Are Independent Retailers a Viable Distribution Channel for Local Foods? Evidence from Vermont

A Jane Kolodinsky, Ph.D., Department of Community Development and Applied Economics, University of Vermont

Erin Roche, M.S., Research Specialist, Center for Rural Studies, University of Vermont

Sona Desai, MBA, Food Hub Manager, Intervale Center, Vermont

Erica Campbell, M.S., Farm to Plate Program Director, Vermont Sustainable Jobs Fund

Selected Paper prepared for presentation at the Agricultural & Applied Economics Association's
2014 AAEA Annual Meeting, Minneapolis, MN, July 27-29, 2014.

Are Independent Retailers a Viable Distribution Channel for Local Foods? Evidence from Vermont

Introduction

The local food movement has taken hold across the country. In some areas, traditional channels for selling local food are saturated, including farmer's markets and community supported agriculture. In others, consumers and producers alike may be unwilling or unable to participate in these direct to consumer market channels. In either case, increasing access to local foods presents an on-going challenge. Developing the independent retailer channel can be a way to increase market access for both producers and consumers.

Overall, the goal of increasing both distribution and consumption of local food is the development of Sustainable Food Systems (SFS). SFS include a range of food production, transformation, distribution, marketing, consumption, and disposal practices, which differ in size and occur at various scales (local, regional, national, and global). SFS are geographically diverse, and serve as a means to protect and regenerate natural resources, landscapes, and biodiversity to ensure that current consumer food and nutrition needs are met are without compromising the ability of the system to meet the needs of future generations. They support diverse cultures, socio-demographics, heritages, customs, and lifestyles. They also support fair and just conditions for communities, and provide equitable access to affordable, culturally appropriate, and health-promoting food. SFS offer economic opportunities for a range of diverse stakeholders across geographic regions. Farmers and workers are provided with living wages. Producers and consumers are able to access information necessary to understand how food is produced, transformed, distributed, marketed, consumed, and disposed. They are empowered to

participate actively in decision-making throughout the system (Stevenson, 2009). The production and consumption of local food is a key component of SFS.

Vermont is ahead of many states in their strategies to increase local food consumption. During the 2009 Vermont legislative session, two member-based public policy organizations, Vermont Businesses for Social Responsibility and Rural Vermont, crafted and helped win legislative approval for the creation of a Farm to Plate Investment Program (F2P). The goals of the legislation were to "increase economic development in Vermont's food and farm sector, create jobs in the food and farm economy, and improve access to healthy local foods" (Vermont Sustainable Jobs Fund, 2013a). Now five years into the initiative, Vermont is implementing several of the strategic initiatives outlined in the plan. One of these is to increase the distribution of local food through independent retailers.

This study examines the relatively untapped market characterized by independent retailers. Using an on-line survey of independent retailers in the state of Vermont, we describe the characteristics of these retailers and investigate opportunities for and barriers to expanding the distribution of local food.

Background

Consumers face considerable barriers when accessing fresh food. It can be as simple as the time it takes to travel to pick-up local produce, prohibitive up-front costs of the pre-pay CSA model, attitudes about the perceived costs of local foods, the perceived elitism of shopping at a farmers' market, or the very real affordability challenges of food (McEntee, 2010). The irony is that many rural communities are located near farms, but are not able to access the foods

produced by their neighbors (McEntee & Agyeman, 2010; Morton, Bitto, Oakland, & Sand, 2008).

Small to medium sized farming operations may be well suited to using independent retailers as distribution channels. Selling to wholesalers is often not feasible because smaller farms do not have the quantities available on a regular basis that many distributors require. In addition, selling wholesale puts the farmer in the position of price-taker, with little to no influence over the price received. While using independent grocers for sales may not be as lucrative as the direct to consumer markets, including farmer's markets and community supported agriculture, they can be a fit for farmers with enough production, but without expertise or resources necessary to compete in the direct to consumer market (Kolodinsky, in press).

Historically, independently owned community stores were the centers for trade and social gathering in rural communities. Modern life has challenged their viability (Bailey, 2010; P. Clark, Tsoodle, & Kahl, 2008). Larger centers of commerce are more accessible by car and many people no longer work in the town they live, choosing to do their shopping elsewhere as part of their work commute. The community store is also challenged by the limits of scale when ordering from distributors who are used to larger volume purchases, and some delivery truck drivers are not able to justify a special trip to reach an out-of-the-way village center. Retail regulations have become more limiting, and put compliance strain on small operations. Chain stores have been displacing many locally owned independent grocery stores for a long period of time (Mayo, 1993).

From a community development perspective, the trend away from independent retailers has been debilitating to the viability of rural towns and villages that relied on these stores not only as an anchor for the commercial district, but also as a "third place" away from home and

work where community members can gather. Produce, because of its perishable shelf life, is one of the product categories that a community store is challenged to keep in stock. When consumers can no longer access fresh produce from community stores they start to shift their total shopping dollars to larger centers of commerce. Independently owned community grocery stores are left losing money on produce or losing customers.

As evidenced in the literature, despite increased agricultural production, fresh food still accounts for a small segment of U.S. agriculture, and significant barriers still exist for farmers to access new markets and for consumers to purchase more local foods (Low & Vogel, 2011).

Literature Review

The challenges of increasing local food consumption focus on key drivers of demand that include geographic proximity, relationships with farmers, and support for local economies. There are also complicated demographic, psychographic and behavioral attributes of local food consumers, and issues of consumer access and affordability (Bean Smith & Sharp, 2008; Brown, 2003; D. Conner et al., 2013; D. Conner, Colasanti, Ross, & Smalley, 2010; Ostrom, 2006; Thilmany, Bond, & Bond, 2008; Zepeda & Leviten-Reid, 2004; Zepeda & Li, 2006).

