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Evaluating the Economic Impacts of Taste NY: A Case Study of the Southern Tier Welcome Center Taste NY Store

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Executive Summary

Taste NY (TNY) is a New York state-led program designed to promote farm viability, economic development, and food access and equity. Cornell University researchers conducted a sales analysis and economic impact assessment of one TNY retail store on the New York economy. In doing so, it demonstrated a successful methodology that can be used to evaluate the impact of other TNY outlets. The researchers used scan level data from the Southern Tier Welcome Center (STWC) TNY store from January 1, 2022-December 31, 2022. The scan data captured the sales data of each product from every transaction, approximately 174,000 customer transactions.

Sales Analysis

In 2022, the STWC TNY store sold 730 products from 145 NYS producers and processors. Of these 145 producers and processors, 61 sold products directly to the store, while 84 sold their products through the 7 wholesale-distributors doing business with the store. Total store sales in 2022 were $692,060. Overall, average store payments to producers were $2,797. Food and beverage items constituted 89% of the products and 94% of total store sales. The top 10 items in sales included sandwiches and coffees and other lunch items, typical grab-and-go items for the traveler on the road.

In early 2024, the New York Department of Agriculture and Markets (NYS AGM) conducted a survey of TNY suppliers. The most popular benefit to selling through the store, cited by 83% of respondents, was it "increased the visibility of my business". Additional business performance indicators include "increased my total sales (71% of respondents), "gained more customers" (50%), and "increased my total volume" (29%).

The TNY program might be able to improve its benefits to producers by developing additional locations where people will be more interested in purchasing local products as opposed to refueling themselves with grab-and-go food items. TNY could investigate how it might work collaboratively and leverage its other programs, such as at the New York State Fair. More appropriate site locations and finding synergies with other programs could improve the visibility of the local products, improve trial purchases, and improve repeat purchases.

Economic Impact Assessment

If all sales at the STWC TNY store represent increases in overall consumer demand for the products offered and the cost of the TNY program is formalized with a household income change due to the state funded subsidy, a strong benefit cost ratio (BCR) results: 3.66. However, producer survey results indicate a high degree of reallocation of product sales by producer suppliers from other local markets to the TNY store. To the degree that the estimated demand changes with respect to firm-level producer volumes can be attributed specifically to TNY programming effects, we estimate an upwards bound on the BCR of 1.17.

Alternatively, we consider an approach whereby the net economic impact of the TNY store (with the subsidy) is compared with the economic impact of a comparable private business (with no subsidy). In this case, the opportunity costs of not having a privately run convenience store of like size reveals a BCR of 1.45 for the TNY store.

The diversity in scale, operational nature, and target customers across the 63 TNY retail stores precludes any suggestion of robustness of our results to alternative TNY outlets. However, with the methodological framework established, replication of this research across store types will be instrumental in assessing the effectiveness of alternative TNY retail settings.

Acknowledgements

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This Report

This report is written in two parts. Part I is a general description of the store and store sales in 2022 and its suppliers. Part II is the description of the economic impact of the store.

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Part I: The Southern Tier Welcome Center Taste NY Store Sales Analysis

Taste NY (TNY) is a New York state-led program designed to promote farm viability, economic development, and food access and equity. It is a marketing program funded through the state budget and operated by the New York State Department of Agriculture and Markets (NYS AGM). According to NYS AGM the program "…highlights the quality, diversity, and economic impact of food and beverages grown, produced, or processed in New York State (NYS). TNY aims to create new opportunities for producers through events, retail locations, and partnerships."

Funding for the TNY program started in 2013. Since that time, the program has established 63 sales outlets and administered promotional events designed to promote NY products and to provide visibility and access to products grown or manufactured in NYS. The retail outlets are of several types, including welcome centers, standalone stores, kiosks in stores, sports arenas, airports, malls, and an online store.

A scope of work is detailed for all TNY retail operators in their contracts with the NYS AGM. V. Giarratano (personal conversation, February 12, 2024) provided the details for the scope of work for the STWC TNY store for offering NYS products:

- Require that all food and beverage products sold are produced or manufactured in New York State. Products or ingredients not processed or produced in New York State, but considered essential, may be used subject to approval by the department on a case-by-case basis. If offered, each prepared menu item must include at least 50 percent New York ingredients throughout the year.
- Ensure that all vendors have all necessary federal, state, and local licenses and/or permits for each product.
- Offer for sale, at a minimum, the following items, all of which shall be sourced from New York producers and approved by the Department:
    a) Packaged foods such as soups, salads, sandwiches, wraps, parfaits, baked goods, etc.
    b) Snacks/grab-n-go items such as chips, crackers, cookies, pretzels, nuts, chocolate products, etc.
    c) Beverages such as locally roasted coffee, flavored milks, drinkable yogurts, locally recognized sodas and juice products.
    d) Dairy items such as cheese, yogurt, milk, ice cream, etc.
    e) Maple and honey products.
    f) Seasonal fruits and vegetables.
    g) Grocery/pantry items such as pasta, jams/jellies/preserves, sauces, salsas, pickled products, herbs and spices, condiments, flours/grains, etc.
    h) Packaged tea/coffee.
    i) Textiles and craft gift items such as candles, wool products, wood products, beauty products, etc. All non-food retail products must be made in New York State and promote sustainable and equitable practices.

Study Overview

This research analyzed retail sales performance from the TNY store (reported in part I) and the economic impact of the TNY store on the New York economy (reported in part II). There are many TNY retail outlets, and they differ widely by geography, size, merchandising, number and type of products, and customer base. Because of this, the results in this report cannot be generalized to represent all TNY stores. But the remaining retail stores can be analyzed using the same methodology.

Store scanner data from January 1 through December 31, 2022 were obtained from the TNY STWC's sales system provider. The data captured the sales data of each product from every transaction, approximately 174,000 customer transactions.

Description of Store and Suppliers

The STWC building is owned and operated by the New York State Department of Transportation, but the footprint and operations for the Taste NY retail market are contracted to Cornell Cooperative Extension of Broome County by the Department of Agriculture and Markets. In addition to being an information and welcome center for out-of-state visitors, it houses a TNY retail store. The store's primary drop-ins are tour buses, many from Canada and Buffalo, traveling to and from NYC or other tour destinations, and truckers. The center is located on an access drive off I-81 northbound.

The fact that the store operates in a state welcome center designed to welcome travelers prompted us to compare some of the store performance metrics to that of an average convenience store. These stores, as well as the STWC, are often quick stops for grab-and-go items, coffee, restrooms, and other traveler conveniences. We will visit this comparison in parts of the report below.

Graphs of sales by month and by time of day (Figures 1 and 2) illustrate traffic patterns corresponding to traditional seasonal tourist traffic with lower sales in January and winter months, increasing to a summer peak in July and August and declining after (Figure 1). If we look at the daily sales calculated by the quarter hour (Figure 2), we see an association between the noontime peak and sales and can imagine food and beverages as the primary sales drivers.

