Local versus organic: a turn in consumer preferences and willingness-to-pay

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Local versus organic: A turn in consumer preferences and willingness-to-pay

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Abstract

Demand for local food in the US has significantly increased over the past decade. In an attempt to understand the drivers of this demand and how they have changed over time, we investigate the literature on organic and local foods over the past few decades. We focus our review on studies that allow comparison of characteristics now associated with both local and organic food. We summarize the major findings of these studies and their implications for understanding drivers of local food demand. Prior to the late 1990s, most studies failed to consider factors now associated with local food, and the few that included these factors found very little support for them. In many cases, the lines between local and organic were blurred. Coincident with the development of federal organic food standards, studies began to find comparatively more support for local food as distinct and separate from organic food. Our review uncovers a distinct turn in the demand for local and organic food. Before the federal organic standards, organic food was linked to small farms, animal welfare, deep sustainability, community support and many other factors that are not associated with most organic foods today. Based on our review, we argue that demand for local food arose largely in response to corporate co-optation of the organic food market and the arrival of 'organic lite'. This important shift in consumer preferences away from organic and toward local food has broad implications for the environment and society. If these patterns of consumer preferences prove to be sustainable, producers, activists and others should be aware of the implications that these trends have for the food system at large.

Key words: local food, preferences, willingness to pay, organic lite

Introduction

Extant research has addressed drivers of local and organic food demand, willingness to pay (WTP), consumer perceptions and other important dimensions of alternative foods. Particularly important to alternative food system producers and advocates is the nature of these rapidly changing views, which have consequences in the broader context of the food system.

What began as an alternative to industrial agriculture and conventional food has developed into a local food movement. This is evidenced by popular books such as *The Omnivore's Dilemma*[1], and *Animal, Vegetable, Miracle*[2], and documentary films such as *Food, Inc.* and *King Corn*. In 2007, the word 'locavore' (a person with an eating preference for local foods) was added to the New Oxford English Dictionary[3]. The popularity of local food has grown in response. According to the USDA's Agricultural Marketing Service, in 1994 there were 1755 registered farmers' markets, which grew to 4685 in 2008[4]. Total value of sales at farmers' markets in 2007 was $1.2 billion, up from $404 million in 1992[5]. Community supported agriculture programs (CSAs) have also seen significant growth in the past decade. The number of CSAs in the US has increased from just 50 in 1985 to about 2500 in 2008[6,7]. Other outlets for local food sales such as roadside stands, small and independent local grocers and direct sales to local restaurants have also seen significant growth[8].

The value of local food in the US market jumped from an estimated $4 billion in 2002 to about $5 billion in 2007, and is expected to increase to $7 billion by 2012[9]. This has piqued the interest of many groups in local food. For example, retail and processing giants such as Wal-Mart and Frito-Lay offer local ingredients, and new retailers such as New Seasons Market are finding success by focusing in part on food miles[10]. Much of this change is in response to studies that indicate a high WTP for local food.

We know that organic foods benefit from a concrete definition and a certified labeling program, but local food is a more abstract concept, with definitions often varying by

consumer perceptions. Many define local to be within a certain geographical distance, such as 100 miles, while some define local to mean some political boundary, such as a state border. Others point to a definition more rooted in ethics, community and other factors not directly corresponding to food miles[11]. While there is no firm or standard definition for local, interest in local foods is high among consumers, producers and retailers.

What is unclear from previous work is (1) the linkage between the federal organic standards and the turn in demand for local food, and (2) the implications that this turn may have for the food system going forward. We describe the development of the local food movement and the change in consumer preferences concerning organic and local food characteristics, both pre- and post-USDA organic standards implementation. As large agribusinesses seek to capitalize on changes in consumer preferences, farmers' markets, CSAs and other direct and niche local food markets may be vulnerable to corporate co-optation[10]. This has serious implications for small farmers, consumers and many other stakeholders. In this context, our review provides some insight into the marketing potential of 'local' and the potential for its co-optation by industrial agriculture into 'local lite'.

