

ARE SCHOOL FOOD PROGRAMS GOOD INVESTMENTS?

A brief history of US Government support for domestic and international school meal programs and a summary of evidence regarding their effectiveness

Global Child Nutrition Foundation
August 2017

EXECUTIVE SUMMARY

US Government support for domestic and international school meal programs¹ is extremely important, because the programs work, and they work in powerful ways. Nutritious school meals contribute to children's education and welfare, which in turn contributes to their productivity and to the education and welfare of subsequent generations. School meal programs benefit families and communities, and contribute to local and national economic development. This document lays out the evidence.

The power of school food programs comes from the entirety of the benefits, the integration of the three pillars of development (education, health/nutrition, and agriculture) within one program, the anchoring of the programs in schools, the involvement of all levels of society, and the intergenerational impact.

The US Government has supported domestic school meal programs since the 1930s. The cornerstone legislation is the National School Lunch Act of 1946. Other programs, including the School Breakfast Program, Ag in the Classroom, and Farm-to-School, have evolved since 1946 to complement the core lunch program. The United States Department of Agriculture (USDA) administers the programs, with annual funding from a permanent appropriation that is based on custom receipts from the previous year. In recent years, USDA-administered child nutrition programs have received about \$8 billion of the roughly \$10 billion generated through the customs receipts program.¹

Since the early 1960s, at least, the US has also supported international school meal programs. Funding was erratic, though, until 2000, when the \$300 million Food for Education Initiative (FFEI) was launched. FFEI was a pilot initiative that led to the 2001 George McGovern-Robert Dole International Food for Education and Child Nutrition Act. The McGovern-Dole program was authorized in 2002, and is administered by USDA, as was FFEI. Program funding increased from \$100 million at the outset, to \$209 million in 2017. Currently, there are active McGovern-Dole programs reaching about three million children in 25 low-income countries.²

¹ The following terms are used almost interchangeably in this document: school food programs, school feeding programs, and school meal programs. While there are distinct differences between them, each involves food provided to children in a school setting. Except where noted, we do not focus on who is funding or partnering in the programs' implementation; the modality through which the food is procured or delivered; the time of day the food is provided; nor on the type, amount, or quality of food provided. Each of these issues can be of great significance, depending on the specific contexts and issues a program is aiming to address, but we are primarily concerned herein with school food programs writ large, regardless of the specific details of their implementation.

² The 25 current McGovern-Dole countries are: Bangladesh, Benin, Burkina Faso, Cambodia, Cameroon, Cote d'Ivoire, Ethiopia, Guatemala, Guinea Bissau, Haiti, Honduras, Kenya, Kyrgyzstan, Laos, Liberia, Malawi, Mali, Mozambique, Nepal, Nicaragua,

Despite the long history of US investment in school food programs domestically and internationally, however, the effectiveness of these programs is periodically challenged, as is the case now.

The Healthy, Hunger-Free Kids Act of 2010, the authorizing legislation for child nutrition programs (the National School Lunch Program and other institutional feeding programs for children), expired in September 2015 amid debates and competing proposals for how the programs should be changed. Nonetheless, the programs continue because of the ongoing funding from the permanent appropriation.ⁱⁱ

The McGovern-Dole program is under scrutiny as a potential 2017 Farm Bill and the 2018 federal budget are being negotiated. While there is bi-partisan support for international school food programs, the President's proposed 2018 budget called for the McGovern-Dole program to be eliminated.ⁱⁱⁱ

Concerned, the Board of Directors of the Global Child Nutrition Foundation (GCNF)³, decided in June 2017 to develop a set of communications highlighting evidence that school nutrition programs work. This document serves as the basis for this work.

Implementation of large-scale school feeding programs is complex and difficult; it takes years to build a solid, well-performing program, and even solid programs require careful monitoring and the ongoing adoption of improvements as the programs evolve.

Due to their complexity and the influence of factors outside the programs' control, measuring the impact and accurately ascribing attribution to large-scale school food programs is extremely difficult, even in situations where financial resources and expertise are available.

Despite these difficulties, this document provides evidence that, when reasonably well-managed, school meal programs work, in both the short- and the long-term. The evidence shows that the programs have positive impacts on the pillars of human and economic development: health and nutrition, education, and agriculture. It is rare that a single program will have benefits in each of these areas, as is the case with school food programs.

Nearly every country in the world has some form of school meal program.^{iv} Unfortunately, the coverage of school meal programs is weakest in the very places where the need is the greatest: In low-income countries, only about 18 percent of school children are provided school meals; 49 percent of school children receive food at school in upper-middle-income countries.^v

Rwanda, Republic of Congo, Senegal, Sierra Leone, Tanzania. USDA reported that in 2015 McGovern-Dole was reaching 3 million children. Source: USDA, Foreign Agricultural Service, 2017; <https://www.fas.usda.gov/programs/mcgovern-dole-food-education-program>

³ GCNF is a US-based non-profit organization that has supported the expansion and improvement of national school meal programs around the world for more than 19 years. GCNF staff and its international, fifteen-member Board of Directors are steeped in experiences and studies that demonstrate the value of nutritious school food programs. GCNF does not implement school food programs (so does not compete for funds for that purpose); rather, GCNF partners with and complements the work of agencies and organizations that do. GCNF has received minimal financial support from the US Government over the period of its existence. In full disclosure, however, in 2017 at USDA's request, GCNF applied to USDA and others for funding to carry out a Global School Feeding Survey.

To compound the issue, most or all the countries with low coverage are the same countries that currently must rely on external support for their school meal programs—support such as that from the McGovern-Dole program. The programs thus tend to be small and vulnerable to decisions outside the countries' own control, despite the clear need for and effectiveness of the programs.

The domestic needs are significant: A recent study reports that one in six children, or 13 million children in total in the US is facing hunger; 59 percent of children from low-income families say they have come to school hungry; three out of four educators see children who regularly come to school hungry; 92 percent of the educators are concerned that hunger will impede their students' ability to succeed; and teachers are concerned enough to pay an average of \$300 per year out of their own pockets to buy food for students.^{vi}

The international story is also painful: While up-to-date hunger and malnutrition data for school-age children worldwide is not easily available, the data for children under five years of age is indicative of the problem. "Wasting" is the term used for acute malnutrition of short duration; an estimated 52 million children under five suffered from wasting in 2016. "Stunting" is the term used for evidence of chronic undernourishment; 2016 estimates were that 155 million children were "stunted". Meanwhile, an estimated 41 million children were overweight in 2016.^{vii}

As noted above and laid out in more detail in this document, there is ample evidence that school meal programs are good for the children they serve all around the world and for the economic development of the countries where they are implemented.

The issue for the US, as in countries everywhere, then, is not really whether there is a need nor whether school meal programs are effective.

The issue is not even whether the programs are effectively implemented. The global network of organizations and leaders in the realm of school feeding that has evolved—aided significantly by the opportunity to share learning at the Global Child Nutrition Forum over the past 19 years—is stronger and better equipped than ever to help get it right. These players are collaborating extensively, in unprecedented ways, to ensure that programs are sharing and benefiting from one another's experience and expertise.

The issue is not politics nor political parties. Leaders across the political spectrum and in country after country have voiced their support for school meal programs throughout the decades and continue to until present.

The issue, rather, is political will.

The Global Child Nutrition Foundation and its partners can attest to the fact that the leaders of some of the poorest countries in the world are demonstrating unshakable support for feeding their young and vulnerable citizens at school. We hope that the leaders of the United States and of the world's other rich countries will have the political will to support the nutrition of their own young and vulnerable citizens, and to help those countries with fewer resources to do the same.

INTRODUCTION

Just about every country in the world provides daily meals or healthy snacks for school-going children through some form of national school food program.^{viii}

This paper summarizes the history of US Government support for domestic and international school food programs⁴ and key evidence regarding their effectiveness.

In the June 2017 meeting of the Global Child Nutrition Foundation (GCNF) Board of Directors⁵, it was decided that GCNF should address recent public statements and ongoing issues regarding the efficacy of school meal programs that threaten to undermine US Government support for school nutrition programs. The GCNF Board decision was to broadly communicate key information about school nutrition programs, highlighting the existing and extensive evidence that they work—even under very trying conditions—when implemented and managed reasonably well. With nearly 20 years of experience and strong credibility in this field, GCNF is well-positioned to address these issues.

US GOVERNMENT SUPPORT FOR DOMESTIC SCHOOL FOOD PROGRAMS

The US Government has invested in school meals for its children since the 1930s, at least. In 1946, after ten years of pilot efforts by the US Department of Agriculture (USDA), Congress enacted the National School Lunch Act. Relevant highlights of the evolution and intent of the program follow.

"The national school lunch bill provides basic, comprehensive legislation for aid, in general, to the States in the operation of school lunch programs as permanent and integral parts of their school systems..."

