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School Meals, Social Protection and Human Development: Revisiting Trends, Evidence, and Practices in South Asia and Beyond

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**School Meals, Social Protection and Human Development:
Revisiting Trends, Evidence, and Practices in South Asia and Beyond**

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Abstract

With nearly 420 million children reached worldwide, school meals are among the largest-scale social protection interventions. This paper traces the evolution of school meals programs globally, examines the empirical evidence underpinning them, reviews select implementation practices with an emphasis on South Asia, and provides one of the first estimates of World Bank's investments in school meals.

JEL Codes: A10, D60, I38, O10

Keywords: Social protection, social assistance, school feeding, school meals, food assistance.

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Key messages

- School meals programs reach nearly 420 million children worldwide on most school days. They are probably the most extensive social protection programs and, with a budget of USD 48 billion, are among the largest of human development interventions. Notably, domestic funding plays a major role even in low-income countries, where about half of total expenditures are funded by governments.
- Part of this popularity may reflect the evidence that nutritionally appropriate school meals can be an effective means to pursue simultaneously multiple development goals: potentially contributing at the same time across the sectors of human development, agriculture, gender and income.
- The strength of evidence for these multiple returns is uneven: in education, it is stronger for school attendance and enrolment than for learning; in health and nutrition, school meals may be relatively more effective in bolstering food security than addressing chronic malnutrition. There is a particular need for further research on: actual program costs; the relative benefits of in-kind and cash-transfers; the social protection returns in terms of local multipliers and jobs generation; the potential for school meals to reduce the risk of diet-related non-communicable diseases later in life; and the specific returns to home grown school feeding.
- There are few other social assistance interventions which could have achieved the remarkable success of the global School Meals Coalition, which attracted 97 member countries in two years and not merely re-established but exceeded pre-pandemic levels of school meal coverage in the same period. The popularity of school meals may also reflect a hard-to-quantify, yet key political dimension.
- School meals appear to have deep roots in the social contract between state and citizens, but they also present scope for significant improvement. A rich agenda lies ahead for governments in enhancing the design of school meal programs in cost-effective ways; improving their practical connections with other social protection and human development systems; and expanding partnership opportunities with private sector, communities, civil society and governmental actors. With its longstanding tradition and current large-scale programs, South Asia stands out as one of the key regions where the school meals agenda could be advanced in ways that are technically and politically sustainable.
- While the World Bank's policy and financial engagement in school meals may at first sight seem comparatively limited relative to government domestic investments, the institution's operational footprint is more substantial and more relevant than often assumed. Since 2008, the Bank has rendered support to school meals via 71 projects in 36 countries and for a volume of operations of at least USD 282 million.

1. Introduction

School meals are popular programs among governments and societies. Nearly every country around the world has some form of school meals operation in place, with approximately half of the world's schoolchildren receiving a meal at school every day (1). School meals are particularly salient in South Asia, the region hosting the largest school meals program worldwide – India's Mid-Day Meal Scheme – and accounting for one-third of global school meals coverage. This paper will review key issues in school meals evidence and experiences, and attempt to explain its popularity. In doing so, it maintains a global spirit while delving into specific South Asian practices.

In many ways, school meals could be considered an in-kind version of conditional cash transfers. School meals and cash transfers have long been the foundations of social protection programmes aimed at schoolchildren and adolescents. In the last decade, both cash transfers and school meals have grown in global importance: cash transfers have become the default social assistance instrument for low-income countries (2), while school meals programmes have emerged as the world's most extensive safety net and now serve more than half of the world's primary school children (3). The two programs are often implemented together: for example, Brazil's social reforms in the 2000s simultaneously introduced both the celebrated Bolsa Familia and what is still the world's second-largest universal, free school meals program (4,5).

Cash transfer programs have been the subject of extensive review and assessment from a social protection perspective (6). School meals programs have been widely evaluated with respect to their impact on educational and nutritional outcomes, but there are no comparable evaluations that explore the relationship between school meals and social protection. In this review we aim to better understand how school meals contribute to a comprehensive and effective national safety net program. To analyze this question, we use a social protection lens to document the impetus that led countries to establish national school meals programs and explore the evidence of impact and reach of these interventions.

This review covers five sections: the next section sets out a brief history of school meals. Section 3 offers a snapshot of trends globally. Section 4 reviews the empirical evidence on the impact of school meals. Section 5 analyses national school meal programs in South Asia to understand the evolution and development of school meal programs in neighbouring countries with a specific focus on social assistance functions. Section 6 stocktakes engagements in school meals by a government partner, the World Bank. Lastly, Section 7 concludes by summarizing key messages in evidence and practices.

2. Evolution in school feeding history

The emergence of school meals programs largely coincided with the expansion of public education in Europe and America in the late 19th and early 20th centuries. During this period, non-state actors endeavoured to address locally identified problems of child poverty and malnutrition among the expanding school population. As part of the broader social transformation that emerged from the Industrial Revolution, the responsibility of providing meals to needy pupils began shifting to the state (7).

The need for school meals in industrialized countries was amplified by the confluence of a significant increase in income inequality and the political drive to invest in public education as a nation building tool. In the United States, the push for institutionalizing school meals at the federal level gained momentum with the introduction of compulsory education which some considered to be “an utter folly” without the requisite sustenance to facilitate learning (8). In Britain, the political impetus for state-sponsored school meals is difficult to separate from the groundswell of support for other social policy measures such as old age pension which increased due to the organized labor movement.

Developing countries embarked on the twin agenda of fighting poverty and investing in education following decolonization in many cases or the rise of a modernizing regime in others. Although there has been an element of gradual organic growth in some developing countries, the lessons of industrialized countries, the increasing recognition of “second generation human rights” in the decades following World War II, and the guidance of international organizations such UN agencies played a significant role in the emergence of school meals in developing countries. The economic transformation in China, in contrast, enabled the government to gradually expand its school meals budget at the pace of its economic growth, which helped address emerging social needs partly created by industrialization (9). Table 2.1 summarizes the motivations for countries to introduce national school meals programs.

Table 2.1. Rationales that Motivated Countries to Introduce School Meals Programs Nationwide

Rationale	Country	Year	Context
Equality of opportunity	Holland	1900	Holland became the first country to enact a national legislation authorizing municipalities to supply food and clothing to children who might fail to enrol into school for lack of resources (7).
National security	Britain	1906	A series of reports issued in the aftermath of the Boer War highlighted the physical deterioration among young British men, and in response, a commission recommend school meals be provided to needy children (10).
Economic recovery	US	1933	The US rapidly rolled out federal assistance for school meals as part of the recovery program during the Great Depression. The program created employment for 7,442 women in 1933-34 and secured demand for the excess supply of agricultural output caused by the depression, protecting farmers' incomes (7).
Reconstruction and rehabilitation	Germany	1946	The provision of school meals in Germany in the aftermath of World War II, spearheaded by Herbert Hoover, was introduced to rehabilitate a population post-conflict (11).
International guidance	Brazil	1946	A proposal by UNICEF put forward in 1946 spurred the country to institutionalize school meals at the national level, scaling up from geographic targeting in disadvantaged regions (12).
Human rights	India	2001	The Supreme Court of India directed all governments across the country to fully implement its scheme of providing cooked meals to all children in primary schools to promote education and prevent child hunger and appointed Independent Commissioners to ensure compliance (13).
Correcting past injustices	South Africa	1994	A progressive constitution designed to address the dramatic injustices and inequities of the recent past laid the foundation for deploying school meals as part of a package of social protection measures. South Africa also represents a case in which school meals was first introduced as part of an integrated nutrition program aimed at preventing hunger before it was moved to education as the program evolved (14).
Response to emerging social needs	China	2011	The government of China gradually expanded its school meals budget at the pace of its economic growth, which helped address social needs partly created as a result of the process of economic change. For instance, the comprehensive school health and nutrition interventions introduced since 2011 are targeted at children who are left behind in rural areas by parents mostly employed in urban areas (9).

The emergence of frameworks to assess national policy commitment and implementation of school meals during the first decade of the millennium

Social protection instruments, such as school meals, combine support from multiple sectors to ensure vulnerable children remain in school in order to achieve their developmental potential. One of the earliest concerted efforts to include the well-being of the students in social protection and development was the launch in 2000 of the *Focusing Resources for Effective School Health* (FRESH) Framework at the transformative World Education Forum in Dakar, Senegal as part of the call for “Education for All”. This framework was launched in 2000 by a multi-agency partnership that included UNESCO, UNICEF, the WHO, WFP and by the World Bank to guide the programmatic design of quality school-based health and nutrition interventions, and to promote the importance of student health and well-being for education outcomes. This was also one of the World Bank’s earliest statements recognizing the importance of health and well-being in education and human capital.

The 2008 Food, Fuel and Financial Crisis highlighted the interconnectedness of school-based health and nutrition interventions, as low-income countries leveraged World Bank emergency agricultural funds to expand the coverage of national school meals programs, with the multiple connected targets of improving social assistance, health, nutrition, education, and human capital (15). Although this was a response first seen in low-income countries, middle- and high-income countries followed suit when faced with the subsequent global recession. School meals programs were then leveraged to reach more children, even during vacations, in countries which had not previously viewed school meals as a social protection measure, including Spain, Italy and Scotland.

The origins and structures of this country-led demand were explored in 2009 in the World Bank publication “Rethinking School Feeding”, which had a cross-sectoral Human Development perspective (15). The report received input from the three World Bank Human Development global practices of Social Protection and Jobs (SPJ), Education, and Health, Nutrition and Population (HNP), as well as from UN and development partners. The report marked a sea-change in thinking about the role of school meals as a multisectoral intervention and had a worldwide effect on accelerating the introduction and expansion of school meals programs taking a social protection perspective. There is unusually specific evidence supporting the emergence of a new vision: in 2010, as part of their support for emerging from the global recession, China and Russia independently launched national school meals programs using “Rethinking School Feeding” as the empirical rationale for the launch (Figure 2.1) (6). The effectiveness of these national school meals programs has shown promise; ten years after introducing an unusually complete school health and nutrition program as part of a larger investment in human capital, China declared an end of absolute poverty in the country (9,16).

Figure 2.1. Country-Led Demand Motivated the 2009 World Bank Rethinking School Feeding Publication



In response to the new global interest in school meals programs, the World Bank developed school meals and school health policy tools as part of the pre-existing policy program which sought to create a “Systems Approach for Better Education Results” (SABER). These tools were created by a cross-sectoral partnership of countries and development agencies, convened by the World Bank, to explore the policy implications of national school meals and school health programs and to track change over time. Since the release of the SABER tool in 2012 (17), at least 81 country reviews have been undertaken across 59 countries, with several countries completing the assessment more than once, making it the most widely used policy tool for governments to self-evaluate and track national school health and school meals programs (18).

As part of this new vision, WFP, the world’s primary source of school meals program support, introduced a new school meals policy in 2013 pivoting from a primary focus on food-aid to supporting the role of these programs in supporting nation building and protecting the well-being and education of school-age children and adolescents in low-resource settings. As part of this policy, WFP, together with countries, use the SABER School Feeding tool to strengthen program design and track policy evolution. WFP now publishes biennial reports on the status of school meals programs globally which serves as the primary source of data on country-level actions. Currently, WFP is developing a new year-on-year database for this information as part of a *Data and Monitoring Initiative* of the global School Meals Coalition (1,3).

Increased adoption of school meals by countries globally in the second decade of the millennium

Globally, the number of children receiving school meals increased by 9 percent between 2013 and 2020. The scale-up was greater in low-income countries, increasing by 36 percent from a low starting point, and greatest in lower-middle-income countries where it increased by 86 percent. The scale-up was particularly notable in Africa (1). By January 2020, school meals programs were delivered to more children across more countries than at any time in human history, reaching 388 million children daily (equivalent to half of the world’s primary school population) (1).

Almost all national school meal programs around the world are operated by national governments. More than 87 percent of all countries have a school meals policy in place with 98 percent of meals provided by governments using their own domestic funds. This funding proportion is largely driven by programs in lower-middle-, upper-middle- and high-income countries (3). Annual global investments in school meals are estimated to be USD 48 billion. This is many times higher than ODA investment in school meal programs, which totals USD 300 million annually, the majority of the funds coming from the McGovern-Dole Program of USDA (19). This exceptional commitment of domestic funds shows the priority that governments place on the current health and well-being of their school children, and highlights the opportunity for development agencies to increase investment in this area, especially in low-income countries.

Programs in low-income countries have also become more self-reliant, with the proportion of domestic funding for national school meals programs increasing from 17 percent to 28 percent between 2013 and 2020 (1). Governments in low-income countries almost doubled their level of funding relative to international donors over the same period, as the share of ODA for school meals decreased from 83 percent to 71 percent over this same period. Domestic allocation of resources, for both school meals and cash transfers, remains under-funded in low-income countries to meet the true demand; spending on social assistance is on average 1.5 percent of gross domestic product (GDP) (20).

COVID-19 and post-pandemic developments

The outbreak of the COVID-19 pandemic and the subsequent closure of schools worldwide in an attempt to limit viral transmission precipitated the largest education crisis in history, with more than 1.6 billion children deprived of schooling (21). Closing schools not only deprived children of education but also removed access to what is now recognized to be the primary platform for delivering support and care to school-age children and adolescents. At the height of the crisis in April 2020, around 370 million children were suddenly deprived of their daily school meal (22), halting a decade of global growth in school meals programs and other health services. In some countries schools re-opened relatively quickly, for many there was a disruptive cycle of re-opening and reclosing, and for some, this withdrawal of schooling was long-term; for example, schools in Uganda and the Philippines only reopened more than two years later (23,24).

