FoodMap NY

Leveraging Private-Sector Innovation and Investment for Food Security

RESEARCH SPOTLIGHT REPORT

Healthy Food in Retail Environments

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NYU STERN
Center for Sustainable Business

Mother Cabrini
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Cornell
SC Johnson College of Business
CENTER FOR SUSTAINABLE GLOBAL ENTERPRISE

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Introduction

More than 44 million Americans experience food insecurity today, including more than 2.2 million people in New York State alone. Despite decades of government and philanthropic efforts, levels of food insecurity continue to rise, depriving millions of a decent quality of life, and costing our nation billions in preventable health care expenses.[1] In response to this crisis, federal and state leaders have called for private sector collaboration to improve food access and affordability; integrate nutrition and health; empower consumers to make, and have access to, healthy choices; support physical activity for all; and enhance nutrition and food security research.[2]

The NYU Stern Center for Sustainable Business, in partnership with Cornell University, and with the support of Mother Cabrini Health Foundation, sought to better understand where private sector interventions and investment could enhance food and nutrition security in New York State (NYS). Research was conducted between April 2022 and May 2023 to assess current knowledge, efforts, and opportunities for private sector engagement in six focal areas:

1. Controlled Environment Agriculture
2. Supply Chain & Infrastructure
3. Healthy Food in Retail Environments
4. Food and Nutrition Assistance Programs
5. Food as Medicine
6. Food Finance

This report focuses on research and opportunities in the area of **Healthy Food in Retail Environments**. As the food system has adapted to the needs of ever-larger retailers, it has increasingly overlooked the needs of small retailers, be they urban corner stores or rural grocers. Yet the market these small retailers represent has substantial, albeit dispersed, purchasing power and economic potential. We see opportunities to adapt to small retailers' needs, while creating innovative new forms of wholesale, distribution, and retail enterprises that expand access to healthy food—creating a scalable, self-sustaining sector of the food system.

Separate reports for each of the other areas are available here:

view resources

Background

The most fundamental characteristic of the modern U.S. food system is a relentless drive for larger and larger scale to reduce costs per unit across the entire value chain, from food production to distribution to sales. For a society that emerged from the Great Depression and World War II with a fixation on providing an adequate supply of affordable calories for its population, the impacts of this drive for scale were profound: whereas the average working-class family in the 1920s devoted one-third of its budget to food, similarly placed families today spend just 10% of their budget on a basket of food that is fresher and more sanitary, and includes a selection of products unimaginable 100 years ago. The average supermarket stocks 40,000 or more stock-keeping units (SKUs), and the scale of the largest supercenters and warehouse clubs keeps growing. C&S Wholesale Grocers, one of the largest grocery wholesalers in the U.S., makes available 137,000 SKUs to its retailer clients. At the same time, our society struggles with obesity and a variety of diet-related diseases due to our unfettered access to this cornucopia.

Supermarkets expanded rapidly after World War II, following suburban migration and taking advantage of less-expensive real estate to create larger stores with more shelf space and greater sales. The suburbanization of the supermarket has contributed to reducing food access in lower income communities and neighborhoods of color in American cities. As Elizabeth Eisenhauer has argued, the suburbanization of food retail and the concentration of race-based urban poverty "signaled divestment from the 'inner city,' and contributed to a 'cycle of decline' that resulted in the unequal and unhealthy food environments seen across American cities today."[3] Others, however, posit that it was the earlier rise of supermarkets within urban areas that created the conditions for low food access. Corinna Hawkes states that the initial introduction of the modern supermarket concept within urban areas forced the closure of small food retailers that were once dominant in city neighborhoods, creating the conditions for areas with limited food access when supermarkets moved out to the suburbs.[4]

Ever-larger food retail enterprises require correspondingly larger investments in real estate, infrastructure, logistics expertise, and marketing. Their scale requires that they be located where they can capture larger and larger sales per store, to produce an adequate return on the larger investment. These stores cannot serve relatively less affluent and less concentrated populations profitably. Small, rural communities do not have the aggregate demand needed to produce adequate revenue for these large stores. Many urban environments, on the other hand, cannot offer an adequate return because they require much higher investment in real estate and logistics. As a result, the food retail landscape is marked by a growing emphasis on large supercenters and corporate-owned convenience and dollar stores, while rural and urban communities alike are left with declining access to grocers that meet their healthy consumption needs.

NYS' food retail landscape reflects these broader, national trends. Across the state, there are approximately 1,000 supermarkets, yet over 250 are supercenters, including Walmart, Target, and Big Lots.[5] Similarly, there are close to 300 big-box food stores currently operating in NYS, including Sam's Club and Costco.[6] The average US supermarket today stocks more than 31,000 stock-keeping units (SKUs). C&S Wholesale Grocers, one of the largest US grocery wholesalers, offers its retailer customers more than 137,000 SKUs.While small, independent retailers continue to operate in both urban and retail areas across the state, the number of warehouses and supercenters has increased dramatically in recent years, rising 163% between 2007 and 2017, while the number of grocery stores only increased by 25%. Likewise, store sales in warehouses and supercenters increased 109% during this time period, while store sales in grocery stores only increased by about 35% between 2007 and 2017.[7]

Public policy experiments designed to incentivize the opening of supermarkets in underserved communities—such as the Food Retail Expansion to Support Health (FRESH) program in New York City—have produced disappointing results. Even when they succeeded in establishing new supermarkets, many of these stores ended up closing, unable to find a path to profitability. Large-scale grocery stores are simply not designed to succeed in these communities. For more on prior NYC projects and their challenges please see the Appendix. Fortunately, they are not the only possible solution.

While the state's food retail landscape is increasing in scale, there has also been a proliferation of small retail locations, though corporately owned and operated. Due in part to population out-migration from rural areas, as well as the scaling up of the food retail industry, the rural food retail landscape now increasingly favors convenience stores and larger supercenters. For example, convenience stores (e.g., 7-Eleven, Cumberland Farms) and dollar stores (e.g., Dollar General, Dollar Tree, Family Dollar) currently outnumber supermarkets across the state (2,200 stores versus over 1,000 stores, respectively); additionally, NYS has over 1,300 drug stores, many of which sell food items to consumers.[8] The period from 1990 to 2015 saw 480% and

526% growth rates in dollar stores and supercenters, respectively.[9] In contrast, there are currently only seven food cooperatives operating in the state, including four established cooperatives and three start-ups.[10] Further, the state currently boasts 400 farmers markets, 250 farm stands, and 10 mobile markets. Online food retailers, including Amazon Fresh, Instacart, and DoorDash, among others, also operate throughout the state.

The middle components of the value chain, wholesalers and distributors, are also pursuing larger scale to serve the largest retailers. Wholesalers have consolidated even faster than supermarkets. As they adjust their operating and profit models to capture the lucrative business of large retailers, they become increasingly unsuited to serving small retailers. For example, small food stores are often unable to meet the minimum order sizes required by full-service wholesalers. Their small orders make them uneconomical for larger distributors to serve. Small food retailers are therefore limited to working with just a few distributors, typically those that specialize in supplying convenience stores.

Since small food retailers have no choice, they also have no negotiating leverage, which manifests in two critical ways:

- Their costs are substantially higher than their larger competitors' costs for the same items.
- The selection of products and brands available to them is very limited—dictated by the limited needs of the typical convenience store—reducing their ability to serve their customers' needs.

Alternatively, some owners of small stores buy from warehouse clubs or supercenters, and then add their own mark-up. Either way, their costs, and hence their consumer-facing prices, are significantly higher than those at large stores. At the same time, their ability to stock a full-service selection of grocery products, including fresh and perishable items, is extremely limited because suppliers are simply not organized to serve them well. While research conducted with a sample of NYS residents indicates that the majority (88%) of study participants within the examined locations use grocery stores (traditional supermarkets, 63%; limited-assortment stores, 25%) as their primary food retail location, only 7% of respondents shopped at supercenters as their primary source of food—although such data does not take into account consumers' geographic proximity to certain types of food retailers.[11] For example, consumers may shop at certain retailers, such as supercenters, because of retailers' location in the community in which these consumers live and/or work.

Despite the growing food retail landscape, food and nutrition insecurity remains prevalent in NYS. While the state has a relatively low food-insecurity rate compared to other states within the U.S., areas with significant rates of food insecurity still exist. These rates are highest in rural counties (e.g., Chautauqua, Montgomery, Seneca), although urban counties (e.g., Erie, Monroe, Westchester) have the highest total number of food insecure individuals. Furthermore, across NYS, more than one-third of adults consume fruit less than once per day, and 21.5% of residents consume vegetables less than once per day,[12] far lower than the recommended four to five servings per day. Produce consumption is lower among males and low-income residents in NYS[13]; other factors associated with low produce consumption include living with a disability, having an income of less than $50,000 per year, and having lower levels of formal education.[14] Given the presence of nutrition and food insecurity throughout NYS, it is necessary to develop innovative and cost-effective solutions that can benefit retailers and consumers alike. Small food retail environments present the most economical solution to address such challenges within rural and/or densely urban areas. In some cases, small food retail stores may be the only existing source of food in many rural and urban communities. Solutions that expand their offerings of healthy food items and/or reduce their costs are vitally needed.

Defining the Opportunity

The financial viability of small food retailers looks challenging, considering their disadvantaged place in the food distribution chain and the declining demographics (in terms of both population and wealth) of rural small towns and urban low-income neighborhoods. We see opportunity, however, in the substantial collective purchasing power of people who still live in these increasingly underserved areas.