Our work extends the literature by specifically examining the studies that allow a direct comparison between characteristics now associated with local or organic foods. Our analysis indicates a turn in demand from organic to local that is coincident with the development of the federal organic standards. We discuss the implications of this on the potential corporate involvement in providing local food.

Industrial Agriculture and the Federal Organic Rule

It took 12 years for the USDA to adopt national standards for the production, processing and marketing of organically labeled food under the Organic Food Production Act of 1990[12]. The USDA officially adopted the federal organic standards in October 2002 once it was satisfied that organic food would not 'disparage the rest of the food supply'[13]. The Organic Rule defines the minimum production, processing and input standards (National List of Allowed Substances) that must be met to use the organic label. The standards (1) apply to both domestically produced and imported organic products; (2) contain a list of allowed synthetic and prohibited nonsynthetic substances and a list of specific exceptions to the organic label requirement; (3) employ distinct guidelines for organic crops standards and organic livestock; (4) strictly define the handling and processing of organic products; and (5) include the USDA organic seal and a four-tier organic labeling scheme: '100% organic', 'organic', 'made with organic ingredients' and 'product contains some organic ingredients'.

Substantial price premiums coupled with public demand drew large agribusinesses into the organic foods market[13,14]. In 2006, sales of organic products reached $16.7 billion (3% of the $596 billion US food market), representing an annual growth rate of 20.9%[15]. Just 5 years earlier, sales of organic food products were $7.4 billion. Organic food now has more market share and a broader reach, but it is fundamentally different in character than when it started. Between 1990 and 2002, corporate agribusinesses took advantage of the USDA's formal rulemaking processes that disfavored the more ideological aspects of the organic movement[16], and lobbied to allow genetically modified ingredients, irradiation, chemically raised meats and several previously prohibited substances[17]. By 2002, when the USDA adopted its Organic Rule, 'organic' was federally defined as an input-driven technical process rather than a concept based in sustainability; food could still be labeled organic if it was made by General Mills corporation, produced in China using forced labor, and sold only through Wal-Mart[18].

Organic foods fundamentally changed with the development of the federal standards. Effective marketing campaigns co-opted the central themes of the organic movement to increase market share, while the products were largely grown on farms that either abandoned the sustainable agronomic practices associated with organic agriculture or were recruited from the ranks of conventional agriculture[19]. This resulted in the conventionalization (taking on the characteristics of conventional agriculture) and bifurcation (dual structure of very large and very small producers) of organic agriculture[20]. The entry of large corporations, such as Danone and General Mills[21], and the consolidation of food retail outlets, such as Whole Foods and Wild Oats[22], effectively cut out small farmers from the benefits of the boom in demand for organic foods. Production of organic food was forced toward large-scale, least-cost, input-oriented standards[19], and smaller competitors and those not adopting a least-cost production model were largely marginalized[13]. Today, the organic market essentially functions as an oligopsony, with a small number of very powerful wholesaler/retailer 'organic giants' who limit farmer income; about 80% of the organic food market is handled by just two national distributors[21,23].

Local as Response to 'Organic Lite'

Many argue that organic food now suffers from the same problems that initially spurred the organic movement (see review by Feenstra[24]). Early advocates of organic food focused on concepts now associated with local food. These included a discussion by Hightower[25,26] of the corporate control of US agriculture, including its impacts on small farmers, farm workers, consumers and food quality; Berry's[27] description of the associated loss of community and culture; Gussow's[28,29] essays on concerns over food, nutrition and the environment; and more recently,

Table 1. Comparison of local, organic and deep organic foods[1].