The COVID-19 pandemic suggests that while school feeding have been used in an array of emergencies and crises (e.g., see Section 4), such programs were not necessarily effective if left in their traditional form. In fact, they adapted and were largely monetized, including providing families of children with an equivalent transfer in vouchers or cash transfers. This occurred in about 35% of countries surveyed in global trackers (87), with the majority of countries opting for take home rations (only 9% of countries maintained pre-pandemic, on-site feeding design).

At the same time, the experience of having service delivery interrupted by prolonged school closures helped alert governments to the inadequacy of most health systems in serving school-age children and adolescents outside of the school platform. This increased the resolve of governments to reopen schools and strengthen school-based public health initiatives, so that they could improve the health and well-being of the children and ensure that they could effectively participate in school as healthy learners. To support this resolve, national political leaders formed the School Meals Coalition at the 2021 UN Food Systems Summit with the triple aims of restoring national programs, ensuring the well-being of all children, and rebuilding more resilient school-based health systems. The global Coalition is now led by 97 member states – 43 of which are from Africa – and covers more than 62% of the global population.

The number of children being fed in schools in 2022 rebounded to 418 million, exceeding the number of children fed pre-COVID-19 by 30 million (7 percent) (3). School meals are often accompanied by complementary services; in 2022, the most common nutrition-sensitive interventions delivered alongside school meals included deworming (38%), weight and height measurement (34% and 32%, respectively), and anemia testing (11%) (3). Importantly, this trend with increasing access to school meals is not consistent across income groups: while high-income, upper-middle-income and lower-middle-income countries all show a similar and consistent increase, low-income countries have overall experienced a net decline of 4 percent, although there are some notable exceptions. Almost all of the re-opening and rebound in coverage has been financed by governments from domestic funds, so the relative inability of low-income countries to respond is yet another clear indication of the need to focus external investment on the most fiscally constrained countries.

Countries recognize that school meals offer benefits that accrue across sectors and often pursue multiple policy objectives of their programs, with nutrition, education and social protection among the most commonly reported aims, as summarized in Table 2.2. Both nutrition and education might be thought of as default objectives because of the intrinsic value of supplying nutritious food to growing learners in an educational setting, and because of their potential to help establish life-long healthier food practices. However, unlike in the case of nutrition, the relative importance of education as an objective is given less emphasis as countries become wealthier. Every low-income country surveyed identified education as an objective, whereas, in contrast, only 69 percent of programs in high-income countries have education as an objective. Perhaps this is because the overall value of school meals in encouraging school participation declines in settings where school enrolment is already high, or perhaps because there is more confidence that children will receive most of their nutrition from the home. The third most common objective of school meals programs, as identified by 73 percent of countries assessed is income transfers. The relevance of this objective appears to decline with income group, when the share of vulnerable population decreases and there are other options for social assistance. Agriculture is reported in 42 percent mostly low-income countries to stimulate local agricultural growth through sustainable demand for produce. Finally, a third of the programs

identified obesity mitigation as an objective, with this objective becoming more salient as countries grow wealthier and worries about malnutrition give way to concerns about obesity.

The objectives indicate that school meals programs in poorer countries are targeted at more objectives in low-income countries than programs in richer countries, with an average of 3 objectives compared to 1.6 in upper-middle-income countries. This suggests that school meals carry more weight as a social development strategy in poorer countries where the needs are more complex and resources are scarcer than in more developed countries that have a richer mix of policy tools.

Table 2.2: School Meals Objectives at a Program Level, Percentage of Programs (N=185)

Objective	Low income	Lower-middle income	Upper-middle income	High income	Total
Education	100	91.49	78.79	69.84	83.61
Income transfer	85	78.72	69.7	63.49	73.22
Nutrition	90	93.62	93.94	93.65	92.9
Agriculture	62.5	48.94	30.3	30.16	42.08
Obesity	5	17.02	30.3	68.25	34.43
Average number of objectives per program	3.04	2.24	1.65	2.05	2.16

Source: GCNF 2021

Political commitment to school meals has been growing around the world, as demonstrated by the broad composition of countries representing the School Meals Coalition, that have a school meals policy, and that finance their national programs with domestic budgets. This presents an opportunity for development partners and countries to reflect on three key actions: first, more deliberately explore the complementarity of social assistance programs, such as school meals and cash transfers; secondly, optimize the two investment streams to support the most vulnerable children and families; and third, generate within countries and within agencies a more thoughtful discussion across key sectors, including education, health, social protection, agriculture and beyond.

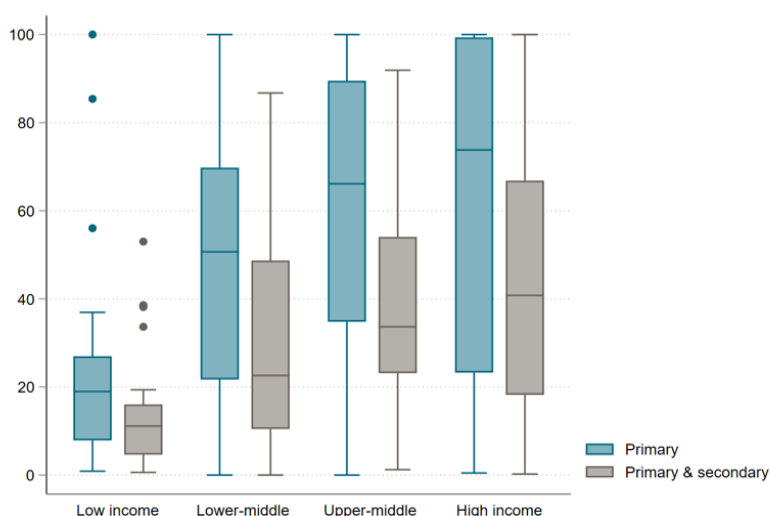
3. Current outlook

Coverage of school meals

The expansion of school meals programs in the developing world accelerated in the aftermath of the 2008 Food, Fuel, and Financial Crisis which stirred a number of low- and middle-income countries to adopt school meals as a social protection measure. According to the 2021 USDA-sponsored global survey of national school meals programs (n=125), administered by the Global Child Nutrition Foundation (GCNF) (25), the median share of primary and secondary school students covered by school meals is 28 percent globally and rises to 55 percent when only primary school students are considered. This shows that most programs prioritize younger students possibly because the educational and health impacts of interventions are deemed to be the highest for early intervention.

Figure 3.1 shows that there is still a sizeable disparity in coverage between rich and poor countries. Based on the GCNF 2021 school meals survey, the median coverage at the primary level is 20 percent for low-income countries and 77 percent for high-income countries, and the average drops to 11 percent for low-income countries and 41 percent for high income countries when secondary school students are included. Notably, the median coverage among lower-middle-income countries is more than double that of low-income countries, indicating that countries are willing to expand their school meals programs disproportionately more rapidly as they become wealthier. The distribution of school meals coverage is most even among upper-middle-income countries as measured by the coefficient of variation. This is likely because upper-middle-income countries are characterized by higher levels of income inequality justifying investment in school meals as well as relatively larger fiscal space making the investment possible. Although most schools closed in 2020 to limit the transmission of COVID-19, coverage of school meals has largely resumed or exceeded pre-pandemic levels (25).

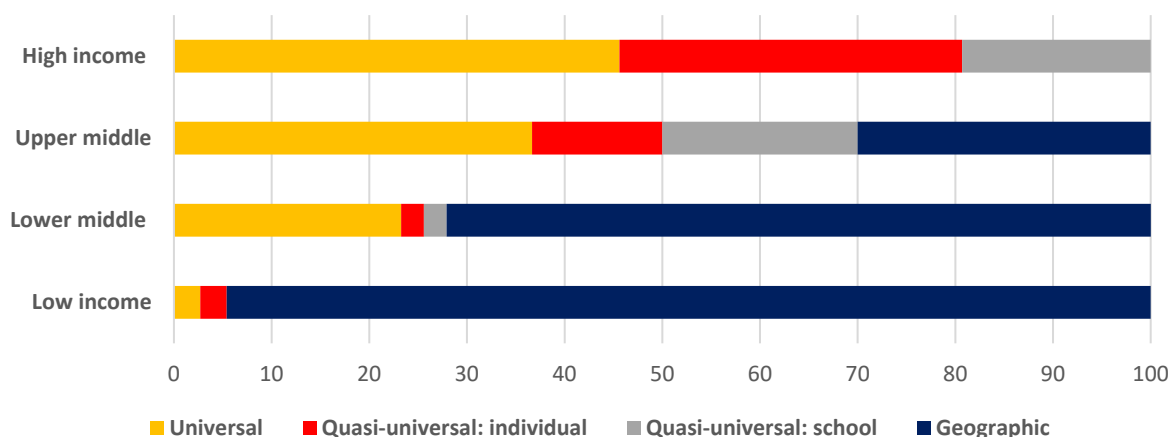
Figure 3.1: School Meals Coverage as a Share of Pupils Enrolled



Program design: modalities and targeting

School meals programs come in various forms in terms of the modes of delivery and the content and quality of the food provided. Often, the most basic choice of modality is between onsite meals versus take-home rations with non-negligible implications for the administration of the food for education program as well as its value as a social assistance tool (26). In the recent survey administered by GCNF covering 125 countries, a great majority (91 percent) provided onsite meals, in the form of breakfast, lunch, dinner or snacks. Lunch is most common (96 countries surveyed) because pupils often spend lunchtime in school. Breakfast programs, which are offered in 49 of the countries surveyed, offer particular benefit to children at-risk of coming to school on an empty stomach, highlighting its dual purpose a social assistance instrument. Take-home rations are less prevalent than onsite meals but are overwhelmingly popular among low-income countries (82 percent) as an emergency response or to supplement onsite meals to targeted groups, such as girls. The majority of the countries that provide take-home rations also supply onsite schools meals demonstrating the complementary nature of the two modalities.

Figure 3.2: Targeting Models at a Program Level



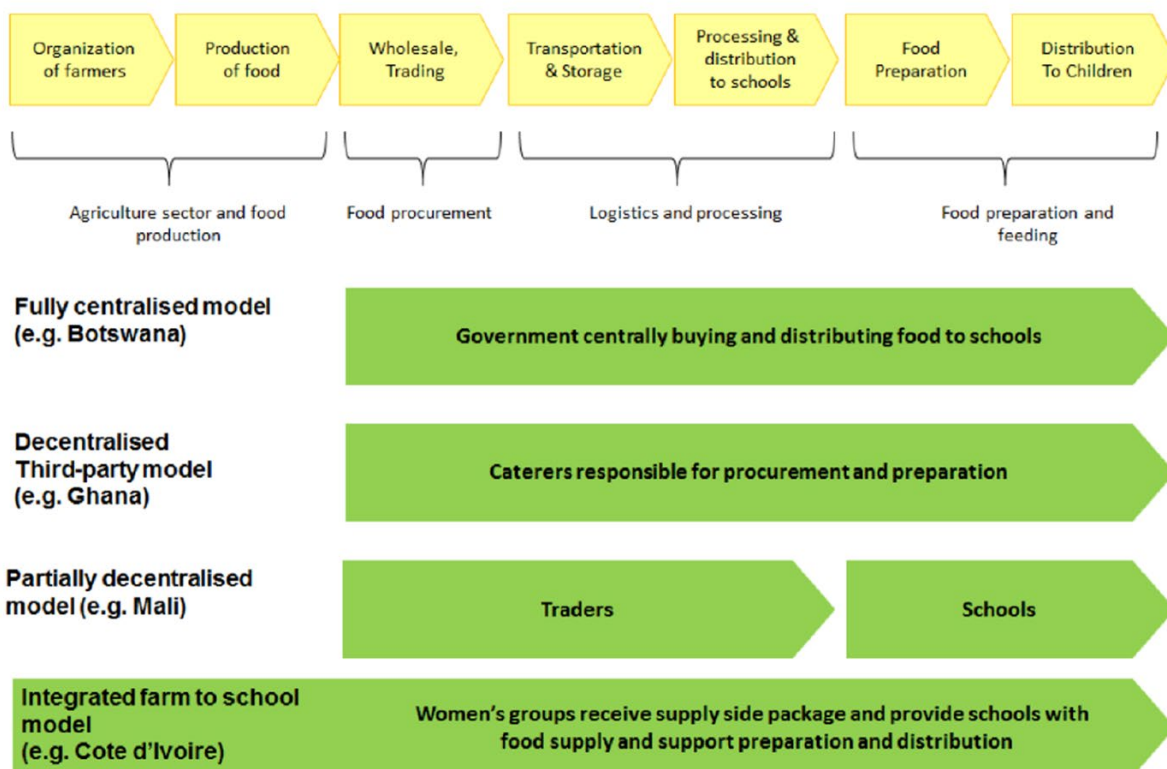
Apart from modality, another key design element of a school meals program is targeting. As in most other social assistance interventions, the targeting of school meals can have significant implications for program efficacy and efficiency. Targeting models can be grouped in four broad categories: universal, quasi-universal with individual targeting, quasi-universal with school targeting, and geographic. Universal provision is defined as the supply of free food to all pupils at a given level of schooling with no predetermined restrictions. Overall, 28 percent of surveyed programs fall in this category, however as Figure 3.2 shows, a program in a high-income country is 16 times more likely to provide universal access than a program in a low-income country.

On the other side of the spectrum sits geographic targeting which is defined as the supply of food to all pupils residing in a particular part of a country often selected based on criteria of vulnerability, low educational attainment, or poor nutritional outcomes. Nearly all low-income countries and close to three-fourth of lower-middle income countries apply geographic targeting to the provision of school meals. In contrast, no program in a high-income country uses geographic targeting. The third category consists of quasi-universal provision which is

defined as nationwide implementation of school meals with more refined targeting criteria than geographic targeting. Quasi-universal targeting becomes more relevant in upper-middle- and high-income countries, as programs target the provision of school meals to students who meet specific thresholds, such as family income (individual targeting) or to schools that have a high proportion of low-income students (school-based targeting).