It appears to be possible for new kinds of enterprises to aggregate the buying power of underserved populations to provide them with a broader and healthier food selection at more affordable prices. By making use of technology to aggregate the demand of these populations and implementing innovations to make operational costs manageable, one or more scalable and self-sustaining new business models may become part of a solution.

This opportunity may be approached at two distinct points in the food distribution system: (i) food wholesale and distribution, which has grown increasingly unsuited to the needs of rural grocers and urban corner stores, and (ii) small food retail itself, where new business models may make it possible to offer consumers a better selection at more affordable prices.

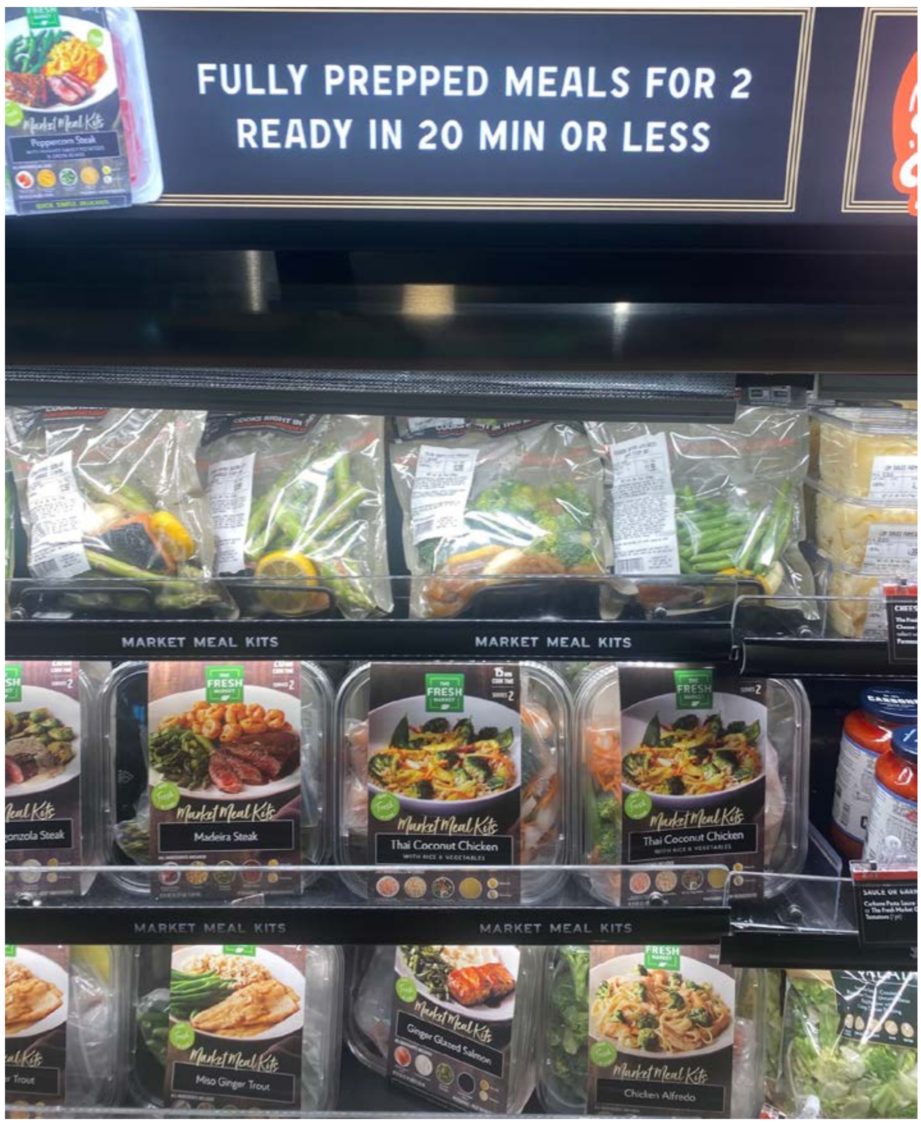
Following are a set of case studies of successful wholesale and retail solutions, featuring several innovative enterprises that continue to operate today with apparent success:

Wholesale and distribution:

- Small grocery cooperatives: purchasing organizations for small retailers (RAD Co-op and Kanbe's Markets)
- Cooperative wholesalers (Olean Wholesale)

Retail:

- Online orders delivered to temperature-controlled food lockers (RAD Co-op, Buche Foods, and FreshPost)
- Consignment suppliers of fresh produce and grab-and-go prepared foods (Kanbe's Markets)
- Self-service and partially staffed retailers (Main Street Market, food lockers operated by the RAD Cooperative)
- Existing small-town retailers expanding to incorporate groceries (AdkAction)
- Social-purpose grocery stores (Foodlink, Rolling Grocer 19)



Case Studies

Case Study 1: Small Grocery Cooperative (wholesale)

As early as 2014, Lori Capouch, rural development director for the North Dakota Association of Rural Electric Cooperatives (NDAREC), heard increasing concern about challenges that local food stores were facing to remain profitable. She did some research and quickly learned that rural America generally was struggling with food access issues. Loss of a food store in a small town makes it a less desirable place to live or establish a business, accelerating the town's decline.

Data on the struggles of rural grocery stores are hard to come by, but NDAREC developed its own database of small grocery stores using its local agents across North Dakota, which revealed the following:

- In 2019, the association's surveys showed there were 104 remaining grocery stores in North Dakota communities with populations of 2,100 or less. By early 2023, that number had dwindled to 87 (-16% in four years). Fourteen of the 87 remaining stores were structured as nonprofits and two were transitioning to a nonprofit model.
- A financial analysis compared the wholesale prices that rural grocery stores paid their suppliers and found that they varied on average by 14%, due to smaller orders and their ability to order only from distributors specializing in convenience stores.

This analysis contributed to a feasibility study that Capouch developed for a rural grocery cooperative, comparing the cost savings of combining several stores' orders into one. This combined order would be serviced by a full-service wholesaler that would deliver to one location. The combined costs to the cooperative of receiving the combined order delivery, parsing it for individual stores, and distributing it to them in a climate-controlled delivery vehicle would have to be offset by the savings provided by the wholesaler.

The projections found that these costs were more than offset by the lower wholesale costs. It was estimated that each grocer in a wholesale buying cooperative could improve its bottom line by $10,000 annually simply by combining orders with other grocers. This was a substantial benefit, when compared with a net profit of just $18,200 for the average rural grocery operator in North Dakota.

NDAREC championed the development of the Rural Access Distribution (RAD) Co-op, ultimately convincing three stores and a restaurant to collaborate. RAD Co-op has been in operation since late 2021. Although the smaller stores had been unable to order from mainstream wholesalers in the past, they now purchase from UNFI, a major food wholesaler, which is the cooperative's primary wholesale supplier. The stores installed a point-of-sale (POS) system from FTS Retail that communicates among the cooperative's stores and enables them to combine orders to meet UNFI's order minimums—for example, rounding up to the next whole case size.

After one year of operation, the cooperative found that:

- At the two stores that gained UNFI, sales increased by 23% and 16%, respectively. Projected cost reductions of approximately 14% have not yet been verified. (North Dakota State University is conducting an evaluation.)
- At least some of the sales increases can be attributed to improved product selection. Two different factors are behind the improved selection: access to a mainstream food wholesaler and the ability to combine orders. UNFI, the wholesaler, offers a much broader selection than the convenience store supplier these stores formerly used. In addition, their combined purchasing power now enables them to order certain products that they could not previously order on their own in UNFI's standard sizes (e.g., full cases).
- In addition to incentivizing consumers to buy more from a rural grocer whose product selection has now improved, these stores' better selection may also help convince customers to shop locally more often and for a greater variety of products, enabling small stores to capture a larger share of their customers' food retail basket.

Better product selection and reduced costs, leading to increased sales and profits, suggest that small food retailers can benefit greatly from strengthening economies of collaboration such as cooperative sourcing operations.

Challenge: Software Adaptation

The RAD Co-op was able to identify a retail POS system developer—FTS Retail in Stafford, Texas—that was willing to adapt its platform so that orders from multiple stores could be combined for delivery (and provide cost savings) but also disaggregated and invoiced separately to individual stores.

Additional Lessons Learned

Local Institutional Food Supply: The RAD Co-op has also been able to pick up the slack when adjacent supply channels struggled. For example, it now supplies several local school lunch programs that were having difficulty sourcing ingredients for healthy meals.

Vendor Adaptation: The wholesaler must be willing to adapt to working with a cooperative. There is, of course, the opportunity for increased sales, but there is also some work to be done to serve a new kind of client. It took months for UNFI, the cooperative's primary wholesale supplier, to enable the stores in the RAD co-op to order without accepting direct delivery (i.e., delivering multiple stores' orders to one location). Since implementing minor operating changes that were needed to serve the cooperative, the company has become a supporter of the concept and has allocated development funding to adapt to the needs of small stores and cooperatives.

Additional practical lessons learned from the launch of the RAD Co-op:

- Businesses don't want to admit when business isn't good. Capouch found that rural grocery owners were reluctant to admit their precarious financial situation. Getting them to participate required sensitivity to this concern.
- A certain level of trust among store owners is needed, along with a willingness to take on a little risk. They needed to change their perspective, from seeing other small stores as competitors, to operating collaboratively as cooperators. Finding people who can work together while changing their business model can be a challenge.