Figure 1. Store Sales by Month

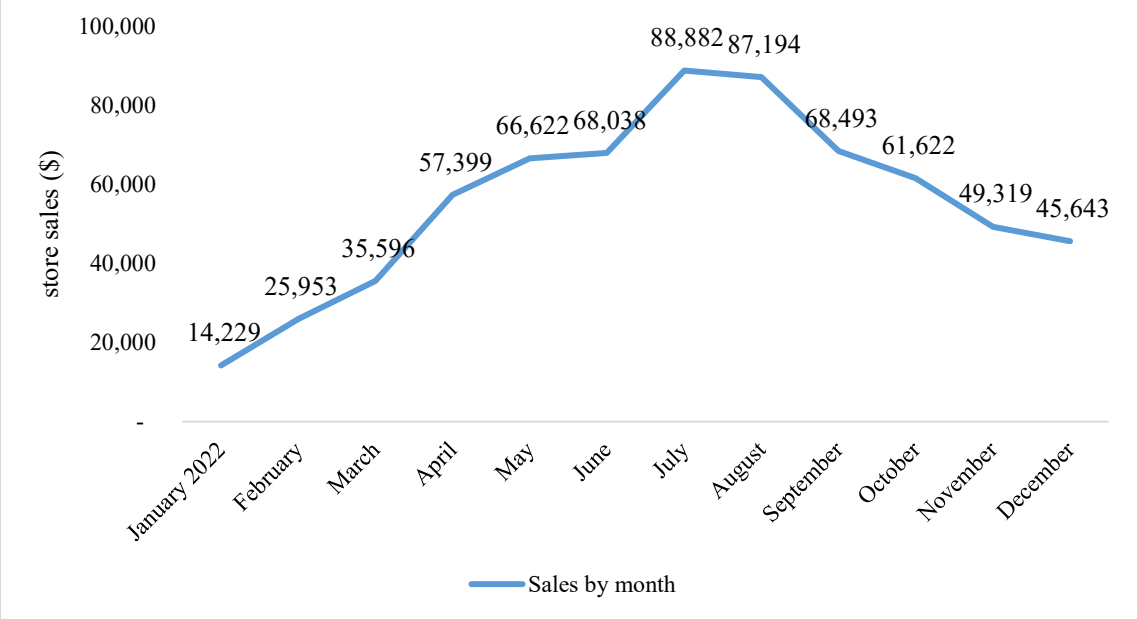
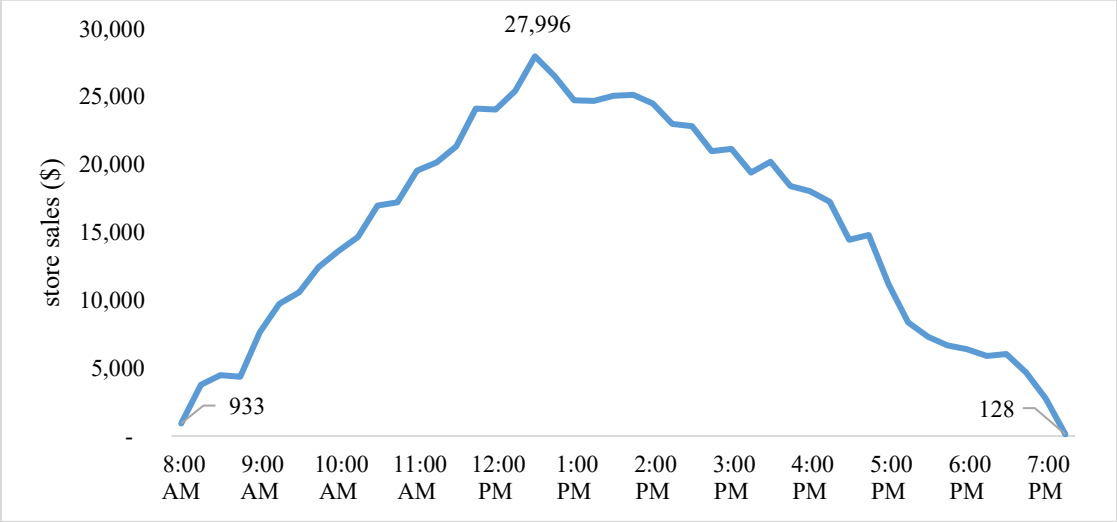


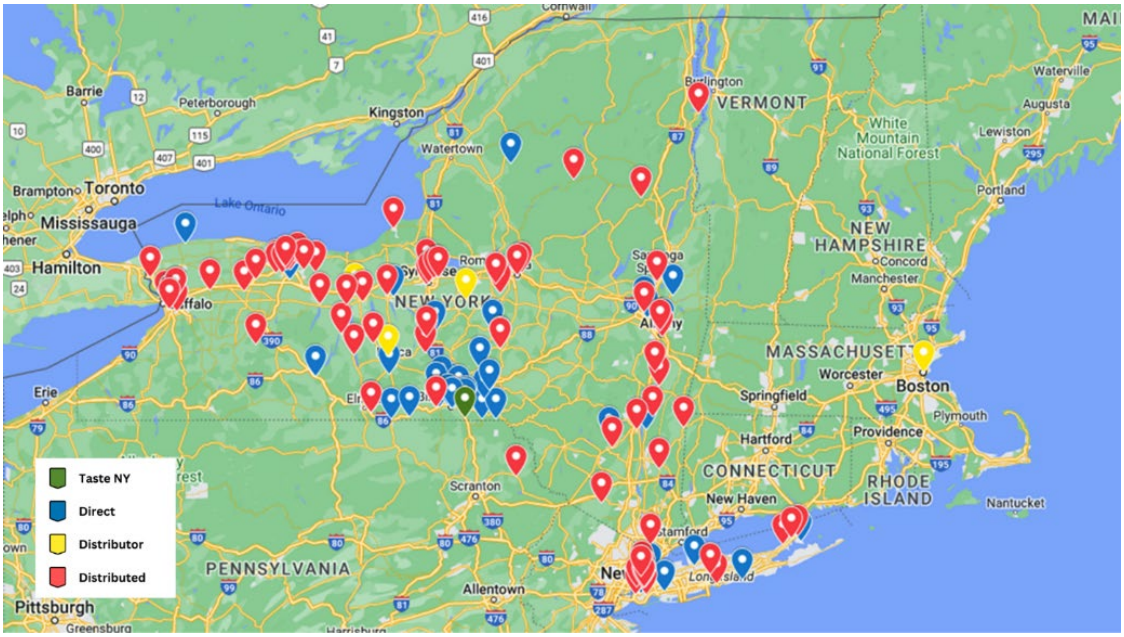
Figure 2. Store Sales by Time of Day



In 2022, the STWC TNY store sold 730 products from 145 NYS producers and processors. Of these 145 producers and processors, 61 sold products directly to the store, while 84 sold their products through the 7 wholesale-distributors doing business with the store. The total number of suppliers to the TNY store was 68.

Shown on the map in Figure 3, producers who sold products directly to the store are shown with blue pin markers. Those selling products to wholesale or distributor intermediaries are represented with red markers. Wholesalers themselves are shown with yellow markers, and the store is indicated with a green marker. Distribution is often a key hurdle for small businesses, and as expected, the farther the producer is from the store, the more likely a wholesale-distributor was involved in supplying its products to the store.

Figure 3. Producer Locations, Southern Tier Welcome Center Store



The most popular item was hot coffee. An average of 73 cups of coffee and tea were sold per day.

Total store sales in 2022 were $692,060 (Table 1). A large majority (89%) of the products in the store were food and beverage items, and food and beverage sales constituted 94% of total store sales. The average item price in the store was $6.35, and the highest price for a product was $40 while the lowest price was $0.50. The average price at convenience stores reported by the National Association of Convenience Stores (NACS 2023) in 2022 was $4.36 (excluding fuel).

Total store purchases from suppliers were $451,271, or an average of $611 per item. Average annual store purchases from direct producer suppliers (including purchases for foodservice sales but excluding shipping costs) were $4,293 (the median was $1,372). As expected, average store purchases per wholesale supplier were higher with a mean of $18,687 (median = $27,483). Overall, average store purchases per producer (direct and through wholesalers) were $2,797 (excluding wholesale and transport margins).