Attributes	Local	Deep organic	Organic lite
Production methods, inputs	Any	Pesticide and GMO-free, IPM; often very eco-friendly, sustainable and biodynamic	Pesticide- and GMO-free
Types of products	Wider variety, heritage varieties, seasonally available multi-purpose livestock and poultry	Wider variety, heritage varieties, seasonally available multi-purpose livestock and poultry	Traditional
Location	Local, but loosely defined	Local	Anywhere (even China)
Certification	No formal standards	None	Strict standards
Labeling	Federal—none State—often yes	None	USDA organic labels
Relationship to consumer	Close	Close	Distant
Market concentration	None	None	Dominated by large producers and retailers
Scale of production	Small	Small	Typically very large
Length of food chain	Short—direct to consumer	Short—direct to consumer	Long—involves wholesalers, shippers, storage, etc.
Impact on environment	Same as industrial agriculture, but smaller scale impacts	Eco-friendly	Less pollution from pesticides, but otherwise same as other industrial farms
Impact on local community, farm workers, animal welfare, etc.	Positive	Very positive	Same as industrial agriculture

[1] Adapted from a review of the literature.
GMO, genetically modified organism; IPM, integrated pest management.

Kneen's[30] review of the social and ecological costs of the global industrial food system that stood in opposition to sustainability, food justice and community.

Organic food lost its essential nature as an alternative to industrial agriculture[31]. While the number of certified organic acres in the US nearly quadrupled from 1995 to 2005, the average size of certified organic farms more than doubled from 189 acres to 477 acres[32]. Some argue that many organic products achieve only the minimum standards such as pesticide- or GM-free content: 'organic lite'. Today, every state in the US reports having at least one organic certified farm, but just 16% of organic foods are sold through direct marketing channels, such as farmers' markets, CSAs, cooperatives, etc[33]. The term 'organic lite' draws stark contrast with 'deep organic', which is identified with smaller scale, eco-friendly farming systems[19], or a dualism between shallow/corporate and deep/agri-ecological organic[34].

Critics view organic lite as 'dangerously incomplete' because it lacks a social vision[35]. Dimensions such as community food security, farm-worker welfare, animal welfare, land stewardship, resource conservation, preservation of heritage breeds and sustainability are no longer strongly associated with organic foods[14] both in the US[19] and abroad (e.g., Ireland[16], Great Britain[36,37], Australia and New Zealand[38,39]). Many in the organic movement were deeply disappointed by the effects of the Organic Food Production Act: 'When we said organic we meant local. We meant healthful. We meant being true to the ecologies of the region. We meant mutually respectful growers and eaters. We meant social justice and community. In other words, industrial organic farming isn't really organic'[17]; organic is 'more about fairness and respect than it is about parts-per-billion of pesticide residues'[18].

Many consumers have turned to local foods as a more holistic and authentic substitute for organic. For some, food miles rather than organic labels are the representation of sustainability[40], and organic movement supporters are now looking to local as the solution to industrialized organic foods: 'as organic consumers, the first and foremost action we can take is a commitment to buy food produced as locally as possible'[41]. For these consumers, local appears to be adequately defensible from 'opportunistic corporate greening'[42] in marketing campaigns and takeover by industrial agriculture. The concept of local food presents a difficult problem for the large agribusinesses that now dominate the market for organic foods. 'Foodsheds'[43] and 'civic agriculture'[44] leave no room for industrial farming, organic or otherwise. Both concepts stress the importance of eating close to home to reduce environmental and social externalities[43] and rebuild communities[44]. Local food has also gained interest from small organic farmers that reject certification and prefer to rely on a trust relationship with their consumer[20]. See Table 1 for a comparison of local, organic and deep organic.

The Turn in Preferences for Local and Organic Food

We review the literature on consumers' perceptions and WTP for local and organic food characteristics. Comparisons between local and organic food can be made both by summarizing generic findings for organic and local separately (sort of a meta-analysis), and by examining studies that explicitly include characteristics of both local and organic within the same study. We organize the studies into two groups: (1) where characteristics associated with local food are viewed as less important than those traditionally associated with organic foods today; and (2) where local is considered more important than organic. We summarize the key studies below, and highlight a turn in the demand for local food characteristics.

Local LESS important than organic

Numerous studies focus on factors influencing demand for *organic* food and consumer perceptions of various food characteristics that include consumer health, environmental impacts, etc. Very few of these studies also include characteristics associated with *local* food.