Innovation: Cooperative Wholesaling

NDAREC is developing the next level of innovation to support rural food access: a cooperative wholesale/warehousing system. This system will operate on a larger scale than the RAD Co-op and could serve a much larger territory—a radius of 50 to 100 miles, including a Native American reservation. It will also include some nontraditional uses of its space, such as an area where local producers can bring field-fresh produce to be processed, packaged, and distributed on the same trucks as conventionally sourced produce. It will also include space for a food bank that needs more food-distribution space.

NDAREC launched a feasibility study and put together a steering committee for the wholesale cooperative. The goal is to create an appetite for purchasing foods differently, as well as to test whether suppliers are willing to try something different. The feasibility study will include some initial financial projections, just as the retail cooperative feasibility study did several years ago.

In the same vein, we studied a wholesale cooperative owned by independent retailers in NYS (see below).

Next Steps: Expanding Operations

Now that the initial group of stores has proven that the cooperative works, others are asking to join. Food delivery lockers are the most popular area of interest (see below). Many stores want to obtain grants to install lockers in communities that have no local food retailer. Other kinds of retailers are also interested in partnering, including pharmacies, bakeries, and meat producers. Cooperatives and food hubs can gather both local and conventionally sourced products, and bring efficient deliveries to people with inadequate food retail stores.

Case Study 2: Olean Wholesale Grocery Cooperative (wholesale)

Olean Wholesale Grocery Cooperative ("Olean Wholesale") was established in Syracuse, NY, in 1922 as a collection of more than a dozen retailers in the Central New York area. Over the nearly 100 years that the cooperative was in operation, Olean Wholesale expanded its product offerings and geographic reach, while continuing to fulfill its mission of providing small food retailers with a competitive product selection at reasonable prices in a market that has been increasingly dominated by ever-larger companies.

Olean Wholesale began just as the chain grocery-store business model was gaining popularity. With chain grocery stores able to purchase products in bulk, resulting in lower prices for both consumers and retailers, there was a necessity for independent retailers to adapt their business model to the changing retail landscape. The retail cooperative model lent itself to a variety of competitive advantages for participating retailers.

First, participating in a cooperative allowed independent retailers to pool their resources, allowing them to buy in bulk at lower prices. Second, the cooperative also gave retailers increased scale to purchase advertisements in Sunday newspapers, a necessary adaptation if independent retailers were to retain consumers' attention in the face of increased competition.

Innovation: Collaborating on Advertising and Wholesale Price Advantages

The cooperative model was particularly important for independent retailers such as Nojaim Brothers Supermarket ("Nojaim Bros."), one of Olean Wholesale's founding members, whose operating model and customer base was different from that of a chain supermarket. For example, Nojaim Bros. opened a family grocery store in 1919 in Syracuse, in a neighborhood that would eventually become the ninth-poorest census tract in the United States. The cooperative wholesaler contributed to the viability of its small retail members while still providing these businesses with the flexibility to serve their customer base, many of whom purchased goods through the use of an informal credit system.

Innovation: Equitable Cost Structure for Cooperative Members

Throughout Olean Wholesale's tenure, ownership in the cooperative was proportional to the amount of product purchased by each participating retailer, a model that was found to be more effective than allocating the same number of shares and similar voting rights to each member. What remained similar across retailers, however, were their costs. All retailer members paid the same price, with no additional charges for delivery, regardless of their distance from the warehouse.

While the retailers involved in Olean Wholesale were initially convinced to join by the ability to advertise cooperatively, the group faced product-related challenges, differing needs among the stores, and differing proximity to the warehouse, which affected the cooperative's distribution costs. Ultimately, the cooperative decided to sell its first warehouse, outsourcing this function to P&C Fresh, a relationship that flourished for decades and helped the cooperative manage its wholesale food distribution channel, until P&C underwent a series of mergers and appeared at risk of being acquired.

Olean Wholesale operated as a full-service grocery wholesaler, carrying products ranging from meat, dairy, and produce, to non-food, household, and personal-care goods. It also offered a variety of retailer services (e.g., operations, technology, advertising, store development) and private label products, including more than 1,400 items under the Shurfine brand name, as well as other brands, including TopCare and Valu Time.

By 2019, Olean Wholesale was serving more than 270 independent food retail and convenience stores in three states—New York, Pennsylvania, and northeastern Ohio—generating over $300 million in annual sales, with profits distributed to the owners at the end of the year. It was praised for its ability to offer a culture of personalized customer service and comprehensive offerings, as well as a robust network of partnerships among independent retailers.

Challenge: Cooperative Form of Governance

Olean Wholesale was sold to C&S Wholesale Grocers, the largest wholesale grocery supply company in the U.S., in 2019. While some owners opposed the sale, a majority of mostly older retailers were seeking to cash out and retire, and hence willing to risk the disappearance of the cooperative after its acquisition. One of the primary reasons for the sale included ongoing challenges to the financial viability of independent food retailers in the face of buying power of super centers and dollar stores.

Challenge: Inadequate Enforcement of Antitrust Laws

Paul Nojaim, one of the current owners of Nojaim Bros., whose family was involved with the creation of Olean Wholesale in the early part of the 20th century, also notes that changes in the enforcement of antitrust laws allowed the largest supermarkets to gain market advantages. By convincing the FTC that they were a unique "class of trade," giants like Costco and Walmart were not only able to secure lower costs than smaller competitors, but also negotiate with manufacturers directly and source custom product packages that were unavailable to small retailers. Perhaps most impactful, the largest retailers could negotiate unusually favorable terms. For example, Walmart does not pay its suppliers for their products until these have been scanned through the checkout system—lowering its working capital costs by effectively forcing suppliers to sell on consignment, something small retailers are unable to do.

As Nojaim explains, the Robinson-Patman Act, enacted in 1936, mandated that large food companies and wholesalers had to use the same sales terms for all customers and operate with complete price transparency, offering the same price to everyone, whether a customer was buying a case, a pallet, or a container of a product. As large retailers such as Walmart entered the food retail business, however, they appealed the policy to the Federal Trade Commission (FTC) and successfully advocated for a rule change allowing for different terms among different "classes of trade"; furthermore, lack of enforcement of Robinson-Patman's requirement that all prices be made public further cemented large retailers' advantages.

Olean Wholesale enabled small retailers to consolidate their purchasing power and gain some of the cost advantages of larger scale businesses. However, it did not allow them to pierce the "class-of-trade" restrictions introduced by hyperscale retailers in the late 20th century. Organizations like the Institute for Local Self-Reliance and the Rural Grocery Initiative at Kansas State University continue to oppose the expansion of supersized food retailers, especially where they use their influence with suppliers to undermine the economic viability of local and independent retailers. These organizations argue that the advantages gained by this "class-of-trade" construct are unlawful under the Robinson-Patman Act. There comes a point, however, when small businesses no longer have the resources to compete. That may be what led the owners of Olean Wholesale to accept C&S' acquisition offer.

As one investigates potential solutions that improve access to healthy, affordable food in underserved communities, both rural and urban, one will have to consider how retailers may be compromised by "class-of-trade" disadvantages.

Case Study 3: Online Orders Delivered to Temperature-Controlled Food Lockers (retail)

In the RAD Co-op's development phase (see Case Study 1), its members learned about food-delivery lockers. This innovation allows consumers to place an order online and receive delivery in a climate-controlled locker with three temperature zones: room temperature, refrigerated, and frozen. Once delivery is made, consumers receive the code that will open the locker(s) with their order and can pick it up anytime, at their convenience.

A supplier of these lockers, T4 Solutions of Pewaukee, Wisconsin, convinced one of the RAD Co-op's member stores to test lockers in two neighboring towns that have no grocery store. The lockers are due to be deployed in the second quarter of 2023.

In nearby South Dakota, Buche Foods saw the potential for lockers to serve a Native American reservation. It set up computers in a community area where consumers could place their orders online. These lockers are also due to be put into service in mid-2023.

Challenge: High Capital Cost

Currently, the capital cost of the lockers is substantial. On a purely operational basis, however, they should be profitable, after accounting for the modest cost of electricity and a Wi-Fi internet connection.

FreshPost, a start-up company based in Chicago, Illinois, is planning to pilot food lockers as a business that rents space to retailers—an innovation that eliminates the lockers' capital cost as an obstacle to adoption. FreshPost's business model allows for more than one retailer to use a locker location, improving the unit's utilization and hence its per-order cost.

The business model of online ordering with delivery to food lockers is one that has been fairly well tested, although not yet in the U.S. T4 Solutions' locker supplier is an Australian company that has been selling temperature-controlled food lockers for almost 10 years in Australia and Canada, where the product has performed well in both very hot and extremely cold weather. While there is still some work to be done to prove lockers' viability in the U.S., the solution is not untested.

Challenge: Software Platform

This type of enterprise requires the same software adaptation required by the RAD Co-op (see Case Study 1) to place and deliver orders from multiple stores to multiple locker locations. FTS Retail has done most of the work needed to provide this solution, although some minor effort will still be required to deploy lockers.

Case Study 4: Consignment Supplier of Fresh Produce (retail)

Kanbe's Markets, which launched in early 2020, was conceived as a food access project that would improve the availability of fresh produce (and other perishable items) in small independent retailers in and around Kansas City, Missouri. It currently serves 41 independent retailers in Kansas City using easily installed refrigerated produce coolers as well as basket racks for room-temperature items (e.g., bananas). It has a goal of expanding to 300 retailers.