(Section 2 of the Act defines its purposes.) "...It is hereby declared to be the policy of Congress, as a measure of national security, to safeguard the health and well-being of the Nation's children and to encourage the domestic consumption of nutritious agricultural commodities and other food, by assisting the States, through grants-in aid and other means, in providing an adequate supply of food and other facilities for the establishment, maintenance, operation and expansion of nonprofit school lunch programs."^{ix}

Since 1935, funding for the federal component of the US school meal programs has been permanently authorized under Section 32 of the of the act (P.L. 74-320, as amended; 7 U.S.C. 612c) of August 24, 1935:

⁴ As noted in Footnote 1, the following terms are used almost interchangeably in this document: school food programs, school feeding programs, and school meal programs. There are distinctly different types of programs, but we are primarily concerned herein with school food programs writ large, regardless of the specific details of how the program is implemented.

⁵ The following individuals serve on GCNF's Board of Directors and gave input to this decision and to this paper: officers Gene White (President), Dr. Ron Kleinman (Vice President), and Penny McConnell (Secretary-Treasurer); and Emmanuel Ohene Afoakwa, Trish Ault, Daniel Silva Balaban, Ashleigh Black, Rafael Fabrega, Stanley Garnett, Krysta Harden, Kate Houston, Susan Neely, Barbara Noseworthy, Janey Thornton, and (non-voting) Arlene Mitchell. Cindy Long serves as the USDA Liaison to the Board, with no voting rights. Also involved were three GCNF Honorary Advisors, Edward M. Cooney, Michele Fite, and Marshall L. Matz.

“Section 32’ is a permanent appropriation that...has set aside the equivalent of 30% of annual customs receipts to support the farm sector through the purchase of surplus commodities and a variety of other activities.

The appropriation has totaled nearly \$10 billion annually in recent years. Today, most of the appropriation (about \$8.4 billion) is transferred to the U.S. Department of Agriculture’s (USDA’s) child nutrition account...

Funds are to be used to (1) encourage the export of farm products through producer payments or other means; (2) encourage the domestic consumption of farm products by diverting surpluses from normal channels or increasing their use by low-income groups; and (3) re-establish farmers’ purchasing power...

...Purchased commodities are diverted to the National School Lunch Program and other domestic food assistance programs. In FY2015, \$465 million was designated for planned Agricultural Marketing Service commodity purchases to fulfill the commodity assistance entitlement set by the National School Lunch Act...

...Over time, Congress has reduced USDA’s discretion to use Section 32 authority via authorizing legislation and through appropriations. Most significantly, the 2008 farm bill (P.L. 110-246) permanently capped the amount USDA is permitted to spend after transfers for use in the child nutrition programs and to the Department of Commerce for fisheries activities. It also required minimum levels of fruit, vegetable, and nut purchases to support domestic nutrition programs and required USDA to use Section 32 to fund the Fresh Fruit and Vegetable Program, which provides snacks to participating elementary schools.^x

As implied in the previous paragraphs, US school food programs have evolved over the years. Some highlights:

- A School Breakfast Program was set up in 1966 as a two-year pilot to help schools serving breakfasts to “nutritionally needy” children. In 1975, after several extensions and changes, Congress authorized it as a permanent program.^{xi}
- In 1997, USDA began a program to connect farmers to the school meal programs through activities such as school gardens, “ag in the classroom”, taste-testing, and farm field visits; the 2008 Farm Bill gave more flexibility for giving geographical preference for unprocessed locally-grown or -raised agricultural products when using program funds; by 2009 USDA had established a Farm-to-School team; in 2010, the Child Nutrition Reauthorization allowed for Farm-to-School grants; in April 2011 the Final Rule establishing the program’s regulations was published.^{xii}
- The Healthy and Hunger-Free Kids Act of 2010 (reauthorization of the Child Nutrition Act), sought to promote better nutrition and to reduce childhood obesity.^{xiii}

US SUPPORT FOR SCHOOL MEAL PROGRAMS INTERNATIONALLY

Over the past half century, the US Government and US-based non-profit groups have also invested in school food programs in other countries. From the early 1960s through the mid-1980s, demand from low-

income countries was very high. Support was forthcoming during that period from the US and other donor governments as well as from the non-profits' private supporters. Though the demand from poor countries remained strong thereafter, external support from donors and implementing non-profit partners tapered off to minimal levels by the late 1990s.

In 2000, former Senator and then Ambassador George McGovern and former Senator Bob Dole supported a renewed commitment to international school meal programs, and on July 23, 2000, President Clinton announced a "\$300 million initial start-up program in support of universal school and pre-school feeding program for the over 300 million hungry children of the world".^{xiv}

Clinton formally introduced the Global Food for Education Initiative on December 28, 2000.

"The pilot initiative was implemented in fiscal years 2001 and 2002, with completion expected in fiscal year 2003. Under the pilot, USDA's Commodity Credit Corporation committed \$300 million for US commodities, transportation, and administrative expenses. Commodities (were) donated under the authority of the Section 416(b) program. The USDA-approved projects (were) conducted through the United Nations World Food Programme, private voluntary organizations, and eligible foreign governments."^{xv}

In May of 2001, a bi-partisan coalition of Members of the House and Senate introduced the George McGovern-Robert Dole International Food for Education and Child Nutrition Act of 2001, described by Representative James McGovern as "legislation to end hunger among the world's children in our lifetimes".^{xvi} The McGovern-Dole program was authorized in section 3107 of the Farm Security and Rural Investment Act ("Farm Bill") of 2002 (7U.S.C. 17360-1).

The program's first ten years is summarized as follows:

"The program was first implemented in FY2003 with \$100 million of Commodity Credit Corporation funds as stipulated in the 2002 farm bill. Beginning in FY2004, the authorizing statute provides for the program to be carried out with appropriated funding. The FY2004 agricultural appropriations act (P.L. 108-199) provided \$50 million to carry out the program.

Subsequent funding was generally at \$100 million a year. There were attempts to give it more permanent funding levels during 2007 and 2008 and it received an additional \$80 million in 2009. By 2011–2012, the funding level was around \$200 million per year. It was also credited with improving school attendance, especially among girls, who were more likely to be allowed to go to school if a meal was being provided."^{xvii}

In a related development, the US Government tentatively entered the "home-grown" school feeding (HGSF) realm in 2008. HGSF broadly describes school feeding programs for which food is procured locally, an effort to spur agricultural growth.⁶ The term evolved in international development circles between 2003 and 2006, and resulted in a number of African countries pledging to undertake HGSF programs to address both their education and their agriculture goals.

⁶ The term "home-grown school feeding" evolved from the New Partnership for Africa's Development, the Millennium Development Project and related parties between 2003 and 2006.

By 2006, most donor countries had already started to donate cash rather than commodities for humanitarian and development efforts involving food; the US was the only major holdout in resisting that trend. By 2007, the Bill & Melinda Gates Foundation, the Howard G. Buffett Foundation, and others had begun to explore using the purchasing power of the United Nations World Food Programme (WFP) and the predictability of large-scale food programs such as school feeding to spur growth in agriculture and give market access to smallholder farmers. By 2008, over \$75 million had been committed from the two foundations to the “Purchase for Progress (P4P)” program implemented by WFP to pilot purchasing a small percentage of WFP’s food needs from smallholder farmers in some 20 low-income countries.

Congress authorized a five-year, \$60 million pilot USDA Local and Regional Food Aid Procurement (LRP) program under the Food, Conservation, and Energy Act (The Farm Bill) in 2008. The LRP program gave designated organizations implementing a limited set of US-funded programs (including McGovern-Dole) additional resources to begin to purchase eligible commodities in the countries where the projects were being implemented, or from nearby countries.