Yet the benefits of increasing consumption of locally grown food include improved farm profitability and viability, farmland conservation, improved public health, and closer social ties between farmers and consumers (Andreatta & Wickliffe, 2002; D. S. Conner & Levine, 2007; D. Conner et al., 2013, 2010; Lyson, 2004). An increase in consumption of local food is correlated to indicators of better health and well-being for consumers based on an increase in fruit and vegetable consumption (D. Conner et al., 2010). And, research shows that consumption of fruits

and vegetable is positively correlated with weight management and lowered risk for chronic diseases such as diabetes (Gonzalez-Suarez, Worley, Grimmer-Somers, & Dones, 2009; Gustafson, Cavallo, & Paxton, 2007).

Selling locally grown food is a strategy that allows small and medium sized farms to differentiate their products. These same farms also contribute to a broad array of indicators of social, economic and environmental well-being (D. S. Conner & Levine, 2007; Kirschenmann, Stevenson, Buttel, Lyson, & Duffy, 2008; Lobao, 1990; Lyson & Welsh, 2005).

However, challenges to providing local food exist, including financing, distribution, marketing research, policy barriers and opportunities, multi-sector collaboration, and store owner skills and capacity (Karpyn & Burton-Laurison, 2013). While these barriers were developed in the context of the healthy "corner store," they also affect independent food retailers across the board.

In a study of local retailing in New York State, Guptill and Wilkins (2002) conclude that food retailing, including of local foods, cannot be predicted merely by the size of the store, and as conventional grocery stores are being increasingly threatened by superstores, there are new opportunities for collaboration and initiatives for healthy foods such as perishables, natural foods, or local food products. In their qualitative analysis, they found that interviewees stated that the decision to stock products, particularly new products, was influenced by predicted demand, and streamlined procurement processes were very important. In addition, most of the stated barriers to working with local producers for stores of all sizes were related to marketing.

Other studies have found that retailers emphasize the need for consistent and efficient ordering systems, which increases with the size of the retailer and can be difficult for smaller producers to meet (J. K. Clark, Inwood, & Sharp, 2011; Morris & Buller, 2003). For example,

Clark et al. (2011) report that the primary barriers to increasing Ohio-grown produce in retail sites are a lack of supply and aggregation. Relationships between retailers and producers also matter, but may need to become more formalized as distance between the two increases. Mid-size and independent retailers are typically capable of and willing to work with local producers and sell their products, and there is a growing focus at all size levels for retailers to identify where their "local" products come from (Martinez et al., 2010).

Morris and Buller (2003), in a study of British retailers, found that retailers perceive local food sales are more profitable in the direct to consumer market compared to retail channels of distribution. Yet, Batte et al. (2007) found that consumers are willing to pay (WTP) more for locally produced food at traditional grocery stores, albeit the premium for retailers was less compared to the willingness to pay (WTP) for the same items at specialty outlets.

Overall, the literature on the potential of using independent retailers as a channel to distribute local food is older and scattered. Supply side studies highlight barriers of low profitability and difficulty in sourcing. Demand side studies show inconsistent demand for local in grocery outlets and a small WTP a premium for local. However, studies also point to the potential for local foods sold by independent grocery retailers to support local farmers and communities and meet a growing consumer demand for local products.

Methods

The Vermont Farm to Plate Network is a self-governing collaborative made up of farm and food system businesses, nonprofit organizations, government agencies, funders, educational institutions and community groups all working together to reach the 25 goals in the Farm to Plate

Strategic Plan, as well as to advance their own organizations' goals (Vermont Sustainable Jobs Fund, 2013b). Members convene as Working Groups, Cross-cutting Teams, and Task Forces, to collaborate on high impact projects, as well as to assess gaps, opportunities, and trends and monitor progress towards F2P goals.

One Task Force is the *Independent Retailers Task Force*, which focuses on increasing the availability of local food in small independent grocery stores through targeted marketing and consumer education support. This task force directly addresses three of the twenty five goals of the Farm to Plate Strategic Plan: Total Local Consumption; Distribution Infrastructure; and Local Food Availability ("Food Retailers | The Network | Vermont Food System Atlas," 2014).

As part of this task force's work, an online survey of independent grocers was developed by the Intervale Center and the Center for Rural Studies at the University of Vermont and reviewed by the Vermont Grocers' Association and the Vermont Sustainable Jobs Fund Farm to Plate Initiative. The survey methodology was approved by the University's Institutional Review Board. The survey was conducted in August and September of 2013.

A list of grocers was compiled using resources from the Vermont Grocers' Association and the Vermont Food System Atlas. The compiled list was checked for duplicates. The Vermont Grocers' Association shared the survey link with their members on the list with an email address available. Other stores were emailed the link by the Intervale Center (if an email address was available). Approximately 390 stores were contacted by email, and 73 stores completed the survey. Nineteen stores who did not complete the survey were contacted in October 2013 to check for any systematic bias; all 19 stated that they did not see or receive the email.

Results

Stores classified themselves into type and size for this survey. Stores with physical footprints less than 2,500 square feet were classified as small; stores between 2,500 and 4,999 were classified as mid-sized, and stores with physical footprints of 5,000 square feet or more were classified as large stores. Descriptive statistics are provided in Table 1. Country stores formed the largest group of respondents (43%), followed by convenience stores (28%) and grocery stores (22%). Country stores made up the majority of small stores (56.7%) and a large percentage of mid-sized stores (42.3%). Grocery stores formed the main group within the large store category (42.9%). A map of respondents' location and size with respect to population density in the State is included as Figure 1.

Table 1.