Most of the studies regarding organic consumers' motivations focus on perceptions of organic, attitudes and factors that influence purchases[45] or WTP for foods with varying levels of pesticide contamination, labeling, etc. (see review by Thompson[46]). These studies typically conclude that organic consumers are motivated by concerns for the environment, consumer health and safety, and product attributes such as price, taste, appearance and freshness (e.g., Tregear et al.[47], Browne et al.[48]).

Older studies of organic food found clear evidence of stronger preferences and/or WTP for characteristics associated more with organic food than for local food. Some of these studies involved consumers ranking food attributes. Studies implemented prior to the late 1990s found very strong support for factors such as protection of the environment, consumer health and conservation of resources, but weak support for supporting local communities, protection of farm workers and ecologically driven concepts such as preservation of nature–farm balance (e.g., Hawkes and Stiles[49], Sachs et al.[50], Goldman and Clancy[51], Sparling et al.[52] and Govindasamy et al.[53]). For example, Sparling et al.[52] found over three times more respondents indicating that concern for the environment was a major reason for purchasing organic than any factor now linked to local food (i.e., protection of farm workers). Likewise, Goldman and Clancy[51] found that concern for different aspects of the environment accounted for the top three of the seven ranked reasons for buying organic produce, while protecting farm workers ranked fourth and preserving a balance of nature only ranked sixth. Govindasamy et al.[53] is the most recent study we uncovered that found very little support for local over organic food characteristics. Their mail survey asked consumers in New Jersey to rank 19 product characteristics in order of importance. Traditional product characteristics (i.e., freshness, taste/flavor and cleanliness) were rated highest and health value and absence of pesticides were next highest, while locally grown and country of origin were rated among the least important. Unfortunately, their survey did not examine other dimensions of local food (e.g., supporting small farmers).

A handful of studies from this period focus on food origin, but neglect a comparison with organic foods. Two of these studies found that consumers were much more interested in product quality, price, appearance and other traditional demand factors than product origin[54,55]. For example, Kezis et al.[54] surveyed consumers by mail in Maine, Delaware and West Virginia, and found that produce origin was much less important than quality, appearance, price, convenience and variety. Lockeretz[55] conducted intercept surveys at supermarkets, farmers' markets and agricultural fairs in Massachusetts, and found that only 14% at farmers' markets or fairs indicated support for local farms as a reason for shopping there. Instead, they valued freshness, convenience, prices and selection. The other two studies examined price premiums and found very little support for local food[56,57]. Eastwood et al.[56] conducted consumer interviews in Tennessee, and found a very weak WTP premium for local tomatoes and peaches, but negative WTP for other local goods. They concluded that local produce should be priced below comparable out-of-state products. Bruhn et al.[57] conducted intercept surveys at supermarkets, and found that 78% of respondents considered locally grown to be an unimportant characteristic; only 13% expected to pay a price premium for locally grown foods. Clearly, the locality of food sources was not considered a priority for most consumers during this period.

Local MORE important than organic

The turn from organic to local foods became apparent in studies conducted around the late 1990s. Both in the US and abroad, researchers began to note odd results in organic food studies. For example, a study of British consumers found that concern for the environment did not help differentiate organic produce buyers from nonbuyers[47], and only 9% of respondents indicated that concern for the environment was their primary reason for buying organic. Likewise, there was evidence that certified organic was losing its credibility and consumer support[58]. Underhill and Figueroa[58] surveyed residents of eight northeast US states to determine the relative impact of organic and certified organic on WTP. They found a slight preference for organic over certified organic (about 5% higher predicted probability of buying organic than certified organic) that could be interpreted as a preference for small farms. Also, several studies found that protection of self (consumer's health) was not the primary motivation for purchasing organic (e.g., Gallons et al.[59]).

