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Economic Impact of Farm to School

Farm to School (FTS) is a national program focused on encouraging school districts to purchase local healthy food from farmers. In the Capital Region, a local nonprofit, Capital Roots, encourages local school districts to participate in the farm to school program to enable districts to gain access to fresh and healthy food options. There are many advantages to the farm to school program including economic and health benefits, but there are also barriers to consider.

Scope of the Problem

Currently, the Farm to School (FTS) breakfast/lunch initiative is a federal program where schools in a set region are able to buy different local foods from farmers. School districts in New York State currently buy the following types of local foods: fruits, vegetables, milk, and meat or poultry (Farm to School Census, 2015). As a result of this program, students are able to gain access to fresh local foods. Advocates of the farm to school program cite several benefits. One of the most prominent benefits is the program revolves around healthy lifestyles. Supporters argue that fresh foods direct from the farm, can positively affect a student's weight and improve behavior (Central Minnesota Farm to School Impact Analysis, 2010). Another benefit of the farm to school program is related to education. The program educates students about the source of their food, local agriculture, and healthy diets. This education can also spark interest in students that may one day pursue careers in the agricultural sector. Job creation and economic activity is an important outcome of the farm to school program as well. This means that for every job created by school districts purchasing local foods, additional economic activity creates another 1.67 jobs (National Farm to School Network, 2016). The FTS program encourages food service directors to buy more local produce from farmers in the region instead of their usual means of contracting food from domestic food distributors.

Current Policy

Farm to School programs began in two schools in Washington D.C. in 1996 as a grassroots movement and now reach approximately 23.6 million students in 42% of U.S. school districts (USDA, 2016a). FTS programs are supported by policy and funding at the federal government level and financial support from private foundations (National Farm to School Network, 2016b). While FTS programs vary considerably from one school to another, all programs use a multi-pronged approach that include a mix of core elements such as school gardens, local food procurement, nutrition education, and agricultural literacy (National Farm to School Network, 2016a). The Farm to School program encompasses a broad range of



programs in which schools are connected with local farms. Some examples of FTS programs include: a school inviting a local farmer to present to students on small-scale food production, including a taste test of farmer's crop. Another example would be a school making a one-time purchase of locally grown vegetables to feature at lunch or snack during Farm to School week. A school making recurring weekly or monthly purchases from local farmer and developing a relationship where the farmer plans his growing season to produce the type and quantity of produce desired by the school food service director is another example of the FTS programming.

Positive Benefits of Farm to School

The FTS program works to create positive school and community benefits in the sense that it increases community and schools awareness about local foods. Over half of the school districts that engage in the FTS program claimed they enjoyed positive results including increased support from parents and community members, improved acceptance, and participation in school meals (FNS-USDA, 2015). Nationally 63% of school districts with the FTS program completed at least three FTS related activities, which include creating school gardens, cooking classes, and field trips to local farms in the region. The FTS program works to stimulate local and regional economies. According to the USDA census, school districts spent almost \$790 million on local foods during the 2013- 2014 school year. This is a 105% increase over the \$386 million of local food purchased during the 2011-2012 school year when the census was first conducted (FNS-USDA 2015). The program strengthens local

communities, as it enables schools to spend more money within the local economy on products grown by farmers. With this increased revenue, farmers reinvest more money back into the community by purchasing materials and hiring local employees.

Another benefit of the

FTS program is it works to improve children's health nutrition and academic performance. The program has shown to increase students fruit and vegetable consumption by introducing students to new fruits and vegetables as they form eating habits that they will have for the rest of their lives. Serving more fresh fruits and vegetables can also help school districts decrease the added sugars and salts in school meals. Food service employees have control over the food preparation instead of using canned and processed produce. Much canned or processed foods contain large amounts of added sugar and salt which is artificially flavored and not healthy for children. This benefit has also results in a decrease in diet-related diseases such as childhood obesity and diabetes.

Economic Impact Beyond Local Food Procurement

Some evidence, according to Farm To School advocates, suggests the program has led to reduced food waste, representing a cost savings for schools (U.S Department of Agriculture, 2016). The reduction of food waste may be due to improved quality of meals served and an increased awareness of the value of the food through FTS class programing. Also, since schools buy more fresh produce and less processed or canned foods, the produce lasts longer and remains fresh because it is straight from the farm unlike the processed food.

Other evidence of economic impact is that FTS focuses on healthy diets and education through food and agricultural literacy causing improved nutritional intake and improved health outcomes among children. These health outcomes include: reduced rates of obesity and weight-related illnesses, which can also likely lead to healthcare cost savings (Fung, 2012). Some economic impact modeling may show that if FTS program lead to improved health outcome, it will have a negative impact on the economy. However, despite potential losses for the healthcare industry, gains at the societal would likely be greater.