Store Characteristics, n = 69

	Overall		Small < 2500 square feet	Mid-sized 2500-4999 square feet	Large 5000+ square feet
	Frequency	Percent			
Country store	30	43.0%	56.7%	42.3%	21.4%
Convenience store	19	28.0%	36.7%	26.9%	7.1%
Grocery store	15	22.0%	3.3%	30.8%	42.9%
Food co-op	4	6.0%	3.3%	0.0%	21.4%
Health food store	1	1.0%	0.0%	0.0%	7.1%

As shown in Table 2, the majority of stores (84%) reported their gross annual sales between $250 thousand to $5 million. The physical size of the store seems to be related to gross annual sales, as 70% of small stores reported sales between $250 thousand to $1 million, 60% of

mid-sized stores reported sales between $1 million to $5 million, and all of the large stores reporting gross annual sales over $1 million and 58.4% over $5 million.

Figure 1.

Independent Retailers in Vermont by location, size and population density.

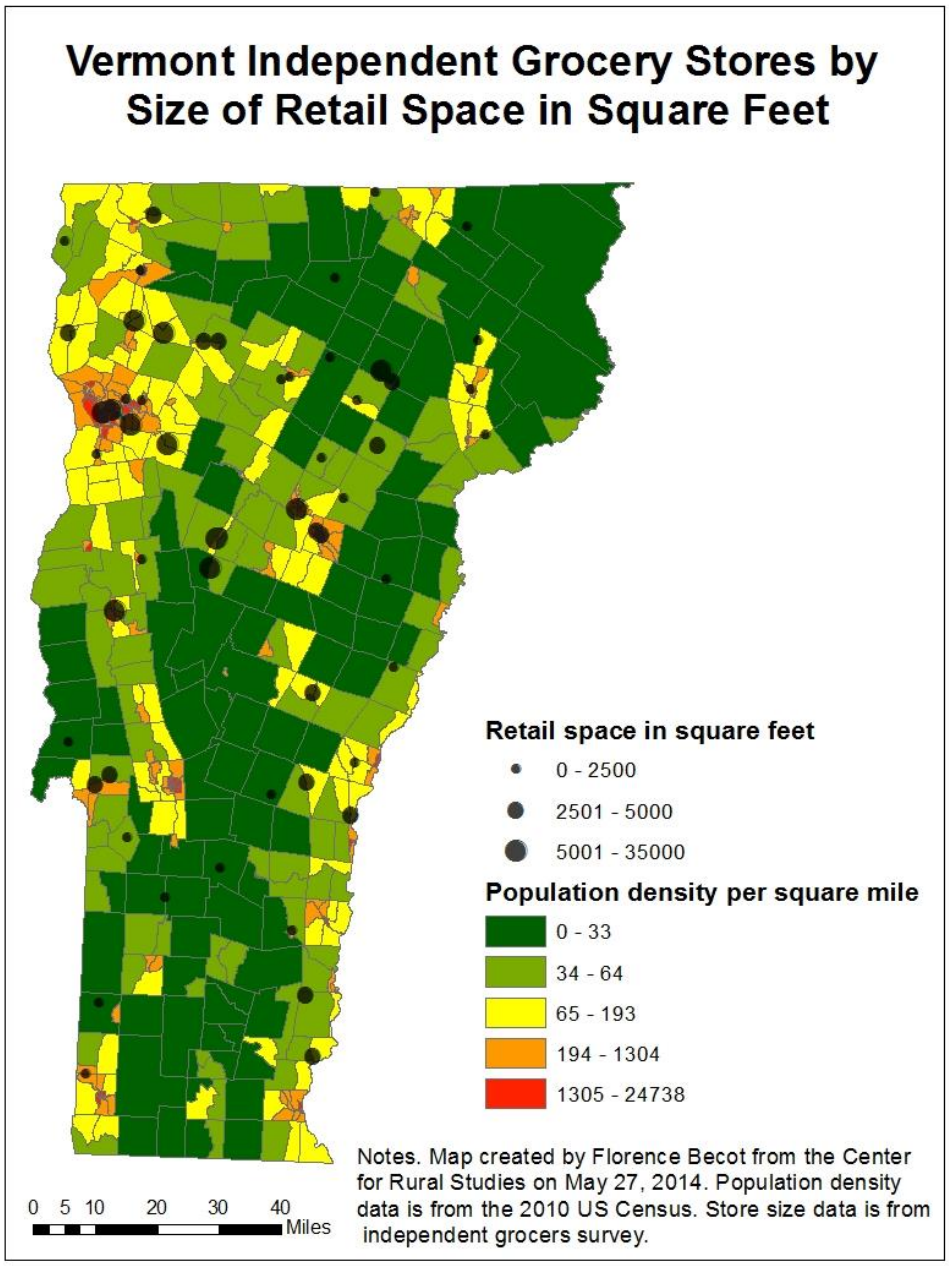


Table 2.

Reported Gross Annual Sales for 2012, n = 70

	Overall		Small < 2500 square feet	Mid-sized 2500-4999 square feet	Large 5000+ square feet
	Frequency	Percent			
Less than $250,000	1	1.0%	0.0%	4.0%	0.0%
$0.25 - 1 million	30	43.0%	70.6%	28.0%	0.0%
$1-5 million	29	41.0%	26.5%	60.0%	41.7%
$5-15 million	8	11.0%	2.9%	8.0%	41.7%
Over $15 million	2	3.0%	0.0%	0.0%	16.7%

The percentages of stores reporting to carry certain products were largely consistent across size categories. Exceptions to this occurred at the large stores, which carried more bulk and non-dairy perishables and less tobacco products than the small and mid-sized stores. Overall, over 90% of stores reported carrying coffee and other hot beverages (92%), dairy/eggs (92%), general merchandise (92%), beer and wine (93%), and grocery products (93%).

