), 481–510.
Guthman, J. (1998). Regulating meaning, appropriating nature: The codification of California organic agriculture. *Antipode, 30*(2), 135–154.
Hartman Group (2000). *Organic consumer profile.* Bellevue, WA: Hartman Group.
Haumann, B. (2003). North America. In M. Yussefi & H. Willer (Eds.), *The world of organic agriculture* (pp. 107–116). Tholey-Theley, Germany: IFOAM.
Henderson, J. E., Dicken, P., *et al.* (2002). Global production networks and the analysis of economic development. *Review of International Political Economy, 9*(3), 436–464.
Herrmann, G. (2003). Certification. In M. Yussefi & H. Willer (Eds.), *The world of organic agriculture* (pp. 27–40). Tholey-Theley, Germany: IFOAM.
Hopkins, T. K., & Wallerstein, I. (1986). Commodity chains in the world-economy prior to 1800. *Review, 10*(1), 157–170.
Humphrey, J., & Schmitz, H. (2001). Governance in global value chains. *IDS Bulletin, 32*(3), 19–29.
Hughes, A. (2000). Retailers, knowledges, and changing commodity networks: The case of the cut flower trade. *Geoforum, 31*, 175–190.
Hughes, A. (2001). Global commodity networks, ethical trade and governmentality. *Transactions of the Institute of British Geographers, 26*(4), 390–406.
(IFOAM) International Federation of Organic Agriculture Movements (2003a). About IFOAM. Available: http://www.ifoam.org.
(IFOAM) International Federation of Organic Agriculture Movements (2003b). IFOAM guarantee system. Available: http://www.ifoam.org.
(IFOAM) International Federation of Organic Agriculture Movements (2003c). Organic agriculture and Fair Trade. Available: http://www.ifoam.org.
(ITC) International Trade Centre (1999). *Organic food and beverages: World supply and major European markets*. Geneva: ITC/UNCTAD/WTO.
Kaplinsky, R. (2000). Globalisation and unequalisation: What can be learned from value chain analysis? *Journal of Development Studies, 37*(2), 117–146.
Klonsky, K. (2000). Forces impacting the production of organic foods. *Agriculture and Human Values, 17*(3), 233–243.
Kortbech-Olesen, R. (2002). *The United States market for organic food and beverages*. Geneva: International Trade Center.
Kortbech-Olesen, R. (2003). Market. In M. Yussefi & H. Willer (Eds.), *The world of organic agriculture* (pp. 21–26). Tholey-Theley, Germany: IFOAM.
Latour, B. (1993). *We have never been modern*. Cambridge MA: Harvard University Press.
Lauret, F. (1983). Sur les études de filiéres agro-alimentaire. *Economies et sociétés cahiers de l'ISMEA, 17*, 721–740.
Law, J. (1994). *Organising modernity*. Oxford: Basil Blackwell.
Lernoud, P. (2003). Latin America. In M. Yussefi & H. Willer (Eds.), *The world of organic agriculture* (pp. 21–26). Tholey-Theley, Germany: IFOAM.
Lockie, S., & Kitto, S. (2000). Beyond the farm gate: Production-consumption networks and agri-food research. *Sociologia Ruralis, 40*, 3–19.
Lohr, L. (1998). Implications of organic certification for market structure and trade. *American Journal of Agricultural Economics, 80*(5), 1125–1129.
Marsden, T., Munton, R., Ward, N., & Whatmore, S. (1996). Agricultural geography and the political economy approach: A review. *Economic Geography, 72*(4), 361–375.
Marsden, T., Banks, J., & Bristow, G. (2000). Food supply chain approaches: Exploring their role in rural development. *Sociologia Ruralis, 40*(4), 424–438.
Marsden, T., Flynn, A., & Harrison, M. (2000). *Consuming interests: the social provision of foods*. London: UCL Press.
Marquardt, S. (2001). Organic cotton: Production and marketing trends. Available: http://www.organic-research.co.uk/research/papers.
Masuda, F. (2000). The domestic organic market and the development of national standards in Asia. In *Proceedings of the 6th International IFOAM Trade Conference: The development of markets and the quality of organic products* (pp. 34–38). Tholey-Theley, Germany: IFOAM.
Mather, C. (1999). Agro-commodity chains, market power and territory: Re-regulating South African citrus exports in the 1990s. *Geoforum, 30*, 61–70.