School meals programs can be highly diverse depending on procurement modalities. For instance, practices may range from highly centralized to fully decentralized models (Figure 3.3). Such different engagement across supply chains can provide flexibility in implementation, but also help placing emphasis on particular goals (e.g., connection with local agriculture in the case of decentralized, “home grown” models). As programs mature, national programs are increasingly aligning school meals menus with produce available through local production, which simultaneously ensures the cultural appropriateness of the menus and enhances planet-friendly and biodiverse agricultural systems (27).

Figure 3.3 Diversity in School Meals Procurement Modalities



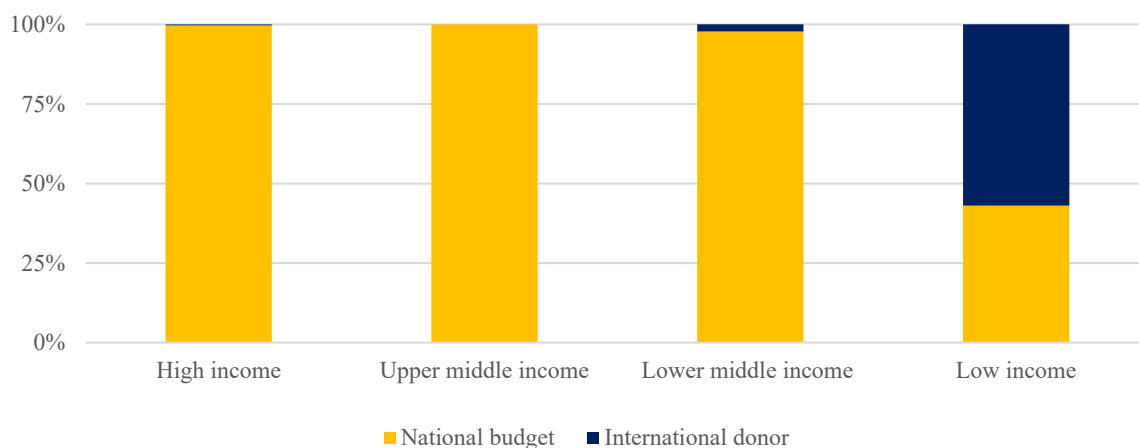
Financing

As described previously, governments of industrialized countries took over the funding of school meals programs from civil society several decades to more than a century ago. In recent

decades, international organizations and NGOs paved the way for the institutionalization of school meals programs in many developing countries. The past few decades have seen more developing countries adopt national school meals policies and fund an increasing share of school meals costs out of their national budgets, signalling political commitment.

The latest data from the WFP State of School Feeding Worldwide reveals that the financing of school meals in low-income countries is still dominated by international funding with national governments contributing just 43 percent of the total cost on average (Figure 3.4) (3). This is despite over half of low-income countries reserving a separate budget line for school meals. The share of government funding grows dramatically for countries above the low-income threshold, with governments of lower-middle-income countries contributing to their school meals programs at more than twice higher rate, as a percentage of total cost, than low-income countries. This suggest that the low share of domestic financing in low-income countries could be a reflection of qualifying for more donor funding than a lack of commitment. Per capita allocation within national budgets have largely remained consistent between 2019 (pre-COVID-19) and 2021 (during the pandemic), indicating sustained commitment for school meals programs, with little distinction between countries with a dedicated budget line for school meals and those without.

Figure 3.4 Source of School Food Funding



Source: (3)

4. Evidence

Relative strength of the evidence

The recognition that the benefits from school meals programs accrue to multiple sectors is a major reason why governments are prepared to invest significant domestic resources. Estimates have found that school meals programs yield a benefit-cost ratio varying between USD 7 and USD 35 for every USD 1 invested, depending on the setting (28). The gains are larger in poor households and among girls (29,30). These returns are particularly high because they accrue to at least four sectors: agriculture, education, health and nutrition, and social protection. Across these four sectors, however, there is variation in the strength of evidence of effect, as shown in Table 4.1. There are also other sectors where the returns are recognized to be important politically and socially, but have yet to be adequately quantified: these include gender, in terms of impact on girls' education, and peace-building, in terms of the role of schools in post-conflict reconstruction and community building.

Table 4.1. Level of Current Evidence for Impact of School Meals on Four Sectors

Outcome area	Level of current evidence
Agriculture/local development	<ul style="list-style-type: none"> - Very limited causal evidence on the effect of homegrown school feeding on local agricultural production and farmers' incomes in low-income countries. - Relatively strong evidence of commercial returns to the agriculture sector in middle- and high-income countries.
Education	<ul style="list-style-type: none"> - Relatively strong evidence on impact on school participation, particularly attendance (31). - Limited but emerging evidence on learning outcomes particularly among specific subgroups such as poor students and girls (32).
Health and nutrition	<ul style="list-style-type: none"> - Limited and mixed evidence on impact on nutritional outcomes, such as Height-for-Age Z-score (33). - Very narrow evidence base on other aspects of nutrition, such as dietary quality - Emerging research on the potential for nutritionally appropriate school meals to moderate the risk of obesity in childhood and of diet-related non-communicable diseases in adulthood (34,35)
Social protection	<ul style="list-style-type: none"> - Emerging evidence on the role of school meals for building the human capital of the poor (32). - Limited but promising evidence on the role of school meals as an insurance against covariate shocks (36).

Local agriculture enjoys particularly large returns from school meals programs, stemming from local purchase and stable demand, which is why the agricultural sector leads in some countries, for example the US federal school meals program emerged in the 1930s recession as a market stimulus and remains USDA-led today (37). Well-designed school meals programs can provide nutritious diets that meet international standards (38) and can shape lifelong healthy dietary preferences; whilst in contrast, low-quality, cereal heavy school meals menus may potentially have perverse consequences such as increasing the risk of diet-related disease in adulthood (39). Annex One explores the information available on potential benefits that may accrue from

school meals programs across the following six domains: income support and social cohesion; education; health and nutrition; agricultural markets and economic activities; climate; and gender. Perhaps the most important point is that the full range of benefits only accrues if summed across multiple domains, but working across silos to deliver multi-sectoral programs remains a challenge that few countries, and perhaps equally few development agencies, have yet to resolve.

Some low-income and lower-middle-income countries have increased the proportion of the costs of school meals from domestic budgets by 15 percent compared to pre-pandemic commitments. Benin, for example, has announced a national budget commitment of USD 270 million over the next five years to scale up the national program, which in 2022 has already reached 75 percent coverage. Rwanda has reached universal coverage of school meals, increasing its support for 640,000 children in 2020 to 3.8 million in 2022.

The cost of school meals, whether as a standalone intervention or as part of a complementary pack of nutrition-sensitive interventions, is a key factor in the different uptake of programs across income groups. Although the costs of other nutrition-sensitive school-based interventions, such as school-based deworming are well documented (29,40), current and reliable cost data on school meals programs is largely unavailable. Recognizing that school meals often represent the main cost of a comprehensive school health and nutrition package, the Sustainable Financing Initiative of the School Meals Coalition has prioritized seeking these data in 2024. The most comprehensive data set currently available is from a study in 2013 which analyzed programmatic costs from 74 countries and showed that per-capita program costs were remarkably different across income classifications. While the overall median cost was USD173 per child per year, the median per-capita cost by income group ranged from USD 54 in low-income countries to USD 693 in high-income countries (41). With this degree of variation in cost, and presumably quality, it is difficult to argue that the programs are truly comparable.

To better understand the impacts of these costs on the affordability of school meals programs for different income groups, studies have compared these costs to the overall expenditure for primary education and to GDP (41,42). These studies showed that the proportionate costs were markedly dependent upon income group: with the lowest proportion in high income groups (range of medians 10% to 11%), a middling proportion in middle-income countries (range of medians 19% to 42%), and exceptionally high in low-income countries (range of medians 68% to 96%) (1). These data suggest that affordability in low-income countries is key constraint on uptake. This is also the conclusion of a World Food Programme analysis that estimates that school meal programs represented 8% of the per-child cost as a percentage of per capita GDP in low-income countries in 2020, compared to 1 percent of GDP in high-income countries and 3 percent of GDP in middle-income countries (1). The underlying factor is the floor price of food which remains relatively stable across countries. While the cost per meal may be lowest in low-income countries, it inevitably demands a larger proportion relative to education costs for those countries which invest least in education and which have the lowest GDP (41). Additional analyses are needed to better estimate how the cost of national school meals

programs might change to align with global nutritional guidelines. If school meals and school health are important contributors to the well-being of the learner then this argues for a focus of development support on low-income countries to help them create human capital and make the transition to lower-middle-income status. It is a remarkably consistent observation across the 44 countries that have been followed across that transition by WFP that the coverage of national school meals programs shows a marked up-tick.

Despite constraints on public finances due to the health and economic costs of the COVID-19 pandemic (2), the global investment in school meals increased between 2020 and 2022 by USD 5 billion, rising to USD 48 billion in 2022. This increase in domestic funding, presumably reflecting the resolve of national governments to respond to the negative consequences of the school closures in 2020, has not been followed by ODA, which has declined by 6 percent over the same period, reflecting the high-income countries' response to slower GDP growth, reduced revenue collection, and external debt pressures at home (3).

Efficacy of school meals from a social assistance standpoint

The body of evidence on the impact of school meals largely focuses on estimating the impact of school meals on nutritional outcomes in the form of physical growth, cognitive development or educational attainment. Conversely, there are limited impact evaluations on the social safety net dimension since the value of income transfer is often seen as an input to improve child outcomes. Since the primary target outcomes of most school meals interventions are related to educational and nutritional outcomes, we can reinterpret the relevant results with respect to the three dimensions of social protection: prevention, protection and promotion (43). When recast with this framing, the objectives of school meals can be defined as preventing short-term hunger and in times covariate shocks, and promoting the human capital development of vulnerable children.

The impact of school meals on alleviating hunger is straightforward to measure as far as the calorie content is known, although there is considerable uncertainty regarding the appropriate metrics and tools to apply to school-age children and adolescents. It is also generally practicable to measure intra-household reallocation of food resulting from participating in a program. Where food provided at school is the only regular meal of the day and there is little reallocation of food within households, school meals can alleviate hunger among vulnerable students (26,44). Apart from individual vulnerabilities, school meals can protect against hunger during systemic shocks. In India, the negative impacts of drought on nutritional outcomes of children have been entirely compensated by the mid-day meals scheme (36). Relatedly, additional areas for exploration include identifying the appropriate metrics to assess the degree to which national school meals programs align with nutritional standards.

The second question regarding the social assistance implications of the human capital development dimension looks to whether the education and health benefits of school meals accrue to vulnerable children who might have otherwise lagged behind. There is a robust

evidence base showing the positive impact of school meals on physical growth and school attendance of children (45). But the benefit of school meals on school participation is also likely to be limited in countries where school enrolment is high (46). Therefore, further evidence on the impact for vulnerable sub-populations is necessary to understand the social assistance implications of school meals across a broad spectrum of contexts.

School meals tends to have the strongest impact on school enrolment of all education outcomes, with the greatest impact for girls, internally displaced people/refugees, and in areas of food insecurity (47). There is evidence that school meals could complement early childhood development interventions with potentially high relative returns by promoting enrolment significantly (48). A study in Burkina Faso shows that take-home rations play a decisive role in persuading poor parents to send their daughters to school instead of engaging them in household food production (49). Therefore, school meals may contribute to the social assistance function of promoting the human capital development of vulnerable children through school participation.

Compared to enrolment, the evidence on the impact of school meals on learning outcomes is less robust than the impact of traditional pedagogic interventions. However, in settings with high levels of poverty and vulnerability, school meals can perform better than many other education interventions in improving learning outcomes. For instance, in the case of Sub-Saharan African countries, out of 15 types of education interventions, the impact of school meals on learning is surpassed only by structured pedagogy and extra time (50). An evaluation of a nationwide school meals program in Ghana also reveals that girls and children from low-income households can benefit more from school meals in terms of achieving higher test scores than boys or children from higher income households (51).

Comparative effectiveness of alternative social assistance interventions

Having considered the evidence on the efficacy of school meals as a social assistance tool, the next question pertains to how school meals compares to other social assistance instruments, such as cash transfers, in achieving the desired outcome. The relative effectiveness of school meals in alleviating child hunger can be examined through the lens of the longstanding debate on cash versus food (52). The first issue that needs to be considered in such a comparison is whether cash transfer is intended to pursue food security or nutrition objectives. It is also important to consider whether the transfers are sufficiently child-sensitive to be compared with school meals. As far the broader cash versus food question is concerned, a review of recent evidence demonstrates that relative effectiveness cannot be generalized since average impacts tend to be context-specific (53). For instance, cash transfers outperformed food transfers in increasing overall food consumption in Yemen and Sri Lanka whereas food transfers did better than cash transfers in increasing calorie in-take in Ecuador. In general, the choice between cash or in-kind food transfers should be based on careful consideration of the structure and functioning of local food markets. Logistics costs are likely to be substantially higher for school meals compared to cash-based modalities, but as mentioned systematic cost analysis is missing.

When it comes to education, conditional cash transfers have a strong track record of increasing access to schooling, providing a viable alternative to school meals (54). Cash transfers have little effect on learning once children are in school, however. A comparative review of educational and social assistance interventions across low- and middle-income countries shows that school meals outperform cash transfers in terms of improving learning outcomes (50) as cash transfer programs “may relax an economic constraint to access for the children but do not directly affect the learning process beyond that” (55).

Finally, school meals programs may be less effective in reducing household poverty compared to more general social assistance programs. For instance, a study in Armenia finds that school meal programs are too modest relative to country-level poverty line consumption to influence poverty levels compared to targeted family support programs (46). Such findings show that the comparative effectiveness of school meals needs to be weighed carefully in settings where the basic benefits of hunger relief and enrolment promotion are less relevant.