Educational programming is another cornerstone of FTS programs. Research has shown that FTS has enhanced educational learning as there is an increase in student engagement leading to positive attitudes towards learning (Bamford, 2015). Schools participating in FTS programs have seen a decrease in behavioral referrals and school nurse visits, further indicating improved educational outcomes. Better educational outcomes have been associated with



improved economic outcomes due to increased earning potential. Although, one could draw conclusions, further research is needed to assess the relationship between FTS programming, educational outcomes, future labor market productivity and labor earnings. Research to explore these impacts has been limited so far, due to a lack of resources, but this research is crucial. Changes such as improved health and educational outcomes are long-term changes that require longitudinal studies (Fung, 2012).

Profile of a School District Food Budget

Figure 1 below shows the difference in prices of what the East Greenbush school district pays for their produce and what the Capital Region nonprofit Capital Roots pays for the same produce. The table shows fruits and vegetables that are available for two and a half months of the year. It shows the quantity each organization buys and how frequently these produce are ordered in a week/year. There is a variation in prices from both organizations as Capital Roots buys local produce from farmers and the East Greenbush school district buys processed food from domestic food service distributors. Both organizations buy in large quantities which is reflected by the quantity and orders a week. After compiling all the numbers together, the table shows a six thousand dollar difference in the annual amount paid for the produce and the East Greenbush school district pays more for several food items in comparison despite Capital Roots have two additional vegetables namely: broccoli and potatoes. Though the table below shows Capital Roots paying a lower amount for their produce, there are also hidden additional costs the organization must take into consideration. Some of these cost include: transportation, processing and operational fees. In order for Capital Roots to be somewhat successful in starting this program, there should be a possible expansion of their facility since it is going to serve as a central location for farmers to bring their produce in order to sell to school districts in the Capital Region.

Key Organizations

Many organization in the United States support the promotion of the Farm to School program, especially because of its improved educational and healthy outcomes. Organizations seek to promote the FTS program because it is beneficial to school districts, local famers, and the economy.

- **Local School Districts:** School districts throughout the state play an important role in what kids eat. It is crucial for them to realize that healthier food options will create a positive environment for everyone.
- **United States Department of Agriculture (USDA):** The USDA is an organization of the federal government responsible for developing and executing federal laws related to farming, agriculture and food. The USDA is currently responsible for most of the Farm to School program funding.
- **Food and Nutrition Service (FNS):** The FNS is an agency under the USDA and is responsible for administering the nation's domestic nutrition assistance programs. This service helps to address the issue of hunger in the United States on a wide scale.
- **Capital Roots of Troy, New York:** This is a Capital Region nonprofit that works to reduce the impact of poor nutrition on public health in New York by organizing community gardens and providing healthy food access.

Fruits and Vegetables	Season Availability	Current Price at Capital Roots	Quantity	# of Orders/Week	# of Orders/Year	Current Price at East Greenbush School District	Amount Paid/Year at Capital Roots	Amount Paid/Year at East Greenbush School District
Broccoli	June+Sept (1/2 Aug)	\$20.00	Bushel	2	26		\$1040	
Cucumbers	June+Sept (1/2 Aug)	\$24.50	Bushel	2	26	\$19.75	\$1274	\$1027
Lettuce	June	\$15	24 CT	4	52	\$44.07	\$3120	9166.56
Green Peppers	June+Sept (1/2 Aug)	\$14.20	Bushel	1	13	\$18.99	\$184.6	\$246.87
Red Peppers	June+Sept (1/2 Aug)	\$5.73	6 Pack	4	52	\$7.99	\$1191.84	\$1661.92
Potatoes	June+Sept (1/2 Aug)	\$17.72	Bushel	2	26		\$921.44	
Tomatoes	June+Sept (1/2 Aug)	\$21.25	25 Lbs	3	39	\$15.99	\$2486.25	\$1870.83
Cherry Tomatoes	June+Sept (1/2 Aug)	\$11.50	12 Pt	4	52	\$14.99	\$2392	\$3117.92
Apples	June+Sept (1/2 Aug)	\$20.00	Bushel	12	156	\$20.99	\$37440	\$39293.28
Total							\$50,050.13	\$56,384.38

Figure 1: East Greenbush school district purchased fruits and vegetables pricing compared to Capital Roots produce price.

Barriers of Farm to School

While there are many benefits to supporting the Farm to School program, there are still many barriers that exist. Each of these barriers must be addressed in order to garner wider participation in the program. One of the biggest ways to address most of these obstacles is additional funding to support food service directors in obtaining and creating healthier meals for kids.

Pricing:

Due to strict budgetary constraints, most schools surveyed said they would be willing to purchase local products only if price was comparable.