Kanbe's sells food in small local grocery stores. The store owners pay only for what sells and take on no inventory risk.

Innovation: Turnkey Produce Department with No Inventory Risk to the Retailer

The business model for Kanbe's Markets involves several innovations:

- It installs refrigerated produce units that plug in to a standard electrical outlet, requiring almost no installation effort.
- It services each store five days per week, delivering fresh items, taking back over-ripe ones, managing the display, and maintaining the quality and appearance that is crucial to fresh produce sales.
- It sells the produce on consignment, providing the store owner with 30% of sales without incurring any inventory risk.
- It operates under a blended governance model that includes both a for-profit operation and nonprofit grocery supplier. The nonprofit status and blended operating model allows Kanbe's to raise money from grants and source food from wholesalers on favorable terms, offering these wholesalers a tax deduction for produce donations or sales made at a deep discount.

Innovation: Operations

Kanbe's tries to stock 25-30 items in its produce units. It would like to offer more and different options, based on what stores in different neighborhoods want, and it is learning who the store's customers are and how they flow through these small food markets—i.e., understanding the market, in addition to the food. Kanbe's is also evaluating different kinds of delivery vehicles; for example, small dock-high delivery trucks are used in Mexico City. These may be a better fit for an urban area, where larger delivery vehicles can't operate as efficiently.

Kanbe's truck drivers manage deliveries, returns, in-store merchandising, and informal information gathering. There has been little turnover in drivers, which has been critical to the enterprise's success. One driver attended a course to obtain a special certification, during which Frito-Lay offered him a substantial raise for similar work. The driver turned down the offer because he felt committed to Kanbe's social mission.

Kanbe's operates five trucks on three routes, reaching a current total of 41 stores that are relatively close to each other. It estimates that its current fleet could service as many as 50 stores on the same three routes—17 stops per truck per day. The business is still learning how to maximize the efficiency of its delivery routes. Currently, it operates three refrigerated flat-front Isuzu box trucks, one refrigerated sprinter van, and one refrigerated box truck. Although it is evaluating small trucks, sprinter vans are easier to maintain.

Innovation: Financial Model

Kanbe's goal is to produce $500 in revenue per store per week, which it estimates would be its break-even point. That level of sales would cover the direct and indirect costs of the driver, truck, fuel, warehouse operation, marketing materials, administration, and accounting. None of Kanbe's clients have reached $500 per week yet (the average is $100) but some have grown to $200 or $300 per week. Kanbe's hopes to add sandwiches and other grab-and-go items, improving both total sales and access to healthy food in their client stores.

The business would like to grow from 41 stores on three routes to 300 stores on 18 routes. Kanbe's believes that it could service this volume of business with its current 30,000-square-foot warehouse. If it could achieve $500 in weekly sales per store, this would generate $8 million in revenue and make the enterprise less dependent on philanthropic fundraising.

Its financial model aims for 30% cost of goods sold, 30% commission to retailers, and 40% for overhead and profit. Kanbe's ability to reach its 30% goal for the cost of goods sold depends on the success of its innovative food sourcing operation.

Innovation: Hybrid Sourcing and Food Waste

Kanbe's works with two wholesalers, Liberty and C&C Produce, on a sourcing strategy that combines (a) purchasing at standard wholesale prices, (b) purchasing at a significant discount relative to wholesale, and (c) donated produce. This results in a low blended cost, but also maintains relationships that are profitable for the wholesalers. In 2022, Kanbe's received 700,000 pounds of donated produce. Standard quality control at wholesalers and large retailers evaluates produce by the pallet; if a wholesaler or retailer finds a few bad items in a batch, they tend to reject the whole pallet, not wanting to sort through the entire batch. Wholesalers are willing to give away these imperfect pallets for the tax deduction, but they want to work with organizations that can receive the donations at scale. The receiver of this produce—the food pantry or consignment grocer—then needs volunteers to sort the pallets of imperfect produce into four streams:

1. Retail quality: This stream must be **supermarket perfect** in order to build store-owner trust and consumer acceptance.
2. Imperfect but edible produce: This stream is donated to about 35 nonprofit food pantries and soup kitchens in Kansas City's **emergency food system**. Kanbe's hopes to use this stream to create more healthy food, including value-added meals and products like jams and jellies.
3. The next level down can be used **in soup or animal feed**: pig and chicken farms will pick up this produce for feed.
4. The worst produce is sent to **compost**: volunteers remove and recycle any plastic wrapping and compost produce that's spoiled or otherwise unusable. Some vegetable growers will pick up discarded produce for compost.

Challenge: Contributing to a Zero-Waste Food System

Kanbe's eventual goal is to help its suppliers achieve zero waste, while recovering as much value as possible from the sorting process. Kanbe's discussed establishing a working relationship with Associated Wholesale Grocers (AWG), a wholesale cooperative based in Kansas City, Kansas (with over 1,100 member companies in 28 states, and annual sales of about $10.6 billion), but Kanbe's CEO said, "We would drown in 1% of the produce they throw away every day." Those discards currently go to landfill.

Both Liberty and C&C operate warehouses that range in size from 250,000 to 300,000 square feet. In comparison, Kanbe's warehouse is 30,000 square feet and can accommodate a lot of growth beyond its current business.

Kanbe's aims to create an opportunity out of waste, which it believes is the core problem for the U.S. food system. It sees enormous potential in the opportunity to rescue even just 10% of U.S. food waste. (Currently, an estimated 35% of the food produced in the U.S. is wasted.)

At the moment, Kanbe's only distributes produce, but it would like to offer distribution of a whole-diet variety. Dairy is a challenge, because it's impossible to know if something in a closed container has gone bad, and it involves more regulation. Processing cut fruit is expensive, requiring licensing and a "clean room," which costs several million dollars, but C&C offers that service and could become a source for Kanbe's.

Additional Lessons Learned

Kanbe's is making progress toward proving a business model that puts fresh, perishable food in corner stores at no risk to the store owner. Utilizing a hybrid for-profit/nonprofit business model enables the company to source produce at a low blended cost. The use of small (refrigerated) Sprinter vans for daily deliveries makes the operation nimble.

Case Study 5: Self-Service Supermarket (retail)

Alex Ostenson didn't start out in the grocery business. Using problem solving skills that he gained through his training as a diesel mechanic, he sought to tackle a major problem affecting food access in Evansville, Minnesota, a small town of 1,500 people: the closure of the town's only grocery store. In the three years following the closing of that store, residents "saw the town go dormant," according to Ostenson. He saw an opportunity to introduce an innovative food retail model that could serve the needs of the community and remain financially sound. Ostenson recognized that a traditional food retailer wouldn't work in a town of Evansville's size. It's not unusual for Evansville's residents to return home from work later in the evening, when the town's businesses are typically closed. The lack of a grocery store limited the ability of residents—especially those with families and children, or those working long hours—to purchase food conveniently.

In 2020, Ostenson opened Main Street Market in a 900-square-foot building. Customers pay a membership fee to shop there and the store is staffed on Tuesdays, Thursdays, and Saturdays, when deliveries are stored, shelves are stocked, and the retail space is cleaned. Staffing the store three days per week also helps people understand that there's a family behind the business, since Alex and his wife are the staff. When customers have a problem, they are invited to call or text Alex for help, or jot down their concerns and ideas on the store's suggestion chalkboard. On days when the staff is not in the store, key-tag technology allows customers to sign in and purchase groceries. Altogether, about 90% of store visits occur outside of normal business hours, validating the value of the store's 24/7 accessibility.

With its small stockroom, the store carries all basic items customers need: frozen food, meat, dairy, and produce, when available and affordable. According to Ostenson, many customers come in and buy a few days' worth of groceries; typically, these are customers that do a week's worth of shopping in big-box stores located in other towns near their jobs, and then fill in the gaps with a few items at Main Street Market. Others, however, purchase an entire week's worth of goods. Some customers don't shop there regularly but still value the store's accessibility enough to pay the membership fee.

Innovation: Membership Fee

Main Street Market utilizes a membership system, which bolsters its financial viability, allowing the store to be self-sufficient since it opened in 2020. There are three membership options: $30 for three months, $50 for six months, and $75 for one year. To sign up, new members must come to the store when staff is there so that they can be shown how the store is set up and get connected to the keycard system. Currently, the business has approximately 125 members, 110 of whom are local Evansville residents.

When the first round of renewals came due, Alex included a note proposing that undecided members could take $10 off the membership fee. About half of the members said they would have renewed anyway. Others were influenced to renew by the offer. He thinks that a major factor is that people see the value of having a store in town and want to support it. Main Street Market's memberships have had an estimated renewal rate of over 80%.

Innovation: Pricing and Costs

While Main Street Market doesn't stock every brand, which is a change from its initial retail model, the store customizes its purchasing in order to stock those products that customers prefer. At times, the store has had to stop carrying certain products, particularly produce that is unaffordable because of the small order quantities placed with its mainstream food distributor. During the farm season, however, the store can purchase products from local residents who have gardens, allowing customers to buy fresh items at almost half the price of chain grocery stores like Walmart. Altogether, Main Street Market remains competitive with large retailers on most food items, with some customers stating that the store is cheaper than Walmart. Because of its low operating costs, the store doesn't necessarily use the suggested retail price, instead providing its customers with affordable purchasing options and developing a loyal customer base.