5. School Meals as a Social Assistance Measure in South Asia

In this chapter we analyse national school meals programs in South Asia to understand the evolution and development of national school meals programs in the region. South Asia is home to 521 million children under 14 years of age, representing approximately 26 percent of the population at this age globally (56).

Globally, school meals programs have evolved from a needs-based food assistance intervention to a rights-based public service provision, led by initiatives in South America and more recently Sub-Saharan Africa and South Asia. The scope of these rights has also expanded beyond food and has evolved through distributive justice to include aspects of economic, social and cultural rights and a recognition of the critical interrelated ecological, socio-cultural and political dimensions of hunger and food systems. For example, in India, the current national school meals evolved through judicial intervention in the context of right to food and right to education. Similarly in Nepal, school meals programs have been shaped by legal recognition of the right to food security and food sovereignty and indirectly by the ideological influence of political parties associated with peasant movements in the making of the new constitution. In other countries in the region, such as Bangladesh and Bhutan, the move towards universal programs indicates an implicit recognition of school meals in a rights-based framework.

Social protection is increasingly seen as a means of enabling social justice centred on the principles of equality, equity, rights and participation. Given the sites of implementation, i.e. schools and local communities, and its inherent design linkages with food, i.e., diets and learning, school meals can serve as an effective platform to enable transformative and adaptive social protection programs besides providing an important safety net. Home-grown school feeding models and related approaches also mediate with local and national food systems and can catalyse socio-ecological pathways that promote equity and sustainability. In this chapter we explore some of these potential linkages in the context of South Asian experience.

We initially assess three indicators – level of government ownership, policy development and program coverage – to help frame programs in the region across policy domains, in accordance with the markers of policy maturity used within the World Bank SABER (Systems Approach for Better Education Results) – School Feeding policy tool.¹ This is followed by a description of country programs summarizing the history, current status and plans. Finally, the discussion section reflects on factors that may determine the nature and content of the different programs in the context of social protection.

This chapter is informed by a policy analysis, literature review, and key informant interviews. The policy analysis included a review of key policy documents issued by government departments or ministries with reference to school meals for each country. Policy documents were obtained from government websites or from sources in the countries reviewed for this

¹ These markers of policy maturity used within the SABER policy tool are: latent, emerging, established, and advanced

analysis. The literature review focused on program guidelines, project reports and government memorandums. Key informant interviews were conducted for Afghanistan, Bangladesh, Bhutan, Pakistan, Nepal and Sri Lanka. Data for selected education and public health indicators were extracted from data sets published by World Bank and UN agencies (see Annex 2).

Diversity of school meals programs in South Asia

Table 5.1 summarizes the scale of programs for three reference years over the last decade. It shows the diversity of programs in terms of coverage, scale and trends. The data is reported by countries and published by WFP, except for Afghanistan and Pakistan for which the data is estimated. India is by far the largest program, reaching over 1 million children daily, despite seeing an 8 percent decline in coverage from 2020 to 2022. The program in Nepal has shown the most significant scale up with exponential increase in the number of children, it also reports the highest coverage in the region at 76 percent. Bhutan is the smallest program, also showing significant growth in coverage from 19 percent in 2020 to 33 percent in 2022. Bangladesh shows no change from 2020 to 2022 with 15 percent coverage.

Table 5.1: Percent Coverage of Children Receiving School Meals (1,000's)

Country	2013	2020*	2022
Afghanistan	1,841	1,341 (est.)	1,341 (est.)
Bangladesh	1,930	2,965 (15%) *2018	2,971 (15%) *2021
Bhutan	82	75 (19%) *2018	102 (33%) *2021
India	113,600	90,400 (63%) *2019	106,000 (55%) *2021
Nepal	471	636 (12%) *2018	3,240 (76%) *2021
Pakistan	2078	10,400 (est.)	10,400 (est.)
Sri Lanka	1264	1,467(84%) *2018	1,067 (62%) *2021

Sources: WFP. 2022. State of School Feeding Worldwide 2022. Rome, World Food Programme; WFP. 2020. State of School Feeding Worldwide 2020. Rome, World Food Programme

Notes: *Proportion of children covered by social protection (%) from The State of the World's Children 2023 Dataset, UNICEF.

As would be expected, there is substantial inter-country variation in the region in terms of actual budgetary allocation and as percentage of GDP ranging from 0.02% in Bangladesh to 0.13% in Bhutan (see Table 5.2).

Table 5.2: School Meal Program Expenditure in SAR, Total and as Percentage of GDP

Country, year, currency, and unit	Expenditure (LCU)	GDP (%)
Bhutan, FY 2019/20, Nu, Million	224,582	0.13%
Bangladesh, FY2019/20, BDT, Million	4,750	0.02%
India, 2019/20, INR, Million	110,000	0.06%
Nepal, 2019, NPR, Million	2,935	0.08%
Sri Lanka, 2019, LKR, Million	5,063	0.03%

We classify programs in five typologies using nomenclature from SABER School Feeding policy indicators for Table 5.3: Latent, Emerging, Established, and Advanced. “Other” is used where the SABER policy indicators are not appropriate. The typologies were developed based on three primary indicators and two secondary indicators as summarized below.

Primary indicators:

- (i) *Coverage* as a percentage of government schools/administrative units under national school feeding program.
- (ii) *Government ownership* which includes program funding by national/sub-national government budget and program management by relevant government ministry/agency.
- (iii) *Policy and regulatory framework* which includes government policies, laws and any other regulatory instruments related to the implementation of school feeding.

Secondary indicators:

- (i) *Meal type* as defined by the type of meal served, i.e. a cooked hot meal or only snacks such as biscuits and/or milk.
- (ii) *Farm linkages* consists of any policy and program components that enable direct/indirect structured demand for farmers through school feeding food procurement.

The recognition of school meals programs as part of the national social protection strategy/framework is mentioned as a program feature where relevant. However, this is not included as an indicator as it is a function of national social protection governance structures and does not necessarily reflect the state of school meals programs.

The classification is based on an overall subjective assessment of where each program is situated in terms of the indicators mentioned above. The purpose of the classification is to provide an overview of program status and evolution in the region. Table 5.3 defines each type and situates programs in the region across these types based on key features.

Table 5.3: Program Type and Features

COUNTRY	PROGRAM FEATURES
LATENT	Policy development and/or operational plans are being actively considered by the government.
PAKISTAN	<ul style="list-style-type: none"> • Plans for a national school meals policy are being led by Ministry of Poverty Alleviation and Social Safety and the Ministry of Planning, Development and Special Initiatives.

	<ul style="list-style-type: none"> • The objective is to embed school feeding in the national social protection institutional framework. • In 2021 Pakistan joined Global School Meals Coalition.
EMERGING	
The transition to government ownership is underway and some policies or guidelines have been published. Program primarily consists of snacks and/or milk with provision of a cooked meal currently limited to a pilot program.	
BANGLADESH	<ul style="list-style-type: none"> • Program is government led in 94 of the 104 intervention units. • School meals are recognized as a major program in the national social protection framework, i.e. the National Social Security Strategy (NSSS) 2015 and the action plan for 2021-2026. • A National School Meal Policy was published in 2019. • Government strategy is being developed for a new national program.
ESTABLISHED	
Government ownership of the program is complete along with associated policy frameworks. Program consists of cooked meal with some aspects of local agriculture linkages.	
NEPAL	<ul style="list-style-type: none"> • The Government of Nepal manages the program in all 77 districts. • School meal is included in Education Policy, 2019 and School Sector Development Plan (SSDP) 2017-2023. • Integrated National Framework on Social Protection 2022 of the National planning commission includes school meals. • Agriculture linkages through Home Grown School Feeding model.
SRI LANKA	<ul style="list-style-type: none"> • The program is government led covering 75% of schools in the country. • Detailed guidelines have been issued by the Ministry of Education. • School meals are likely to be included in the national social protection policy, which is currently under development.
BHUTAN	<ul style="list-style-type: none"> • Transition to government ownership completed in 2019. • Program currently covers 80 percent of schools. • National School Feeding and Nutrition Programme Strategy 2019- 2030 has been developed. • School meals included in National Education Policy <i>draft</i> 2021. • Local agriculture linkages for perishable foods.
ADVANCED	
The program has a long history of government ownership with universal coverage and clearly defined governance systems and policies.	
INDIA	<ul style="list-style-type: none"> • Universal government funded program covering primary and upper primary children in all 766 districts. • Established policy framework at the central and state level. • Linked to national government food reserves system. • Promotion of specific food crops.
OTHER	
Program is very limited or suspended and there is no policy engagement due to current domestic political circumstances	
AFGHANSITAN	<ul style="list-style-type: none"> • Limited externally led program. • No plans to develop a policy framework. • The current Taliban led government is not recognized.

Afghanistan

In Afghanistan school meals program started in 2002 supported by WFP, as an emergency response to the civil conflict in two provinces. The intervention consisted of take-home rations

for girls in primary school and high energy biscuits for all primary students. The program was subsequently scaled up to all the schools in 14 provinces of 34 provinces, based on vulnerability index. Beneficiaries included all students in grades 1-5.

The program has been severely disrupted since the Taliban-led takeover of the country, especially with respect to female beneficiaries. Only in four provinces, girls are allowed to attend secondary school. In these provinces school meals program support is provided to secondary school girls in the form take-home rations and cash transfers. In 2021, WFP Afghanistan targeted 420,000 students across the country including 120,000 girls. Given issues with the legitimacy of the Taliban government, policy engagement with the government to institutionalize the program has been put on hold.

Bangladesh

The Bangladesh program started in 2001 as an emergency response program, targeting 350,000 school children from flood-affected families, with support from WFP. In 2005, the coverage expanded to 1.2 million children and the government of Bangladesh initiated plans to make it a national program and developed a *Project Proposal for School Feeding*. The WFP support for the program was phased out and the government (Ministry of Primary and Mass Education) took over the program in 2011 with gradually increasing coverage.

Currently, school meals coverage is focused on 104 poverty-prone sub-districts out of 495 sub-districts in the country covering primary schools and pre-schools. 94 of the sub-districts are managed by the government (Ministry of Primary and Mass Education), and WFP manages implementation in 10 sub-districts. NGOs also play a substantial role in supporting the program administration. The meal consists of fortified biscuits in all intervention areas. A limited pilot for cooked meals on the home-grown school feeding model was undertaken in 16 sub-districts in 2019.

School meals are recognized as a major program in the national social protection framework, i.e. the National Social Security Strategy (NSSS) 2015 and the Action Plan for 2021-2026, under the Social Security Policy Support (SSPS) Programme of the Bangladesh Planning Commission, Government of Bangladesh.

Currently the program is on hold as the government is in the process of developing a new program with a more diversified food basket. The new program will continue to provide dry rations with targeted coverage. A separate feasibility study on implementing a home-grown school feeding model on a limited scale is also under way.

Bhutan

School feeding has a long history in Bhutan with meals being provided in monastic schools. With the start of a secular schooling system in the 1960s, school meals were provided in these schools with the primary objective of increasing retention and enrolment. In 1974, a formalized

school meals program was established and scaled-up with support from WFP. The National Education Policy (draft) 2018 recognised the role of school meals as a strategy to support children to complete basic education. The transition to government ownership started in 2004 and was completed by 2019.

The national program is led and funded by the Government of Bhutan (Ministry of Education). It currently covers 80 percent of schools and 65 percent of total school children in the country and provides on-site cooked school meals. The program includes all government schools from primary school to high school (~5 years to 18 years). Plans to include ECD (3 years to 5 years) have been proposed by the Ministry of Education. Non-perishable commodities are centrally procured, and perishable commodities are procured at the school level though a home-grown school feeding model.

The current allocation is 1500 (around 18 USD) BTN per child per month. Non-perishable commodities are centrally procured, and perishable commodities are procured at the school level though a home-grown school feeding model. Fortified rice is provided centrally to all schools.

A National School Feeding and Nutrition Programme Strategy 2019- 2030 has been developed to guide school meals program development. It aims to further expand to include all schools in rural Bhutan and children in the Early Childhood Care and Development. The strategy includes a school agriculture program and operational linkages with the Ministry of Agriculture.

India

The program in India is a government-led initiative and was over the years expanded through judicial intervention and legislation. Many states in India have a long history of school meals, for example, in Tamil Nadu, a state-wide, noon-meal scheme was initiated by the state government in 1982. Over the 1990s increasing number of states started school meals programs and this provided a clear emergent context for a national level policy and program. The origin of the current national program, which was retitled from National Program for Mid-Day Meal in Schools (NP-MDMS) to PM-POSHAN, dates back to 1995 when National Program of Nutritional Support to Primary Education (NP-NSPE) was launched as a centrally Sponsored Scheme with a view to enhancing enrolment, retention and attendance and simultaneously improving nutritional levels among children.

The program has evolved substantially since its inception, most notably led by orders from the Supreme Court of India in 2001 (*PUCL v Union of India*). The court case began as a petition filed in the Supreme Court in 2001 by the People's Union for Civil Liberties against the Government of India, the Food Corporation of India (FCI), and six State Governments, in the context of inadequate drought relief. Subsequently, the case was extended to the larger issues of chronic hunger and under-nutrition, and all the State Governments were made parties to the case. In 2001 the Supreme Court made an order which had far reaching implications, as it made school meals an enforceable legal entitlement from a welfare scheme. Since many states were

not providing cooked meals but only dry rations, the order also directed the government to replace monthly dry rations of grain with daily, cooked mid-day meals. In September 2004, the scheme was revised to provide cooked mid-day meal with 300 calories and 8-12 grams of protein to all children studying in classes I – V in government and aided schools. In October 2007, the scheme was further revised to cover children in upper primary (classes VI to VIII) initially in 3479 Educationally Backwards Blocks (EBBs).