The store operates on the income from sales of TNY products and a store-specific subsidy provided by the state ($250,000). The gross margin between the cost of the products and the product sales pays for retail operations, which usually includes such things as staffing labor, rent/utilities, marketing, etc. The store's average price per unit sold was $6.35 generating a gross retail margin of $34.8%.[1] This gross margin is very similar to that of food retailers, and according to the NACS (2023), the average gross margin for convenience stores in the U.S. was 34.9% in 2022.

Table 1. Description of STWC TNY Store Sales and Cost of Goods Sold

Store performance metric	
Total sales	$692,060
Sales from top 10 items	$186,855
Number of suppliers[1]	68
Number of producers or processors with sales of products	145
Number of products	730
Average price per product	$6.35
Average sales per product	$948
Average products sold per producer	5
Number of food and beverage products	649
Sales of food and beverage products	$649,465
Number of non-food products	81
Sales of non-food products	$42,595
Total cost of goods sold	$451,271
Average store purchases per producer[2]	$2,797
Average product % gross margin[3]	34.8%

[1] Suppliers equal producers or processors who sell directly to the store plus wholesalers or distributors selling to the store.
[2] Excludes wholesale and transport margins from producers selling through wholesalers.
[3] Simple average of product percentage gross margins.

[1] Retail gross margin is calculated here as the price minus cost divided by the price.

Product sales are concentrated. Sales of the top 10 items were $186,855 which was 27.0% of total store sales (Table 2). These top 10 items included sandwiches and coffees and other lunch items, the typical grab-and-go items for the traveler on the road. The top selling individual item was a ready-to-eat chicken salad sandwich which, alone, is 4.8% of store sales. The 12-ounce hot coffee is the second-best seller and is 4.3% of total sales. These grab-and-go items qualify for TNY since they are supplied by a local caterer and the coffee is brewed at the store from coffee supplied by a NYS roaster.

Table 2. Top Ten Items Sold at the STWC TNY Store

Product	2022 Sales	% of Store Sales
Chicken salad sandwich	$32,909.19	4.8
Hot coffee 12 oz	$30,096.42	4.3
Turkey and cheese sandwich	$26,291.20	3.8
Tuna sandwich	$22,092.00	3.2
Hot coffee 16 oz	$18,813.60	2.7
Fruit salad	$16,127.94	2.3
Ham sandwich	$13,967.20	2.0
Homemade pasta salad	$9,639.32	1.4
(NY Supplier) bakery cookies	$8,612.85	1.2
Peanut butter and jelly sandwich	$8,305.26	1.2

Twenty-eight percent of the STWC store sales were for foodservice type items (Figure 4). Sixty-six percent of the STWC store sales were for packaged food and beverages. Together, 94% of the STWC store sales were for all food and beverages. Comparing these to information reported by NACS (2022), 29% of convenience store sales (excluding gas) in 2022 were for foodservice items and 46% of convenience store sales were for edible grocery other than foodservice (Figure 5).

Figure 4. Percent of STWC TNY Store Sales by Category

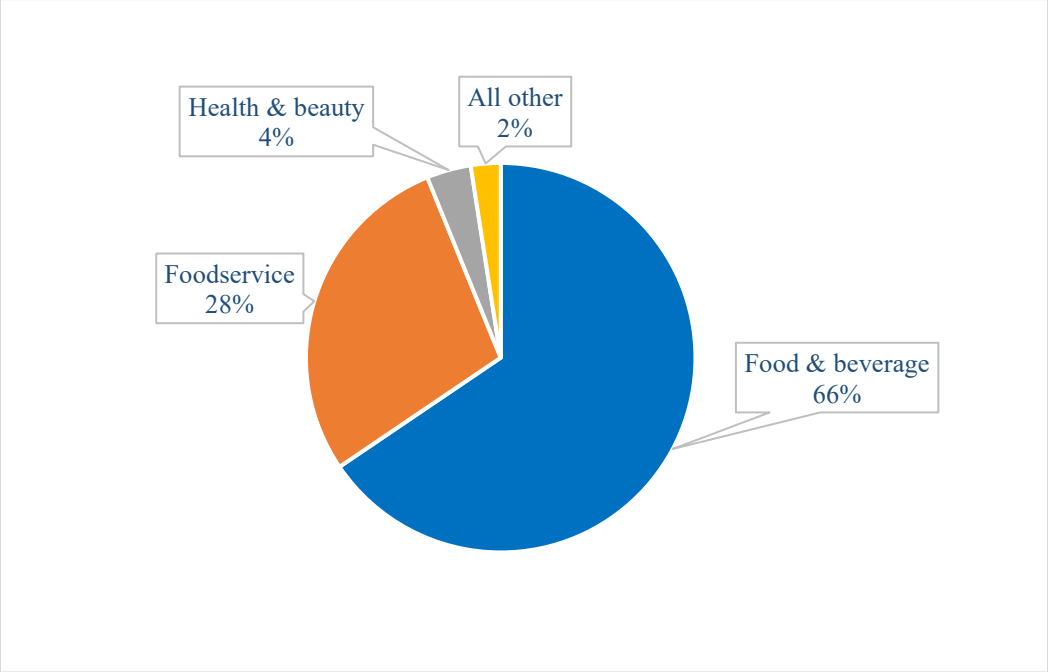
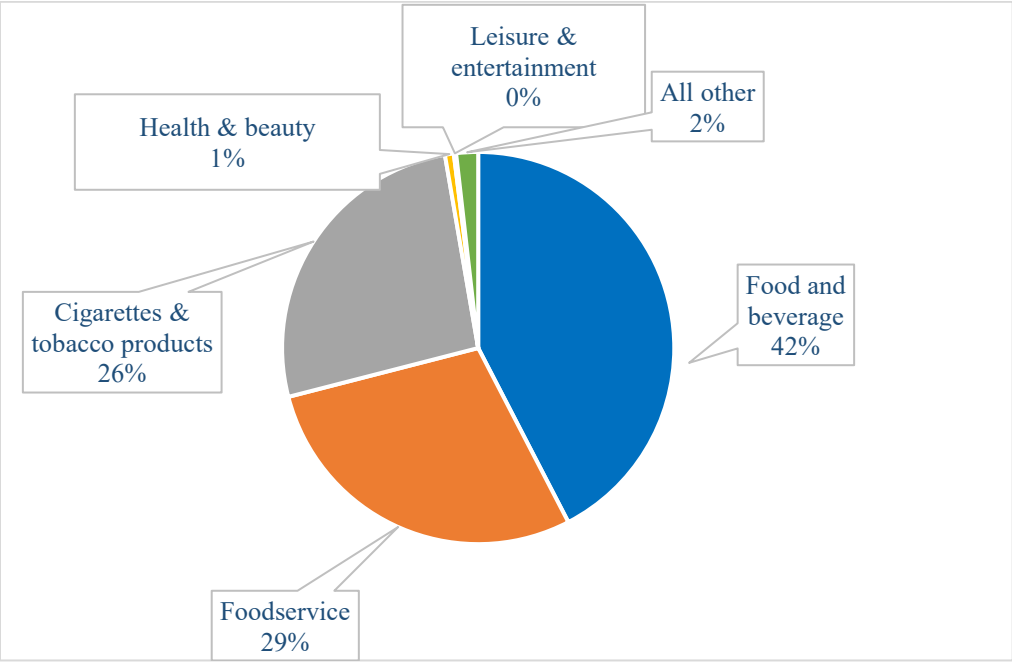