The Agricultural Act of 2014 amended The Farm Bill and established LRP as a permanent program. “The intended effects of the USDA LRP Program are to support development activities aimed at strengthening the trade capacity of food-insecure developing countries and to address the cause of chronic food insecurity. The regulation also addresses how emergency programming will be addressed.”^{xviii}

USDA thereafter said that it will prioritize “• Development programs, although if a need arises emergency programs may be approved; • McGovern-Dole International Food for Education and Child Nutrition Projects as established under section 3107 of the Farm Security and Rural Investment Act of 2002 (7 U.S.C. 1736o–1); and • Projects that are located in Africa and procure eligible commodities that are produced in Africa.”^{xix}

While LRP is still a relatively new option and more time is needed to assess its impact on food security, tens of millions of children have received US-donated food under the auspices of the McGovern-Dole Program. Caitlin Dewey of the Washington Post reported on March 20, 2017, that the McGovern-Dole program has fed 40 million children since its inception, in “40 of the world’s most impoverished nations, including several that are currently approaching famine”.^{xx}

CHALLENGES TO US GOVERNMENT SUPPORT FOR SCHOOL MEAL PROGRAMS

The National School Lunch Program and other USDA-managed domestic school-based nutrition programs are not without issue, however, nor is the McGovern-Dole International Food for Education program. The domestic school meal program has also been criticized over the years for a variety of perceived ills, ranging from some relatively frivolous complaints to very serious concerns about food quality and safety, nutritional standards, compliance, corruption and waste in the system, links to obesity, costs and targeting, and more.^{xxi} Regarding the McGovern-Dole program, the Government Accounting Office and others have found fault with the implementation and evaluation aspects of the program as managed by USDA, since its inception.^{xxii}

The legislation covering domestic school meal programs falls under separate legislation: “Child nutrition programs (school meals, WIC, farm to school, etc.) are within the Senate Agriculture Committee’s jurisdiction but not House Agriculture, hence it is dealt with in separate legislation (the Child Nutrition Act), not in the farm bill.”^{xxiii}

The reauthorization of the Child Nutrition Act did not happen in 2016, as advocates had hoped. The situation is described below:

“The “child nutrition programs” (National School Lunch Program and certain other institutional food service programs) and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) were last reauthorized by the Healthy, Hunger-Free Kids Act of 2010 (HHFKA, P.L. 111-296). Some of the authorities created or extended in the last reauthorization law expired on September 30, 2015, but the vast majority of operations and activities continue because appropriations laws continued funding.

In the 114th Congress, both committees of jurisdiction—the Senate Committee on Agriculture, Nutrition, and Forestry and the House Committee on Education and the Workforce—completed markups of reauthorization legislation but did not complete reauthorization. (At the final adjournment of a Congress, all legislation that has not yet been sent to the President dies. When the new Congress convenes, the formal legislative process must begin anew.)

Legislative activity in the 114th Congress, though historical, may provide helpful background for the 115th Congress... While both proposals would have extended authorities and included many of the same policies, the House committee’s proposal would have made three major policy changes to the school meals programs that are not in the Senate committee’s proposal: (1) a demonstration project for up to three states to receive a block grant in lieu of funding from a number of open-ended child nutrition programs, (2) a higher threshold for school participation in the Community Eligibility Provision (CEP), and (3) increased reimbursement rates for the School Breakfast Program.

In other school meal policies, both proposals included different changes to school meal nutrition standards, including whole grain and sodium requirements. The proposals would both have revamped the current law procedures for the verification of household applications for free and reduced-price school meals.

The Senate and House committees’ proposals would have piloted or expanded a number of alternatives for feeding low-income children during the summer months through the Summer Food Service Program (SFSP). Proposals would have streamlined SFSP with afterschool meals and snacks and created off-site alternatives to the congregate feeding site model. Both proposals included a continuation of the Summer Electronic Benefit Transfer (EBT) pilot, although the Senate committee would have expanded it and made it permanent.

The proposals are similar in their policy changes for the Child and Adult Care Food Program (CACFP) and the Farm to School Grant Program.

Both proposals would have expanded the types of snacks served through the Fresh Fruit and Vegetable Program. They would each have expanded offerings beyond fresh to frozen, dried, and canned, although the Senate committee's proposal would have done so in a more limited way.

Both proposals included a number of changes to Special Supplemental Nutrition program for Women, Infants, and Children (WIC) policy. Only the Senate committee would have raised the age of child eligibility and increased infant certification periods. Both proposed changes to income eligibility calculation, WIC-eligible foods policy, integrity of benefit redemption, transition to EBT, and competitive bidding for infant formula and foods.

The Congressional Budget Office (CBO) estimated that the Senate committee's proposal would have increased the deficit by \$1.1 billion over 10 years (FY2016-FY2025) and that the House committee's proposal would have reduced the deficit by \$67 million over 10 years (FY2017-FY2026).^{xxiv}

The future of the McGovern-Dole Program is also somewhat unclear, despite consistent bi-partisan support in Congress. In March 2017, as reported by Reuters, the "White House ... said it would eliminate the McGovern-Dole International Food for Education program, which provides donations of US agricultural commodities to food-deficit countries. The program, which had \$182 million earmarked in the fiscal-year 2017 USDA budget, "lacks evidence that it is being effectively implemented to reduce food insecurity," the document said."^{xxv}

As this document is being written, the funding level proposed in an amendment to the House of Representatives Appropriations Bill for Fiscal Year 2018 is a healthy \$201,668,000, however, and hearings related to the next Farm Bill—the authorizing legislation for McGovern-Dole—are underway. Bi-partisan support in both houses of Congress is expected—but not guaranteed—to protect the McGovern-Dole program.

WHAT ARE THE BENEFITS OF SUCH PROGRAMS?

The benefits of school meal programs are both short- and long-term. Health and nutrition, education, and agriculture are the pillars of human and economic development, but it is rare that a single program will have benefits in each of these areas, as is the case with HGSF programs. The most important effects are multi-generational: A child who receives adequate nutrition is a better learner; a child who is educated

will be more productive as an adult⁷ and will be a better parent for the next generation; educated parents are more likely to have healthier children⁸ and to send their children to school⁹, and so on.

Recent literature highlights the importance of the well-being and education levels of adolescents—particularly adolescent girls—prior to their becoming parents.

“The greater attention given to the care, empowerment and protection of adolescents, girls in particular is the soundest way to break the intergenerational transmission of poverty and risk. For instance, good quality education empowers children’s lives like nothing else, giving adolescents, both female and male, the knowledge, skills and confidence to meet the global challenges of our times.

Educated girls are less likely to: marry early, get pregnant as teenagers, more likely to have correct and comprehensive knowledge of HIV and AIDs, and more likely to have healthy children when they eventually become mothers.”^{xxvi}

Home-grown school feeding programs provide a predictable, long-term, and substantial market for nutritious agricultural products, which encourages farmers to invest in inputs and adopt methods to improve their yields over time.

School meal programs span public and private sector interests and many administrative, social, and economic levels as well, directly involving the national (and international, in cases of countries receiving foreign assistance) level, the state or provincial level, the district and school level—and all the way to the family and individual child. The child is the first to benefit, with the family a close second. The effects on the local and national economy can take longer to be realized.

⁷ “The literature establishes a strong positive association between human capital and productivity for individuals, firms and the economy as a whole. It also suggests: that both flows and stocks of human capital are important to productivity; that higher-level skills become increasingly important as countries develop, requiring firms and labor to adopt increasingly complex technologies or to innovate to further enhance welfare; that foundation skills play a key role in productivity and are more easily developed during an individual’s formative years than in adulthood; and that good management and leaderships skills promote the efficient use of human capital within workplaces...” *Human capital and productivity: Literature review*, Australian Workforce and Productivity Agency, March 2013; <https://docs.education.gov.au/system/files/doc/other/human-capital-and-productivity-literature-review-march-2013.pdf>

⁸ “In some poor countries, girls marry as early as 11 years of age and have on average six children. Girls who go to school marry later, practice greater restraint in spacing births and have an average of 2.9 children (King, 1994); Each additional year of schooling for a mother results in a 5-10 percent decrease in mortality in her children (King, 1994); a study by the International Food Policy Research Institute concluded that 44 percent of the reduction in malnutrition between 1970 and 1995 is attributable to increases in women’s education (Smith, L. and others, 2000).” *Global School Feeding Report 2006*, WFP, 2006

⁹ “Relative to children whose mothers had no formal education, children whose mothers had attained primary, secondary or higher education were 7%, 14% and 22% more likely to attend primary school respectively.” *Does living in a community with more educated mothers enhance children’s school attendance? Evidence from Sierra Leone*, by M. Kamanda, N. Madise, and S. Schnepf, *International Journal of Educational Development*, Volume 46, January 2016, Pages 114-124; <http://www.sciencedirect.com/science/article/pii/S0738059315001145>

In wealthier nations, the private sector generally plays a significant role in national school meal programs, creating jobs and profits along the programs' supply chains and contributing to the programs' sustainability. Some countries deliberately link private sector development goals and investments to school meal programs; others are just beginning to explore mutually-beneficial public-private relationships for their programs. Generally speaking, low-income countries have not yet involved the private sector, though there is increasing attention to the employment opportunities created through the programs, particularly for relatively low-skilled youth and women.^{xxvii}

Schools—especially primary schools—are ubiquitous, and serve as an excellent platform for efficiently and effectively reaching large numbers of needy children. Most countries have invested heavily in school infrastructure, but some of that investment is lost if children are too hungry to attend school or to learn or parents are reluctant to send their children to school for economic or other reasons. Implementation of a school meal program provides an incentive for families to send their children to school and requires some level of community involvement—for the handling, storage, and preparation of food, at least. Programs often include a requirement for parent-teacher or other community meetings as well. Parental involvement in their child's schooling and welfare is known to have a positive impact on the child's development and learning.¹⁰

National school meal programs are also resilient to political and economic changes, probably because they serve as effective social safety nets, touch so many citizens, and have multiple constituencies and at all levels throughout each country.