The tipping point occurred in the late 1990s when studies began to find that consumers place a greater importance on

purchasing local rather than organic foods, and they perceive that local foods are better for society (e.g., Gallons et al.[59], Zumwalt[60]). For example, Wolf[61] found that consumers in California rate locally grown as somewhat to very desirable, a much higher rating than is given to grown organically. A later study by Wolf et al.[62] reported that California residents indicate locally grown to be a moderately important factor for shopping at farmers' markets, while organically grown is only a slightly desirable factor; shoppers also perceived local food as being fresher, better quality and more affordable. Gallons et al.[59] found that locally grown is a very important (49%) or somewhat important (31.5%) reason for Delaware residents to shop at direct markets (e.g., farmers' markets). Fewer consumers indicated that organically grown was a very important (15.8%) or somewhat important (19.9%) reason.

Studies also began to find that these preferences for local foods translated into high WTP. Kezis et al.[63] interviewed consumers at Maine farmers' markets and found both a high relative ranking of characteristics associated with local foods and a high WTP. Respondents ranked organically grown much lower than support local farmers, and 79% were WTP an average 17% price premium for local foods. Ross et al.[64] and Jekanowski et al.[65] found similar results in their surveys in Maine and Indiana, respectively. Zumwalt[60] surveyed consumers in four Midwest states about their attitudes for local, organic and all-natural foods. Forty-three percent of respondents were willing to pay at least 10% more for local foods, and while taste, quality and nutrition ranked highest, 70% rated support local farmer as very or extremely important; organic rated as the least important attribute (only 25% rated it as very or extremely important). Conversely, only 2.2% indicated supporting farmers/local farmers as one of their top two reasons for buying organic. Loureiro and Hine[66] found that WTP is higher for local food than organic food in Colorado; on average, consumers are willing to pay 9.37% more for local and 6.64% more for organic. Brown[67] and Schneider and Francis[68] found similar results for Missouri and Nebraska, respectively.

More recent studies find even higher WTP for local food (e.g., Darby et al.[69], Toler et al.[70], Adams and Adams[11]). For example, Toler et al.[70] report that consumers in Oklahoma are willing to pay 33% more for a generic local good and 70% more if the farmer is perceived as less well off compared to the consumer. Also, Adams and Adams[11] report WTP for a generic local good ranging from 48 to 107% more, on average, among three distinct groups of farmers' market shoppers in Florida. In addition to finding higher average WTP for local food, studies are finding a higher share of respondents associating local food with very positive environmental and social outcomes. For example, Zepeda and Leviten-Reid[71] found that supporting local farms was important to about half of so-called alternative consumers in Wisconsin, and they viewed local as providing direct environmental, economic, community and health benefits. Hartman Group[72] found similar views.

Discussion

Schneider and Francis[68] review the literature on local foods from 1984 to 2003 and argue that preference for local foods is 'rather inconclusive, indicating both weak and strong consumer preferences for local foods' (p. 253). Rather than viewing consumer perceptions and WTP for local food as static during this time period, we contend that there was a sea change in both perceptions and WTP that is coincident with the shift from deep organic to 'organic lite'. See Table 2 for a summary of select local food studies in the US.

We document a significant shift in consumers' perceptions of and WTP for local and organic food. In particular, changes in consumer views are coincident with the passage of the Organic Food Production Act of 1990 and the subsequent Organic Rule issued by the USDA. We note a distinct turn in the way consumers view both organic and local food, beginning with Wolf[61] and Gallons et al.[59]. Over the past decade, perceptions of local food have become much more positive, and consumers have indicated an increasingly high WTP for local food as compared to organic.

The shift in preferences and WTP from organic to local has been largely a result of consumers turning away from industrialization of organic agriculture, as previously discussed. The concept of 'local' is possibly more defensible than organic was, particularly given the genesis of the local movement in opposition to 'organic lite'. The movement resulted from dissatisfaction with the health and environmental effects of a modern and industrial agricultural system that co-opted the organic food market[73], and activists see it as a way to 'reclaim the heart and soul of organics' that became less about a social and political statement and more about a method of production[74]. If most consumers view 'local' as broadly defined to include sustainability, community food security, support for small farmers and a host of other issues, it may be seen as mutually exclusive from industrial agriculture.