The program covers pre-primary, primary, and upper primary children (grade 1 to grade 8) in all government and government aided schools in the country with the provision of a nutritious cooked meal. Pre-primary children who were earlier provided meals under Integrated Child Development Scheme (ICDS) have now been brought under the ambit of POSHAN.

The program operates under a national mandate and guidelines coordinated by the Ministry of Education, Government of India. In effect there are over 33 separate school meals programs across 28 states and 8 centrally administered territories. The program for all states is linked to public procurement system managed by the Food Corporation of India (FCI) as food grains are supplied to the school meals program by FCI across the country. For other commodities, states can adopt different procurement methods. A cooking cost of 5.45 INR (0.065 USD) for primary and 8.17 INR (0.1 USD) is provided by Central and State government contribution. This amount can be applied for purchase of oils, condiments and other foods. The actual school feeding cost varies across States depending on respective school feeding menus and guidelines.

As per the GCNF survey, thirteen states reported the inclusion of fortified food items in the POSHAN food basket. Of these, most states included fortified salt (92%), followed by oil (46%) and grains/cereals (23%).

On a pilot basis, school meals across six states – Andhra Pradesh, Karnataka, Maharashtra, Rajasthan, Uttar Pradesh and Telangana – are integrating locally produced and procured biofortified zinc wheat and iron pearl millet. States also provide additional nutrition support; for example, Tamil Nadu recently scaled up ‘*Chief Minister’s Breakfast Scheme*’ covering 30,000 primary schools from 2023. Under the scheme, cooked breakfast is provided to students in addition to the mid-day meals.

According to the National Education Policy 2020, school meals is to be extended to Preparatory Classes in primary schools. The policy also includes the provision of breakfast in addition to mid-day meals.

Nepal

School meals in Nepal started 1974 as a food aid intervention in highly food secure districts primarily supported by WFP and other international agencies. Subsequently the program was coordinated by the government but continued to be response based and externally led. In 2008, the process of transitioning the program from WFP to government ownership was initiated. A cash-based model was piloted in two districts in 2016 and a home-grown school meals model

was piloted in eight districts from 2018. Over the years, the program progressively transferred to the government.

School meal is included in Education Policy, 2019 and School Sector Development Plan (SSDP) 2017-2023. The program is led and primarily funded by the Federal government (Ministry of Education, Science and Technology) and supported by local governments in 70 of the 77 districts in the country. It provides one hot cooked meal to all students from ECD to grade 5 in government schools. The total federal budget allocation is 15 NPR-20 NPR (0.11-0.15 USD) depending on the district. Local governments contribute to the federal budget in varying amounts. Seven districts are covered by WFP/USDA supported project. Food procurement is undertaken at the school or local government level based on a nutritionally defined food basket. The School Education Sector Plan, 2022-2032 (Ministry of Education, Science and Technology) includes further development of policy and regulatory framework for school meals as an objective.

The *Integrated National Framework on Social Protection 2022* of Nepal's National planning commission, which aims to make social protection more coordinated and universal, includes school meals as one of the social protection programs.

Pakistan

A government school nutrition project (Tawana Pakistan Project) was implemented in the 26 most malnourished districts from 2002 to 2005. The project was a joint initiative of the Ministry of Women's Development, Pakistan Baitul Mal, and the Aga Khan University. It had a targeted coverage of 650,000 girls. Recently in response to the COVID-19 pandemic, a school meals program supported by WFP was implemented. It was based on Take Home Rations for females aged five to 12, with an equal proportion of school enrolled and out-of-school girls.

Concurrently, there is no operational national school meals program. School meals is now being recognized as an important component of a national social safety net framework by federal and provincial governments. This is reflected in some education sector plans of provincial governments. In 2021, Pakistan signed and endorsed Global School Meals Coalition and the government has initiated process for the development of a national school meals policy led by the Ministry of Poverty Alleviation and Social Safety and the Ministry of Planning, Development and Special Initiatives.

Sri Lanka

The government school meals first started in 1931 as a safety net intervention. In recent years, the school meals program was initiated as an emergency response. In 2003 the program focused on the conflict affected Northern and Eastern Provinces of the country and in 2005, after the tsunami, it was expanded to other provinces.

School meals program includes three separate interventions: (i) government-led school meals; (ii) government-led school milk program; and (iii) WFP-supported program. The government program under the Ministry of Education covers 83 percent of the government schools across the country providing meals to all students in grades 1-5. In addition, the ECD school meals program includes morning meals for 155,000 children attending ECD centers in poor and malnourished communities. The program coverage was significantly scaled-up following the economic crisis, from 1 million to 2 million school-age children. The current cost allocation is LKR 85 (~0.26 USD) per child per meal.

Meals are prepared on-site or off-site depending on the availability of infrastructure in schools. Food procurement is undertaken at the school level from local markets. WFP is also piloting a home-grown school feeding model but currently there are no plans for farmer linkages in the national program. The school meals program has linkages with the *Samrudhi* program, the largest safety net program in the country. *Samrudhi* beneficiaries were provided employment as caterers for school meals, however over time, this was discontinued as it was not profitable for the caterers. A national social protection policy is being developed by the Government of Sri Lanka and school meals is likely to be included as one of the key components.

Results

The review of programs and policies in South Asia suggests that school meals can deliver important social protection outcomes through its different programmatic components such as food procurement, targeting and provision of nutritious meals. These social protection features of school meals contribute to adaptive, transformative and safety net functions of social protection. We analyse these pathways to social protection by focussing on five key features: (i) gender equity; (ii) support to low-income and vulnerable groups; (iii) nutrition adequacy; (iv) livelihood support; and (v) emergency relief.

i. Gender equity

All programs in the region contribute to positive gender outcomes through increased attendance and retention of female students. An ADB evaluation of a school feeding intervention in one district of Nepal showed that program contributed to overall increase in access, especially for girls and vulnerable children with Gender Parity Index (GPI) for primary school increasing from 0.97 to 0.99 (57). In contexts where the need for gender focus is most acute, school meals can provide targeted support in constrained circumstances. For example, the current external intervention in Afghanistan where the Taliban regime has created a hostile environment for females, the limited school meals program provides take home rations to female students. In 2021, WFP Afghanistan targeted 420,000 students across the country including 120,000 girls.

School meals can also contribute to gender outcomes through the nutrition pathway, more specifically by improving dietary intake of iron in female children and adolescent girls. According to recent estimates, dietary iron deficiency is the leading cause of anaemia disproportionately impacting females, with 825 million cases among females globally compared to 444 million cases among males (58). School meals, especially with iron fortified

foods have shown to significantly reduce the prevalence of anaemia (59,60). Iron is one the focus nutrients included in school meal nutrition guidelines in all countries with school feeding programs in the region. In India, fortified and bio-fortified foods such as iron pearl millet and multiple micronutrient fortified rice are being introduced in school feeding. A quasi-experimental study to evaluate the effect of a multiple micronutrient fortified rice intervention among school children (6–12 years) through school feeding in the Indian State of Gujarat found that the intervention reduced anaemia prevalence by 10% (61).

Another gender pathway relates to the school feeding supply chain, as women farmers and traders are engaged in the provision of school meals as cooks and caterers. For example, in a home-grown school feeding pilot in Nepal, over 25 percent of cooperatives selected for supplies across the six intervention districts were women cooperatives. Similarly, linking farmer to school programme in Bhutan has enabled the creation of women cooperatives for supplies to school feeding.

ii. Support to low-income and vulnerable groups

Programs in the region provide critical safety net for children from low-income and disadvantaged households through the provision of a nutritious meal. This is an inherent function of the school meals design and government school enrolment in the region, which primarily consists of children from low-income households. Some countries such as Bangladesh and Sri Lanka school target intervention areas based on poverty indicators. In some states in India, low-income communities are also supported through the provision of supplementary take home rations and school meals during school holidays.

iii. Nutrition adequacy

There is a significant body of evidence from the region that demonstrates the nutrition and health benefits of school meals including intergenerational benefits and reduction in nutrient deficiencies (62,63). However, studies assessing nutrition content of specific meals based on primary data are limited. This requires an analysis of actual meals served over multiple days. Using other methods such as applying unit budget allocation against a standardized food basket may not be appropriate for a number of reasons including substantial intra-country variation in the net amount available for food purchase depending on local government/community contributions, transport/cooking costs and differences in meal composition.

National nutrition guidelines for most programs serving cooked food suggest on average 30% RDA target for key nutrients per meal for a weekly menu. Nutrient value of programs such as Bangladesh which are primarily limited to the provision of fortified biscuits is limited to the nutritional content of the biscuits.

A school meal assessment study in three districts of Nepal analysing a sample of meals served found that on average the nutritional content of meals was below the 30 percent RDA national guidelines for most nutrients (energy: 14%; fat: 13%; protein: 31%; vitamin A: 9%; zinc: 15%; and iron: 27%). These averages mask important inter-district variations and the program was also affected by prolonged COVID disruption during data collection. Some similar studies are

reported for India, but they are restricted to large urban settings which may not provide meaningful insights on nutritional adequacy.

Evidence from program monitoring also suggests that the nutrition content of cooked school meals is highly variable across schools and seasons in most parts of the region, especially for micronutrients as it is subject to varying availability and access to fruits and vegetables and other non-staples. Another issue relates to low allocated budgets especially where implementation and transaction costs are high as is the case in many parts of Bhutan and Nepal due to mountainous topography and limited connectivity. Finally, during events of price shocks, the value of school feeding budgets can be severely undermined.

iv. *Livelihood support*

School meals programs applying the home-grown school feeding model in Nepal and Bhutan provide livelihood support to small and marginal farmers through preferential procurement. Marginal farmers and other disadvantaged groups can also be targeted through the procurement of specific food commodities. For example, millets which have been introduced in school meals in some States in India such as Odisha and Chhattisgarh are primarily grown on marginal lands by subsistence farmers and tribal communities. School feeding programs in the region also provide employment in the local communities as cooks or caterers. For example, in India 2.6 million cooks are employed in the Mid-Day Meal Program.

v. *Emergency relief and shocks*

The South Asian experience shows that school meals programs provide critical support in emergency contexts. Programs in Bangladesh and Sri Lanka started in response to natural disasters. Equally importantly, the COVID-19 pandemic demonstrated that programs can be quickly adapted to respond to changed circumstances. During the prolonged school closures due to COVID-19, in Bangladesh fortified biscuits were home delivered and in India onsite meals were replaced by take home rations. During the COVID lockdown, in India, ten states provided dry rations (food grains), two states provided cash transfers, and 21 States provided a combination of dry rations and a transfer for the cooking cost. In Chhattisgarh, school children were given dry rations to cover 130 days. According to a report by Oxfam India, more than 90% of children continued to benefit from the school feeding scheme during the pandemic.

The recent economic crisis in Sri Lanka is another example of how school meals can act as a rapidly scalable safety net. The government with support from the World Bank significantly expanded the national school meals program following the economic crisis, from 1 million to 2 million school-age children.

Table 5.4 below summarizes the key social protection functions for the countries in the region by type, modality and coverage. All programs in the region serve as safety nets and contribute to transformative social protection through gender equity. Small farmer linkages and livelihood support are additional transformative elements in three countries. Programmatic experience gained from responding to the COVID-19 pandemic in India and Bangladesh demonstrated the adaptive capacity of school meals programs.

Table 5.4: School Meals and their Social Protection Functions in South Asia

COUNTRY POPULATION (million)	SCHOOL MEALS MODLAIITY	COVERAGE	TYPE	SOCIAL PROTECTION FUNCTIONS
AFGHANISTAN (40)	-	-	OTHER	Safety net Transformative (gender focus)
BANGLADESH (169)	Targeted Dry foods	15%	EMERGING	Safety net Transformative (gender focus) Adaptive (home delivery during the COVID-19 pandemic)
BHUTAN (0.8)	Universal Cooked meal Home-grown school feeding	65%	ESTABLISHED	Safety net Transformative (gender, small farmer linkages)
INDIA (1400)	Universal Cooked meal	55%	ADVANCED	Safety net Transformative (gender, livelihood) Adaptive (take-home rations during the COVID-19 pandemic)
NEPAL (30)	Universal Cooked meal Home-grown school feeding	76%	ESTABLISHED	Safety net Transformative (gender, livelihood, small farm linkages)
PAKISTAN	-	-	LATENT	Safety net Transformative (gender focus)
SRI LANKA (22)	Targeted Cooked meal	62%	ESTABLISHED	Safety net Transformative (gender)

Successes and Challenges

Whilst there is significant intra-regional variation, five countries with operational programs have demonstrated significant progress in terms of program design and implementation. Six specific components are especially noteworthy where all countries have made some progress in terms of planning or implementation: (1) Government ownership and largely consistent budgetary allocations; (2) Inter-ministerial programming across departments of health, education and agriculture; (3) Local government support and community participation; (4) Farm linkages with a specific focus on women farmers/small holder farmers; (5) Menu guidelines with targets for all key nutrients; and (6) Promotion of local foods and/or fortified foods.

As programs expand in scope and coverage, we identify five critical challenges.

1. ***Inadequate budgetary allocation:*** This is found to be inadequate in many contexts as it tends to include costs of transportation and cooking, besides the cost of food. In addition, budgets are rarely revised and hence are not sufficiently responsive to food price increases. Whilst efficient menu planning and procurement can enhance the value for money, it is

challenging to provide a nutritionally diverse diet within allocated resources without contribution from other non-government sources.