In sum, the power of national school meal programs comes from the entirety of the benefits, the integration of the three pillars (education, health/nutrition, and agriculture), the engagement all levels of society, and the intergenerational impact.

IF MOST OF THE WORLD INVESTS IN THESE PROGRAMS AND THERE ARE SO MANY BENEFITS, WHY DO QUESTIONS OF EFFECTIVENESS PERSIST?

Unfortunately, many of the same factors that serve as core strengths of school meal programs also constitute significant challenges. Because they are multi-sectoral, for example, the programs are usually managed by an agency representing just one of the sectors, leaving the other sectors without a sense of ownership. Cross-agency coordination (cross-ministerial coordination in most countries) is difficult, particularly if the country's leadership is not clearly and strongly supportive.

¹⁰ "Parental involvement is very essential in early childhood education and this helps to broaden the child's horizon, enhance social relationships, and promote a sense of self-esteem and self-efficacy." *The Role of Parents in Early Childhood Education*, by F. F. Fasina, *Global Journal of Human Social Science Volume 11 Issue 2 Version 1.0 March 2011 (Double Blind Peer Reviewed International Research Journal)*; http://globaljournals.org/GJHSS_Volume11/6-The-Role-of-Parents-in-Early-Childhood-Education.pdf

Many of the benefits of school meal programs—especially those in terms of increased human productivity and agriculture—are only visible after a decade or more, while most program assessments are limited to a span of five years or less.

It can also be difficult to separate and attribute benefits—particularly short-term benefits—in the education, health and nutrition, and agriculture sectors, because so many factors outside of the school feeding programs’ control can influence outcomes. Agricultural outcomes are dependent on factors such as weather, access to inputs, availability of labor, and the education and skills of the farmer, for example. School feeding may bring children to school and improve attendance, but if there are no teachers or books, or if the school and home environments are not conducive to studying and learning, then the impact on education will be less than ideal. Good nutrition can be undermined by poor hygiene and/or health issues such as intestinal parasites, diarrheal diseases, and malaria.

Calculations of cost-benefit ratios involving school meal programs tend to be focused on just one sector at a time, rather than on the combined benefits, and when the impacts of school meal programs are measured separately by sector—rather than collectively across sectors—the results may not be as strong as other investments in each of the given sectors. For example, there are probably more effective ways to improve learning than providing food to students, other interventions that are important to a child’s health, etc. Sector-specific analyses can fuel accusations of the programs being expensive for that sector and leave the question of overall benefits and cross-sector cost-effectiveness unanswered.

While the concept of feeding children at school is simple, the implementation of school meal programs is complex, requiring the involvement of multiple stakeholders and adaptation to differing contexts. Furthermore, the programs require moving large amounts of money and/or food to a network of schools, making the programs vulnerable to waste, mismanagement, and corruption.

EVIDENCE THAT SCHOOL FEEDING WORKS, FROM MANY ASPECTS

Despite all the challenges, there is a preponderance of evidence to support the assertion that investing in school meal programs makes good sense. There is also increasing evidence to attest to the sustainability of school meal programs beyond the period they are supported by external donors and implementers. The Global Child Nutrition Foundation has reviewed experiences and studies of both national and international school food programs conducted over the past three decades by a variety of institutions and individuals. A summary of the findings of this review follows.

The evidence shows that, when implemented reasonably well, and with these factors in mind, school meal programs are effective. For each of the following assertions regarding the effectiveness of school food programs, we give a few summarized examples of the supporting evidence:

1) School feeding works for improving school enrolment, attendance and retention, and for reducing school dropout rates

- a) A comprehensive evaluation of the Bangladesh School Feeding Program (SFP) in 2003 by the International Food Policy Research Institute (IFPRI) concluded that the program “raised school

enrolment by 14.2 percent, reduced the probability of dropping out of school by 7.5 percent, and increased school attendance by about 1.3 days a month.”^{xxviii}

- b) A World Bank study in Northern Uganda reported a similarly dramatic impact on school participation of the WFP in-school feeding program (SFP) and an experimental take-home rations (THR) program (through which families of students with good attendance records received food): “Both programs had large impacts on school attendance, with impacts varying by grade and gender... Both SFP and THR reduce grade repetition, but SFP impacts are larger. SFP also reduced girls’ age at entry...”^{xxix}
- c) A study of the Osun State, Nigeria School Feeding Program in public elementary schools reported that the program: “resulted in an increase in pupils’ enrolment (78.4%), retention (44.8%), as well as regularity (58.6%) and punctuality (69%) in school attendance. It has also enhanced the pupils’ performance in curricular and extracurricular activities (55.2%).... The study concluded that the School Feeding Programme in Osun State has increased the enrolment and improved the performance of elementary school pupils in the state.”^{xxx}
- d) “The Campbell review on school feeding (Kristjansson et al., 2007) is the most comprehensive and rigorous review of impact evaluations to date... In low income countries, children who were fed at school attended school more frequently, 4 to 6 days a year per child as opposed to the children in control groups... also did better than those in control groups on math achievement tests, consistently, so in lower income countries, and on some tasks requiring rational psychological processing of information. There is also evidence that school meals may have small physical, psychological and social benefits for disadvantaged children.”^{xxxi}

2) School feeding works for cognitive functioning, education, and learning

- a) In Bangladesh, IFPRI found that “The SF program has a statistically significant positive impact on learning, as measured by achievement test scores...for all subjects, the value of the coefficient suggests that the participation in SF program increases test scores by 15.7 percent points. Interestingly, participating students do especially well in mathematics—they score 28.5 percent higher in mathematics than do their counterpart students in the control group.”^{xxxii}
- b) A large-scale look at children’s learning outcomes after five years of participating in the India Midday Meals Program, the world’s largest single school feeding program, two researchers found “that midday meals have a dramatic positive effect on learning achievement: children with up to 5 years of primary school exposure improve their test scores by approximately 10-20%. They further report that “schooling inputs that are directly related to teaching are associated with significantly higher learning when combined with the midday meal, but more general schooling infrastructure is not.”^{xxxiii}
- c) The results of a field experiment in Northern Uganda involving a control group, beneficiaries of an in-school feeding program (SFP), and the beneficiaries of an experimental Take-Home Rations (THR) program giving equivalent food transfers “show that...the THR program boosts math

scores of 11- to 14-year olds by 16.7 points. Both the SFP and THR programs had large significant impacts on math scores of 11- to 14-year olds who had delayed school entry... On cognitive development, both programs improve cognitive function in terms of ability to manipulate concepts.”^{xxxiv}

- d) From a review of 45 studies: “The findings suggest that breakfast consumption relative to fasting has a short-term (same morning) positive domain-specific effect on cognition. Tasks requiring attention, executive function, and memory were facilitated more reliably by breakfast consumption relative to fasting, with effects more apparent in undernourished children.”^{xxxv}
- e) A study of the School Breakfast Program targeting children of low-income families in Boston showed a positive impact on academic achievement: “Controlling for other factors, participation in the School Breakfast program contributed positively to the 1987 Comprehensive Tests of Basic Skills battery total scale score and negatively to 1987 tardiness and absence rates. These findings suggest that participation in the School Breakfast Program is associated with significant improvements in academic functioning among low-income elementary school children.”^{xxxvi}

3) School feeding works for reducing family food insecurity and poverty

- a) After most of the children in the WFP-Government of Bangladesh SFP program had been receiving the fortified biscuits every school day for more than a year, IFPRI found that—in addition to the improvements in enrolment, attendance, and drop-out rates, the program “also substantially improves the diet of the children in the program. Energy (calories) consumed from SFP biscuits are almost entirely (97 percent) additional to a child’s normal diet. In other words, the child’s family does not give him or her less food at home for eating the SFP biscuits at school. ...The biscuits are the single most important source of vitamin A in the diet of program participants. After rice, they are the most important source of energy, protein, and iron. The average energy consumption of participating students are 11 percent and 19 percent higher in rural and urban slum areas, respectively, than in corresponding control areas... Many participating students appear to share SFP biscuits with younger siblings and sometimes other household members. Sharing creates an interesting spillover effect: SFP biscuits account for 7 percent of total energy for children aged 2 to 5 in beneficiary households in the rural area. Clearly, sharing dilutes the benefit of supplemental nutrition for individual schoolchildren. However, it can be quite beneficial for the young siblings, since nutrient supplements have a proportionally greater effect on the nutritional status of the younger children.”^{xxxvii}
- b) Citing other sources, WFP reports: “During periods of shock and reduced purchasing power, families often resort to negative coping mechanisms, including taking children out of school to save on school fees and related expenses (World Bank, 2009a). School feeding programmes can help to safeguard households’ investments in education by defraying some of the costs of schooling and encouraging parents to enrol their children in school and ensure that they attend class regularly throughout the complete cycle. This helps protect children from the risk of both formal and informal child labour and facilitates social integration (Paruzzolo, 2009)...