Meier, C. (1999). El mercado en desarrollo del banano orgánico. *El exportador Dominicano, XXVII*(115), 18–19.

Michelsen, J. (2001). Recent development and political acceptance of organic farming in Europe. *Sociologia Ruralis, 41*(1), 3–20.

Miele, M. (2001). *Creating sustainability: The social construction of the market for organic products*. Wageningen: Wageningen University.

Morgan, K., & Murdoch, J. (2000). Organic vs. conventional agriculture: Knowledge, power, and innovation in the food chain. *GeoForum, 31*, 159–173.

Murdoch, J., Marsden, T., & Banks, J. (2000). Quality, nature, and embeddedness: Some theoretical considerations in the context of the food sector. *Economic Geography, 76*, 107–125.

Mutersbaugh, T. (2002). The number is the beast: A political economy of organic coffee certification and producer unionism. *Environment and Planning A, 34*(7), 1165–1184.

Nigh, R. (1997). Organic agriculture and globalization: A Maya associative corporation in Chiapas, Mexico. *Human Organization, 56*, 427–436.

(OTA) Organic Trade Association (2001). Consumer profile facts. Available: http://www.ota.com/consumerfacts.htm.

Polanyi, K. (1957). *The great transformation*. Boston: Beacon Press.

Ponte, S. (2002a). The "latte revolution"? Regulation, markets and consumption in the global coffee chain. *World Development, 30*(7), 1099–1122.

Ponte, S. (2002b). Brewing a bitter cup? Deregulation, quality and the re-organization of coffee marketing in East Africa. *Journal of Agrarian Change, 2*(2), 248–272.

Ponte, S. (2002c). *Standards, trade and equity: Lessons from the specialty coffee industry*. Copenhagen: Centre for Development Research.

Porter, M. (1990). *The Competitive advantage of nations*. Boston: Harvard Business School Press.

ProChile (2001). *Development of Chilean organic exports*. Available: http://www.chileorganic.com.

Raikes, P., Jensen, M., & Ponte, S. (2000). Global commodity chain analysis and the french filiere approach: comparison and critique. *Economy and Society, 29*(3), 390–417.

Raynolds, L. (1994). Institutionalizing flexibility: A comparative analysis of Fordist and Post-Fordist models of third world agro-export production. In G. Gereffi & M. Korzeniewicz (Eds.), *Commodity chains and global capitalism* (pp. 143–161). Westport, CT: Praeger.

Raynolds, L. (2000). Re-embedding global agriculture: The international organic and fair trade movements. *Journal of Agriculture and Human Values, 17*, 297–309.

Raynolds, L. (2002). Consumer/producer links in Fair Trade coffee networks. *Sociologia Ruralis, 42*(4), 404–424.

Raynolds, L., & Murray, D. (1998). Yes, we have no bananas: Re-regulating global and regional trade. *International Journal of Sociology of Agriculture and Food, 7*, 7–43.

Reardon, T., Codron, J., Busch, L., Bingen, J., & Harris, C. (2001). Global change in agrifood grades and standards. *International Food and Agribusiness Management, 2*(3).

Rice, R. (2001). Noble goals and challenging terrain: Organic and fair trade coffee movements in the global marketplace. *Journal of Agricultural and Environmental Ethics, 14*, 39–66.

Rowan, C. (2000). Sourcing organic and non-GM ingredients. *Food Engineering International, 25*(2), 28–31.

Rundgren, G. (2000). Challenge for developing countries to establish an organic guarantee system. In *Proceedings of the 6th International IFOAM Trade Conference: The development of markets and the quality of organic products* (pp. 62–67). Tholey-Theley, Germany: IFOAM.