2. **Poor food management:** Lack of storage infrastructure and cooking facilities impacts meal quality in terms of both nutrition and food safety and overall program delivery. This implies a need for initial capital investment, perhaps through external investment, which will buffer the need for recurrent investment in infrastructure maintenance.
3. **Lack of formal linkages with local agriculture and farm production:** In the absence of established cooperatives and other complementary interventions, enabling local farm linkages and promoting local NUS foods can involve high transaction and administrative costs. This often leads to supply chain failures. Initial investment in establishing this infrastructure will result in substantial down-stream savings.
4. **Rethinking targeting:** There is an inherent element of appropriate targeting given that programs operate in government schools which excludes higher income levels in the regional context. However, large numbers of children attending private schools from relatively low-income households and out-of-school children are entirely excluded under current program modalities. South Asia is home to the largest numbers of out-of-school children at 31.8 million with 8.2 million at primary level (6 to 9 years) and 23.6 million at the secondary level (10 to 14 years) (64). There are potentially huge social and economic gains to be made by using school meals as an incentive to bring those children, a majority of whom are girls, into the education system.
5. **Meal quality:** This final set of challenges is overarching and stems from the other issues mentioned above, and relates to meal quality in terms of nutritional adequacy, food diversity and portion sizes. Whilst most programs have nutrition guidelines, the limited empirical evidence and program observations indicate that in many contexts, actual meal quality against all three indicators is lacking and inconsistent. Besides budgetary constraints and other issues, this is also attributable to standardized program designs which do not take into account specific needs of areas with poor food availability and access. The necessary response here is to develop guidelines that are aligned with local food systems, and are responsive to local needs at the sub-national level.

To respond to all five of the challenges listed above, there is a clear need for a more systematic and evidence-led approach to delivering national school meals programs, with a particular focus on up-stream investments in infrastructure and locally relevant planning.

Discussion

There is significant heterogeneity between countries in the region in the conception and development of national school meals programs. For example, in Nepal and Bhutan, school meals started as food aid initiative with the objective of improving attendance whilst in Sri Lanka and Bangladesh, it was in the context of emergency relief. In all cases the interventions are evolving from the original context to reflect national social development priorities through deliberate policy change and government ownership. Overall, the findings here indicate a significant, although nascent, policy and programmatic shift in the role of school meals in South Asia from a targeted safety net intervention to a wider social protection program. This

includes the aim of universal coverage and a specific focus on the social and ecological functions of school meals.

A review of programs in the region indicates that whilst financial and administrative capacities are important enabling factors, the key driver is legal and policy frameworks. Nepal, one of the poorest countries in the region, has right to food security and food sovereignty enshrined in the constitution and a specific statute, i.e. through the Right to Food and Food Sovereignty Act 2018, and implements a universal program with the provision of a hot cooked meal. In India, which has a well-established universal program, right to food was recognized initially through judicial interpretation and subsequently in the National Food Security Act 2013. In Bangladesh, Bhutan and Sri Lanka, coverage is targeted. In these countries, school meals and food security are included in government policies, but it is not recognized as a legal right. Pakistan currently does not have a government school meals program, however initial discussions on developing a policy framework are underway at federal and provincial government level.

A rights-based framework based on an explicit law or constitutional provision, encourages the development of a universal program whereas a policy reference at the ministerial level provides for a more limited mandate in a needs-based framework. Nepal and India have an explicit rights-based framework and school meals programs are universal whereas Bangladesh which has a substantially higher per capital income compared to Nepal operates a targeted program. These policy drivers are also shaped by political imperatives, especially in democratic contexts as school meals are seen as an increasingly important electoral issue at the national level and more significantly at the local level affecting a wide range of constituencies.

Whilst laws and policies are important drivers to institutionalize school meals, the intervention by itself in different forms (i.e., NGO supported, community-based, etc.) can influence national policy priorities. Community engagement and participation is implicit in school meals and through the different operational components such as procurement, monitoring and meal planning, it democratises public health and food systems. Experience from the region shows that in receptive political circumstances, this can lead to constructive policy engagement that recognizes and supports the wider social protection benefits of school meals. For example, in the home-grown school meals pilot in Nepal, it was observed that community participation in menu designing and supplies led to better oversight and enhanced support from local governments.

Finally, the analysis in this chapter shows that school meals programs in the region serve important social protection and safety net functions. Governments across the region recognize school meals as a critical social protection and safety net instrument as is evident in the rapid increase in coverage and current policy developments. In countries such as Pakistan and Sri Lanka where new policies are being conceived, governments are considering framing school meals in explicit social protection terms. Given the limited coverage of other social protection instruments in the region especially for children, ranging from 0 percent in Afghanistan to 32 percent in Sri Lanka, school meals programs in South Asia address a critical gap in national social protection systems. In the challenging context of Afghanistan, the limited program

demonstrates that school meals can provide some pathways of safety net engagement with the most disenfranchised group i.e. girls who are not allowed to attend school.

6. World Bank Engagement in School Meals

This section presents the main findings from a school meals portfolio review² of the World Bank financed projects,³ with the objective to better understand the areas and focus of World Bank engagement in school meals. The review identified 71 financing projects supporting school meals across 36 countries over the period of January 2008 - June 2023. This involved a volume of operations of at least USD 282 million. The scope of the support varied, ranging from financing the cost of the meals to technical and infrastructure support to enhancing the delivery of the school meals programs. Typically, the support for the school meal programs was for a sub-component or an activity, and thus only a fraction of the overall investment. The projects identified through this review were concentrated in Africa and in low- and middle-income countries, and the number of investment projects tended to increase during periods of crises. In terms of geographic reach, the majority of projects were implemented in Africa (37 projects; 52 percent) and Latin America and the Caribbean (21 projects; 30 percent). In terms of country-income group, nearly half of these projects were found in middle-income countries (34 projects; 48 percent) and low-income countries (32 projects; 45 percent; see Figure 6.1).

The World Bank's support to school meals increased during or following shocks, as shown by the rise in the number of approved projects after the 2008 global Food, Fuel and Financial Crisis, and the series of crises since 2020 (i.e., COVID-19, Ukraine war and inflation). As first reported in the World Bank 2009 publication (15) this reflects government leverage of school meals to alleviate the negative impacts of the crises on human capital, particularly (i) to address food security and nutritional needs; and (ii) to encourage continuing access to education, especially for girls (see more on this in the objective and targeting methods).

Crises (e.g., COVID-19, global financial crisis in 2008, droughts, and earthquakes) have repeatedly highlighted the crucial role that school meals play to support children (and their families) both during as well as immediately following shock. Often times it is the only (and most nutritious) meal that the children eat for the day. For example, during the initial phase of COVID-19, many countries closed schools and suspended the provision of on-site school meals due to lockdown and social distancing requirements. Some other countries replaced on-site meals with "take-home ration" or "cash" (see "school feeding" part of Annex One in Gentilini et al. 2020 (65)). Bank's portfolio review also highlights that during COVID-19 induced school closure and holiday break, some countries delivered dry rations to children's homes (e.g., Gambia, Colombia). This was done to address the food and nutrition security needs as well as to encourage re-entry of children to their schools upon reopening. At later stages of the pandemic, as schools reopened, on-site school meals resumed and it helped to facilitate smooth

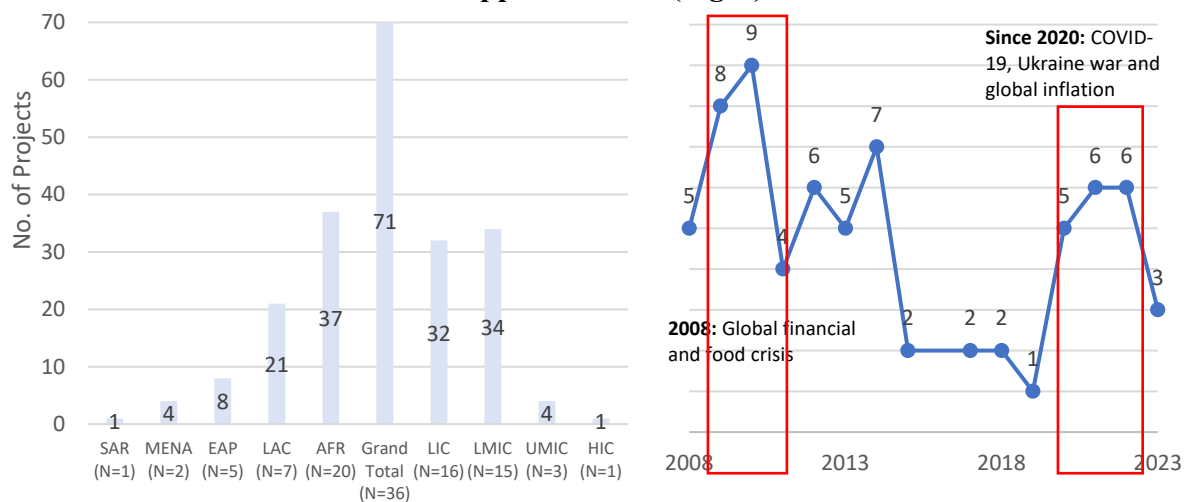
² This portfolio review was conducted using two data sources: (i) the list of school meals projects which is managed by the Education Global Practice; and (ii) Data analytics (Artificial Intelligence/Machine Learning) carried out by Information and Knowledge Solutions (ITSKS). The latter ran an algorithm based on school meals related keywords over the entire project documents in the World Bank information systems. Consequently, based on the list of potential projects supporting school meals, an in-depth document review was conducted to analyze the relevant information.

³ About two thirds of these projects (46) were financed through lending (IBRD/IDA) and one-third (17) were implemented through grants (ex. Recipient-Executed Trust Funds, IDA grants).

transition back to school for students, especially the vulnerable ones including girls (e.g., Kenya, Mali, Djibouti).

Implementation of school meals projects were observed even during the 2008 Food, Fuel and Financial Crisis. The Bank supported governments (e.g., Burkina Faso, Nicaragua, Togo, and Burundi) to implement or expand their school meal programs as a safety net response to the crisis. They were approved with an objective to improve food and nutrition security, and reducing school dropouts (especially for girls, and students from vulnerable families). Similarly, school meals measures were implemented in different countries during different other crises: 2013 cashew crisis⁴ in Guinea-Bissau; conflict situations in Niger and Mali⁵; and in the aftermath of natural disasters such as drought in Madagascar (in 2014), earthquake in Haiti (in 2010), and more recently, floods in some central and western African countries (e.g., Sierra Leone, Chad, and Ghana).

Figure 6.1 Number of World Bank Projects, by Region and Income Group (Left), and by Approval Year (Right)



Notes: Generated by authors based on the World Bank’s projects approved during the period from 2008 to January of 2023. Left: N=number of countries; Right: N=number of projects.

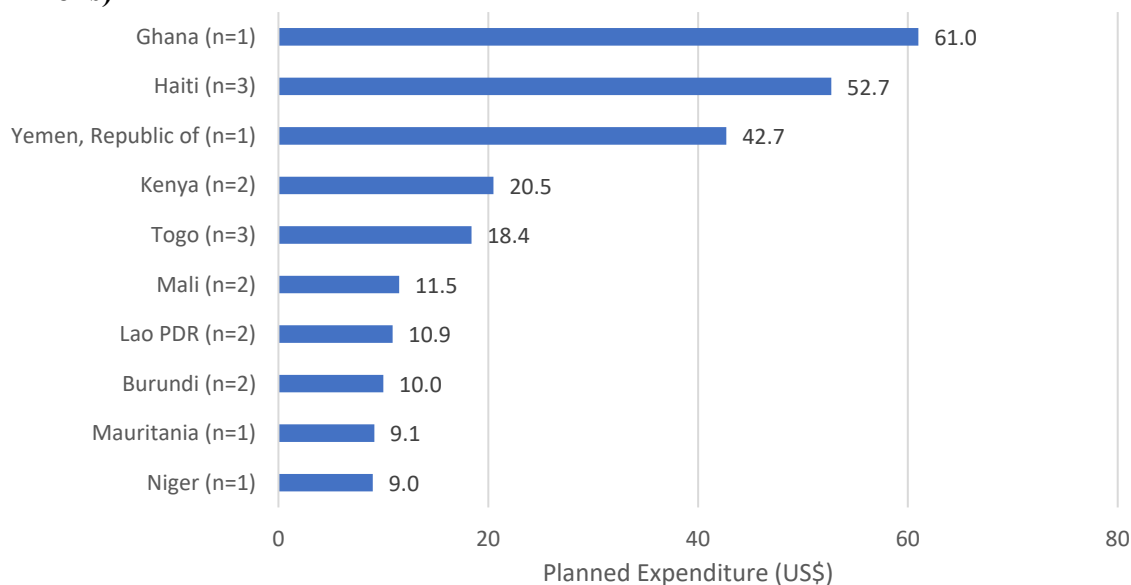
At the program level, the five largest World Bank school meals investments were in Ghana, Haiti, Kenya, Togo, and Yemen ranging from USD 18 to USD 61 million. Based on 31 projects (out of 71 projects) with clear separate budget allocation, the World Bank allocation to school meals over 15 years is at least USD 282 million. The specific allocation for school meals ranged from USD 5 million to over USD 61 million per country (Figure 6.2). Through these projects for which program coverage data was available (50 projects out of 71 projects), the World Bank

⁴ 2013 cashew crisis in Guinea-Bissau led to dip in producer price which resulted in income losses with adverse consequences on household food and nutrition security.

⁵ In Mali, 2012 conflict situation in North led to massive Internal displacement of people from north to south, resulting in overburdened education system in south.

projects supported at least 19.7 million students across 28 countries.⁶ This compares with an estimated global coverage of 418 million children fed across 161 countries (3), and supports the general evidence that the majority of national programs are supported from domestic funds.