...School feeding is a well-recognized safety net that transfers significant value to households with children enrolled in school or with school-age children (Bundy et al., 2008). The value transfer

from school feeding frees up resources within households, allowing families to buy food and invest in productive assets, and ultimately improving their livelihoods, nutrition and education. The value transferred is equivalent to the value of the food transfer delivered to the child at school, the value of the take-home ration (THR), or both. This serves as an incentive for households to send their children to school and ensure that they continue to attend...

... THRs are the best vehicle for maximizing the benefits that a school feeding safety net offers, by extending the value and impact of the transfer beyond the benefits that a child receives from the food ration consumed in school. THRs can easily be targeted to the specific groups that may be most in need of support, such as girls, orphans or other vulnerable children of school age and possibly other members of a household...

... school feeding frees up household income that would otherwise be used for food consumption. The financial value saved from food expenditure is equal to the monetary value of the food transferred, and households can invest part of these savings in productive assets. Evidence from developing countries shows that the poorest households consume an average of 85.5 percent of this added income, spending the remaining 14.5 percent on productive assets. In other words, of every US\$100 of value transferred through school feeding, US\$14.5 is invested in productive assets. The median return on this US\$14.5 investment in developing countries is estimated to be 54 percent per year (Banerjee and Duflo, 2004).^{xxxviii}

- c) "Another study in Bangladesh (Comparing Food and Cash Incentives for Schooling in Bangladesh, by Akhter Ahmed, IFPRI, 2005), compared the country's original Food for Education (FFE) Program launched in 1993 and the subsequent Primary Education Stipend (PES) Program that replaced it in 2002. FFE provided a free ration of rice or wheat monthly to poor families if their children attended school. PES provided participating families with cash instead of food. Both programs encouraged poor families to enrol their children in primary school. The rate of increase in enrolment was greater under FFE (18.7 percent) than PES (13.7 percent). The difference is assumed to be because FFE provided a larger incentive. The annual income transfer under FFE was USD 29.28, compared to USD 20.69 under PES. Ninety-five percent of parents of FFE students said that the program was a major motivation to send their children to school. They also said that the program attracted more girls than boys. Net enrolment rates in primary schools were higher for girls than boys under both programs."^{xxxix}

4) School feeding works to improve child behaviours and reduce depression by reducing children's short-term and chronic hunger and contributing to household food security

- a) A study investigating links between food insecurity/insufficiency and the psychosocial, cognitive, and academic performance of American school aged children (ages 6-11 years) and teenagers (ages 12-16) reported the following results: "After adjusting for confounding variables, 6- to 11-year-old food-insufficient children had significantly lower arithmetic scores and were more likely to have repeated a grade, have seen a psychologist, and have had difficulty getting along with other children. Food-insufficient teenagers were more likely to have seen a psychologist, have been suspended from school, and have had difficulty getting along with other children. Further analyses divided children into lower-risk and higher-risk groups. The associations between food insufficiency and children's outcomes varied by level of risk."^{xl}

- b) Another US-based study determined that: “For school-aged children, severe hunger was a significant predictor of chronic illness after controlling for housing status, mother’s distress, low birth weight, and child live events. For preschoolers, moderate hunger was a significant predictor of health conditions while controlling for potential explanatory factors. For both preschoolers and school-aged children, severe child hunger was associated with higher levels of internalizing behavior problems. After controlling for housing status, mother’s distress, and stressful life events, severe child hunger was also associated with higher reported anxiety/depression among school-aged children. ...*Conclusion*. This study goes beyond previous research and highlights the independent relationship between severe child hunger and adverse physical health and mental health outcomes among low-income children. Study findings underscore the importance of clinical recognition of child hunger and its outcomes, allowing for preventive interventions and efforts to increase access to food-related resources for families.”^{xii}

5) School feeding works for addressing caloric and specific nutritional needs

- a) A 2011 review by Jomaa et al. of peer-reviewed journal articles and reviews published between 1990 and 2011 looked at the impact of school feeding on educational, health, and nutritional outcomes in developing countries. “Analysis of the articles revealed relatively consistent positive effects of school feeding in its different modalities on energy intake, micronutrient status, school enrolment, and attendance of the children participating in SFPs compared to non-participants.”^{xiii}
- b) “Afridi (2010) surveyed children for their dietary intakes from two consecutive days in Madhya Pradesh, India to determine the impacts on students from the national SFP. ...Afridi found... that the students increased their daily nutrient intake by 49 to 100 percent of the nutrients provided from the school meals. The program also reduced the daily protein deficiency by 10 percent, the calorie deficiency by almost 30 percent, and the daily iron deficiency by nearly 10 percent. ...

...The results from these studies (reviewed by Lawson) show conclusive evidence on the impact of Food for Education programs on nutrition and health outcomes. Biochemical analyses of micronutrients show that the various FFE programs contribute to the improvement of these nutrients in the beneficiary students. Rates of anemia decrease as a result of these interventions, while overall caloric intake increases in students. These interventions also improve morbidity and illness rates, resulting in fewer days missed from school and fewer doctor visits. These results verify the findings of other reviews; Bundy et al. (2009) also agrees that FFE improves on children’s health and nutrition, while 61 Jomaa et al. (2011) points out an increase in both energy intake and micronutrients are a result of the provision of school meals.”^{xiii}

- c) The abstract of a systematic review of the use of multiple micronutrient nutrition (MMN) fortification by a team of experts summarizes: “Multi-micronutrient food fortification consistently improved micronutrient status and reduced anemia prevalence. ...MMN food fortification can improve micronutrient status and reduce anemia in schoolchildren. MMN fortification also seems to be effective for reducing morbidity from diarrhea and respiratory infections and might have positive effects on child growth and cognitive domains, particularly those related to memory... The results of this review show that MMN fortification of food can have an impact on various aspects of the health and development of schoolchildren. Considering the vast number of school-

age children suffering from MMN deficiencies and the consequences, the overall impact of MMN interventions in school-age children can be an investment in future generations by helping these children to achieve optimal health and increase their potential to learn.”^{xliv}

6) School feeding works for achieving gender balance in schools

- a) A review of survey data and statistics regarding enrolment and attendance linked to India’s nationally-mandated free midday school meal program reported “that the average monthly attendance rate of girls in grade 1 jumps up by more than 10 percentage points with the introduction of the program. ...data suggests that the program did not lead to a significant increase in overall enrolment levels although panel data indicate a small positive effect on the enrolment rates of girls from disadvantaged socioeconomic groups. Overall the findings show that the program has been more successful in improving participation rates of girls thereby reducing gender disparity in schooling.”^{xlv}
- b) A WFP study in 32 African countries concluded in 2007 that “Food for Education programs can have a lasting positive influence on school enrolment and, by providing extra take-home rations to girls, in addition to on-site feeding, can make a strong contribution to the Millennium Development Goals.” The study probed the impact of school meals and take-home rations on the enrolment of girls in primary schools targeted by WFP in food-insecure areas that also suffered from a lack of access to education. The study demonstrated that “provision of food in schools through the Food for Education (FFE) program contributed to increasing absolute enrolment in WFP-assisted schools by 28% for girls and 22% for boys in the first year. Post year-one enrolment patterns varied according to the type of FFE program. Where provision of take-home rations for girls was combined with on-site feeding for all pupils, the increase in girls’ absolute enrolment was sustained at 30% after the first year. However, in schools providing on-site feeding alone, the rate of increase in absolute enrolment after the first year reverted to the rates of increase found in the year prior to FFE implementation. The provision of take-home rations also appeared to reduce the dropout rate of female students, particularly in the higher grades.”^{xlvi}

7) School feeding works as a safety net, for social protection

- a) School meals programmes are the most prevalent type of social safety net, implemented in 131 countries.^{xlvii}
- b) A review of prior studies led to the question of whether Food for Education is as valuable a social protection investment as conditional cash transfers (CCTs). They conclude, “Here the fair answer appears to be: quite likely. FFE (programs) can increase human capital investments while also providing support to poor households. Thus they serve as a support to current poverty reduction while making the need for future transfers and assistance less likely.”^{xlviii}
- c) The abstract of a study of the India Midday Meals Program reports, “Correcting for self-selection into the program using a non-linearity in the probability of enrolment, we find that the program

acts as a safety net for children, cushioning them from negative nutritional factors; in particular there are large and significant health gains for children whose families suffered from drought.”^{xlix}

- d) “Why are school meals a powerful safety net in Latin America and the Caribbean? Because they support and are part of national systems, they are large scale with a wide outreach to the most vulnerable populations, and they are predictable for recipient communities. Parents know their children will receive a nutritious meal every day at school for the whole school year: this predictability allows families to free up other household resources, access different goods and services, save and invest in productive activities. In addition, nutritious school meals promote inclusive human development by incentivizing regular attendance, decreasing health-related absences, improving concentration and learning ability of girls and boys, and ensuring the completion of the school cycle. They normally complement other targeted conditional transfers linked to school attendance. The school meals platform has also been used by governments in the region to respond to crises, such as the prolonged drought in Nicaragua and the earthquake in Haiti. Governments across the region recognize school meals programmes as one of the largest and most reliable safety net within their national social protection strategies. In some countries, social protection ministries are the lead institution for school meals programmes.”^l

8) School feeding works for agricultural and community development

- a) A joint program of the Food and Agriculture Organization of the United Nations (FAO) and the Government of Brazil begun in 2009 involved family farms: “...in Honduras, Costa Rica, El Salvador, Guatemala, Paraguay, Dominican Republic, Grenada, Saint Lucia and other countries, healthy, adequate and culturally appropriate menus were developed, which take into consideration the students’ nutritional status and eating habits and the availability of fresh and seasonal products from local family farming. ...This process has shown that buying directly from local farmers and supplying schools with quality food generates positive benefits and satisfaction for all the actors: for the farmers, who have better opportunities for income generation and employment in rural areas, and for the students, who have access to healthy and fresh foods.