Table 3.

Reported Product Types Carried by Stores, n = 73

	Overall		Small < 2500 square feet	Mid-sized 2500-4999 square feet	Large 5000+ square feet
	Frequency	Percent			
Grocery (non-alcoholic beverages, maple syrup, honey, jams, condiments, etc.)	68	93.0%	88.2%	96.2%	92.9%
Beer & Wine	68	93.0%	88.2%	96.2%	92.9%
General Merchandise (cleaning supplies, paper products, bottle openers, etc.)	67	92.0%	88.2%	96.2%	85.7%
Dairy/Eggs	67	92.0%	85.3%	96.2%	92.9%

(Milk, Cheese, Yogurt, Eggs, etc.)					
Coffee / other Hot Beverages	67	92.0%	85.3%	96.2%	92.9%
Frozen	65	89.0%	82.4%	92.3%	92.9%
Prepared Foods	64	88.0%	76.5%	96.2%	92.9%
Health & Beauty Products (body care, supplements, etc.)	63	86.0%	82.4%	88.5%	85.7%
Produce	59	81.0%	73.5%	80.8%	92.9%
Bakery	59	81.0%	70.6%	88.5%	85.7%
Tobacco	55	75.0%	76.5%	80.8%	57.1%
Meat & Seafood	57	78.0%	64.7%	84.6%	92.9%
Non-Dairy Perishables (hummus, tofu, etc.)	51	70.0%	61.8%	65.4%	92.9%
Gasoline	36	49.0%	55.9%	42.3%	42.9%
Bulk Foods	23	32.0%	20.6%	23.1%	71.4%

As shown in Table 4, of the 16 product categories, grocery products were most consistently rated as the top revenue-generating product (49 stores and 72% across all 4 rankings), followed closely by beer and wine (48 stores and 70.7%), while frozen foods and non-dairy perishables were reported the least (2 stores and 2.9% and 1 store and 1.5% respectively).

Table 4.

Reported Top Four Revenue-Generating Products, n = 68

	Frequency of ranking				Percent of Ranking			
	#1	#2	#3	#4	#1	#2	#3	#4
Grocery	24	12	10	3	35.3%	17.6%	14.7%	4.4%
Beer & Wine	5	15	16	12	7.4%	22.1%	23.6%	17.6%
Gasoline	17	4	3	5	25.0%	5.9%	4.4%	7.4%
Prepared Foods	8	4	8	8	11.8%	5.9%	11.8%	11.8%
Dairy/eggs	0	3	9	12	0	4.4%	13.2%	17.7%
Meat & seafood	4	9	4	5	5.9%	13.2%	5.9%	7.4%
Tobacco	5	7	4	3	7.4%	10.3%	5.8%	4.4%

Produce	1	5	4	4	1.8%	7.4%	5.9%	5.9%
Coffee/other hot beverages	0	2	3	5	0	2.9%	4.4%	7.4%
Health & Beauty Products	0	2	3	1	0	2.9%	4.4%	1.5%
Other (deli, liquor, magazines)	3	2	1	0	4.4%	2.9%	1.5%	0
General	0	1	1	4	0	1.5%	1.5%	5.9%
Bakery	1	1	1	2	1.5%	1.5%	1.5%	2.9%
Bulk Foods	0	0	1	2	0	0	1.5%	2.9%
Frozen	0	0	0	2	0	0	0	2.9%
Non-dairy perishables ~~(hummus, tofu, etc.)~~	0	1	0	0	0	1.5%	0	0

At least three quarters of stores reported stocking local dairy/eggs (93%), bakery (83%), produce (78%), grocery products (78%), and beer and wine (75%). No stores reported stocking local tobacco, and only 1 store reported stocking local gasoline[1].

Table 5.

Reported Local Products Stocked by Stores Carrying Products in Relevant Categories, n = 73

	Overall	
	Frequency	Percent
Dairy/eggs	62	93.0%
Bakery	53	83.0%
Produce	46	78.0%
Grocery	53	78.0%
Beer & Wine	51	75.0%
Coffee / Other hot beverages	47	70.0%
Bulk Foods	14	61.0%
Prepared Foods	36	56.0%
Meat & seafood	30	53.0%
Non-dairy perishables	23	45.0%
Frozen	25	39.0%
Health & Beauty Products	22	35.0%
General	17	25.0%
Gasoline	1	3.0%
Tobacco	0	0.0%

[1] Respondents self-defined what is "local." The Vermont Origin rule indicates that a Vermont product may be labeled as local if the product is produced in Vermont, the ingredients originate from Vermont, and/or if the company is incorporated in Vermont.

As shown in Table 6, local coffee and prepared hot beverages were reported consistently as accounting for a high percentage of total revenue, both across store size categories (61% for small, 56% for mid-sized and 46% for large) and as an overall percentage (55%). Dairy/eggs also made up sizeable percentages of stores' total revenues (47% overall), particularly for small and mid-sized stores (48% and 52% respectively). Mid-sized stores also reported higher percentages in the non-dairy perishables (37%) and prepared food (51%) categories.

Table 6.