The shift in preferences to local foods is also concomitant with a shift in individual consumption of fresh fruits and vegetables[75], which has been steadily increasing throughout the late 1980s and 1990s. Consumers are increasingly choosing where they shop based on the quality of produce, often leading them to key local food outlets such as farmers' markets and CSAs[10]. The push toward local food has also been driven in part by the restaurant industry and chefs, having discovered that high-quality, fresh and good priced produced can be obtained within the local food market[73]. For example, Cafe 150, the food cafe that caters to employees at Google headquarters, sources all its food within a 150 mile radius[76]. The Chefs Collaborative website is a network of chefs that works with professionals in the culinary industry to foster a more sustainable food supply by improving the means to source food locally.

The shift in the way consumers view organic and local food has significant consequences for the food system. Local has supplanted organic as the fastest growing

Table 2. Summary of select local food studies in the US.

Study	Date of study	*N*	Location and method	Local foods preference	Notes
Kezis et al.[54]	Not stated	2375	Maine, Delaware, W. Virginia: random sample mail survey	Weak	Produce origin much less important than quality, appearance, convenience and variety
Lockeretz[55]	1984	656	Massachusetts: intercept interview at supermarkets, farmers' markets and agricultural fairs	Weak	Only 14% at farmers' market or agricultural fair mentioned 'support local farms' as reason for shopping there, and just over half prefer local; at supermarkets, drops to 27% preferring local
Eastwood et al.[56]	1985	231	Tennessee: random sample interviews	Very weak	50% WTP premium for local tomatoes, negative WTP premium for other local goods; 'care where grown' has insignificant impact on WTP. Freshness/quality as main concern
Bruhn et al.[57]	1989	400	California: open-ended supermarket interviews	Weak	Only 13% expected to pay a premium for locally grown; 78% said origin not important. For tomatoes, 26% would pay 15–20 cents more/lb
Govindasamy et al.[53]	1990	656	New Jersey: random sample mail survey	Very weak	Locally grown, country of origin among least important of 19 characteristics; health value and absence of pesticides ranked 4th and 5th
Thomson and Kelvin[77]	1993	1214	Pennsylvania: intercept interviews at supermarkets and farmers' markets	Weak	9.9% strong, 25.4% moderate and 40.3% weak preference for local. 58.8% of these, primarily to know how food was grown
Jekanowski et al.[65]	1994	324	Indiana: random telephone survey	Moderate	58.8% highly likely to purchase local food products from a grocery store, 39.3% neutral or somewhat likely
Wolf[61]	1995	404	California: random sample interviews	Moderate	Locally grown rated as somewhat to very desirable (3.8 on a 5-point scale), above grown organically (3.2), but 8 other attributes rated above grown locally. Freshness/quality rated above 4.5
Gallons et al.[59]	1995	1205	Delaware: random sample mail survey, direct market consumers	Moderate	Only 5% often buy from direct market; produce selection, locally grown, and like to help farmers were first, second and third most important of 13 reasons for buying at direct markets. Organically grown rated much lower
Kezis et al.[63]	1995	239	Maine: farmers' market interviews	Moderate	72% WTP average 17% price premium. Support local farmers as second most important of nine reasons after quality. Health and food safety ranked 4th
Ross et al.[64]	1997	376	Maine: workplace 'interventions' and surveys	Moderate	76–84% prefer locally grown, but attitudes and preferences regarding local food not significant in regression model
Loureiro and Hine[66]	2000	437	Colorado: intercept surveys in supermarkets	Moderate	43.4% WTP >5% more for organic; 52.7% WTP >5% more for local. Mean WTP premium 6.64% for organic, 9.37% for local
Brown[67]	2000	544	Missouri: random sample mail survey	Moderate	21% WTP a price premium >5%, but quality and freshness deemed most important
Zumwalt[60]	2001	500	Nebraska, Iowa, Missouri, Wisconsin: random sample telephone interviews. Regarding attitudes on local, organic and all-natural	Strong	42.8% WTP at least 10% more; of 12 attributes, taste, quality, nutrition and price most important, but 70% rated 'support local family' as very or extremely important. Organic rated least important (25% rated it very or extremely important)