Figure 5. Percent of Convenience Store Sales, by category, without Fuel



Source: NACS (2023)

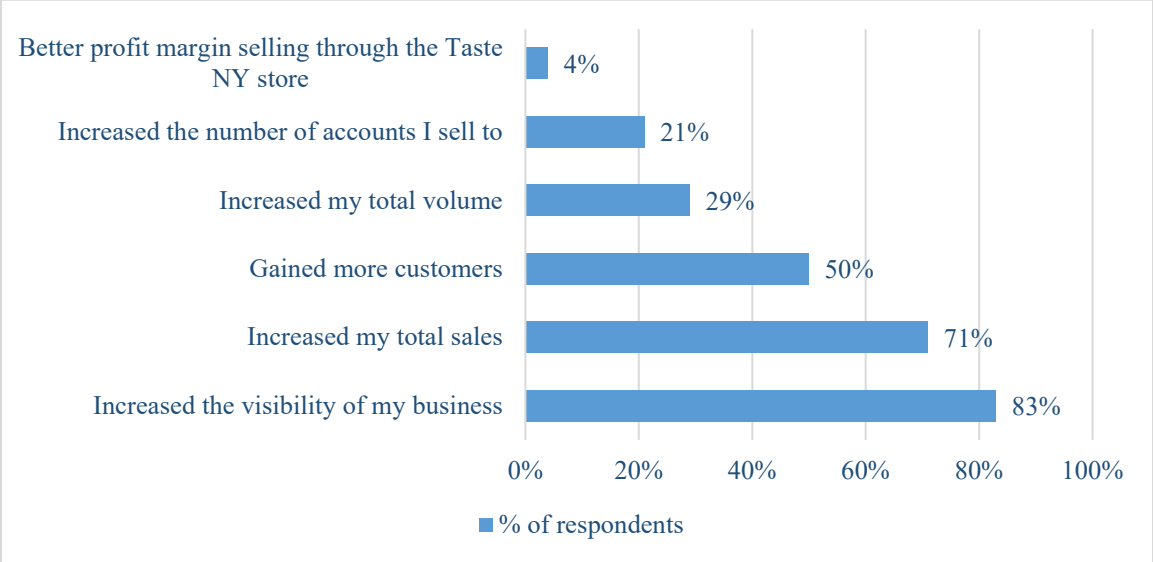
The TNY store may benefit from having a wide assortment of products. The wide assortment can provide a visually appealing store, stocked with products which might appeal to many different customers, from snacks to cutting boards. In addition, the store adds new suppliers and new products from current suppliers every year, which can provide new sales and keep customers coming back. Although many producers and processors may not have enough sales to cover the costs of supplying products to the store, it might offer them benefits in other ways, such as giving them a test market, product visibility, label testing, and introduction to the market. If a product or company becomes successful and starts selling to regional or national markets, the store usually stops carrying the product to make room for new products.

Taste NY Supplier Survey

In early 2024, the New York Department of Agriculture and Markets conducted a survey of TNY suppliers. Twenty-four useable, complete surveys were returned. The responses suggest that some respondents have grown while selling products through TNY.

Since selling through the TNY store may offer a producer several benefits other than increased sales, a survey was developed to understand various benefits suppliers have seen. From a list of six possible benefits indicated in Figure 6 below, the benefit selected by the most suppliers (83%) was, "Increased the visibility of my business". Respondents could select more than one benefit, so significant business performance indicators were also selected. "Increased my total sales (71%), "Gained more customers" (50%), and "Increased my total volume" (29%) are all important measures of performance and were important gains for many of the survey respondents.

Figure 6. Benefits from Participating in Taste NY



Source: NYS AGM (2024)

In addition to improving business performance, TNY has worked to help businesses improve their product labels and pricing. When asked how Taste NY helped their business, "Included my products in their tastings and other product showcases" was selected by 79% of the respondents (Figure 7).

Seventy-seven percent of respondents made changes to their business as a result of selling products at the TNY store (Figure 8). The changes included expanding their business (23%), adding new products (18%), dropping products that were not profitable (18%), and dropping some markets that were not as profitable at the TNY store. In addition, 4% said that they hired new employees.

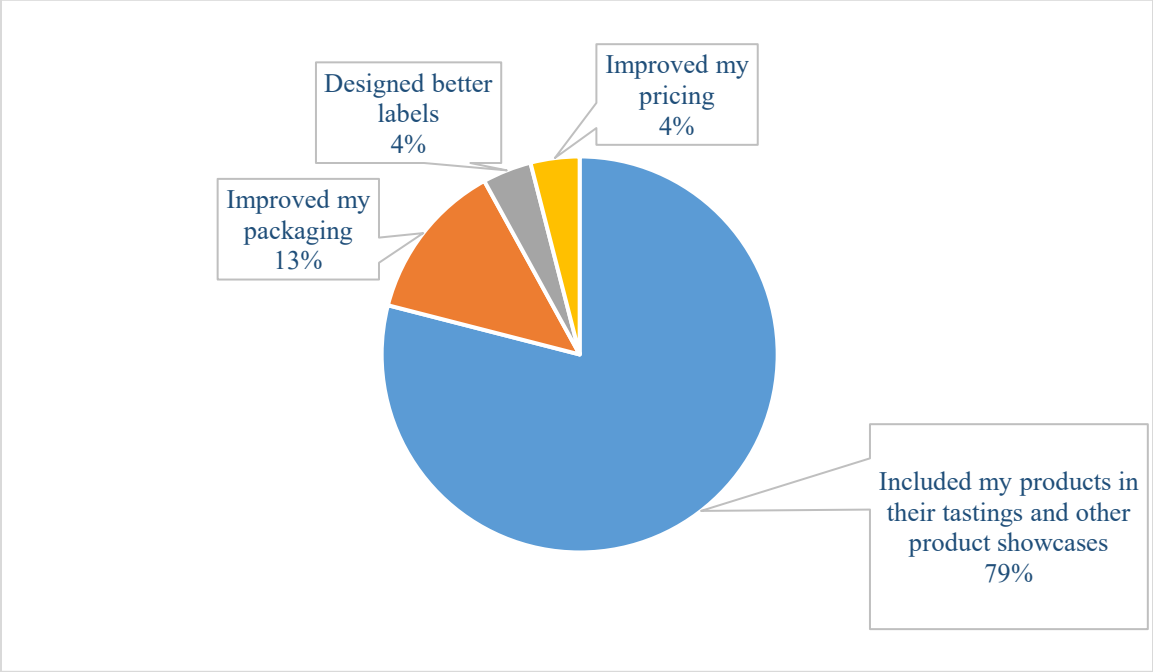
42% of respondents reported that they source at least some ingredients from farms in NYS, while 46% do not source from farms. However, these companies process their products within the state. 12% of respondents said the source "some, not all" of their ingredients from NYS farms.

The benefits that the respondents reported to have received from the STWC TNY store are many and important. To improve the program, responses from suppliers who tried the program but no longer participate are also needed to examine why they are no longer using the store and how the program might be improved to help them.