Distribution:

Food service directors enjoy the convenience of working with a small number of distributors and are hesitant to move forward with local partners.

Coordination:

Many school districts seek a central location to address all their purchasing needs. Multiple delivery schedules and paying various invoices is difficult to coordinate.

Increased Workload:

Preparation of the healthier food will require more work and time on the part of the food service employees to prepare meals because it is not ready made or processed.

Feasibility:

There may be potential challenges regarding the ability for farmers to provide particular food items during an entire school year. Local farmers are subject to local growing seasons.

Increased Costs:

There is the potential for an increase in cost for school lunch prices, which could be a burden on families and tax payers.

Glossary of Terms

Bushel: A measure of capacity equal to 64 US pints equivalent to 35.2 liters used for dry goods.

Farm to School (FTS): A national program where students gain access to fresh healthy food from local producers. FTS makes it easier for children and their families to make better food choices while strengthening the local economy.

Small Farm: Is defined by the USDA as a farm with less than \$250,000 gross annual sales, on which the day to day labor and management are provided by the farmer and/or the farm family that owns or lease the productive assets of the farm.

References

Bamford, Kathleen, "The Role Of Motivation And Curriculum In Shaping Pro-Sustainable Attitudes And Behaviors In Students" (2015). Graduate College Dissertations and Theses. 326. <http://scholarworks.uvm.edu/graddis/326>.

Fung, C., S. Kuhle, C. Lu, M. Purcell, M. Schwartz, K. Storey, and P.J. Veugelers. 2012. "From 'Best Practice' to 'Next Practice': The Effectiveness of School-Based Health Promotion in Improving Healthy Eating and Physical Activity and Preventing Childhood Obesity." *International Journal of Behavioral Nutrition and Physical Activity* 9.

Haynes, M. 2009. "Farm-to-School in Central Minnesota – Applied Economic Analysis." Minneapolis, MN: Region Five Development Commission, CURA Community-Based Research Programs, U of M Central Regional Sustainable Development Partnership, University of Minnesota-Twin Cities Applied Economics Department. Available online: <http://www.regionfive.org/cms/files/Farm%20to%20School%20in%20Central%20MN%20--%20Applied%20Economic%20Analysis.pdf>.

Izumi, Betty T., D. Wynne Wright, and Michael W. Hamm. "Farm to school programs: exploring the role of regionally-based food distributors in alternative agrifood networks." *Agriculture and Human Values* 27, no. 3 (2010): 335-350. <https://link.springer.com/article/10.1007/s10460-009-9221-x>.

Izumi, Betty T., Katherine Alaimo, and Michael W. Hamm. "Farm-to-school programs: Perspectives of school food service professionals." *Journal of nutrition education and behavior* 42, no. 2 (2010): 83-91. <http://www.sciencedirect.com/science/article/pii/S1499404608008269>.

Joshi, Anupama, Andrea Misako Azuma, and Gail Feenstra. "Do farm-to-school programs make a difference? Findings and future research needs." *Journal of Hunger & Environmental Nutrition* 3, no. 2-3 (2008): 229-246. <http://www.tandfonline.com/doi/abs/10.1080/19320240802244025>.

National Farm to School Network. 2016a. About Farm to School. Available online: <http://www.farmtoschool.org/about/what-is-farm-to-school>.

National Farm to School Network. 2016b. National Farm to School Network. Available online: <http://www.farmtoschool.org/>.

Rosenberg, Nathan, and Emily Broad Leib. "Expanding farm to school in Mississippi: Analysis and recommendations." (2011). https://farm-to-school.worldsecuresystems.com/Resources/Expanding_Farm_to_School_in_Mississippi.pdf.

Roche, Erin, Florence Becot, Jane Kolodinsky, and David Conner. "Economic Contribution and Potential Impact of Schools Purchase of Local Foods in Vermont." (2016). http://agriculture.vermont.gov/sites/ag/files/CRS_Economic%20Contribution%20of%20Farm%20to%20School_FINAL.pdf.

Tuck, Brigid, Monica Haynes, Robert King, and Ryan Pesch. "The economic impact of farm-to-school lunch programs: A central Minnesota example." (2010). <https://conservancy.umn.edu/bitstream/handle/11299/171560/2010-EIA-Farm-School-Programs.pdf?sequence=1&isAllowed=y>.

Winston, Amy. "Farm to School." *Maine Policy Review* 20, no. 1 (2011): 233-236. <http://digitalcommons.library.umaine.edu/mpr/vol20/iss1/37/>.

Community Policy Institute

The Community Policy Institute builds capacity surrounding policy within the Capital Region. We provide researched-based policy information to our community partners who use the information to modify best practices and advocate for policies that will further the development and effectiveness of direct community engagement.

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