Reported Percentage of Total Revenue of Local Products, n = 73

	Overall		Small	Mid-Sized	Large
	Frequency	Percent	< 2500 square feet	2500-4999 square feet	5000+ square feet
Coffee/ prepared hot beverages	47	55.0%	61.0%	56.0%	46.0%
Dairy/eggs	60	47.0%	48.0%	52.0%	35.0%
Prepared food	29	42.0%	32.0%	51.0%	43.0%
Bakery	50	38.0%.	33.0%	39.0%	45.0%
Meat & Seafood	29	37.0%	36.0%	39.0%	37.0%
Produce	43	29.0%	25.0%	30.0%	32.0%
Non-dairy perishables	23	26.0%	17.0%	37.0%	24.0%
Beer & wine	48	18.0%	18.0%	15.0%	25.0%
Bulk foods	13	17.0%	12.0%	15.0%	20.0%
Frozen	24	15.0%	22.0%	14.0%	9.0%
Grocery	49	15.0%	16.0%	13.0%	17.0%
Health & beauty products	22	12.0%	17.0%	7.0%	12.0%
General merchandise	17	5.0%	2.0%	7.0%	6.0%

In response to the question, "What are the current barriers to selling local or Vermont-made products?" all respondents indicated lack of consumer interest as a significant barrier to selling local or Vermont-made products. Nearly all respondents (n = 52) also indicated high cost as an important barrier.

Table 7.

Reported Barriers to Selling Local or Vermont-made Products, n = 61

	Frequency of reports as a barrier	Average rank of barrier
Consumers don't buy it	61	3.34
Too expensive	52	3.63
Perishable	43	4.02
Distributor doesn't carry	30	4.33
Would displace a product that is currently carried	18	4.22
Inconsistent supply	11	6.18
Requires additional accounting	11	4.82
Takes too much time	8	5.88
Other	3	7.33

Note. Respondents were asked to rank the above potential barriers in order of 1 being most important and 9 = least important.

There are demand, product characteristic, and supply side barriers to independent retailers stocking more local products, as shown in Table 7. Both consumer demand and high price are the two highest barriers, with ranks of 3.34 and 3.63, respectively. The highly perishable nature of products was ranked by more than half of the respondents and was the third largest barrier. Following these were distribution issues, such as using a distributor that doesn't carry local products. Finally, issues of retailer time cost were reported, including additional accounting and time to deal with individual suppliers. Inconsistent supply was also reported, but this was not a large barrier compared with the others listed. We analyzed these results by size of retailer, as shown in Table 8. Due to the small sample size, perhaps, there are no significant differences between retailer size for each of the barriers, even though differences in percentages are relatively large in some cases. For example, large retailers reported needing more consistent supply, while small retailers reported needing more consumer demand. A need for lower price points also ranked high by all size retailers.

Table 8.

Reported Top Three Aids to Selling More Local Products, n = 73

	Overall		Small	Mid-Sized	Large
	Frequency	Percent	< 2500 square feet	2500-4999 square feet	5000+ square feet
Customer demand	39	53.0%	55.9%	53.8%	42.9%
Lower prices	36	49.0%	44.1%	53.8%	50.0%
More consistent supply	30	41.0%	35.3%	34.6%	64.3%
Distributor to carry more products	25	34.0%	32.4%	30.8%	42.9%
Bigger store	14	19.0%	14.7%	26.9%	14.3%
Marketing support	11	15.0%	14.7%	7.7%	28.6%
More non-perishable items	8	5.0%	14.7%	7.7%	7.1%

Table 9.

Perceived Consumer Interest in Local Products, n = 58

	Overall		Small	Mid-Sized	Large
	Frequency	Percent	< 2500 square feet	2500-4999 square feet	5000+ square feet
Produce	40	69.0%	44%	50%	86%
Dairy/eggs	36	62.0%	38%	50%	71%
Bakery	35	60.0%	35%	50%	71%
Grocery	29	50.0%	35%	38%	50%
Beer & Wine	29	50.0%	32%	35%	64%
Meat & seafood	25	43.0%	24%	27%	71%
Prepared Foods	23	40.0%	26%	23%	57%
Coffee/other hot beverages	17	29.0%	15%	19%	50%
Frozen	12	21.0%	6%	15%	43%
Non-dairy perishables	12	21.0%	9%	8%	50%
Bulk Foods	10	17.0%	3%	8%	50%
Health & Beauty Products	10	17.0%	3%	15%	36%
General	9	16.0%	3%	12%	36%

Table 9 shows that the largest independent retailers are most interested in a wide variety of local products, with fresh items topping the list (dairy/eggs at 71% and produce at 86%). Cheese and yogurt are value-added products. Other opportunities include more value-added products for the largest retailers, including bakery, meat and seafood, and beer and wine. Mid-size retailers reported much lower demand for these products, but do report an interest in bakery items, followed by general grocery and beer and wine. The smallest stores report less consumer demand for all categories, but report some demand for bakery products, general grocery items, and beer and wine.

Discussion

Placing these results in the context of the relatively small literature base, it appears that the previous findings are correct in some ways. There are both demand and supply side issues that create barriers to the increased distribution and consumption of local food in Vermont. However, it is not only a marketing, distribution, demand, or price issue (See, Guptill and Wilkins, 2002; Clark et al., 2011; Morris and Buller, 2003). Issues affecting the retail sector, even narrowed to the independent retail sector, include the array of barriers outlined by Karpyn and Burton-Laurison: financing, distribution, marketing, store-owner skills, and capacity (2013). This study adds perceptions of pricing and consumer demand to the list.