Taste NY Benefits to Producers and Processors as an Incubator

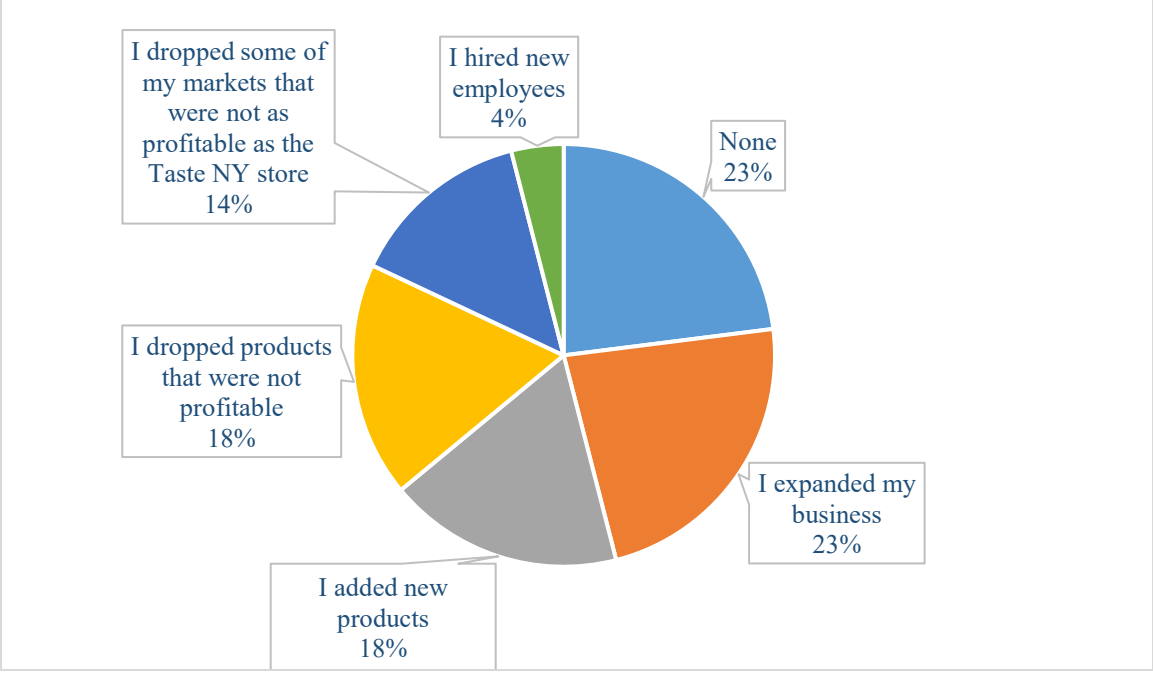
On average, the store did not generate a large amount in sales per product or per producer. After taking out the retail margin, the cost of goods sold per product in 2022 averaged $566 per product. However, we would like to emphasize the mission of TNY as a state-supported incubator or business development tool. As a public incubator, it appears to be successful as a showcase for new and developing products. The store provides an arena for NYS products and gives producers expert education and feedback regarding product development, such as packaging design, graphics and labels, and pricing strategy.

Figure 7. Ways Taste NY Helped My Business



Source: NYS AGM (2024)

Figure 8. Changes Made to My Business as a Result of Selling through Taste NY



Source: NYS AGM (2024)

Store Sales Summary, Part 1

One strategy that is being used very well by the STWC TNY store is to differentiate itself and the TNY program by carrying an exclusive and curated product assortment. The products are not sold in many retail outlets and provide a unique advantage to TNY. However, while we can't be certain,

we feel the store location is limiting its potential. Located in a welcome center, most of the traffic is from tour buses and tourists and truckers using the welcome center as a rest stop and does not offer fuel. The top 10 items are grab-and-go lunch and coffee items which indicate people are using their rest stop to refuel themselves and they may not be thinking of using the stop to purchase new products.

We feel the STWC TNY store operates well as a welcome rest stop for travelers. This is due to its appropriate selection of grab-and-go items and coffee as well as its beautiful scenery and décor. However, we feel the TNY program could improve its benefits to producers by finding locations where people are more interested in shopping for locally produced products. In addition, TNY could investigate how they might work collaboratively and leverage their other programs meant to boost profitability for New York State Producers, such as it already does by participating in the New York State Fair. More appropriate site locations and finding synergies with other programs could improve the visibility of the local products, improve trial purchases, and improve repeat purchases.

Part II: Economic Impact Assessment

Programs affecting locally focused purchasing act through import substitution and spillover effects that improve access for farmers and food manufacturers to new markets aiding in their growth and viability. A valuable perspective to their evaluation is to compare the net economic benefits accruing to the full supply chain via the direct, indirect, and induced (multiplier) impacts. In other words, benefits depend not only on what industries are affected directly by the program, but to the degree that those industries transact with other local industries to support the direct activity expansion.

We develop a customized input-output (IO) model approach to investigate the economic benefits and costs of the STWC TNY store. Importantly, we consider the nature of "costs" of the program from two different perspectives: (*i*) costs related directly to the store subsidy provided by the state and (*ii*) the opportunity cost of a comparable private retail store operating without state subsidy. Given wide differences in store designs, locations, products offered, consumers targeted, etc., the results presented should not be interpreted as robust to the entire TNY program; however, the methods proposed serve as an analytical foundation for which such evaluations can be replicated at other locations. Detailed information on the modeling approach and data processing are available in Schmit et al. (2024).

Data

Customer transaction data was first aggregated by supplier and product for annual retail sales, cost of goods sold (COGS) paid to the supplier, and store retail margin. COGS includes product cost, the wholesale margin (if supplied via a wholesaler), and shipping costs. The retail margin is used to cover store operational costs in addition to the state subsidy provided ($250,000). The store had total sales of $692,060 in 2022, 65% of which were from products provided directly by producers (Table 3).

Each product was then assigned to IMPLAN industry and commodity codes. Product sales were margined to map all dollars to their respective industries. Margining involves disaggregating the retail value of products into their retail, wholesale, producer, and transportation components. The value of the retail margin is given explicitly by the store; however, wholesale, producer, and transport margins are applied based on commodity-specific margins from IMPLAN.

Table 3. Sales, Costs and Retail Margins, STWC TNY store, by category

Category	Total Sales	Cost of Goods Sold[1]	Retail Margin
Total	692,060	451,271	240,790
Total through wholesalers	240,227	160,583	79,645
Total through producers	451,833	290,688	161,145
Processed with primary NYS ingredients	124,497	86,209	38,289
Processed without primary NYS ingredients	567,563	365,062	202,501

Source: STWC TNY (2022)

[1] Cost of goods sold (COGS) includes product cost, wholesale margins, and shipping costs.

Applying margins disaggregates the categories in Table 3 to those summarized in Table 4. While TNY rules call for all products to be produced in NYS, some products provided by a local wholesaler were not - namely, "I Love NY" souvenir items like magnets, mugs, key chains, and pens. Also, some products produced in NYS were provided by a nonlocal (New Jersey) wholesaler. The nonlocally produced items ($4,911 producer margin) and the nonlocal wholesale margin ($4,128) constitute leakage and are excluded from the impact analysis.

A processed food product made with NYS food ingredients will generate more economic impact in total than the same product made without NYS food ingredients due to the higher level of local sourcing through backward industry linkages. All products were reviewed and classified by whether they primarily use local food product ingredients or not. Web searches on producers and products, as well as contacting producers directly, where necessary, were conducted to ascertain the nature of their primary food product ingredients and their sourcing locations. As shown at the bottom of Table 4, approximately 18% of store sales were from products processed with primarily NYS ingredients.

Margins were summed over products by like IMPLAN industry code. Table 5 shows the local producer margins by IMPLAN industry code and if processed with primarily local food product ingredients (as highlighted in bold). Producer margins in Table 5 also include products purchased by the store for foodservice; e.g., eggs, sugar, fluid milk products, bagels, coffee, coffee cups, sandwiches, product labels, and sweeteners and non-dairy creamers.