Table 2 (Continued)

Study	Date of study	*N*	Location and method	Local foods preference	Notes
Zepeda and Leviten-Reid[71]	2002–2003	48	Wisconsin: focus groups	Moderate	Supporting local farms is important to ~50% of 'alternative' consumers, who see it as providing economic, community and health benefits
Schneider and Francis[68]	2003	207	Nebraska: random sample telephone survey	Strong	36% are WTP a price premium >10%, and all-natural and organic food rated as least important of local food characteristics
Wolf et al.[62]	2003–2004	336	California: farmers' market intercept surveys	Moderate	Grown locally rated as moderately desirable, and far above grown organically. Organically grown rated as slightly desirable and rated lowest. Freshness, quality and price rated highest. Good for environment, locally grown rated next highest. Organically grown rated lowest
Darby et al.[69]	2005–2006	530	Ohio: intercept surveys at farmers' markets, farm stores and grocery stores	Strong	WTP premium for local strawberries $0.48 at grocery stores and $0.92 at direct market; also WTP $0.17 at grocery stores and $0.42 at farmers'/direct markets for small farm attribute
Adams and Adams[11]	2007	79	Florida: intercept surveys at farmers' markets	Strong	Three distinct groups of shoppers WTP 48–107% more than nonlocal
Toler et al.[70]	2008	100	Oklahoma: intercept surveys at farmers' markets, grocery stores	Strong	WTP 32.8% more for local, 70% more if local farmer perceived as less well off

segment of the retail food market and has the capacity to change the structure of the food system in ways that organic agriculture did not. While 'organic lite' is associated with a change in production, processing and labeling practices, it did not lead to major changes in the long chain structure of the food system. If positive views of local food continue to strengthen, we may see even faster growth in the local food market, and in direct markets such as CSAs, producer–consumer cooperatives and farmers' markets. These changes may lead to improved community food security and fewer food deserts, more financial stability for small farmers, improvements in consumer health that are linked to eating more fresh and unprocessed foods, and other important environmental and societal impacts. It is too soon to tell whether these trends will be durable, but a successful local food system will require not just high demand, but accessibility. It is crucial that policy-makers pay meaningful attention to developing and supporting the local food system. For example, city and county planning offices have the capacity to greatly assist in building the infrastructure necessary for a thriving local food system[78]. Rather than setting locales for farmers' markets in an *ad hoc* fashion, city redevelopment campaigns can allocate sites specific to the sale of local foods and design policies that encourage the growth of CSAs and farm cooperatives[78].

Even if the trends in consumer preferences for local food continue, there may be changes to the nature of local food as there was with organics. Savvy companies are already using the local concept in their marketing. For example, Frito-Lay recently began a marketing campaign dubbed 'Lay's Local' that emphasized their use of potatoes grown near their factories[79,80]. In 2008, Wal-Mart announced a commitment to source more local produce in an effort to keep food prices low, stating it expected to source about $4 million in locally grown fruits and vegetables from various farms across the US[81]. Critics warn that the retail giant is likely to source its 'local' food from a very small number of large farms, effectively shutting out smaller operations[81]. The minimum requirements for a local grower to supply Wal-Mart include: (1) be equipped with UPC bar code technology; (2) have $2 million in commercial liability insurance; and (3) have a financial stability rating. These requirements are likely out of the reach of small local farms[82].

Although there is a clear turn in the preferences for local food, there still exists a great deal of confusion about local and organic food characteristics. Bodini and Naspetti[83] document that in some cases local and organic food are direct substitutes for one another and in other cases they are complementary. For example, they found that consumers tend to think of organic food as safer, but of less quality than local food. In particular, consumers who infrequently buy organic products are more likely to confuse local food products with organic food products, thinking them to be one and the same. Hughner et al.[84] synthesized the empirical research on organic food demand and found that

many consumers buy organic food because they believe it supports the local economy, a factor also emphasized by proponents of local food. This may suggest the opportunity to market some foods as being both local and organic.