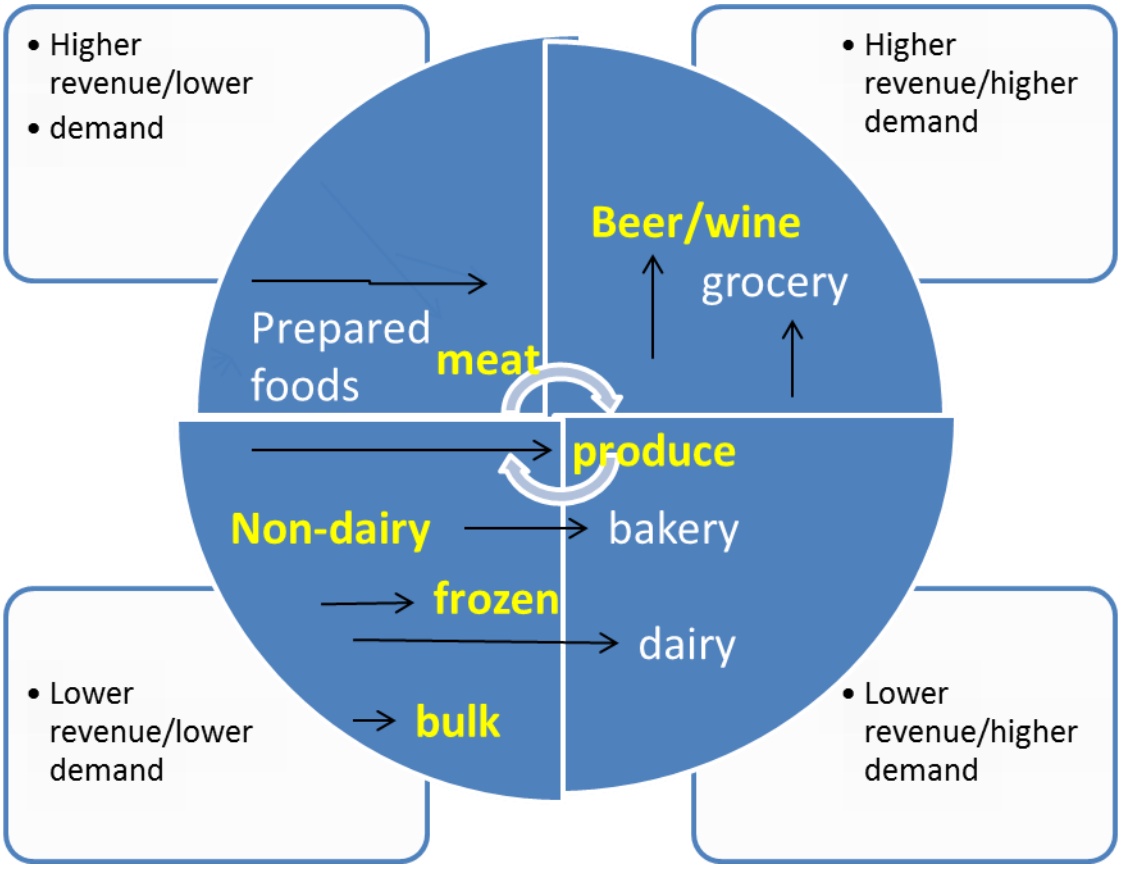
However this does not preclude opportunities for independent retailers. Our analysis indicates that the opportunities may differ by size of retailer, and that suppliers might need to strategize in order improve the independent retailer sector as a distribution channel for local food.

Information in Tables 3, 4, 5, 6, and 9 was triangulated to create Figure 2. Moving from left to right, the figure represents increasing consumer demand, as reported by the independent retailers surveyed. Moving from bottom to top represents lower to higher revenue. Bold, yellow type represents local products that retailers may add to their stock, in addition to products the non-local products that they already stock in those product categories. White type represents products for which a retailer may substitute a local product for the product currently stocked. The arrowhead represents the largest retailers and the arrow direction represents demand as reported by small, medium and large retailers for each product category. In all cases, as shown in Table 9, the largest retailers reported more consumer demand for each of the product categories.

Local beer and wine and grocery items (non-alcoholic beverages, maple syrup, honey, jams, condiments, etc.) represent the highest demand/highest revenue product categories for local. Value-added producers in these categories may have the highest probability of gaining increased access to the independent retailer channel. Local beer and wine (and other spirits, including cider) is an expanding category in Vermont. Rachel Carter, communications director with the Vermont Farm to Plate Initiative, reports that Vermont has at least 27 vineyards and wineries, 31 breweries, 9 cider producers and 15 distilleries (Choate, 2014). This growing sector, matched with the customer demand reported by large independent grocery retailers, shows potential for local producers, although they will have to develop distribution and supply that meets the needs of the larger retailers, at a price point they can afford.

Figure 2.

Opportunities for local foods in independent retail outlets in Vermont.



. Arrows go in direction from smaller stores to larger stores; bold product types represent potential additions of local products to store stock; non-bold product types represent potential substitution of local product for non-local counterpart.

For the general grocery category, which also includes value-added products, there is continued potential in the independent retailer sector. Vermont has long been involved in the prepared, shelf stable grocery category. Jams, jellies, maple syrup and other shelf-stable value added products started the "made in Vermont" revolution (de Wit, 1999). More independent retailers report already selling this category of goods. Therefore, local producers are presented with opportunities to convince retailers to substitute their local product for the brands currently being carried. All barriers, including ensuring consistent supply and distribution and price points

that fit within the retailers' parameters, will have to be addressed by producers. The local condiment category within grocery items has been growing, and includes innovations in mustards, salsas and salad dressings.

Local meat is an another expanding category, and is being invested in by the Vermont Farm to Plate Meat Processing Task Force, which aids in the capitalization of and production of local meat (Gwin & Thiboumery, 2013). The Vermont Farm to Plate Strategic Plan noted, "Although demand for Vermont grown meat typically outstrips supply, farmers face considerable challenges to increased livestock production, including the cost and seasonality of production, access to slaughter, and insufficient production assistance for the development of high quality animals for the market" (Calderwood et al., 2013).