Methodology

Input-Output (IO) models distinguish the effects of an event by the economic sectors of a geographically defined economy (NYS in our case). The analytical strength of this methodology is its ability to estimate indirect and induced economic effects stemming from the direct expenditures. The direct effects are the initial set of expenditures applied to IO multipliers that represent the change or the shock that results from a policy or project (i.e., margined customer sales in our case). The indirect effects are the additional business-to-business purchases that take place up the supply chain within the region (NYS) stemming from the initial input (i.e., the direct effect). Induced effects are values of industry activity that stem from household spending of increased labor income that result from the initial input purchases and follow-on indirect effects.

We present the direct, indirect, and induced effects for employment, labor income, value added, and output. Employment represents average monthly jobs (both full and part time). Labor income sums the income earned by employees and noncorporate proprietor owners. Value added is comparable to gross domestic product (GDP) and includes labor income, taxes on production and imports, and other property income.[2] Output represents the value of annual industry production expressed in producer prices. For manufacturers, output is sales plus/minus changes in inventory. For service sectors, output equals sales. For retail and wholesale trade, it is the gross margin (i.e., gross sales less COGS).

[2] Other Property Income (OPI) includes consumption of fixed capital (CFC), corporate profits, and net business current transfer payments. It includes income derived from dividends, royalties, corporate profits, and interest income. IO models, by default, treat OPI as a leakage. This is because the assumption that income generated from OPI will go to recipients within the region and those recipients will spend that income in a typical manner may not be valid (IMPLAN 2023).

Table 4. Margined Sales into Retail, Wholesale, Producer, and Transport Margins, STWC TNY store, by category.[1]

Category	Total Sales	Retail Margin	Local Wholesale Margin	Nonlocal Wholesale Margin*	Local Producer Margin	Nonlocal Producer Margin*	Transport Margin
Total	692,060	240,790	16,520	4,128	412,928	4,911	12,784
Percent of Total Sales	*100.0*	*34.8*	*2.4*	*0.6*	*59.7*	*0.7*	*1.8*
Total through wholesalers	240,227	79,645	16,520	4,128	133,647	4,911	1,377
Percent of Total Sales	*100.0*	*33.2*	*6.9*	*1.7*	*55.6*	*2.0*	*0.6*
Total through producers	451,833	161,145			279,281		11,407
Percent of Total Sales	*100.0*	*35.7*			*61.8*		*2.5*
Processed w/ primary NYS ingredients	124,497	38,289	3,444		80,901		1,863
Percent of Total Sales	*100.0*	*30.8*	*2.8*		*65.0*		*1.5*
Processed w/o primary NYS ingredients	567,563	202,501	13,076	4,128	332,027	4,911	10,921
Percent of Total Sales	*100.0*	*35.7*	*2.3*	*0.7*	*58.5*	*0.9*	*1.9*

Source: STWC TNY (2022).

[1] For impact, the direct effect of total sales is reduced by the amount of leakage through nonlocal producers ($4,911) and nonlocal wholesalers ($4,128); i.e., the total direct effects across margined categories go from the $692,060 stated above to $683,022.

Table 5. Total Local Producer Margin Values ($) of STWC TNY store, by Industry

Code	IMPLAN Industry	Common TNY product(s)	Margin
4	Fruit farming	Apples	1
10	Other crop farming	Maple syrup	13,255
13	Poultry and egg production	Eggs	143
14	Other animal production	Honey	4,708
63	Dog and cat food mfg.	Dog treats	2,599
71	Breakfast cereal mfg.	Oatmeal	146
73	Sugar refining	Sugar	1,197
74	Nonchocolate confectionery mfg.	Fruit rolls, candy, brittle, gum	22,327
74	**Nonchocolate confectionery mfg.[1]**	**Grape candy**	**2,049**
75	Confectionery mfg. from cacao beans	Chocolate coconut	26
76	Confectionery mfg. from purch. choc.	Chocolates, fudge	22,541
79	Canned fruits and vegetables mfg.	Sauces, salsa, fillings, pickles	7,054
79	**Canned fruits and vegetables mfg[1]**	**Jam, juice, pickles, pesto**	**17,006**
80	Canned specialties mfg.	Pickled eggs	936
81	Dehydrated food products mfg.	Soup mix, drink mix	5,727
81	**Dehydrated food products mfg.[1]**	**Apple chips**	**2,126**
82	**Cheese mfg.[1]**	**Cheese, cheese dip, curds**	**11,576**
84	**Fluid milk mfg.[1]**	**Milk, yogurt**	**9,621**
86	**Ice cream and frozen dessert mfg.[1]**	**Ice cream**	**10,468**
87	Frozen cakes and other pastries mfg.	Cake in a cup	67
90	Meat processed from carcasses	Snack sticks, jerky	11,992
93	Bread and bakery product mfg.	Pound cake, muffin, bagels	10,176
94	Cookie and cracker mfg.	Cookies, biscotti, crackers	28,941
95	Dry pasta, mixes, and dough mfg.	Pancake/scone/bread mix	2,839
97	Roasted nuts and peanut butter mfg.	Peanut butter, pistachios,	4,986
98	Other snack food mfg.	Pretzel, popcorn, chips, puffs	24,999
98	**Other snack food mfg.[1]**	**Potato chips, popcorn**	**8,301**
99	Coffee and tea mfg.	Tea, coffee	29,891
99	**Coffee and tea mfg.[1]**	**Switchel, tonic, herbal tea**	**1,649**
101	Mayonnaise, dressing, & sauce mfg.	Dressing, marinade, hot sauce	14,375
102	Spice and extract mfg.	Rub, seasonings	1,525
103	All other food mfg.	Sandwiches, fruit salad	97,484
104	Bottled/canned soft drinks & water	Soda, pop, water, kombucha	16,482
147	Paperboard container mfg.	Cups, coffee filters, sleeves	2,979
148	Paper bag and paper mfg.	Stickers, product labels	83
163	Other basic organic chemical mfg.	Sweetener, creamer, Splenda	995
177	Soap and other detergent mfg.	Soap, shampoo, hand sanitizer	5,176
180	Toilet preparation mfg.	Skin cream, moisturizer	12,157
197	Pottery and ceramics mfg.	Pottery	1,092
391	All other miscellaneous mfg.	Candles	3,234

Source: STWC TNY (2022)

[1] Products processed with primarily NYS food product ingredients noted in bold.

Retail, Wholesale, and Transport Margins

Retail margins collected on product sales are summed across products as the first direct effect component ($240,790, Table 4). In addition, the State subsidy provided to the store is a source of "income" and is used similarly to retail margins collected on product sales, albeit allocated more heavily to labor costs (67%). Spending of the subsidy by cost category was provided by store management (e.g., for telecommunications, insurance, marketing, and labor costs. The level of the subsidy provided by the State is not included in the retail margin direct effects as this was not generated from economic activity (store sales), but the spending of that subsidy by the store does accrue economic activity from backward linked industry effects.

The direct effect of the local wholesale margin ($16,520, Table 4) is accumulated in the same way as that for the regular retail margin. The nonlocal wholesale margin ($4,128, Table 4) is treated as leakage and excluded. The direct effect of the transport margin ($12,784, Table 4) follows similarly and modeled as truck transportation services.