Results demonstrate that school meals policy can catalyze local dynamics and collaborative actions, through the collective and social construction of sustainable school meals programs with the involvement of local governments, farmers, cooperatives and local communities, enabling linkages between education, nutrition and agriculture.”^{li}

- b) “The Government of Honduras, with the support of WFP and other partners, is incorporating different home-grown models into the national school meals programme which covers 1.3 million children, primarily through the introduction of fresh food supplied by local smallholder producers. The Government has a clear vision to strengthen the link between school meals and local agriculture, in order to maximize the benefits in schoolchildren’s nutrition, as well as for small farmers and communities. ...About US\$ 1.3 million have been invested by the Government to complement the regular food basket of the national school meals program with fresh local fresh produce, reaching over 142,500 pre-primary and primary schoolchildren in 2016.”^{lii}

- c) The Brazil school feeding program “PNAE” is one key component to the country’s Zero Hunger Campaign: “In June 2009, a new PNAE legislation, namely, Law no. 11.947, introduced the legal requirement that at least 30 per cent of the products purchased for school meals should be bought from smallholder farmers and/or their organizations. This legal framework also mandated that priority be given to family farmers from the “agrarian reform settlements”, traditional communities such as quilombolas (slaves’ descendants), and indigenous peoples...PNAE’s 30 per cent rule combines the objective of improving food and nutritional security of the consumers, in this case public school students, with the objective of offering a structured demand for family farmers. The latter is characterized by its predictability and standards, which have the potential to reduce uncertainties and risks, especially price volatility, allowing family farmers to better plan their investments, diversify their food crops, and improve the quality of their produce to match the health and hygiene standards required by PNAE.”ⁱⁱⁱ
- d) The portion of the Brazil national school feeding program budget that went to smallholder farmers increased from 7.8 percent in 2011 to 21.4 percent in 2014. The amounts spent for smallholder produce over the same period increased from \$70 million to \$213 million.^{iv}

9) School feeding works to create jobs, particularly for relatively low-skilled women and youth

- a) Osun State, Nigeria Deputy Governor Grace Titilayo Tomori replied to a GCNF survey in 2014, saying that Osun State has deliberately used the state’s “O’Meals” school feeding program to create jobs for youth and women, in addition to focusing on purchasing foods locally and ensuring nutritious meals for children at school. She reported at the time that the state could attribute about 20,000 jobs to the program, including about 6,000 women hired as cooks and assistant cooks; more than 400 youth involved in fish farming; 2,000 youth involved in chicken production and another 250 young men and women engaged in processing the chicken; as many as 10,000 small farmers and off-takers involved in providing cocoyam for the program; some 1,000 youth who sort and pack eggs and thousands of small-scale egg producers (supplying 300,000 eggs per week to the program), plus cattle producers and processors, transporters, and other workers. The Deputy Governor reported that those are directly linked via Government actions, and that, in addition, “thousands of women on their own volition, have taken up cultivation and sale of vegetables (for the program) ..., and that sales of fruits...have increased “tremendously”.^{iv}

While not many of the countries surveyed by GCNF in 2014¹¹ had gathered data on the number of people employed through the program, those that did tell a compelling story:

- (i) Botswana Government officials reported that they could attribute over 7500 public and private sector jobs to their school meal program;

¹¹ This item (9.a.) refers to a GCNF survey conducted in conjunction with its 2014 Global Child Nutrition Forum and analyzed in early 2015. Some, but not all, of the data was published in 2015 in the 2014 GCN Forum Executive Summary.

- (ii) Cabo Verde estimated 1,000 employed due to their program;
 - (iii) Ethiopia reported 2,400 jobs;
 - (iv) Lesotho reported just over 3,000 cooks and 300 farmers;
 - (v) Namibia reported that their government’s procurement guidelines require companies to be 100% Namibian owned, that 75% of the food used must come from local sources, and that service providers must employ Namibians;
 - (vi) Niger reported that the government employs 300 cooks and processors for their program, but that an additional unspecified number of transporters and others are paid for by the communities; and
 - (vii) Senegal reported a pilot effort to hire post-harvest workers in processing and marketing and anticipated a formal plan for job creation in the next phase of their school feeding program.
- b) Information from those studying school feeding projects in which Tetra Laval has been involved in recent years is summarized in a report;^{lvi} two relevant highlights follow:
- i) In a USDA-funded school meal project started in 2002 in Bangladesh with partners Land O’Lakes and BRAC, about 263,00 students received school milk. In that project, 3 dairy processors began to produce UHT milk (no in-country processors did prior to 2002), and 500 new milk processing and delivery jobs were created.^{lvii}
 - ii) Thailand’s school milk program, which began in 1992, now uses 37 percent of the milk produced in the country; a 6 percent annual growth in the per capita consumption of milk between 1996 and 2006; a total dairy market growth from 290 million litres in the early 1990s to 1,146 million litres in 2003; and a growth in the number of dairy cooperatives from 62 in 1996 to 117 in 2009.^{lviii}

10) School feeding works to limit the negative effects of stunting

- a) Looking at the India Midday Meals Program as a safety net, two researchers reported, “Our findings are broadly consistent with the medical literature on nutrition and supplementary feeding. In early childhood, serious damage can be done to the nutritional development of children with long-term implications for wider development, including cognitive skills. Nevertheless, as noted by several studies in that literature, whereas growth deficits persist into early adulthood if children remain in the same poor conditions, there is potential for catch-up in height-for-age if circumstances improve for the better, such as through nutritional supplementation or migration when children are still young (see for example Tanner, 1981; Coly et al 2006; Golden, 1994). Adair (1999), for instance, finds from a longitudinal survey of over 2000 children in the Philippines that there is ‘a large potential for catch-up growth in children into the preadolescent years’.”^{lix}
- b) Children receiving school milk in Thailand “grew an additional 3 cm per year more in comparison to before program implementation”. The program began in 1992, and the data included statistics up to 2009.^{lx}

- c) “In school year 2013-2014, the School-based Feeding Program of (Philippines) Department of Education targeted feeding more than 40,000 “severely wasted” students for a period of 100-120 feeding days. ...Working on data with verified pre-feeding and post-feeding nutrition status, we found that, of those children verified to be severely wasted prior to the feeding program, about 62% attained at least normal nutrition status at the end of the feeding program. ...At least 62% of parents interviewed said that his/her child attained normal weight for height at the end of the SBFP; 19% said that their child did not, while the remaining 19% could not recall if their child did not attain normal weight or body mass index (BMI) at the end of the feeding program...we found evidence that SBFP does have an impact on the nutrition status of severely wasted students.

Teachers interviewed pointed out that most of the SBFP children enrolled in their classes improved in attentiveness during the feeding program (96%) as well as after (95%). The children also reportedly became more sociable during the feeding (97%), a development that was sustained after the feeding (96%). Improvement in class attendance was also reported by teachers for 94% of the beneficiary pupils; 92% of the children sustained good attendance.”^{ixi}

11) School feeding works to build and sustain political support

- a) “In 2009, the World Bank and the United Nations World Food Programme, in collaboration with The Partnership for Child Development (PCD), published an analysis “Rethinking School Feeding” (Bundy et al., 2009). The analysis was undertaken to increase understanding of countries’ growing demand for school feeding programs which had been sparked by the food, fuel, and financial crises of 2008. Governments had clearly understood that school feeding programs have multiple benefits and are important tools to reach the most vulnerable. They are a social safety net, providing income support to families through enhancing enrolment and reducing absenteeism; and once the children are in school, the programs can contribute to their learning, through avoiding hunger, and enhancing cognitive abilities... “Rethinking School Feeding” documented that rather than seeking to exit from providing school feeding, countries dependent on external funding and implementation tend to transition from externally supported projects to nationally-owned programs (Bundy et al., 2009). ... School meal programs can also contribute to building food markets and the enabling systems around them by generating a structured and predictable demand for food products, thus, benefiting local farmers and promoting sustainable local economic development... Many countries are designing or redesigning national programs and in doing so, are considering the strategic role of public food purchasing in fostering healthy diets and local development. School feeding programs operate in the strategic level of the middle of the food chain, from where they can influence both producers and consumers.