Figure 6.2 World Bank’s Top 10 Country Investments in School Meals (in USD millions)



Notes: Generated by authors based on the World Bank’s projects approved during the period from 2008 to June of 2023. N= No. of projects

The programs supported by the World Bank had multiple objectives, particularly education (73 percent of the projects), and food and nutrition security (61 percent of projects). On average, projects supported two objectives, and these trends were largely consistent with the results from the global survey⁷. Within the education domain, attendance and retention were most frequently reported (56 percent), followed by enrolment (32 percent).⁸ In some cases, projects reported specific objectives, including narrowing the gender gap in education (11 percent), education outcomes (11 percent), school re-entering post-pandemic (6 percent). Besides

⁶ 50 projects across 28 countries have information on coverage of school meals. We selected highest coverage project per country to avoid double counting of beneficiaries. N.B.: planned coverage is 19.7 million children (based on 28 projects) but actual coverage (at the time of writing) is estimated to be almost 16 million children (based on data from 21 projects).

⁷ See Part I. GCNF (2019), using a global survey of School Meal Programs across 103 countries observed that almost all programs (at 93 percent) were designed to meet educational goals, and 88 percent aimed to meet nutritional and/or health goals.

⁸ For example, in Nepal, the School Sector Reform Program Project objective was to improve access to and quality of school education, particularly basic education (grades 1-8), especially for children from marginalized groups. In this example, the Department of Education conducts provides midday meals to students in targeted districts in an effort to increase the demand for education (See Part III of this paper).

education, safety-net, health, labor/employment,⁹ and agriculture objectives only accounted for a fraction (see below for more discussion on the distribution of these projects by the lead sector).

The majority of projects (80 percent; 56 projects) supported existing national school meals programs,¹⁰ while some 20 percent (14 projects) were related to new engagement. Half of the World Bank projects were designed to provide school meals to additional children under existing national programs (horizontal expansion). Consequently, more than one third of the projects were prepared as emergency responses. For example, in 2020, as a temporary, emergency response, a grant-funded project supported Rwanda’s safe school re-entry/re-opening efforts during COVID-19 by providing targeted nutrition support to pre- and primary schools (see Table 6.1).¹¹

Financing for school meals was usually accompanied by technical assistance. For example, countries leveraged the World Bank support to improve their delivery systems and infrastructure (39 percent of the projects), and to experiment with innovative features, such as implementing a new school meals distribution modality or introducing home-grown school meals. See Box 6.1 for additional examples of modalities and targeting. Policy change was supported in 3 countries, including transitioning from external to government led national programs (e.g., Lao PDR and Madagascar), and institutionalizing existing programs (e.g., Togo). Furthermore, advisory services have been provided to some countries, including in Colombia which requested World Bank technical advice on public food procurement systems, with a focus on local procurement from smallholder farmers as part of the national school meals program.

Table 6.1: Type of School Meals Engagement (n=70 projects)

Type of school meals engagement	New	Existing	Total (%)
Horizontal expansion	0	35	35 (50%)
Emergency response ¹²	8	18	26 (37%)
Temporary response ¹³	5	7	12

⁹ A few projects (6 percent) also involved capacity strengthening of farmers, marketing cooperatives, and aggregators to foster linkages among value chain actors and smoothen markets. For example, a World Bank project from Central and Western Africa established two regional agricultural business platforms to bring together smallholders and the private sector, which would link school meals program and suppliers of food items.

¹⁰ Information on the World Bank support to exiting versus new programs was available for all the projects, except for one (n=70 out of 71). For example, as a support to exiting programs, the World Bank in Haiti contributed to government’s efforts to address the crisis by extending the school meals program underway through the Education for All project. The program was adapted to cover some children over the summer break and also expanded the coverage of the program in the new school year starting in September 2008.

¹¹ This school meals support came along with other provisions such as scholastic materials for students, remedial education guidance to teachers, and construction of handwashing stations.

¹² Emergency response refers to the projects which were in response to any emergency or crisis (e.g., earthquake, COVID-19, etc.). It is similar to the temporary responses in the sense that emergency response could be short term (i.e., less than two years). Such projects are counted under both these categories.

¹³ Temporary response refers to the projects which were for short term. It is similar to the emergency responses in the sense that emergency response could be short term (i.e., less than two years). Such projects are counted under both these categories.

Delivery systems and infrastructure (e.g., IT, evaluations)	3	14	17 (24%)
Filling the financing gap	0	14	14
Innovation (e.g., change in modality, home grown meals)	1	9	10
Maintaining and supporting the existing program	0	10	10
Pilot	3	0	3
Policy change/reforms (ex. internalization, institutionalization)	0	3	3
Total sample (n=cumulative of columns) (N=70 project)	(n=15) N=14	(n=103) N=56	(n=118) N=70 (100%)

Notes: These categories are not mutually exclusive, meaning, a specific program can fall under more than one category. N = number of projects; n=sum of the projects falling under each of the categories (N.B.: this can be greater than 100% as the categories are not mutually exclusive).

From the Governmental side, the Ministry of Education led majority of school meals projects (44 out of 58 projects: 76 percent).¹⁴ Ministries of Agriculture and Health each led 7 percent (4 projects), and other ministries such as, Finance, Planning and Economic Affairs, Social Protection, and Rural Development led on the others (13 projects; 22 percent). This composition reflects the objectives of school meals which were predominantly led by the education sector, as discussed in Part I. In terms of cross-ministry collaboration, majority (53 projects; 91 percent) specified one ministry and only 5 projects (9 percent) included two or more ministries.

The World Bank lead sectors followed a similar pattern to those of the governments: the Education Global Practice led on more than half the projects (37 projects; 52 %), followed by Social Protection and Jobs Global Practice (13 projects), Agriculture (13%), Macroeconomics and Trade Global Practice (10%), and the Health and Urban Global Practices (3% each).¹⁵ In terms of cross-sectoral collaboration, the majority (85%; 60 projects) of the projects had only one Global Practice involved. Among projects where two or more Global Practices were involved, almost half of them (5 projects) had Human Development-wide participation.¹⁶

While the World Bank projects support is directed to governments, the implementation of the project typically depended upon external partners. In 42 (out of 71) projects for which the implementation arrangements were described, there were on average 1.4 implementers (including implementing partners) per project (Table 6.2). WFP was involved in more than half of these projects (22 out of 42 projects). For example, in Guinea-Bissau, as part of the World Bank's Second Emergency Food Security Support Project, the government requested WFP to continue the assistance they provided during the first phase of the project, thereby entrusting it

¹⁴ The information on ministry leading the project from the government's side was only available for 58 out of 71 projects.

¹⁵ In addition, in an attempt to promote positive environmental externalities (e.g., forest conservation), the World Bank has implemented a project (e.g., through the Energy and Extractive Global Practice in Burundi) to help finance the installation and maintenance of institutional stoves in schools to provide free lunch to students. Such projects would help transition from using traditional three stove cooking to industrial stoves for efficient cooking.

¹⁶ Out of the five projects, four projects (El Salvador, Eswatini, Papua New Guinea and Togo) involved three HD GPs: Social Protection, Education, and Health, Nutrition and Population, and one project (in Rwanda) involved two GPs: Education, and Health, Nutrition and Population. N.B.: Besides these 5 projects, there has been a school meals project in Brazil where Gender GP co-led with Agriculture and Food GP.

with the implementation of school meals activities along with food-for-work projects. WFP contracted 12 NGOs through Field Level agreements¹⁷ to implement the school meals activities, along with food-for-work activities.

Second, about 40 percent (16 out of 42 projects) of these programs outsourced NGOs to implement school meals. For examples, in Haiti’s PROMESSE project,¹⁸ the government contracted qualified NGOs to deliver school meal services. The third-party firms were also hired to conduct verification and technical assistance visits to schools, and carry out phone surveys. One fifth of the projects (9 projects) were directly implemented by the government themselves (mainly by the Ministry of Education), as in Lao PDR, and Madagascar. These projects were initially implemented and scaled-up by the WFP, but eventually, as part of the exit plan, handed over the operational and financing responsibilities to the Ministry of Education. Lastly, there are school meals programs in Benin, Togo, and Yemen, which rely on an informal system of *mamans* (village women) and Parent-Teacher Associations to cook and deliver school meals, under the support and supervision of well trained and experienced local NGOs.

Table 6.2: Implementors of School Meals (N=42 projects, n=60 implementers)

Implementing partner	# of projects (%)
WFP	22 (52%)
NGOs	16 (38%)
Government-run	9 (21%)
Parent-Teacher Associations (PTAs)	7 (17%)
Community-based school meals (system of village women)	5 (12%)
FAO	1 (2%)
Total (N=42 projects)	60 (Avg. 1.43 implementers per project)

Note: These categories are not mutually exclusive, meaning, a specific program can fall under more than one category

Box 6.1. Design of School Meals in World Bank Projects¹⁹

On-site hot meals were the most popular school meals modality, with a few projects providing multiple modalities based on specific criteria (e.g., gender, frequency of benefit). The vast majority of these projects (80 percent out of 71 projects) provided on-site hot meals, followed by take-home rations (16 percent) and on-site snacks (9 percent). A few of these projects (e.g., in Guinea, Guinea-Bissau, etc.²⁰) added take-home rations to on-site hot meals for

¹⁷ WFP uses Field Level Agreements as their main agreement in all types of NGO partnership arrangements, where NGOs handle WFP resources or implement activities on WFP's behalf. This agreement gives both parties the assurance that their interests are protected by law.

¹⁸ The PROMESSE project stands for Promoting a more Equitable, Sustainable and Safer Education

¹⁹ N.B.: The information for modality is available for 71 projects while data on targeting criteria is only available for 65 projects. The percentages mentioned in this section add up to more than 100% as these categories are not mutually exclusive. Meaning, a project which provides both on-site and take-home ration is considered under both the categories. Similarly, for projects having more than one targeting criteria are counted accordingly.

²⁰ Liberia and Djibouti

female students only, in an effort to reduce the gender gap in education enrolment and retention.²¹ Other projects (in Haiti, Yemen, etc.²²) provided two meals per day, consisting of a morning snack and a mid-day hot meal. A project in Central African Republic provided two meals – a porridge in the morning and a hot meal at noon.

The World Bank engagement in school meals used multiple targeting criteria; geography and level of schooling being the two most popular form of targeting. About 89 percent (out of 65 projects) of the projects use geographic targeting based on low education outcomes (e.g., attendance, enrolment), poverty level (e.g., poorer areas), and some specific criteria such as calamity or flood affected areas of refugee camps). For example, in Mauritania, the World Bank funded school meals project expanded horizontally with an objective to improve retention of students in areas where the poor are concentrated. The project has reached 149,609 students based on WFP selection criteria, which included the poverty level, the level of girls' school participation, among others. There are also targeting methods which use individual characteristics, such as level of schooling (primary or secondary), grade (e.g., 1st 2nd), and/or age. At 55 percent, level of schooling is most popular, with 86 percent targeting primary schools, 39 percent pre-primary, and 8 percent secondary level.

²¹ For example, in Guinea-Bissau, the project provided one hot meals to all students from first-sixth grade, and take-home rations for girls from fourth-sixth grade, who had at least 80 percent attendance record.

²² Lao PDR and Central African Republic

7. Concluding remarks

In reaching nearly 420 million children worldwide, school meals programs are one of the largest-scale social protection (and human development) interventions. This includes USD 48 billion in global investment, with domestic funding playing a major role even in low-income countries (where about half of total expenditure are funded by governments).

Various reasons can attest to such diffusion across low- and high-income countries: for once, the intervention has been subject to extensive empirical scrutiny. Studies have shown that school feeding can be an effective means to pursue specific human development goals, as well as attaining a multiplicity of such objectives simultaneously (e.g., across agriculture, income, and education goals). The evidence is stronger for dimensions like school attendance and enrolment as opposed to learning outcomes; and school meals are relatively more effective in bolstering food security than addressing chronic malnutrition. This is not surprising, as outcomes like learning and stunting are shaped by a wider range of factors than transfers alone. Also, important evidence gaps remain in terms of cost-effectiveness: as in-kind transfers, the delivery of nutritionally appropriate, micronutrient-fortified school meals is likely to entail higher implementation costs than cash-based programs. An estimation of such costs as well as their interpretation alongside potential high benefits (e.g., in terms of local multipliers and jobs generation) would help advance the applied research frontier on the agenda, as would an analysis of the long-term potential for school meals to mediate the risk of diet-related non-communicable diseases in adulthood.

Explaining the popularity of school meals also entails a harder-to-quantify, yet key political dimension. The establishment of global political and high-level leadership, most recently demonstrated by the alacrity with which 97 countries, representing all income levels, have signed up to the global School Meals Coalition, and how that Coalition has restored global coverage of school meals to pre-pandemic levels only a year after its formation. This is a level of commitment that seems hard to achieve with other social assistance interventions, and may reflect the uniquely well-established values attributed to school meals, such as supporting “children” (as opposed to “workers” or other groups), providing “food” (where food is something people “deserve”, while cash is something to be “earned”) and investing in “schools” (which are almost universally viewed as compulsory and universal “investment in future generations”). It may be that when these several powerful notions are combined they rally unusually strong political support across income distributions within and across countries.

If school meals have deep roots in state-citizens social contracts, they also present scope for improvement. A rich agenda lies ahead for governments in enhancing the design of school meal programs in cost-effective ways; improving their practical connections with other social protection and human development systems; and expanding partnership opportunities with private sector, communities, civil society and governmental actors. With its longstanding tradition and current large-scale programs, South Asia stands out as one of the key regions where the school meals agenda could be advanced in ways that are technically and politically sustainable.

While the World Bank's policy and financial engagement in school meals may at first sight seem comparatively limited relative to government domestic investments, the institution's operational footprint is more substantial and more relevant than often assumed. Since 2008, the Bank has rendered support to school meals via 71 projects in 36 countries and for a volume of operations of at least USD 282 million. This is a significant presence alongside the circa USD 300 million annual ODA committed to this area, largely from USDA's McGovern-Dole and the UN World Food Programme, particularly because of the focus on low-income countries. Furthermore, the World Bank brings exceptional breadth and experience to the policy engagement because it involves all practices across the Human Development spectrum, and others, especially agriculture, beyond that.