Local prepared foods also show some potential for expansion. While prepared foods are higher revenue items for stores, independent retailers report higher revenues but lower demand for this food category, compared to grocery items and spirits. The prepared foods category is likely more of a niche market, as many larger independent retailers prepare their own products, including salads and deli items (Volpe, 2011). Meeting distribution and consumer price points will remain a barrier for both the meat and prepared foods category.

Local produce shows potential for all sizes of retailers, but a match must be made for low demand smaller retailers and high demand larger retailers. Balancing distribution, accounting, delivery schedules and marketing for produce will require building relationships between growers and retailers, or a larger distribution method that perhaps aggregates produce from several farms (Stevenson, 2009).

Local dairy was reported by independent retailers to be a lower revenue, higher demand product category. While fluid milk is almost all local in the State, there is a growing artisan

cheese industry that is gaining entry into retail outlets. The Vermont Cheese Council includes 44 cheese makers on their "Cheese Trail Map," and identifies 14 independent retail outlets and five distributors that carry Vermont cheese (Vermont Cheese Council, 2014). While these products command high premiums relative to "commodity" cheeses, some Vermont cheese brands are more competitively priced and are widely available, including Vermont Creamery and Dakin Farms.

Conclusion

There appears to be potential for distributing local products through the independent retailer supply chain. The most potential, based on this survey of 74 independent grocers of various sizes, exists for the newer spirits category and the historically profitable local grocery items. There is also potential for increases in sale of prepared foods and meats. And, while there is demand for other product categories, revenue streams are lower. Importantly, the location and size of independent retailers, and population density of these locations, as shown in Figure 1, must be considered along with the market opportunities depicted in Figure 2.

Strengths of the study include the use of survey and GIS tools to develop a compilation of market potential for a variety of local food products based on current conditions and opportunities as perceived by the independent retailer sector in Vermont. Weaknesses of the study include a limited sample size.

Overall, barriers to using independent retailers to sell local food are the same highlighted in the literature for all non-direct-to-consumer channels: distribution, pricing, supply, and ease of accounting. The analysis presented here cannot be generalized beyond Vermont. However, the methodology used can provide a useful framework for other geographic areas that are

investigating developing markets for local foods beyond the direct-to-consumer channels that have become saturated in some areas of the country.

References

Andreatta, S., & Wickliffe, W. (2002). Managing Farmer and Consumer Expectations: A Study of a North Carolina Farmers Market. *Human Organization, 61*(2), 167–176.

Bailey, J. M. (2010). Rural grocery stores: importance and challenges. *Center for Rural Affairs Rural Research and Analysis Program. Published October*. Retrieved from http://www.hungerfreecommunities.org/wp-content/uploads/2011/12/rural-grocery-stores.pdf

Batte, M. T., Hooker, N. H., Haab, T. C., & Beaverson, J. (2007). Putting their money where their mouths are: Consumer willingness to pay for multi-ingredient, processed organic food products. *Food Policy, 32*(2), 145–159. doi:10.1016/j.foodpol.2006.05.003

Bean Smith, M., & Sharp, J. (2008). *A Current and Retrospective Look at Local Food Consumption and Support among Ohioans*. Columbus, Ohio: The Ohio State University.

Brown, C. (2003). Consumers' preferences for locally produced food: A study in southeast Missouri. *American Journal of Alternative Agriculture, 18*(04), 213–224. doi:10.1079/AJAA200353

Calderwood, L., Sawyer, S., Kahler, E., Hoffer, D., Perkins, K., Fuller, S., & Tippet, H. (2013). *Farm to Plate Strategic Plan: Food Production: Livestock and Meat* (pp. 255 – 293). Vermont Sustainable Jobs Fund.

Choate, S. (2014, March 18). Getting In the Spirit: Exploring Vermont's booming beer and wine industry : MyFinance Magazine. *MyFinance Magazine*. Retrieved from http://www.myfinancemagazine.com/getting-in-the-spirit-exploring-vermonts-booming-beer-and-wine-industry/

Clark, J. K., Inwood, S., & Sharp, J. S. (2011). *Scaling-up Connections between Regional Ohio Specialty Crop Producers and Local Markets: Distribution as the Missing Link* (pp. 1 – 56). Columbus, Ohio: The Ohio State University.

Clark, P., Tsoodle, L., & Kahl, D. (2008). *Rural Grocery Sustainability Project: Customer Survey* (pp. 1 – 16). Kansas State University: KSU Center for Engagement and Community Development.

Conner, D., Becot, F., Hoffer, D., Kahler, E., Sawyer, S., & Berlin, L. (2013). Measuring Current Consumption of Locally Grown Foods in Vermont: Methods for Baselines and Targets. *Journal of Agriculture, Food Systems, and Community Development*, *3*(3), 83–94. doi:10.5304/jafscd.2013.033.004

Conner, D., Colasanti, K., Ross, R. B., & Smalley, S. B. (2010). Locally Grown Foods and Farmers Markets: Consumer Attitudes and Behaviors. *Sustainability*, *2*(3), 742–756. doi:10.3390/su2030742

Conner, D. S., & Levine, R. (2007). Circles of Association: The Connections of Community-Based Food Systems. *Journal of Hunger & Environmental Nutrition*, *1*(3), 5–25. doi:10.1300/J477v01n03_02

De Wit, C. W. (1999). Food-Place Associations on American Product Labels. In *A Taste of American Place: A Reader on Regional and Ethnic Foods* (pp. 101 – 109). Rowman & Littlefield Publishers.