Producer Margins

Producer margins generated from products without primarily NYS food product ingredients are applied directly to their corresponding IMPLAN industry (Table 5) assuming default industry spending patterns and average regional purchase coefficients (RPCs) on intermediate inputs from IMPLAN. An RPC is the proportion of the total demand for a commodity by all users in a study area that is supplied by producers located within the study area, and where all users(industries and institutions) are assumed to purchase that commodity locally at the same rate (IMPLAN 2017).

Producer margins generated from processed products with primarily NYS food product ingredients (FPIs) require additional customization to account for their higher multiplier effects. For processed food products, intermediate input expenditures are disaggregated into their (FPIs) and nonfood product ingredients (NFPIs). For each industry grouping, the RPCs for particular FPIs are adjusted to 100% from their default IMPLAN values (see Schmit et al. 2024 for details).

Store Subsidy

As mentioned above, the STWC TNY store is subsidized by NYS to help support operations in the amount of $250,000 per year. In our first benefit-cost approach, we compare the gross economic impact originating from facilitated store sales to the negative impact of a tax effect on NYS households based on the level of the store subsidy. Put differently, if the subsidy is funded through an increase in the NYS budget by residents through income taxes (or other means), there is less income available to be spent by those taxpayers privately for other purposes. As this is modeled as negative household income change the results show up only as induced effects.

Convenience Store Counterfactual

Our second analytical approach considers a counterfactual example. Specifically, if the TNY store were not in operation what other (private) business would most logically replace it? Located on an exit off an interstate highway, the logical conclusion is that of a convenience store (with fuel sales). Accordingly, we construct a convenience store sales pattern (Table 6) from NACS (2023) and model the same level of store income; i.e., store sales ($692,060) + subsidy (250,000). We utilize default IMPLAN industry spending patterns and average RPCs (last column of Table 6).

Since purchases by the convenience store for resale need not be produced in NYS (like the TNY rule), the direct effects are lowered by the amount of leakage based on IMPLAN default RPCs. Specifically, the total direct output effect is $343,329 indicating significant, albeit expected, leakage (64%), particularly given the relatively large share of sales from fuel (RPC = 1.21%).

Table 6. Convenience Store Sales Pattern and IMPLAN mapping.[1]

Category (subcategory)	Percent of sales by category[2]	Retail Sales ($)	IMPLAN Industry	IMPLAN RPC (%)
FUEL TOTAL	**72.00**	**678,283**	**154**	**01.21**
MERCHANDISE TOTAL	**21.00**	**197,833**		
Cigarettes	26.23	51,887	109	55.14
Other tobacco	10.59	20,945	109	55.14
Beer	10.97	21,698	106	37.54
Wine	0.81	1,599	107	27.21
Liquor	2.18	4,306	108	03.70
Packaged beverages	22.77	45,041	104	26.33
Candy	4.81	9,507	76	13.38
Salty snacks	5.45	10,777	98	17.82
Packages sweet snacks	2.07	4,105	98	17.82
Alternative snacks	2.33	4,608	98	17.82
Frozen foods	0.23	465	78	19.59
Ice cream/novelties	1.29	2,561	86	38.20
Ice	1.02	2,025	105	40.36
Edible grocery	0.69	1,356	99	08.94
Nonedible grocery	0.17	340	149	24.91
Perishable grocery	1.55	3,069	90	15.17
Milk	2.31	4,567	84	65.44
Dairy and deli	0.49	966	82	13.06
Bread	0.35	688	93	41.87
Health and beauty care	1.02	2,018	172	05.24
Automotive products	0.62	1,222	154	01.21
Publications	0.27	526	423	91.32
General merchandise	1.80	3,557	302	00.89
FOODSERVICE TOTAL	**7.00**	**65,944**		
Prepared food	68.08	44,893	103	14.24
Commissary	9.63	6,353	103	14.24
Hot dispensed beverages	9.32	6,149	99	08.94
Cold dispensed beverages	6.93	4,571	104	26.33
Frozen dispensed beverages	6.03	3,978	104	26.33

Source: NACS (2023). IMPLAN industry codes based on the most common products sold in each category.
[1] Total convenience store sales are $942,060 based on STWC TNY store sales plus the State subsidy.
[2] Subcategory percentages reflect the percentage shares within the broader category.

Results

Table 7 presents the gross economic impacts for the producer margins. As expected, relatively higher multiplier impacts accrue through products made primarily with NYS ingredients. From the multipliers, for every $1 of direct producer output, an additional $1.05 are created via backward linkages for NYS-sourced ingredient products relative to $0.64 for products with non-locally sourced ingredients. Overall, the $412,928 in direct producer margin increases to $703,079 in total economic impact (for output) when the backward linked indirect and induced effects are included. The remaining margined component results are shown in Table 8, where the direct effects follow from Table 4. As expected, the retail (45%) and producer margins (51%) constitute the lion share of total impact. Over all margins, the gross economic impacts are approximately 7.0 jobs, $424 thousand in labor income, $700 thousand in value added, and $1.4 million in total output.

Table 7. Gross Economic Impacts of Producer Margin, STWC TNY store, 2022

Effect	Employment	Labor Income	Value Added	Output
Primary Ingredients Produced Outside NYS				
Direct	1.33	61,734	94,446	350,133
Indirect	0.60	48,507	78,381	143,051
Induced	0.39	29,999	53,519	80,981
Total	2.32	140,239	226,346	574,164
Multiplier[1]	1.75	2.27	2.40	1.64
Primary Ingredients Produced Within NYS				
Direct	0.11	8,205	14,414	62,795
Indirect	0.18	12,874	22,064	50,618
Induced	0.07	5,743	10,245	15,502
Total	0.36	26,822	46,723	128,915
Multiplier[1]	3.44	3.27	3.24	2.05

Sources: IMPLAN (2024), STWC TNY (2022)

[1] The multiplier is computed as the total effect divided by the direct effect.

Table 8. Gross Economic Impacts of STWC TNY Store, by Margin Category

Effect	Employment	Labor Income	Value Added	Output
Retail Margin[2]				
Direct	2.38	101,438	155,893	240,790
Indirect	0.54	43,914	76,497	131,911
Induced	1.19	91,814	163,945	248,094
Total	4.10	237,165	396,335	620,794
Wholesale Margin				
Direct	0.06	5,736	8,098	16,520
Indirect	0.04	3,732	5,733	9,023
Induced	0.03	2,563	4,574	6,921
Total	0.14	12,031	18,404	32,464
Total Producer Margin				
Direct	1.43	69,939	108,859	412,928
Indirect	0.79	61,381	100,444	193,669
Induced	0.46	35,742	63,764	96,483
Total	2.68	167,062	273,068	703,079
Transport Margin				
Direct	0.06	4,288	5,904	12,784
Indirect	0.03	2,054	3,422	5,233
Induced	0.02	1,752	3,122	4,723
Total	0.11	8,093	12,448	22,740
Total Margins				
Direct	3.93	181,401	278,755	683,022
Indirect	1.39	111,079	186,097	339,835
Induced	1.71	131,870	235,405	356,221
Total	7.03	424,350	700,256	1,379,077

Source: IMPLAN (2024), STWC TNY (2022)

Net Economic Impact

The estimated tax effect of the $250,000 subsidy is applied as a negative household income change in our IO model (Table 9). The negative impacts are approximately 1.4 jobs, $104 thousand in labor income, $191 thousand in value added, and $289 thousand in output. Subtracting the impact effects of the tax from gross impact of the local spending reveals the net economic impacts. Net changes across metrics are all positive: 5.7 jobs, $320 thousand in labor income, $509 thousand in value added, and $1.1 million in industry output (Table 9).