Case Study 6: Existing Small-town Retailer Expanding to Incorporate Groceries (retail)

NYS's North Country region faced a problem plaguing many rural communities in the U.S.: the closure of more than a dozen of grocery stores in the past few years, leaving its residents with limited access to fresh, healthy, and affordable foods. To address this challenge, AdkAction—a community organization established in 2007 to advocate for the specific needs of Adirondack residents—began working to address food insecurity in its programs. Now a certified 501(c)(3), AdkAction has developed a unique food retail model that incorporates local grocery options into other kinds of stores through partnerships with local "champions."

Innovation: Business Model

In 2013, the closure of the only grocery store in Keeseville, NY, left residents throughout Essex County with limited retail options: drive many miles to the nearest remaining grocery store or rely on dollar stores for their household groceries. Changes in the local food retail landscape were especially difficult for residents with limited mobility, transportation, and budgets. AdkAction's innovative retail strategy emerged from this closure.

In 2017, AdkAction developed a public-private partnership with Keeseville Pharmacy to open a "Farmacy," which incorporates food retail into an existing pharmacy location. This reduces the cost of opening and operating a new storefront while leveraging existing community assets to combat food insecurity. Further, adding food items to an existing store can draw on the existing foot traffic and customer base for economic viability.

Under this partnership, AdkAction collaborated with the long-time owner of Keeseville Pharmacy, Dan Bosley, who bought the shuttered RadioShack store next door to his business. AdkAction provided two three-year rounds of technical assistance to the Farmacy, including a paid staff member to support the endeavor and assistance acquiring grant funding and equipment to outfit the newly acquired space with coolers and connect the location with procurement systems. At the Farmacy, Keeseville residents can purchase healthy food, including fruits, vegetables, dairy, meat, and value-added products, within the expanded pharmacy space. The Farmacy also accepts SNAP (Supplemental Nutrition Assistance Program, formerly known as "food stamps") and WIC (Special Supplemental Nutrition Program for Women, Infants, and Children) benefits. Keeseville Pharmacy now uses approximately one-third of its square footage for food items.

Innovation: Local Sourcing and Educational Programming

While AdkAction's Farmacy model provides North Country residents with increased access to an expansive selection of healthy foods, it is also includes an emphasis on local sourcing of food items. Although food retailers are increasingly scarce in rural communities in the North Country, the area continues to host an abundance of agricultural producers. Stocking local food not only provides expanded options for consumers, but also creates ripple effects by enhancing the region's local economies.

AdkAction also offers cooking education programs to further reduce barriers to food access. Although the Farmacy stocks healthy and local food, residents may still face obstacles related to cooking and/or processing food items. Therefore, AdkAction offers a variety of educational resources, including cooking classes, demonstrations, recipe development, and local food promotion.

Innovation: Expansion and Adaptation

AdkAction replicated the Farmacy model in 2019 with the opening of the Mountain Weavers' Farm Store in nearby Port Henry, New York. In this case, food retail items are stocked next to high-quality handmade baskets made by local residents instead of pharmacy products. Although the partnership is somewhat different, it still offers products from local farms and food processors, as well as educational programming, including community cooking classes, on-site tasting events, and weekly recipes. The model has since been adapted to another location, bringing the total to three: the Farmacy in Keeseville, the Mountain Weaver's Farm Store in Port Henry, and a location in Rouses Point. AdkAction plans to expand the program's capacity, use of technology, and number of locations.

Innovation: Farmacy Toolkit

AdkAction's executive director, Sawyer Bailey, states that the model was "unheard of," when the Farmacy first launched. The organization has since developed a Farmacy Model toolkit to assist other communities in adopting this innovative food retail model. The toolkit—which offers recommendations on topics such as identifying potential partners, securing funding, and implementing and sustaining the business—can be adapted to any retail site that is willing to carry food alongside its normal products, making the model suitable for both urban and rural communities facing challenges related to fresh food access.

Bolstering the financial viability of local grocery stores is an important antidote to a vicious cycle that is undermining local economies in rural America. As the population of a rural community declines or grows less prosperous, sales at its food retailer decline. The decline may also be accelerated by the establishment of big box retailers or dollar stores, even those that are too distant to satisfy residents' weekly food shopping needs; less frequent visits to these disruptors can still cannibalize the demand that a rural grocery store once served. The resulting deterioration in sales may be the final factor that undermines a local store's profitability or financial viability.

The resulting disappearance of a local food retailer then makes a community less desirable for both current residents and those considering a move there. The inevitable decline in the community's population makes a local grocery store even less viable, perpetuating a vicious cycle of decline.

AdkAction's innovation of adding groceries to other kinds of retail stores, which enables them to share the costs of overhead and staffing, is another valuable solution to addressing the decline of rural economies.

Case Study 7: Social Purpose Grocery Stores (retail)

A social purpose grocery store (SPG) is a food retailer that is typically a nonprofit organization or is owned by one. Its purpose is to provide high-quality food at affordable prices in underserved communities, with the goal of reducing food insecurity. An SPG would sell food at below-market prices but, unlike a food bank, it would not distribute that food for free.

The basic premise of the SPG model is that even though food-insecure people cannot stretch their food budget for a full 30 days every month, in the aggregate they still control significant purchasing power. If we look at this as an asset rather than a shortfall, it is theoretically possible to create an enterprise that leverages this asset to capture lower costs from suppliers.

Inevitably, the SPG must provide differential pricing or targeted discounts to customers experiencing different levels of food insecurity. The mechanism for implementing this need not be complex or stigmatized.

Rolling Grocer 19

Rolling Grocer 19 (RG19) is a small SPG that has been operating since 2019 in Hudson, New York. RG19 operates as a cooperative with about 2,000 consumer members (about 900 of whom are regularly returning customers). The organization is evaluating what kind of governance will best serve its customer base: cooperative, nonprofit, or B Corporation. RG19 delivers the highest quality natural and organic food that it can, emphasizing fresh and local produce and locally produced value-added products. Development goals include growing its prepared food offerings and home delivery services, both of which were recently launched in collaboration with a local food bank, Columbia County Recovery Kitchen.

Innovation: Three-Tier Pricing

RG19 operates on a three-tier pricing system, based on individual consumers' financial status. Members register via a simple form that assigns them to a pricing tier and are entered into the POS system. RG19 does not verify eligibility criteria. Every item in the 800-square-foot store has three prices, which the POS system automatically applies on checkout. There is no public disclosure of the shopper's pricing tier.

The most inexpensive tier sets prices at 10% over RG19's cost, the middle tier at 20% over cost, and the highest tier at 40% over cost, which is a "typical" retail mark-up. The 900 regular customers are roughly evenly divided among the three tiers, and the average checkout basket is about $30. Given the membership composition by tier, RG19's average realized mark-up is about 23%, which is about 17% lower than typical retail pricing.

Innovation: Business Model

With this pricing structure, each member pays something toward the store's operating costs, and even those paying the highest prices are theoretically paying no more than they would pay at another independent retailer. However, the store is not yet operating at breakeven. After four years (including the pandemic), annual sales have reached about $750,000, but RG19 remains dependent on donations to fund an annual operating loss of $250,000 to $300,000. At its current location, it projects growth up to $1.5M in sales but has not yet determined whether that level of sales will bring it to operational breakeven.

As much as possible, RG19 contracts with local farmers for its fresh produce, dairy, and meats.

Foodlink

Based in Rochester, NY, Foodlink is a regional foodbank that serves a ten-county region and is working to launch a SPG. Several years ago, Foodlink worked with a Canadian consulting firm, Mushroom Cloud, to produce some very thoughtful research suggesting that SPG retail might be a more effective way to provide food assistance than free food banks. Mushroom Cloud's analysis demonstrated that SPGs could put more and better-quality food on the tables of low-income consumers using money they already have.

Many variations of the SPG model are possible, ranging from means-tested, members-only models like RG19, to full-fledged supermarkets that are open to the general public. In some models, everybody pays the same reduced price, while in others, all shoppers are offered a base discount price, with an additional subsidy provided according to need. Mushroom Cloud's model estimates that to fill the "gap between food-insecure peoples' food budgets and their consumption needs using money they already have, an SPG would have to offer discounts averaging 22% below market prices." However,

> "Charitable food assistance implicitly assumes that the market will set prices and that when people are priced out, food banks will do their best to fill the gap. But if food banks were grocery stores, they could exert significant influence over the price of goods, especially in comparison to commercial alternatives. Instead of starting with the shortfall people experience, the starting point for this model would be the three weeks each month where, on average, food-insecure people can afford to feed themselves. SPGs, run by organizations that currently operate food banks, could build on that base … by providing a place where that income goes further."

(It is interesting to note that Mushroom Cloud's estimate of the need for an average 22% discount relative to typical retail prices is not much lower than RG19's current realized prices, which average approximately 17% below typical retail levels.)

Competing with Dollar Stores

Dollar stores have created a new retail niche and are growing rapidly. As of 2021, there were over 35,000 dollar stores across the United States, an increase of roughly 5,000 (16.7%) from 2017 to 2021. To put that in perspective, Walmart operates just over 4,700 stores in the U.S. and Costco fewer than 600.