Schmid, O. (2000). Regulating the organic market: How does the new codex alimentarius regulation fit into the picture? In *Proceedings of the 6th International IFOAM Trade Conference: The development of markets and the quality of organic products* (pp. 75–80). Tholey-Theley, Germany: IFOAM.

Scialabba, N. (2000). *Factors influencing organic agriculture policies with a focus on developing countries*. Paper presented at the International Federation of Organic Agriculture Movements 2000 Scientific Conference, Basel, Switzerland.

Smith, A., Rainnie, A., Dunford, M., Hardy, J., Hudson, R., & Sadler, D. (2002). Networks of value, commodities and regions: Reworking divisions of labour in macro-regional economies. *Progress in Human Geography, 26*(1), 41–63.

Stevens, C. (2001). Value chains and trade policy: The case of agriculture. *IDS Bulletin, 32*(3), 46–59.

Sylvander, B. (1995). Conventions de qualité, marchés et institutions: Le cas des produits de qualité spécifique. In F. Nicolas & E. Valceschini (Eds.), *Agro-alimentaire: une économie de la qualité* (pp. 167–183). Paris: INRA.

Talbot, J. M. (2002). Tropical commodity chains, forward integration strategies and international inequality: Coffee, cocoa and tea. *Review of International Political Economy, 9*(4), 701–734.

Thévenot, L. (1995). Des marchés aux normes. In G. Allaire & R. Boyer (Eds.), *Régulation et conventions dans l'agriculture et l'agro-alimentaire* (pp. 33–51). Paris: INRA.

Thiers, P. (2002). From grassroots movement to state-coordinated market strategy: the transformation of organic agriculture in China. *Environment and Planning C, 20*(3), 357–373.

Tovey, H. (1997). Food, environmentalism and rural sociology: On the organic farming movement in Ireland. *Sociologia Ruralis, 37*(1), 21–37.

Valceschini, E., & Nicolas, F. (1995a). *Agro-alimentaire: Une économie de la qualité*. Paris: INRA.

Valceschini, E., & Nicolas, F. (1995b). La dynamique économique de la qualité agro-alimentaire. In E. Valceschini & F. Nicolas (Eds.), *Agro-alimentaire: Une économie de la qualité* (pp. 15–37). Paris: INRA.

Van Elzakker, B. (2000). *Organic certification*. Paper presented at United Nations Food and Agriculture

Organization Ad-hoc Expert Meeting on Socially and Environmentally Responsible Banana Production and Trade.

Walaga, C. (2003). Africa. In M. Yussefi & H. Willer (Eds.), *The world of organic agriculture* (pp. 45–54). Tholey-Theley, Germany: IFOAM.

Whatmore, S., & Thorne, L. (1997). Nourishing networks: Alternative geographies of food. In M. Watts & D. Goodman (Eds.), *Globalising food: Agrarian questions and global restructuring* (pp. 287–304). NewYork: Routledge.

Wilkinson, J. (1997). A new paradigm for economic analysis. *Economy and Society, 26*(3), 305–339.

Willer, H., & Richter, T. (2003). Europe. In M. Yussefi & H. Willer (Eds.), *The world of organic agriculture* (pp. 73–94). Tholey-Theley, Germany: IFOAM.

Willer, H., & Yussefi, M. (2001). Organic agriculture worldwide 2001: statistics and future prospects. Available: http:///www.soel.de/inhalt/publication/s_74.03.pdf.

Yussefi, M.& Willer, H. (Eds.). (2003). *The world of organic agriculture*. Tholey-Theley, Germany: IFOAM.

Zygmont, J. (2000a). Organic trade association sees opportunities in exports. *AgExporter, 12*(6), 8–10.

Zygmont, J. (2000b). *US organic fruit: Export opportunities and competition in the international market*. Paper presented at Washington Horticultural Association 96th Annual Meeting, Yakima, Washington.