Considering gross state product (GSP or value added) as the evaluative measure, when taken together, the benefits ($700,256) exceed the costs ($191,170), or a benefit cost ratio (BCR) of 3.66. Put differently, for every dollar of value added lost in the state to support the STWC TNY store, $3.66 of value added is gained, albeit with one important qualification that we turn to next.

Table 9. Net Economic Impacts of STWC TNY Store.

Effect	Employment	Labor Income	Value Added	Output
Total Margins				
Direct	3.93	181,401	278,755	683,022
Indirect	1.39	111,079	186,097	339,835
Induced	1.71	131,870	235,405	356,221
Total	7.03	424,350	700,256	1,379,077
Multiplier[1]	1.79	2.34	2.51	2.02
Subsidy Effect				
Direct	-	-	-	-
Indirect	-	-	-	-
Induced	(1.36)	(104,210)	(191,170)	(289,024)
Total	(1.36)	(104,210)	(191,170)	(289,024)
Net Effect				
Direct	3.93	181,401	278,755	683,022
Indirect	1.39	111,079	186,097	339,835
Induced	0.34	27,660	44,235	67,197
Total	5.67	320,140	509,087	1,090,054
Multiplier[1]	1.44	1.76	1.83	1.60

Source: IMPLAN (2024), STWC TNY (2022)

[1] The multiplier is computed as the total effect divided by the direct effect.

An important limitation of our approach (as with all IO analyses) is that all of the direct effects modeled are assumed to be new deliveries to (i.e., an increase in) total final demand; i.e., the value of goods and services produced and sold to final users. More specifically, if some of the STWC TNY sales represent a reallocation of products previously sold by TNY suppliers to other local buyers (e.g., a producer shifting product sales at farmers markets to TNY), this is not an increase in final demand. Without knowing actual producer changes in response to store sales, the net benefit (and BCR) of the program at the STWC is an upward bound. However, at least 21.0% of store sales must represent new sales to final demand (i.e., the $289,024 negative output impact from the subsidy divided by $1,379, 077 positive output impact from store sales) to retain a BCR above one.

So just how much of the TNY store sales can we allocate to impact? To address this issue, we consider survey questions specifically to the nature of new versus reallocated sales (NYS AGM, 2024). The relevant questions and summarized responses are shown in Table 10.

Table 10. Selected Results from STWC TNY Producer Survey[1]

How has your total annual volume (quantity) of products sold through all market channels changed since you started selling in the TNY store?	Decreased, I exited other markets or have declining sales in existing markets	N = 0
	No change, I reallocated product from other market channels to the TNY store.	N = 12
	Increased, I expanded production and sales of my products at the TNY store and/or other outlets.	N = 12
If you answered "Increased" in Question 1, by how much has your product volume of sales increased over all markets you participate in?	Simple average (positive changes only)	83.5% Range: 10% - 254%
	Simple average (including zero changes)	40.0%
	Sales weighted average (positive changes only)	92.1%
	Sales weighted average (including zero changes)	24.6%
Of the percentage change in Question 2, how much of it is due to sales at TNY specifically?	Average (positive changes only)	29.5% Range: 1% - 100%
	Sales weighted average (positive changes only)	23.4%

Source: NYS AGM (2024)

Clearly there is reallocation of products from other markets; i.e., one half of respondents indicated they had no increase in total firm sales volume as they "reallocated product from other market channels to the TNY store." Note, this reallocation of product may well be financially rewarding to the producers in terms of increased net returns but has consequence to the overall net economic impacts generated in the State.

The vendor-sales-weighted average increase in sales volume for producers indicating an increase in overall firm sales volume was 92.1%, and with a substantial range; i.e., 10% to 254%. When including all respondents (i.e., including those with no change in overall volume), the overall sales-weighted average percentage increase is 24.6%. The 24.6% increase in sales volume implies a BCR 1.17.

In addition, firms may be growing sales volume for their business irrespective of their involvement in TNY. If that is the case, the third question becomes relevant. When asked about how much of the increase in sales volume was due to TNY specifically, the sales weighted average was 23.4% (Table 10). Accordingly, new final demand attributed to the STWC TNY is 5.8% on average (0.246 x 0.234), implying a BCR below unity (0.28). However, the TNY program provides additional services, such as marketing, label creation, and product development for producers. If, say, a producer's increased sales at farmers markets are due to the heightened visibility of their firm and products through TNY's marketing efforts, this effect should be attributed to TNY. Similarly, product development through TNY that aided firms in accessing other local markets (e.g., grocery

stores), can at least partially attributed to a TNY effect. Accordingly, lower and upper bounds on the BCR due to the STWC TNY store after considering overall demand (sales) growth are 0.28 and 1.17, respectively.

Counterfactual Comparison

An alternative approach in comparing benefits and costs is our counterfactual convenience store comparison. Applying the spending patterns in Table 6 and comparable level of store sales ($942,060), noting leakage of goods not produced in NYS, the impact results are shown in Table 11. Aggregate multiplier effects vary based on the composition and volume of products sold. As expected, all are lower than the respective gross values for the STWC TNY store (Table 9). When considering the net multiplier effects for STWC TNY store, only the value added multiplier remains higher; i.e., 1.83 versus 1.59. That said, it is the changes in total impact that are most salient, and are higher, even on net, for the TNY store, than the counterfactual convenience store.

Table 11. Economic impacts of new convenience store with same income as STWC TNY store[1]

Impact	Employment	Labor Income	Value Added	Output
Direct	1.39	$82,964	$219,997	$343,329
Indirect	0.51	$42,017	$70,185	$120,000
Induced	0.44	$34,007	$60,671	$91,802
Total	2.34	$158,988	$350,853	$555,131
Multiplier	1.69	1.92	1.59	1.62

Sources: IMPLAN (2024)

[1] Since purchases by the convenience store for resale need not be produced in NYS, the direct effects are lowered by the amount of leakage based on IMPLANs default RPCs.

In this analytical approach, the issue of final demand is still at play, but now for both stores. In terms of the counterfactual, this is likely more driven on the demand side; i.e., whether the new convenience store displaces sales from other convenience stores nearby. However, given the final demand issue is present on both sides, to the degree that they occur, they will offset each other in the final calculations. Accordingly, we ignore the issue of final demand changes in this approach. Ultimately, considering the net value added created by the STWC TNY store as the benefit and the value added created by the convenience store of like size as the (opportunity) cost, a BCR of 1.45 results.

Economic Impact Assessment Summary

If all sales at the STWC TNY store represent new deliveries to final demand and the cost of the TNY program is formalized with a household income change due to the state funded subsidy, a strong BCR results (3.66). However, producer survey results indicate a high degree of reallocation of products sales by producer suppliers from other local markets to TNY. To the degree that the estimated additional sales volume can be attributed specifically to TNY programming effects, and considering spillover over effects of other TNY services for producers, we estimate an upward bounds on the BCR of 1.17.

Alternatively, considering an opportunity cost approach whereby the net economic impact of the TNY store (with the subsidy) is compared with the economic impact of a comparable private business (with no subsidy) minimizes (to some degree) the issue of final demand and the

reallocation of sales (by producers and consumers). In this case, the opportunity costs of not having a privately run convenience store of like size reveals a BCR of 1.45 for the TNY store.

The diversity in scale, operational nature, and target customers across the 63 TNY retail stores precludes any suggestion of robustness of our results to alternative TNY outlets. However, with the methodological framework established, replication of this research across store types will be instrumental in assessing the effectiveness of alternative TNY retail settings.

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