Food Retailers | The Network | Vermont Food System Atlas. (2014). *VT Farm to Plate Food Atlas*. Retrieved May 22, 2014, from http://www.vtfoodatlas.com/network/food-retailers

Gonzalez-Suarez, C., Worley, A., Grimmer-Somers, K., & Dones, V. (2009). School-Based Interventions on Childhood Obesity. *American Journal of Preventive Medicine*, *37*(5), 418–427. doi:10.1016/j.amepre.2009.07.012

Guptill, A., & Wilkins, J. L. (2002). Buying into the food system: Trends in food retailing in the US and implications for local foods. *Agriculture and Human Values*, *19*(1), 39–51.

Gustafson, A., Cavallo, D., & Paxton, A. (2007). Linking Homegrown and Locally Produced Fruits and Vegetables to Improving Access and Intake in Communities through Policy and Environmental Change. *Journal of the American Dietetic Association*, *107*(4), 584–585. doi:10.1016/j.jada.2007.02.023

Gwin, L., & Thiboumery, A. (2013). *From Convenience to Commitment: Securing the Long-Term Viability of Local Meat and Poultry Processing* (Technical Report). Oregon State University. Retrieved from http://ir.library.oregonstate.edu/xmlui/handle/1957/38213

Karpyn, A., & Burton-Laurison, H. (2013). Rethinking Research: Creating a Practice-Based Agenda for Sustainable Small-Scale Healthy Food Retail. *Journal of Agriculture, Food Systems, and Community Development*, 1–5. doi:10.5304/jafscd.2013.034.015

Kirschenmann, F., Stevenson, G. W., Buttel, F., Lyson, T. A., & Duffy, M. (2008). Why Worry about the Agriculture of the Middle? In *Food and the Mid-Level Farm* (pp. 3 – 22). MIT Press.

Kolodinsky, J. (in press) Community Supported Agriculture. Food Issues. New York: Sage.

Lobao, L. M. (1990). *Locality and Inequality: Farm and Industry Structure and Socioeconomic Conditions*. SUNY Press.

Low, S. A., & Vogel, S. (2011). *Direct and intermediated marketing of local foods in the United States*. US Department of Agriculture, Economic Research Service. Retrieved from http://wallace.webfactional.com/mount_ngfn/ngfn/resources/ngfn-database/knowledge/ERR128.pdf

Lyson, T. A. (2004). *Civic Agriculture: Reconnecting Farm, Food, and Community*. UPNE.

Lyson, T. A., & Welsh, R. (2005). Agricultural industrialization, anticorporate farming laws, and rural community welfare. *Environment and Planning A*, *37*(8), 1479–1491. doi:10.1068/a37142

Martinez, S., Hand, M., Da Pra, M., Pollack, S., Ralston, K., Smith, T., … Newman, C. (2010). *Local Food Systems: Concepts, Impacts, and Issues* (Economic Research Report No. ERR 97) (pp. 1 – 87). U.S. Department of Agriculture, Economic Research Service.

Mayo, J. M. (1993). *The American grocery store: the business evolution of an architectural space*. Westport, Conn: Greenwood Press.

McEntee, J. (2010). Contemporary and traditional localism: a conceptualisation of rural local food. *Local Environment*, *15*(9-10), 785–803. doi:10.1080/13549839.2010.509390

McEntee, J., & Agyeman, J. (2010). Towards the development of a GIS method for identifying rural food deserts: Geographic access in Vermont, USA. *Applied Geography*, *30*(1), 165–176. doi:10.1016/j.apgeog.2009.05.004

Morris, C., & Buller, H. (2003). The local food sector: A preliminary assessment of its form and impact in Gloucestershire. *British Food Journal*, *105*(8), 559–566. doi:10.1108/00070700310497318

Morton, L. W., Bitto, E. A., Oakland, M. J., & Sand, M. (2008). Accessing food resources: Rural and urban patterns of giving and getting food. *Agriculture and Human Values*, *25*(1), 107–119. doi:10.1007/s10460-007-9095-8

Ostrom, M. (2006). Everyday Meanings of "Local Food": Views from Home and Field. *Community Development*, *37*(1), 65–78. doi:10.1080/15575330609490155

Stevenson, S. (2009). *Values-based food supply chains: Executive Summary* (pp. 1 – 12). Wisconsin Center for Integrated Ag Systems.

Thilmany, D., Bond, C. A., & Bond, J. K. (2008). Going Local: Exploring Consumer Behavior and Motivations for Direct Food Purchases. *American Journal of Agricultural Economics*, *90*(5), 1303–1309. doi:10.1111/j.1467-8276.2008.01221.x

Vermont Cheese Council (2014). Website. Available: http://www.vtcheese.com/contactus.htm. Accessed May 28, 014.

Vermont Sustainable Jobs Fund. (2013a). *Farm to Plate Strategic Plan: A 10-Year Strategic Plan for Vermont's Food System: Executive Summary* (pp. 1 – 51). Vermont. Retrieved from http://www.vtfoodatlas.com/plan/

Vermont Sustainable Jobs Fund. (2013b). *Farm to Plate Strategic Plan: Analysis of Vermont's Food System - Overview* (pp. 61 – 72). Retrieved from http://www.vtfoodatlas.com/assets/plan_sections/files/Chapter%203_Analysis_Overview_MAY%202013.pdf

Volpe, R. (2011). *The Relationship Between National Brand and Private Label Food Products: Prices, Promotions, Recessions, and Recoveries* (Economic Research Report No. ERR - 129). U.S. Department of Agriculture, Economic Research Service. Retrieved from http://www.ers.usda.gov/publications/err-economic-research-report/err129.aspx#.U4VS9i-cDQM

Zepeda, L., & Leviten-Reid, C. (2004). Consumers' views on local food. *Journal of Food Distribution Research*, *35*(3), 1–6.

Zepeda, L., & Li, J. (2006). Who Buys Local Food? *Journal of Food Distribution Research*, *37*(3), 1 – 11.