Recently, the World Bank policy engagement on school meals has been further cemented by joining the 97 countries in the School Meals Coalition. This need not necessarily mark a dramatic change in direction in the World Bank's approach, but it does present new opportunities for the institution to build on its established strengths in supporting low-income countries and its unusual capacity to contribute across multiple sectors. It also calls for the institution to identify and build on lessons from engagements with governments and partners, to provide coherent cross-sectoral Human Development-perspectives on the issue, and to offer demand-led technical and knowledge-brokering services related to school meals.

8. Annex

Annex 1. Exploring the Evidence for Benefit from School Meals across Six Domains

Annex 1 summarizes the scale of global evidence presently available to assess the strength of evidence for the benefits from school meals across six domains: income support and social cohesion; education; health and nutrition; agricultural markets and economic activities; climate; and gender.

Income support and social cohesion

Income equality: Nearly one-in-two primary school students globally benefit from school meals and are the only social protection mechanism for which school-age children and adolescents are the main beneficiary. School meals indirectly benefit the households of the beneficiaries, as they represent an in-kind income transfer in low-income settings equivalent to approximately 10 percent of household income. In particular, the provision of take-home rations to girls can represent a significant income transfer to households, outweighing the forgone benefits of nonattendance (15). In settings with extreme poverty, school meals can also offer a noticeable welfare outcome (46).

Peace building: The provision of school meals fosters peace, community cohesion, and resilience, including among recently resettled populations (1). Meals at school offer children living in conflict situations a sense of normalcy and social cohesion. The 2020 Nobel Peace Prize awarded to the World Food Programme is a recognition that ending hunger is an important component of the pursuit for peace (66).

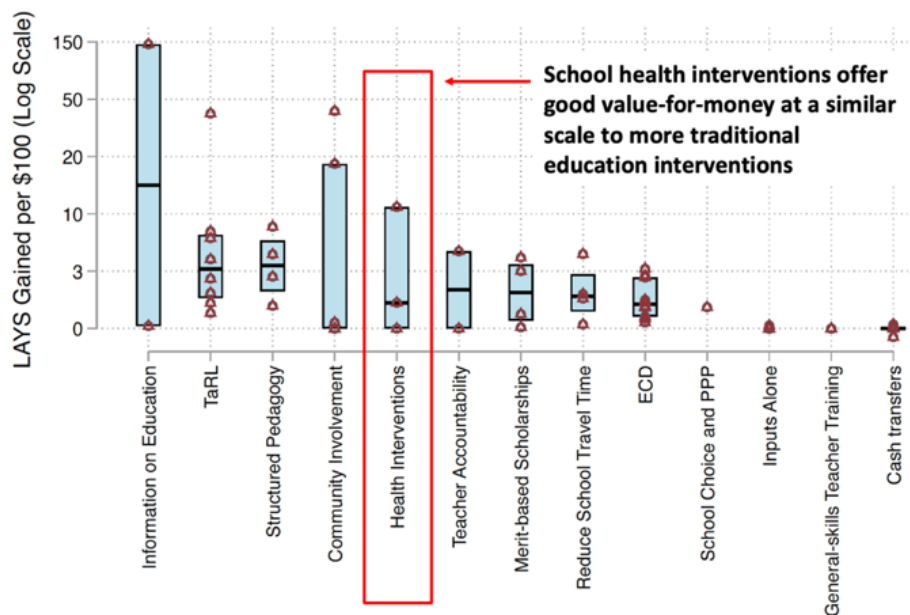
Education

Improved access: Interventions which keep students in school for longer are beneficial to the learner and to the economy (67). Studies show that the average rate of return to one additional year of schooling is about 9 percent, and that women experience higher average rates of return to schooling (68). The evidence suggests that school meals and take-home rations, both of which are conditional on attendance, can mitigate gender disparities in school enrolment amongst female students (69,70). For example, there is evidence to suggest that school meals in conflict settings, compared to general food assistance, can reduce the participation of school-age girls in the labor market by 10 percentage points (71).

Improved learning: A recent review of 150 impact evaluations found that over half of education interventions had almost no effect, including popular policies such as general-skills teacher training and provision of inputs to schools, such as laptops. Cash transfers were among the least impactful for increasing learning and results remain mixed when examining the effectiveness of conditional cash transfers and unconditional cash transfers (72–74), with more positive evidence from school meals programs (75). For instance, Lundborg et al. (76) show that a Swedish program providing free of charge nutritious school meals to all children in

primary school had long term effects on lifetime income, increasing by 3 percent for all exposed pupils. Bashir et al. (77) also find that school meals delivers better outcomes compared to cash transfers, as they have a direct impact on learning capacity. School meals might seem cost-ineffective compared to other forms of education or specialized social protection interventions, however, the economies of scopes it generates potentially turns it a worthwhile investment, especially in food insecure areas (75). Using Learning-Adjusted Years of Schooling (LAYS), the new education metric that might be considered as equivalent to the DALY for health, specific school-based health interventions offer value for money returns comparable to more traditional educational interventions (78) (Figure 8.1)

Figure 8.1. School Health Interventions Offer Good Value for Money at Similar Scale to More Traditional Education Interventions



Source: Adapted from World Bank Policy Research Working Paper No. 9450

Health

Indirect health benefits from complementary school-based services: School meals programs reach more than 400 million children daily (equivalent to some 69,840 billion meals in total) (1). Nearly all (93 percent) of national school meals programs provided complementary interventions, including nutrition-related interventions such as deworming (38 percent), weight and height measurement (34 percent and 32 percent, respectively), and anaemia testing (11 percent). Additional school-based health interventions include handwashing (76.8 percent), eye testing (22 percent), dental/oral hygiene (22 percent), hearing testing (16 percent), among others (3). The long-term health, education, and economic benefits from complementary interventions, such as school-based deworming programs have been well documented (29,79).

School health and nutrition programs can have marked gender consequences because the school platform can deliver simple, routine, and free health services to all students, which particularly benefits vulnerable girls who have irregular contact with health clinics. Moreover,

infrastructure investments, such as adequate latrines, handwashing stations, universal provision of free menstrual supplies, and timely health education supports adolescent girls to manage their menstruation while in school.

Improved intergenerational health (improved adolescent health leading to maternal and birthweight): The health and nutritional status of mothers is a key determinant of the birthweight and health of their offspring, which in turn, can make important contributions in reducing future child stunting. Cumulative exposure to interventions, such as through daily school meals and complementary school-based health services, during adolescence have been associated with improvements in future child linear growth, as was seen after decades of investments through India’s Mid-Day Meals Programme (63).

Improved growth and development: A Cochrane review on school meals (80) conducted a meta-analysis of three randomized controlled trials in three LMICs: Jamaica (81), Kenya (82), and China (83). The meta-analysis found a small yet significant effect on weight (0.39 kilograms, 95 percent confidence interval 0.11, 0.67) and a small nonsignificant effect on height gain (0.38 centimeters, 95 percent confidence interval –0.32, 1.08), across implementation modalities and target populations. A more recent review also found that school meals had significant effects on weight and height gain (84) (see Table 8.1). The success of these approaches critically depends on the regularity of the supplementation throughout the school year.

Table 8.1. Summary of Nutrition and Cognitive Impacts of School Meals

School feeding activity	Anthropometric Status		Micronutrient Status						
	Height or stunting	Weight or underweight	Iron	Hemoglobin or anemia	Iodine	Vitamin A	Zinc	B vitamins	Cognition
In-school meals	+++	+++	+	++	n.a.	+	+	+	+++
Take-home rations	++	++	—	+	n.a.	—	—	—	++
Multiple micronutrient fortification	++	++	+++	+++	+	+++	+++	+	++
Multiple micronutrient powder	++	++	++	++	+	++	++	+	++

Source: Watkins and others 2015.

Note: RCT = randomized controlled trial.

n.a. = not assessed by an RCT; + = evidence from one RCT; ++ = evidence from two RCTs; +++ = evidence from more than two RCTs; — = lack of any evidence.

Improved diet (diversity and quality): Evidence suggests that school meals can be effective in promoting macronutrient and micronutrient adequacy in the diet (85), and that food-based strategies in school meals programs can effectively address micronutrient deficiencies (86,87). The impact of school meals on micronutrient status is dependent on the dose, initial micronutrient status, and interactions with other micronutrients supplemented.

School meals with controlled menus and diets which meet international standards provide an opportunity to deliberately maintain nutritional status. Several analyses have spotlighted the need to make school diets more nutritionally appropriate (e.g. BOND-KIDS). Well-designed school meals programs can provide nutritious diets that meet international standards (38). FAO

recently published the School Food and Nutrition Framework to guide countries with developing or strengthening comprehensive and nutrient-based standards for national school meals programs (88).

Longevity (NCD prevention in adulthood): Avoidance of diet-related non-communicable diseases (NCDs) is a major contributor to long and healthy life, and human capital protection. The incidence of NCDs in adulthood are, at least in part, a consequence of lifelong behaviours, including dietary preferences, which are established in adolescence. High quality school meals may also foster understanding of healthy diets and food habits at a critical age when life-long dietary preferences and social attitudes are formed and carried into adulthood, particularly if action-oriented nutrition education is incorporated into the program (89). By taking these messages home, children can also influence the dietary preferences of their family, and coupled with a whole school approach, which actively involves communities, the broader food culture and values can also be positively influenced. School meals that are nutritionally poor, may in contrast increase the risk of diet-related concerns later in life.

Schools represent the most established and extensive parts of public food systems worldwide, making national school meals programs an exceptional opportunity to help address the determinants of childhood obesity. School meals permits the deliberate promotion of healthy preferences and behaviours during school-age and adolescence which could address the obesity epidemic. A recent review of 185 national programs identified that school meals programs have multiple policy objectives, with one-third of the countries assessed identified obesity mitigation as an objective, with this objective becoming more salient as countries grow wealthier and worries about malnutrition give way to concerns about obesity (GCNF 2021, refer to Table 2.2 in Section 2). Recent studies have shown that high-quality, universal school meal provision is associated with increased intake of healthy foods, particularly for children experiencing disadvantage, suggesting that this intervention may improve diets and reduce obesity prevalence in childhood, and promote healthy dietary habits in the long-term (34,35).

Agricultural Markets and Economic Activities

Improved food sovereignty and resilience: The diet and menu of school meals can be used as a deliberate tool to influence dietary shifts and food purchase preferences and build on the power of procurement to create demand for locally preferred and ecologically sustainable crops (27). In Nepal, the switch to home-grown school feeding changed the crop supply patterns from just three mainly imported crops to 18 largely indigenous sources (27,90).

Market multipliers resulting from predictable markets: Local agriculture enjoys huge returns from school meals programs, stemming from local purchase and stable demand, which is why the agricultural sector leads in some countries, for example the US federal school meals program emerged in the 1930s recession as a market stimulus and remains USDA-led today (37). Home-grown school feeding approaches can regenerate local agriculture by creating stable markets for often neglected and underutilized local crops, cost-neutral biofortified foods, and climate-smart nutrient-dense foods from local small farmers.

Long-term job creation: Employment dynamics are one of the multisectoral aspects of school meals programs as they create local jobs, especially for women and small holder farmers. It is estimated that school meals programs create local jobs on a ratio of 2,000 jobs to every 100,000 children fed (1,3,28). This data is a conservative estimate as it only assesses direct jobs created by the implementation of school meals programs, without quantifying indirect employment or business opportunities generated by school meals, for instance when local farmers benefit from programs implemented under a home-grown school feeding model (3).

Climate

Climate resilience: School meals have helped to protect against hunger during climatic shocks, such as drought. In India, the negative impacts of drought on nutritional outcomes of children have been significantly compensated by the mid-day meals scheme (36).

An area of emerging research interest relates to making school food systems more planet-friendly. Approximately 30 percent of food is wasted and accounts for 8 percent of carbon emissions (91). Food production accounts for 70% of freshwater use, and is the principal driver of biodiversity loss, mainly due to the conversion of natural ecosystems for crop production or pasture. and approximately 80 percent of school meals in LMICs are prepared over open fires (92), suggesting the potential to immediately reducing greenhouse gas emissions by switching to more efficient fuel-efficient stoves. These environmental consequences affect the ability to produce high quality foods, compromising food security and nutrition.

Recognizing that in many countries school meals represent more than 70% of all publicly managed food systems, a recent analysis developed by more than 80 institutions worldwide identified that governments could bring about positive change through four policy areas: menu changes which encourage dietary shifts which promote planetary and population health; clean and energy efficient cooking methods; prevention of food loss and waste, and reduction of plastic use; and action-oriented and holistic food education to help establish life-long healthier and more sustainable food practices. These actions could, in turn, build on the power of procurement to create demand from the agricultural sector for school foods from ecologically sustainable local farm systems, where possible, stimulating local approaches to agriculture which are regenerative, and which promote biodiversity, resilience, and food sovereignty (27).

Gender

Improved health and well-being for adolescent girls: School meals improves girls' attendance and can be an enabling factor for adolescent girls to remain in school. In conflict affected settings, school meals can reduce the participation of school-age girls in the labor market by 10 percentage points compared to general food assistance (71). Each additional year of schooling has protective benefits for future generations, as the longer girls are in school, the later a woman begins childbearing which lowers the risk of child mortality. These effects are robust even in the absence of learning outcomes, and the effects are stronger with improved levels of education quality (93).

Annex 2. Key Sources for Country-Based School Meals Programs in South Asia

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ABSTRACT

With over 400 million children reached worldwide, school meals are among the largest-scale social protection interventions. This paper traces the evolution of school meals programs globally, examines the empirical evidence underpinning them, reviews select implementation practices with an emphasis on South Asia, and provides one of the first estimates of World Bank's investments in school meals.

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Key Words: Social protection, social assistance, school feeding, school meals, food

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