Rather than a “big-box” strategy, dollar stores follow what has been dubbed a “small box” approach. Dollar stores have relatively small physical footprints, averaging 7,500 square feet compared with 180,000 square feet (24 times larger) for a typical Walmart and 146,000 square feet (21 times larger) for a typical Costco. With their small stores, dollar stores tend to swarm their target markets, establishing numerous stores in close proximity. They often open very close to existing grocery stores and have a significant impact on the latter’s financial viability.

Dollar stores stock a wide range of household goods, emphasizing low-maintenance items that don’t require frequent employee attention and pose little inventory risk from spoilage. The food items they carry tend to be shelf-stable, processed foods that on their own do not constitute a healthy diet. While Dollar General is planning to place fresh produce in 10,000 stores in the coming years, only a few thousand currently offer it, and those that do typically do not provide a broad assortment of fresh produce.

Dollar stores’ pricing appears to be low, but it can also be misleading. They may stock items that are closer to their expiration dates than a supermarket would, and they may offer prices that appear nominally low but are not really a bargain on a per-unit basis. They may even contract with food manufacturers to source package sizes that are not available to other retailers in order to offer misleadingly low nominal pricing.

Because grocers operate on very thin margins and often rely on profits from packaged items to subsidize their produce and other perishables, losing even a fraction of their revenue from items like soft drinks and cereal can destroy a business’s financial viability. It has been said that Dollar General “takes the gravy right off the top.” An independent grocer cannot absorb losses for very long before it has to close, whereas Dollar General and Dollar Tree, large publicly held corporations, can sustain an unprofitable new location long enough to eliminate the competition.

The combination of dollar stores’ opportunistic product and pricing strategies with their physical swarming strategy is especially damaging to grocery stores’ sales. And while the dollar stores siphon off a portion of grocery sales—often enough to drive small food retailers’ sales volumes below the break-even point—they do not provide a substitute for the grocery store. Reports claim that when dollar stores cannibalize 10% to 20% of an established independent store’s sales, that can often be enough to drive the grocer out of business.

Dollar General, the category leader, has taken some tentative steps to offer a healthier mix of food items, launching a program called “DG Better For You” in 2018, which promotes healthier items at attractive prices. Over time, Dollar General expects the DG Better For You initiative to include over 130 products, about 75% of which are expected to be from its Good & Smart private label.

At the beginning of 2023, Dollar General operated more than 18,000 stores in the U.S., while Dollar Tree operated more than 16,000 (including Family Dollar, with which it merged in 2014). Although roughly 75% of the U.S. population presently lives within 5 miles of a Dollar General store, the company’s intensive location strategy suggests the potential for nearly doubling its store footprint. In a December 2022 earnings call, Dollar General’s CEO put a precise number on the company’s vision: “You know, in the U.S. alone, we have 16,000 additional opportunities [potential new locations], and we feel great about our ability to capture those.”

The National Grocers Association and the Institute for Local Self-Reliance, among others, have been calling for more aggressive enforcement of the Robinson-Patman Act and other antitrust laws that seek to protect small independent retailers from what they describe as predatory and monopolistic behavior by large corporate retailers.

NYU MBA Team Competition

In spring 2023, NYU's Center for Sustainable Business conducted a pitch competition in which 10 teams of MBA and other graduate students competed for a total of $15,000 in prizes for the best three pitches. The teams studied the problem posed by dollar stores and proposed strategies for transforming Dollar General's food strategy, with the goal of making Dollar General stores sources of healthier, more affordable foods in their communities. The student teams pitched a number of innovative new strategies that the competition's judges thought merited further consideration by the company. These included:

- Creating a meal kit program in-store, sold under Dollar General's Good & Smart brand. This program would provide the meal kit ingredients, recipes, and instructions in-store, eliminating the expensive delivery and advertising costs of mainstream meal kits. Several teams pitched this idea, noting that it would: (a) leverage Dollar General's purchasing power for large quantities of meal-kit ingredients; (b) provide consumer education on tasty and culturally appropriate ways to shift consumption in a healthier direction; (c) provide a convenient way to cook with fresh ingredients, while simplifying and reducing the time required for meal preparation (a crucial factor for families with multiple wage earners and those working multiple jobs); and (d) reduce food waste, since meal kits provide pre-portioned ingredients.
- Adopting simple policy adjustments that reflect the needs of lower-income customers and, at the same time, offer incremental sales opportunities for Dollar General. For example, Dollar General has not applied for approval to accept WIC payments, even though it already accepts SNAP Electronic Benefits Transfer (EBT) cards. Doing so would benefit its customers while also attracting WIC users to Dollar General stores.
- Leveraging Dollar General's purchasing power to access large volumes of "imperfect" and "ugly" produce at low cost. Not only would this initiative help the company offer high-quality produce at affordable prices, it would also reduce food waste, an enormous problem in the food system.
- Family fresh food boxes incorporating fresh items sourced opportunistically to achieve a significantly discounted total price. Tiered pricing was also suggested to encourage subscriptions and repeat purchases.

Key Learnings From Stakeholder Interviews

The food retail sector is diverse, encompassing a variety of models that range in size, population served, items stocked, and operational logistics. Still, interviews conducted with stakeholders indicate shared challenges and opportunities among small businesses operating in this sector.

Financial Viability, Wholesale, and Cooperative Purchasing

First and most notably, stakeholders affirmed the challenges of remaining financially viable as small, independent grocery stores. In keeping with national trends, multiple stakeholders spoke about the closure of small, independent food retailers in their communities, driven in part by competition with big-box and dollar stores that enjoy lower costs, greater product access, and the ability to undersell smaller grocery stores. These large competitors can skim a portion of the food business—including shelf-stable, processed foods—without offering consumers the full line of healthy groceries they need. In doing so, the big-box and dollar stores substantially weaken small full-service grocery stores without offering a real substitute.

A leading theme shared by stakeholders relates to challenges in purchasing items at competitive prices. For example, multiple stakeholders across both urban and rural areas shared that wholesalers have minimum buying requirements; stores that don't meet certain minimum order volumes may be shut out from working with certain distributors. Barriers were also noted regarding legal and regulatory requirements, such as the lack of enforcement of the Robinson-Patman Act, as well as purchasing and stocking affordable perishable items, such as fruits and vegetables in retail locations like corner stores.

While some recounted stories of retailers that purchase foods from big-box stores, such as Sam's Club, because it's cheaper than the distribution channels available to them, others noted the presence of retailers who participate in group or cooperative ordering. As illustrated by the case studies above, cooperative purchasing has been successfully implemented in rural communities, and a similar model was of interest to urban retailers.

Changes to Overhead Cost and Product Selection

Alongside efforts to increase financial viability through the adoption of new purchasing models, multiple stakeholders shared ways in which their businesses seek to reduce overhead costs. In rural communities, for example, retailers have been able to leverage unused or vacant storefronts to start their food retail operation, eliminating the necessity of purchasing and/or building a new retail space; other retailers have gained similar benefits through partnerships with existing organizations, such as pharmacies. While such partnerships are detailed in the case studies above, new retail operational models were also shared, including the utilization of a self-service concept, either through brick-and-mortar operations or food lockers, and mobile or delivery retail operations.

Elsewhere, stakeholders shared an interest in other innovative models, such as SPGs, municipally owned grocery stores, nonprofit stores, public-private ownership, and school-run stores, noting that the introduction of non-traditional retail models is likely to continue due to overarching trends in the U.S. food retail landscape. A public-private partnership model, in which an independent business owner owns the inventory at the store, but some other party (e.g., a community foundation, economic development foundation) within that community makes the capital investments (e.g., buildings and equipment) was discussed more than once. This model may allow for leasing of buildings at below-market rents, making it easier for these businesses to stay in business, or assist with business transitions, if owners of a grocery store are getting ready to retire.

Stakeholders also shared various ways in which they sought to *increase* revenue, such as through the ability to offer prepared foods and complete meals. Prepared foods offer customers the ability to grab fresh and affordable meals on the go, especially if they aren't stopping in a retail location for a full shopping trip. For rural residents in particular, stakeholders noted the importance of making it worthwhile for these consumers, especially those traveling in cars, to stop and purchase food items. Grab-and-go food items, like fruit salads, may work better for a specific food retailer than whole, unprocessed produce, providing benefits for both retailers and consumers. Retailers' ability to offer different products, however, is often dependent on stores' infrastructure, such as cold storage systems, deli equipment, and grills.

Still other stakeholders spoke about the importance of offering local produce; some retailers, for example, benefited from the overflow of customers who could not shop at a farmers market during operating hours. Other businesses benefited from filling in gaps that existed not only in geographic areas with low food access, but also within racially and ethnically diversifying communities. Adapting retail offerings to meet consumer tastes, especially culturally appropriate items, has benefited retailers' bottom lines and helped to develop a loyal customer base. Lastly, several retailers shared ways that they have sought to attract customers through physical improvements to their stores, such as new signage, awnings, and produce stands.

Linkages with Other Parts of the Food System

The food retail sector does not operate in isolation, but rather relies on connections between grocery stores and other actors, such as agricultural producers. Stakeholders shared that it is often difficult for local producers to sell their produce to large stores like Kroger and Walmart. In these cases, selling to small grocery stores provides retailers with an edge over their competition, as well as the opportunity to offer fresh, healthy produce at lower prices by removing intermediary food system actors, such as distributors and aggregators. Many stakeholders shared a desire for, or a current practice of, stocking local produce, in both brick-and-mortar and mobile locations. Community supported agriculture (CSA) was another way of providing local produce to consumers.