Analysis of school feeding funding has shown that national governments in low-income countries are increasing their investments in school feeding, with a rise of 12 percent in four years, from 6 percent in 2008 to 18 percent in 2012 (WFP, 2013)”^{lxii}

- b) Some country-specific examples of countries’ expression of commitment follow.
- i) In 2011 Botswana’s Minister of Local Government said, “The Government of Botswana has a longstanding commitment to the school feeding program and have been supported by the

- World Food Programme. However, in 1997 the government of Botswana fully took over the program to ensure local ownership and accountability.”^{lxiii}
- ii) In Brazil, school feeding was introduced in the early 1940s; in the mid-1950s, there was a campaign to make it universal; and by 1972 a National Institute for Food and Nutrition (attached to the Ministry of Health) was set up to manage the program. The program underwent numerous name changes and grew over the years, withstanding multiple and dramatic changes in the country’s political system (over 20 presidents and military rulers presided between 1940 and 2017). The program became a pillar of the Zero Hunger Strategy of under President Luiz Inacio Lula da Silva, and remains popular to date, with the Brazilian government and partners allocating funds and technical assistance to assist low-income countries to manage their school feeding programs, via the Brazil-sponsored and -based World Food Programme Centre of Excellence against Hunger.^{lxiv}
- iii) “School lunches are a common topic when Japanese reminisce about their school life. There is even a small museum in the Ministry of Education, Culture, Sports, Science and Technology in Japan (MEXT) where the typical school lunches of each generation are replicated. This exhibition receives favourable reviews from visitors, who make comments like, “It was great for conversation with my child,” and, “It brought back memories of those days.” In Japan “eating from the same pot” signifies fellowship and bonds, and this phrase can be applied all around the country in the case of school lunches. This article looks into the School Lunch Service, which the Japanese hold so close to their hearts. ...Although various forms of school meals existed in the country at least as far back as the 1890s, the central government-funded school lunch program started after World War I... In 1951, (in a budgetary crisis), the minister of finance argued for the termination of school lunch subsidies in the Diet, but PTAs from all over Japan opposed the minister, urging for the continuation of the school lunch service, and opposition political parties jointly proposed legislation for school lunches. It was in 1954 that the School Lunch Law was finally passed and put into force.”^{lxv}

12) School Feeding works for nutrition education and intergenerational improvements

- a) This set of excerpts from “Nutrition Education in Schools”^{lxvi} summarizes the issue very well: “Children progressively acquire and learn eating habits and practices as they grow and develop. Initially, the family plays a key role in the process not only as responsible for feeding the child, but also by setting norms within the family, acting as role models, encouraging certain behaviors and rewarding or limiting others...

...During school age, the social environment of children diversifies and extrafamilial influences progressively become more important references. In this period, children are more independent, start making their own food choices and take personal decisions regarding what they eat. The family is less important for adolescents, while friends, peers and social models are the key influences on their eating practices...

...Scientific evidence supports that prevailing food patterns during infancy and childhood influence growth and development; have an impact on health not only during this period of life, but also on the potential development of risk and protective factors related to the onset of chronic diseases later in adulthood. Nutrition during childhood contributes to maintaining health and optimal learning capacities. Furthermore, food habits that persist during adolescence are more likely to track onto adulthood...

...Policy measures and education within specific settings such as schools, workplaces, hospitals or cities are valuable strategies to influence health. Schools provide the most effective and efficient way to reach a large segment of the population: young people, school staff, families and community members.

... In this context, the provision of food in the school either as school meals or in any other potential way plays an important role...

... School meals provide a valuable opportunity for nutrition education. Food provided at schools should be nutritionally adequate and consistent with classroom messages. Staff dealing with school meals should be properly trained, supported and integrated with teaching staff."

- b) An evaluation of the effectiveness of school-based nutrition education in reducing or preventing overweight and obesity in children and adolescents involving a systematic search in 14 databases and five systematic reviews for randomized controlled trials conducted in schools revealed that "Interventions in schools to reduce overweight and obesity, as well as to increase fruits and vegetable consumption, have demonstrated effectiveness in the best-conducted studies."^{lxvii}
- c) "Schools are a critical place to introduce and reinforce healthy behaviours that serve as a strong foundation for childhood development and increase children's chances of living healthier lives. The school food environment consists of the meals children eat there as well as foods available in vending machines, student stores, and concession stands. Since children's eating habits are formed early on and can influence taste preferences later in life, it is essential that healthier foods are introduced to them at school. Our analysis of data on individual Americans' diets, BMI, and medical expenditures suggests that creating healthy eating habits early in childhood could prevent higher healthcare costs in adulthood...Research performed by UCS and others underscores the power of schools to improve the daily diets of children, especially those from the most economically disadvantaged backgrounds." Our analysis has demonstrated that healthy school foods can serve as a lifeline for children swimming in a sea of junk food."^{lxviii}
- d) "There are intergenerational benefits for younger children. The links between school feeding and increased enrolment point to a positive effect on the well-being of the next generation because both maternal and paternal education levels are strong determinants of child growth and development as measured by stunting. The odds of having a stunted child decrease by about 4-5 percent for every additional year of formal education achieved by mothers."^{lxix}

13) School feeding works in emergency and post-emergency situations, whether those situations are man-made or due to natural disasters

a) The World Food Programme, as the world’s largest humanitarian organization and a major supplier of school food for vulnerable children, has a long history of providing school feeding in emergencies. For example:

i) A 7.6 magnitude earthquake struck South Asia October 8, 2005. Some 70,000 lives were lost and 2.5 million people were left homeless. Schools remained closed for a few months, but when they were reopened in tents, WFP provided high-energy biscuits and dates. “This was an important part of the emergency operation as it created a sense of normalcy and encouraged children to continue their studies. The tremors continued for many months ...Parents as well as students felt happy and safe in the tented schools. The incentive of giving dates and biscuits to students at school was well received and it kept enrolment intact ...In spite of enormous logistical challenges WFP managed to get food to the neediest, and through emergency school feeding reached 110,000 school-age children in their time of crisis”^{lxx}

ii) WFP responded to the Indian Ocean Tsunami of December 2004 in numerous ways and countries, including by providing school food in both Sri Lanka and in Aceh Province, Sumatra:

(1) Between March and May of 2005, WFP distributed take-home-rations for all school age children in tsunami-affected areas of Sri Lanka, and by May of that year, managed to initiate school feeding involving fortified biscuits for 250,000 primary school children in the south and the northeast of the country. “Children and their families interviewed at the time expressed their appreciation for the biscuits, with many acknowledging the important income transfer the school feeding ration offered.”^{lxxi}

(2) In Aceh, WFP launched a school feeding program within three months of the tsunami, beginning with 50,000 children in March 2005. “In April, the program tripled, and by May, had grown to over 270,000 children (and teachers), and continued to expand over the following months. Thus, under an emergency operation...340,000 school children were provided with micronutrient fortified biscuits and nutrition and health awareness for a period of one year. ...WFP worked with UNICEF and NGOs to provide schools with a water supply and sanitation facilities. ...Biscuits were seen as a direct income transfer, freeing resources that households usually spent on a meal or snack for school children. ...The teachers, students, and families contacted by an evaluation team at the time welcomed the school feeding program and teachers reported improved attendance.”^{lxxii}

b) Soha Moussa, who now works with WFP in her home country of Lebanon where 25 percent of the population is made up of refugees, was at Tufts University when she delivered the Sixth Dr. Abraham Horowitz Lecture at the United Nations Standing Committee on Nutrition in 2002. She said, “In the summer of 2001 (as) a WFP School Feeding Associate, I was among 28 students selected to travel to 54 countries, many of which were experiencing emergencies (e.g. Sierra Leone, East Timor, Colombia) to assess school feeding programmes in place. The stories and

perspectives of all the associates considerably broadened my experience. The consensus at the end...was that schools have the potential to address nutritional issues, as well as provide a safe haven and a source of stability for children and their families both in areas experiencing emergencies, and where relocation as a result of such emergencies has occurred. School feeding programmes can play an instrumental role in keeping schools open in crisis and conflict.”^{lxxiii}

- c) “WFP supports the education of Syrian children by providing nutritious snacks in almost 900 schools across Syria, as well as through school meals initiatives in Egypt, Jordan and Lebanon. (In Lebanon) WFP joined forces with the Ministry of Education and Higher Education to address the lack of education opportunities for Lebanese and Syrian primary school pupils and to prevent the loss of a generation. By distributing locally-sourced ready-to-eat snacks, WFP addresses short-term hunger and provides an incentive for children to enroll and remain in school.”^{lxxiv}

