



Tri-county Local Food Capacity and Barriers to Growth

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Research continues to show consumers are willing to pay a premium for source-identified food grown near where they live. This demand for local food represents a potential profit opportunity for farmers and ranchers able to market products through local food channels, particularly small and medium sized producers looking for ways to remain profitable in highly competitive food markets. Increases in local food sales have also been shown to increase local economic growth because more of each food dollar stays in the community. The tri-county region of Butte, Glenn and Tehama counties is agriculturally rich, producing both a large variety and significant volume of food products, so how are local food markets impacting the region, and are there potential benefits we are not yet capturing. A series of collaborative research projects have been conducted over the last five years aimed at understanding the local food capacity and markets.

What is the Tri-county's Local Food Capacity?

We conducted a study estimating the "local food capacity" of the tri-county region of Butte, Glenn, and Tehama counties. The study asked the hypothetical question: at current production levels, how much of the food eaten in the region could be supplied by local (tri-county) supply?

Our results showed a local food capacity for the tri-county region of over 70 percent. By our measure, nearly three

quarters of the food we eat could be provided by local farmers and ranchers, without those farmers and ranchers changing what they produce. The results have to be interpreted carefully - we limited foods to broad categories and assumed everyone eats the same diet, for example – but still show significant overlap between the food produced in the region and the region's consumption demands.

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A more complete analysis of local food capacity would rigorously account for seasonality, diet variability, and other important factors, but what is striking about the local food capacity estimates is how they compare to actual local consumption in the tri-county area. Previous studies in places like Santa Barbara County show the share of consumption met by local production is often surprisingly low - significantly less than 5% - even in agriculturally productive locations with established local food economies. This means there is a large gap between potential (>70%) and actual (likely well below 5%) local food consumption in the tri-county region, leading us to wonder: are market barriers limiting beneficial local food sales in the region, and can those barriers be removed to increase sales?

Are Transaction Costs Limiting Local Food Sales?

To help answer these questions we conducted a randomized survey of producers in the tri-county region. Two hundred producers of the over 1000 contacted generously completed the telephone survey, which gathered farm owner/operator demographics, farm characteristics, and sales channels such as farmers markets and farm stands (direct to consumer local), direct sales from farms to grocery stores/institutions/restaurants, or wholesale non-local sales. Figure 1 shows the share of producers who reported selling into only wholesale market channels and the share reporting sales into at least one local sales channel.

To gather information on barriers limiting food sales in the tri-county region, one survey question presented producers with a list of twenty potential barriers to selling their product or expanding their business and asked them to indicate if each was a "Major Barrier," "Minor Barrier," or "Not a Barrier." We organized potential barriers into categories based on "transactions costs," costs of making a sale separate from the purchase price. For example, a farmer who wants to sell produce directly to restaurants has to find willing customers, negotiate products/prices, and deliver products. These activities cost time and money, and play a significant role in determining whether a sale is profitable.

We grouped the barriers in the survey into five transaction cost (TC) categories: information transaction costs, negotiation transaction costs, monitoring and enforcement transaction costs and product transfer transaction costs. Table 1 shows examples of each transaction cost by category. Producers were categorized as indicating yes to each group of TCs if they indicated yes to one or more of the barriers in a particular category. Table 3 shows the barriers grouped by transaction cost category and the share of producers who reported each barrier as either a "Major Barrier" or "Minor Barrier."

To explore how responses to the barriers question were related to farm size, producers were categorized by size based on sales following USDA's 2012 farm typology. Of the 200 producers who completed the survey, the largest share, 41%, reported being small (sales <\$100,000 per year), 38% medium (sales \$100,000-\$250,000 per year), and 31% large (sales >\$250,000 per year). Nine percent declined to state.