The traditional CSA model provides farmers with payments at the beginning of the growing season to fund the costs of equipment, seeds, supplies, and salaries. Benefits to the farmer include avoiding high-interest loans to fund these costs and a degree of crop insurance, since customers share in the risk of a bad harvest or the bounty of a good one. Benefits to the consumer include obtaining the freshest possible produce, the satisfaction of supporting local farmers, and lower prices from a direct-to-consumer model that cuts out the middlemen.

The CSA can be a win-win for farmers and consumers. Yet low-income consumers may lack the capacity to pay upfront for a season's produce. There are several potential models that could close the gaps and help subsidize the difference. As seen in one case study, Soul Fire Farm15 accepts SNAP EBTs and WIC Farmers Market Nutrition Program coupons on a sliding scale based on self-reported income. In this case, more privileged consumers pay more and subsidize the price for those in lower-income brackets. Soul Fire Farm also allows monthly payments from low-income members, who sign a contract committing to regular payments instead of paying the full cost upfront. The CSA absorbs the cost of bad debt, but budgets for a certain amount of it. Finally, the farm includes a "solidarity shares" program where members of the community can buy a share for a neighbor to be delivered at no cost to the recipient. This model is supported by community members, not subsidized by grant funds.

In another case, the nonprofit Center for Agricultural Development and Entrepreneurship (CADE) used a fiscal sponsorship model to help a CSA partner to obtain funding from private sector investors, to offset or subsidize the price of food for low-income consumers. Toward that end, CADE acted as a fiscal sponsor, accepting donations and channeling the funds to the CSA. Contributors received written confirmation of their charitable gifts. A third model for engaging the private sector that could be explored might be the creation of a philanthropic investment "CSA fund" that would make the upfront CSA payments to farmers—guaranteeing small farms the working capital and safety net these payments provide—and then recoup a large portion of the payments as consumers purchase their CSA shares in weekly increments, refilling the fund for the next year. This type of fund might be a more attractive vehicle for grant applications, especially for foundations that are interested in innovative approaches to funding and investment in this space, because it would build equity over time that could be used for both (a) sustaining small farmers and (b) providing affordable fresh produce to underserved communities.

Suggestions for Further Research

Ou research identified at least three ideas that met our criteria for further study, planning, and development, because we felt (a) they can be implemented relatively easily in NYS; (b) they are scalable—a successful proof-of-concept could be expanded statewide or beyond; and (c) they are self-sustaining—the economics of the solution would not require philanthropic or government subsidies over the long term (although all of these ideas will require subsidization during their pilot phase). From most to least scalable, these opportunities are:

1. Independent grocer cooperatives
2. Lockers or self-service grocery stores
3. Social purpose grocery stores

1. Independent Grocer Cooperatives

The first development opportunity we see is to seed the creation of an organization that would tap the large but widely distributed resource base of rural food consumers, as has been convincingly demonstrated by the RAD Co-op in North Dakota. It would be fairly simple to adopt a strategy from the RAD Co-op playbook, recruiting independent rural grocery stores in reasonable proximity to one another to form a cooperative. The advantages that the RAD Co-oper obtained for its members should be available to rural grocers in NYS as well.

Our "game plan" for researching and developing an opportunity of this kind is to connect with rural grocers that have demonstrated an interest in the broader trends and policies that affect their business, with the intention of identifying motivated individuals who could lead the formation of a cooperative. We would try to emulate Lori Capouch, of NDAREC, who played the "seed" role so successfully for the RAD Co-op—encouraging, supporting, and bringing together the resources needed to implement the cooperative.

2. Food-Delivery Lockers or Self-Service Grocery Stores

As the consumer base for individual grocery stores declines, another powerful strategy with the potential to change the economics of rural grocers would be to reduce the overhead costs of running the store. We have identified two business models that do just that:

- A self-service grocery store, modeled by Main Street Market in Evansville, Minnesota, makes possible a small but full-line grocery store (i.e., not a convenience store) by substantially reducing staffing costs.
- An automated system makes it possible to deliver online orders from a full-service grocery store to temperature-controlled food lockers, where customers can pick them up any time at their convenience. After speaking with the RAD Co-op, Buche Foods, locker provider T4 Solutions, and FreshPost, we are optimistic about this model's applicability to rural NYS. It could contribute to the viability of surviving rural grocers (or perhaps even new stores) by enabling them to distribute to lockers based in a number of nearby towns.

A food locker experiment in rural New York would only require a motivated retailer interested in expanding a store's reach and willing to test the technology. Benefits to the retailer would be an expanded customer base and increased sales, with a relatively low cost of service. Having encountered and overcome many operational challenges involved in setting up the company's food locker program, R.F. Buche, the company's fourth-generation president, has been asked to consult with others wanting to set up similar programs. He is a potential resource that could support a NYS program.

As with the retailer-cooperative model, our “game plan” for researching and developing an opportunity of this kind is to connect with rural grocers that have demonstrated an interest in the trends and policies affecting their business, with the intention of identifying motivated owners, suppliers like T4, and possibly a consultant like R.F. Buche, to pilot a food locker solution. Another way of developing a food locker operation would be to work with FreshPost to help it establish a foothold in Upstate New York.

Any of these approaches could benefit from connecting with MeatSuite, a meat delivery locker initiative organized by Cornell Cooperative Extension to promote bulk buying of frozen meat.

3. Social Purpose Grocery Stores

SPGs are another approach to creating a food retailer to serve lower-income communities. There are at least two paths to implementing this solution:

- Develop a relationship with RG19 and a business plan to increase the company’s footprint. Use the expansion of this existing SPG as a proof-of-concept to catalyze further development of SPGs in NYS.
- Expand our relationship with Foodlink and Mushroom Cloud in support of Foodlink’s planned SPG in Rochester. Foodlink has tentatively inquired about our interest in joining their board of advisors, which may be an opening for evaluating, supporting, and promoting the expansion of the SPG concept.

What We Learned

We set out to explore what we could learn about the three alternative models of food retail (described above) in rural communities. Ultimately, our research uncovered useful information about the challenges/merits of these models, as well as helped us to clarify two distinct barriers in the food distribution system that impact rural retail efficiency.

The barriers/opportunities we identified are: (a) food wholesale and distribution where, as with urban corner stores, collaborative negotiating leverage and innovative delivery methods may expand the selection and reduce retailers' cost of goods sold; and (b) small retail operations themselves, where alternative business models may make it possible to maintain or expand rural grocery operations, as well as to offer consumers a better selection at more affordable prices. For each model or solution we explored, we describe why we opted not to pursue the opportunity.

Food and Wholesale Distribution

Reducing Cost of Goods Sold for Rural Retailers

The challenge in serving the rural communities, similar in many ways to the challenge in underserved urban communities, is twofold: (a) accessing a full selection of fresh and healthy foods at competitive costs, and (b) making frequent, small deliveries cost-effectively to widely dispersed stores.

- Access can be accomplished by collaborating to establish wholesaler relationships for multiple stores. The RAD Cooperative in Walsh County, ND, shows that this can be done.
- Delivery to geographically dispersed rural grocery stores is the larger operational and financial challenge, as it is in urban settings.

Accessing competitive costs: The Rural Access Delivery (RAD) Cooperative in Park River, North Dakota, is a contemporary success story demonstrating that small rural grocery stores can also gain access to the largest food wholesalers at competitive prices, if they work together. The RAD Cooperative comprises three rural grocery stores and a restaurant, which agreed to form a wholesale purchasing cooperative that opened for business in late 2021. In testimony to the US House of Representatives Agriculture Committee in March 2023, the Cooperative documented both (a) **sales improvements of 16% and 23% at the smaller stores**, resulting from their new access to a full-line wholesaler, which previously would not do business with them, combined with (b) a **14% reduction in cost of goods sold** afforded by their larger, aggregate orders. An increase in sales and a reduction in the cost of sales is a powerful result for any business, not to mention a small business facing the challenges already described.

Making deliveries cost-effectively: The RAD Co-op implemented a very small-scale solution for last-mile delivery to its members, which operate within a 20-mile radius of each other. Its combined wholesale orders are received at the largest member store, which has extra back room space. Co-op employees break down and repack the orders, then deliver the repacked orders to the individual stores. Employee time and trucking costs are a small portion of the increased profit documented above, and are shared equally among the cooperative members. These costs are more than offset by the lower wholesale costs. It is estimated that each grocer in the cooperative will improve its bottom line by about $10,000 annually, simply by combining orders with other grocers. This is a substantial benefit, when compared with a net profit of just $18,200 for the average rural grocery operator in North Dakota.

Why We Didn't Pursue This Opportunity: We did some unsuccessful networking to identify a potential lead retailer or distributor to organize a cooperative similar to RAD. The RAD Cooperative's experience was that the initiative did not draw immediate enthusiasm from rural grocers. The North Dakota Association of Rural Electric Cooperatives, which organized RAD, spent six years building support among retailers and the wholesaler that ultimately agreed to work with them. While we believe the same could be achieved in less than six years now – especially with RAD as a model – the time needed to build this support was beyond the scope of our initiative.

Alternative Retail Models

Cooperative Wholesaler

The rural electric cooperative that sponsored the development of the RAD Cooperative is developing a feasibility study for a cooperative wholesale/distribution operation. The plan is to operate on a larger scale, serving small grocers and food cooperatives over a much larger territory, and perhaps accommodating related activities to support the local agricultural/ food economy.