The potential confusion between organic and local food stems in part from the relatively abstract concept of the meaning of 'local'. Recent studies indicate that there is no widely accepted definition of 'local' by consumers[11,73]. Local can mean anything from food miles to a social movement. Whole Foods, a natural foods retail operation, defines a product as local if the total transport time from farm to store is seven or fewer hours by truck[85]. Local is defined by Wal-Mart to be a particular state border[82]. Some argue for a system of geographical indications that would protect the local economy, assure consumers and allow them to properly identify credible products, and lower transaction costs[73]. One of the benefits of such a system would be relieving consumers of the burden of getting to know farmers[10]. A concrete definition of 'local' could alleviate consumer confusion, but it has important marketing implications. A geographic definition of local foods (such as a county) or a temporal definition (such as from farm to fork in a day) increases the potential for product differentiation and marketing[69], but may lead to 'local lite' if companies attempt to meet minimal standards.

Conclusion

We trace the change in consumer perceptions and WTP for local and organic food over the past few decades. When viewing them as dynamic rather than static (e.g., Schneider and Francis[68]) our exploration uncovers a turn in the demand for local food that is significant to the broader context of the food system. Various drivers may have contributed to the shift toward local food, such as greater concern about industrialized organic agriculture and greater consumption of fresh produce. We indicate that the change is coincident with the development of federal organic standards and the arrival of 'organic lite'. Our analysis contributes to the growing body of literature on factors driving local food purchases.

The increase in interest and WTP for local food is a boon to small farms, and could lead to structural changes in the food system that have major impacts on environmental and social externalities associated with industrial agriculture. However, it is too soon to tell whether these changes in consumer preferences will translate to a fundamental change in the broader food system. Several factors could seriously impact the success of local food: trends in consumer preferences may subside; large agribusinesses may find a way to co-opt local food into 'local lite' as was the case with organic food; access to local food may continue to be an issue; and consumer confusion about what constitutes 'local' may dampen interest.

Our analysis highlights several interesting interrelationships between local and organic food demand, but we acknowledge that varied and complex factors are driving the apparent change toward local foods, and several critical assumptions are inherent in the research examined in this paper. There are several fertile areas for future research on local food.

While much of the previous work has focused on local and organic food as satisfying essentially similar needs, questions arise as to the nature of consumers' views of organic and local. To what extent do food miles embody the broader notions of community, sustainability, etc.? How does experience with organic and/or local food impact demand for the other? Additional research is needed to identify and understand people who are concerned with ecological footprint (i.e., food miles) of moving food versus those who are primarily concerned with community economic development, ethics, anti-corporate sentiment and other strong motivators for local food purchases. Also, the thrust toward local food is often assumed as structural change in food demand, but many consumers may view local food as a novelty, and demand for it may not be sustained in the long run.

We are also lacking a thorough understanding of an integrated local food system that begins with the small- to medium-sized farms and ends with the retail outlet. What is the appropriate role, if any, for the processor or wholesaler in a local food system? How can collaboration between retail grocers and small farms be best structured to facilitate the local food economy? As noted in Guptill and Wilkins[10], there are several institutional barriers to local producers supplying large retailers. What policies can local authorities use to improve access to local food? Little attention has been paid to the planning and building of the local food system infrastructure and facilitating the growth and expansion of the local food market[77]. Also, while there is a variety of outlets for local food, there is a lack of knowledge as to what represents the most rewarding outlet for local food producers. For example, are farmers' markets better placed in an urban center for greater access to consumers or are they better placed at the rural–urban fringe for better access to producers? Finally, much debate in the popular literature has focused on whether or not a local food industry could support the demand for the current population. Research on how an alternative agricultural system based on local food can complement, or to some extent replace, the existing industrialized system is needed.

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