Figure 1. Share of survey respondents by market channel (2015)

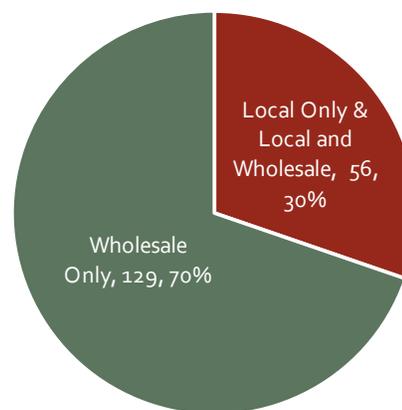


Table 1. Transaction Costs Categories with Examples

Transaction Cost (TC) Category	Example(s)
Information TC's	Finding buyers, identifying best products
Negotiation TC's	Negotiating prices and sales contracts, meeting buyer food safety requirements
Product Transfer TC's	Preparing product (e.g., washing, packaging, storage, delivering product)
Monitoring and Enforcement TC's	Collecting payment, managing returns

Smaller farms were not statistically more likely to sell into local market channels nor did they report more barriers to sales than larger producers.

It is often assumed that smaller farms are more likely to participate in local markets and that they experience more market barriers than larger farms, in part due to the burden of increased transactions costs in local market channels and at lower sales volumes. However, our estimates did not show a statistically significant link between farm size and either market channel or reported TC barriers. Smaller farms were not statistically more likely to sell into local market channels nor did they report more barriers to sales than larger producers. These somewhat surprising results may be

due to our study methodology, but may also indicate the link between farm size and local sales is not particularly strong in the tri-county area. This could have important implications for tri-county policies and programs aimed at increasing local food sales and/or supporting local producers.

We did find a statistically significant link between reported barriers to sales and market channel. Producers selling into local channels reported more barriers overall than wholesale producers, and were statistically more likely to report information, product transfer, and monitoring and enforcement TC's (Table 3). This could be evidence that higher transactions costs in local market channels are limiting local sales, and that beneficial local food sales could be increased if TC's were reduced.

What's Next?

Important questions remain: Does the gap between potential and actual local food consumption in the tri-county region represent a missed opportunity for local businesses and economic growth, or just the realities of regional agricultural production and markets? What are the barriers limiting local food sales from the perspective of buyers like institutions and restaurants? Will removing barriers result in an increase in local food sales?

Research projects seeking to answer these questions are ongoing. Additionally, food buyers such as restaurants and institutions were interviewed in 2015 to gather data on barriers to local food sales from the buyer perspective, and a current project is augmenting those data using additional interviews. Estimates of the potential economic impact of increased local food sales are still needed, as is improved understanding of the role of income in local food purchasing decisions.

In 2015 we launched the North Valley Food Hub (NVFH, www.northvalleyfoodhub.com), an online, managed marketplace facilitating local food transactions between food producers and local businesses such as schools, restaurants, and grocery stores. The hub seeks to reduce the transactions costs of local food sales by providing marketing support, transportation logistics, and transaction infrastructure. Hub sales growth has been slow but steady, and the hub is a valuable tool for research, grant activities, outreach and education.

Table 2. Statistical Relationship between Market Channel and Reported Transaction Costs by Category (n=200)

Information Transaction Costs	Producers indicating "yes"
You don't have sufficient time to find/contact potential buyers	49 (24.5%)
You're not sure where or how to find local buyers	26 (13.0%)
You don't know which crops to grow to make the most money	29 (14.5%)
You don't know how much product buyers want/how many crops to grow	31 (15.5%)
The prices of local advertising/marketing are too high	42 (21.0%)
Negotiation Transaction Costs	
Buyers want liability insurance, and you don't have it	10 (5.0%)
You cannot meet buyers' food safety certification requirements	20 (10.0%)
Product Transfer Transaction Costs	
Buyers want uniform boxes/packing	30 (15.0%)
Buyers want your products processed (washed, trimmed, peeled, cut, etc.)	29 (14.5%)
You don't have a way (or time) to deliver to local buyers	40 (20.0%)
It is too expensive to deliver your products to local buyers	44 (22.0%)
You do not have enough storage for your crops during harvest	41 (20.5%)
Monitoring and Enforcement Costs	
You're worried that buyers will back out on you on short notice	32 (16.0%)
No Barriers Indicated	
None	68 (34%)

Table 3 Transaction Costs Categories with Examples

Transaction Cost (TC) Category	Producers Selling Locally More Likely to Report?*
Information TC's	YES
Negotiation TC's	NO
Product Transfer TC's	YES
Monitoring and Enforcement TC's	YES

* "YES" indicates a statistically significant relationship between market channel and the number of producers reporting at least one barrier in the given transaction cost category

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