Relatedly, we studied a wholesale cooperative that was once owned by independent retailers in NY State. Olean Wholesale Grocery Cooperative was established in Syracuse, NY, in 1922 as a collection of more than a dozen retailers in the Central New York area. Over the nearly 100 years that the cooperative was in operation, Olean expanded its product offerings and geographic reach, including developing its own private-label brand, providing small food retailers with better product selection and wholesale prices than they could obtain elsewhere.

As with the RAD Coop, participating in Olean allowed independent retailers to pool their resources and place larger orders at lower prices. It also gave participating retailers the scale they needed to purchase ads in Sunday newspapers, a necessary adaptation if independent retailers were to retain consumers' attention in the face of increased competition.

By 2019, Olean Wholesale was serving more than 270 independent food retail and convenience stores in three states – New York, Pennsylvania, and Northeast Ohio – generating over $300 million in annual sales, with profits distributed to the cooperative's members. However, when one of the largest grocery wholesalers, C&S Wholesale Grocers, offered to buy the company, a majority of older retailers chose to "cash out." One of the primary motivations for the sale was the ongoing challenges to the financial viability of independent food retailers.

Why We Didn't Pursue This Opportunity: Olean's sale raised questions about governance issues in the cooperative structure, which were beyond the scope of our research.

Consignment Sales

Another model for a delivery operation is Kanbe's Markets, a hybrid for-profit / nonprofit operation in Kansas City, Missouri. Kanbe's installs and services produce coolers in corner stores, charging the stores on a consignment basis only for what sells. Kanbe's serves 50 stores daily with three drivers. In other words, each van serves about 17 stores/day. Based on Kanbe's operational data shared informally with us, and depending on local conditions and the geographic size of a delivery route, we believe that small store delivery and inventory management operations can produce a significant gross profit contribution to support the delivery organization's operations.

Why We Didn't Pursue This Opportunity: Kanbe's operates under a blended governance model that includes both a for-profit operation and nonprofit grocery supplier. The nonprofit status and blended operating model allows Kanbe's to raise money from grants and source food from wholesalers on favorable terms, offering these wholesalers a tax deduction for produce donations or sales made at a deep discount. However, this blended governance model is outside the framework for opportunities the FoodMap was designed to pursue.

Some of the data that Kanbe's shared with us was used to develop projections for the Hunts Point Healthy Bodega Initiative. While the overall business model was not relevant to our goals, we believe the time, expenses, and operating methods that Kanbe's shared with us are perfectly applicable.

Self-Service Stores

The Selling, General and Administrative expenses of a rural grocery business are a key challenge to profitability, given the small and declining sales base they serve. In our research, we identified a number of innovations designed to reduce store overhead. The cost of labor is a major portion of the overhead cost of operating a grocery store. Main Street Market in Evansville, Minnesota, has been operating as a self-service retailer since 2020. The market replaced a regular grocery store that went out of business. One of Evansville's 1,500 residents developed a new business model that includes:

- A small store footprint (900 square feet), reducing rent and maintenance costs;
- A membership fee – a concept normalized by Costco;
- 24/7/365 store access for members via a combination keypad;
- Self check-out; and
- Part-time staffing, three days per week, for restocking, cleaning, and in-person customer service.

Founded in 2020, membership renewals for the store are running over 80%. The store is breaking even, and its owners have purchased a larger store in another town. About 90% of store visits occur outside of normal business hours, reinforcing the value of the store's 24/7 accessibility.

When we interviewed the owner in early 2023, Main Street Market had approximately 125 members. The store is competitive with large retailers on most food items – some customers say that the store is actually less expensive than Walmart. Because of its low operating costs, the store doesn't always use the suggested retail price. And during farm season, the store purchases produce from local residents, allowing customers to buy fresh items at roughly half the price of large chains like Walmart.

Why We Didn't Pursue This Opportunity: While there is an elegant simplicity to this business model – and the owner has already expanded to a nearby town – we thought the concept had limited scalability. It requires a local entrepreneur motivated by public-spiritedness who, almost by definition, cannot earn a full-time living in the business. As a viable business model, the concept would be beneficial if it spread across rural America, but it does not offer a scalable business opportunity that could be sponsored by an initiative like ours.

Multi-purpose/General Stores

Another approach to reducing overhead costs is being tested in three Upstate New York towns that lost their local grocery stores. To fill the vacuum, other retailers (e.g. a pharmacy and a gift shop) are adding grocery sections. The innovator was a pharmacy that expanded to add groceries in an adjoining empty storefront. By managing both the pharmacy and grocery operations in one combined space, the incremental grocery operation (about 1/3 of the total retail footprint) was intended to benefit by sharing overhead costs with the pharmacy operation.

Why We Didn't Pursue This Opportunity: As we learned about the incremental grocery operation's financial characteristics, we thought it likely that profitability might be difficult to achieve. The cost savings involved in operating the grocery business under the umbrella of the pharmacy business seemed negligible. The project champion in this case – the pharmacy owner – was highly motivated by public spiritedness and not overly concerned with the profitability of the side grocery operation. Alternatives that might make this business model more replicable would require subsidies of one kind or another – a consideration that is outside the framework for our initiative.

Photo Credit: Julia Backus

Climate-controlled Lockers

An innovation that has existed for more than ten years in Australia and Canada is being introduced to the US by at least two Midwestern companies. Banks of climate-controlled lockers can be installed in publicly accessible areas that have electric power and internet connectivity. The locker units include three sections for frozen, refrigerated, and room-temperature food deliveries. As typically set up, groceries ordered online are delivered to the lockers and the combination(s) are provided to the customer for pick-up at a time that is convenient for them.

We interviewed Steve Mehmert, founder of T4 Solutions in Pewaukee, Wisconsin. T4 Solutions is in the early stages of selling climate-controlled grocery lockers in the U.S., importing lockers from the Australian manufacturer that pioneered this technology. This solution allows residents of communities with no grocery store to order from stores in neighboring communities. It also allows small rural grocery stores to offer extended (pick-up) hours without incurring the staffing cost.

Why We Didn't Pursue This Opportunity: While this is an intuitively attractive solution for some situations, either replacing or augmenting the retailer, the upfront capital cost of the locker systems, starting at $42,000 for a small 16-unit locker, seems prohibitive for the small retailer market for which we sought solutions. T4's locker units today are mainly purchased using philanthropic grants or public funding. If the capital investment can be assumed by another entity, the operating costs (power and internet connectivity) for these lockers are quite manageable; however, that is a very large "if," and one that does not define a scalable, self-sustaining opportunity aligned with our initiative's goals.

Looking Ahead

Our findings led us to pivot from exploring new or alternative retail models and instead to pursue opportunities to partner with existing retailers such as dollar and convenience stores. While these innovations and experiments described above provide inspiration, as well as evidence that new business models can succeed, we did not see evidence that encouraged us to pursue these opportunities now. We think that these 'green shoots' merit observation, and perhaps, more concerted evaluation and investment in the future. For the purpose of our FoodMap initiative, we pivoted to explore how we might meet shoppers where they are, and identify partnerships with dominant retailers in rural NYS to bring healthier options to the shelves.

Prior NYC Key Food Accessibility Initiatives:

FRESH (Food Retail Expansion to Support Health), launched in 2009, provides tax incentives and zoning variances to incentivize development of full-service supermarkets in underserved neighborhoods. When it was launched, the need for at least 100 new supermarkets in NYC was cited. However, over the next 12 years, the program succeeded in opening just 18 stores. We have since learned more about the unsuccessful attempts of other US cities to incentivize the opening of more supermarkets in underserved communities, and have come to the conclusion that the modern supermarket business model is simply not well suited to many LILA communities. To our knowledge, this general issue has not been well studied, and NYC has not published an evaluation of the FRESH program documenting what has worked and what has not.

Green Carts, launched in 2008, provided 1,000 permits specifically for mobile fruit and vegetable vendors to sell unprocessed fresh produce in specific neighborhoods with limited food access. As of 2020, about 300 active vendors were reportedly in operation. Encouragingly, positive results have been reported for this program:

- 71% of Green Cart customers reported increased fruit and vegetable intake.
- 63% of customers reported shopping at Green Carts at least once a week.
- 68% of these customers earned less than $50,000 a year, and 44% earned less than $25,000 a year.
- The presence of Green Carts was also correlated with expansion of produce accessibility in other food outlets in these communities. By demonstrating significant demand for fresh produce, the Green Carts program prompted retailers to adapt.

As with FRESH, we hypothesize a flaw in the business model, since only 30% of the allocated licenses have been issued, despite apparent success in achieving some accessibility goals.

Healthy Bodegas, a Farm-to-Bodega pilot, and Star Bodegas are all discontinued NYC programs that tried to expand healthy food distribution through small corner stores in various ways. As noted below (“ “), we think a key oversight by these programs was the need for a healthy food distribution link in the bodega supply chain.

Shop Healthy NYC, launched in 2012 and still in operation, is NYC’s most enduring healthy retail program. The program focuses on neighborhoods with high rates of diet-related chronic disease, adopting about 200 new corner stores and supermarkets each year (but transitioning out of stores supported during the previous year). The program provides guidelines, training, and marketing support to retailers who commit to meet goals for stocking and promoting healthy food options. Information on results have not been published since 2014; however, we infer some degree of success based on the program’s longevity.

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