14) School feeding works to provide a good return on investment:

- a) The Boston Consulting Group (BCG) partnered with WFP to do a cost-benefit analysis of three WFP safety net programs, including school feeding. The study looked at Ethiopia, Bangladesh, and Honduras and calculated the cost of the intervention in terms of all government and partner costs for commodities, transport, operational costs and overhead, and the benefits in terms of value transfer, return on investment, increased productivity, healthier and longer life, and externalities, with beneficiary lifetime as the timeframe, no intergenerational benefits, using the lowest GDP quintile as base wage (if actual was not available), five years as the lifetime of assets, and the World Health Organization’s methodology and estimates for Disability Adjusted Life Years (DALYs). It did not consider “several non-quantified by highly relevant benefits associated with school feeding” such as “building stronger community ties, improvements in gender equity and school infrastructure, and serving as a vehicle for other development interventions”. Home-grown aspects were also not considered. The study concluded “Over 300% return on investment with about \$530 per beneficiary of generated value.” The team also conducted a sensitivity analysis and reported it showed “robustness of analysis that remains positive even the worst case.”^{lxxv}
- b) Following on the work described in 13. a., above, Mastercard joined the study alongside BCG and WFP, and the work expanded to 14 countries, and the work continues in 2017. As of October 2016, the team reported a return of between \$3 and \$9, or an average of \$5.50 for every dollar invested in those WFP school feeding programs.^{lxxvi}
- c) Studying benefits realized in an eight-year old Food for Education (FFE) programme in Bangladesh that drew from IFPRI’s long-term study of the programme, researchers examined effects on primary school participation and duration of schooling, and calculated long-term economic benefits of children’s participation in the program. “...the study found that participating children, on average, had school participation rates 20 to 28 percent higher than students who did not participate in the programme. FFE participants also stay in school from .57 to 2 years longer than those not in the FFE programme. The authors estimated that the combined effects on education noted above would represent an increase in lifetime earnings of between 7 and 16 percent for participants going to work in the rural sector, and from 13 to 25 percent for those going to work

in the urban sector. These effects were much higher for females than for males. ...The researchers also calculated the public rates and private rates of return on investment. ...This translates to a public internal rate of return on the programme of more than 14 per cent per year and a private rate of more than 30 per cent. Conclusion: The report stated that the increases in lifetime earnings due to the FFE programme's impact on schooling "would bring large numbers of households above the poverty line." The team also reported that "these analyses imply that the FFE programme represents both an extremely wise economic investment for the government in terms of economic growth, but also a powerful tool of poverty alleviation, especially for women."^{lxxvii}

- d) "Our findings suggest that investing in healthier school lunches today could produce economic benefits in the form of billions of dollars in healthcare cost savings tomorrow."^{lxxviii}

15) School meal programs are resilient and sustainable

- a) As witnessed by their very long histories of withstanding political changes, wars, economic downturns, natural disasters, food price spikes, and more in countries as varied as the Brazil, Japan, the US, and the United Kingdom, school meal programs have exemplified resilience.
- b) Even in countries with far fewer natural and financial resources school feeding has persisted, as can be seen in these examples from the Global School Feeding Sourcebook^{lxxix}:
- i) Botswana, whose school feeding began in 1966 in response to widespread malnutrition due to a five-year drought, has managed and paid for its own school meal program since 1997.
 - ii) Cape Verde, whose program got underway with help from WFP in 1979, took over full responsibility for funding and running the program in 2010.
 - iii) Ecuador received support from WFP and the United Nations Development Programme from the eighties, but support gradually phased out and Ecuador has fully managed its own program since 2009.
 - iv) Ghana's earliest known school food activities were in the 1950s, when students in some Catholic schools received take-home food rations. WFP has been involved in Ghana school feeding and other activities for over 40 years; Catholic Relief Services and numerous others also supported school feeding in the country. In response to NEPAD's home-grown school feeding push, Ghana initiated its own Ghana School Feeding Program (GSFP) in 2005, beginning with a pilot in 10 schools. By the end of 2009, the program was serving over 600,000 children in all of the 170 districts of the country, and by 2014, GSFP reached over 1,730,000 students in 5,000 primary schools.
 - v) India's program is the largest single national school feeding program in the world, providing some 120 million children¹² (113.6 million in 2010-2011) with meals each school day. "The

¹² This figure is from "India's school lunch program may be imperfect, but it deserves credit for feeding millions", by Rhitu Chatterjee, Public Radio International's The World, July 16, 2014; <https://www.pri.org/stories/2014-07-16/indias-school-lunch-program-may-be-imperfect-it-deserves-credit-feeding-millions>. The remainder of paragraph 15.b.v. is from the Sourcebook (See Endnote lxxviii)

- Mid-Day Meal Scheme (MDMS)... was launched in 1995 with the objective to ‘boost universalization of primary education, by increasing enrolment, retention, and attendance and simultaneously impacting on nutrition of students in primary classes’.”
- vi) Kenya’s school feeding activities date back more than 30 years. Its popular school milk program, begun in 1979 was shut down a few years later “due to high costs and the introduction of the Structural Adjustment Program... A school feeding partnership between the Government of Kenya and WFP started in 1980. ... By 2008-2009, the beneficiaries had increased gradually to reach 1.5 million school children. Today, the school meals program includes a WFP-led program and two models of Government-of Kenya-led Home-Grown School Meals Programs.”
 - vii) Even throughout the political and security crises over the past few years, the Government of Mali has remained committed to its National School Feeding Program. School feeding was “first institutionalized in 1972 by Government Decree No. 0235, two years after independence” WFP and Catholic Relief Services (CRS) have supported school feeding in the country for many years, but the government itself fed over 100,000 students in the national program before the crisis and displacement of northern populations during the crisis that began in March 2012. Though much weakened, the national program persists even today in Mali, supported and supplemented by WFP and CRS.

CONCLUSION

Implementation of large-scale school feeding programs is complex and difficult; it takes years to build a solid, well-performing program, and even solid programs require careful monitoring and the ongoing adoption of improvements as the programs evolve and new problems and solutions emerge.

Due to their complexity and the influence of factors outside the programs’ control, measuring the impact and accurately ascribing attribution to large-scale school food programs is extremely difficult, even in situations where financial resources and expertise are available.

That said, this document provides evidence that school meal programs work, and work in powerful ways, with specific and long-lasting benefits to the individual families and children who participate, but with clear benefits as well for communities and countries where they are implemented.

Nearly every country in the world has some form of school meal program.^{lxxx} Unfortunately, the coverage of school meal programs is weakest in the very places where the need is the greatest: In low-income countries, only about 18 percent of school children are provided school meals; 49 percent in upper-middle-income countries.^{lxxxi}

To compound the issue, coverage is also the lowest in countries that are most threatened by the potential withdrawal of donor assistance. The US Government McGovern-Dole Food for Education program, for example, currently covers about 3 million children a year. Programs are currently active in 25 food-insecure countries around the world; priority countries for the program in 2017 are Benin, Haiti, Laos, Liberia, Madagascar, Mauritania, Nepal, Nicaragua, and the Republic of Congo.^{lxxxii}

The issue for the US, as for countries everywhere, is not whether school meal programs are effective. Per the evidence provided in this document, school food programs are good for the children they serve and for the economic development of the countries where they are implemented.

The issue is not even whether the programs are effectively implemented. The network of organizations and leaders in the realm of school feeding that has evolved—aided significantly by the opportunity to share learning at the Global Child Nutrition Forum over the past 19 years—is stronger and better equipped than ever to help get it right. These include numerous players in addition to GCNF, ranging from national government leaders from over 50 countries around the globe and regional bodies such as the African Union and NEPAD; to non-profit groups such as the Breakfast Club of Canada, Catholic Relief Services (US), Counterpart International (US), Mary’s Meals (UK), the Partnership for Child Development (UK), the Social and Industrial Food Service Institute (Russia), and World Vision (US); multilateral institutions, including the Food and Agriculture Organization of the United Nations (FAO), the World Bank, and the World Food Programme and its Brazil-based Centre of Excellence against Hunger; numerous private sector entities; foundations; and academic institutions. These players are collaborating extensively, in unprecedented ways, to ensure that programs are sharing and benefiting from one another’s experience and expertise.

The issue is not politics nor political parties. Leaders across the political spectrum have supported school meal programs throughout the decades and continue to until present.

The issue, rather, is political will.

The Global Child Nutrition Foundation and its partners can attest to the fact that the leaders of some of the poorest countries in the world are demonstrating unshakable support for feeding their young and vulnerable citizens at school. We hope that the leaders of the United States and of the world’s other rich countries will have the political will to support the nutrition of their own young and vulnerable citizens, and to help those countries with fewer resources to do the same.

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