Fiscal policies and programs to improve access to and demand for healthy foods

This fact sheet presents policy options to improve access to and demand for healthy, whole and minimally processed foods, including demand-side policies to increase consumer purchasing power and supply-side policies to increase the supply and availability of healthy foods.

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Barriers to a healthy global food system

Improving diet quality is an international priority as global dietary patterns increasingly do not support healthy living. In 2021, global vegetable intake was 40% below the recommended three servings per day, fruit intake 60% below the recommended two servings per day, and legume and nuts intake 68-74% below the recommended servings.[1] Meanwhile, consumption of ultra-processed foods (UPFs) has increased globally, with UPFs now representing 50-60% of daily caloric intake in some high-income countries and intake trending upward in middle and low-income countries.[2] High intake of UPFs instead of minimally processed foods richer in micronutrients and macronutrients is known to be deleterious to health and has been directly associated with increased risk of over 32 negative health outcomes, including all-cause mortality, heart disease related mortality, type 2 diabetes, obesity, and mental health disorders.[3]

Global Actors

Accelerated by the advent of chemical fertilizers and pesticides, the Green Revolution, and the Centers for Global Agricultural Research And Development, a shift began in the mid-20th century in agricultural practices from traditional to chemical and mechanical processes and the emergence of an agribusiness model where all aspects of food production from the growing of food to the production and marketing of food became more highly commercialized.[4] To maintain increased demand, farmers began to move from growing a variety of crops to growing mass amounts of fewer, more profitable cash crops.

Since these shifts, the agriculture and food processing sectors have become increasingly dominated by fewer and fewer multinational companies.[5] These consolidations are part of a trend over recent decades following a series of mergers and acquisitions across the agri-business sector. Already ongoing in Europe and North America, this trend of widespread farm consolidation has also started in some Asian and sub-Saharan African countries and the Middle East and North Africa.[6] Latin America and the Caribbean are much further along in the turning point from farm creation to consolidation, while the shift is occurring much later for most of Asia and in sub-Saharan Africa.

- Following current trends, the number of farms globally are estimated to drop by more than half by the end of the century — from 616 million in 2020 to an estimated 272 million.[7]
- Farm equipment, commodity trading, food processing, and global grocery retail sectors are highly concentrated and dominated by large, global businesses.[7]
- Approximately 60% of the global seed market is owned by the top four companies, which also control 70% of the global agrochemical market.[6]
- Many multi-national companies have larger economies than national states, with companies' annual revenues higher than annual GDP of a country.[8] This growth of corporate revenue and power is facilitated by neoliberal trading policies such as trade liberalization, producer subsidies, and strengthened private property rights as well as growing demand for multi-national company products in low- and middle-income countries.

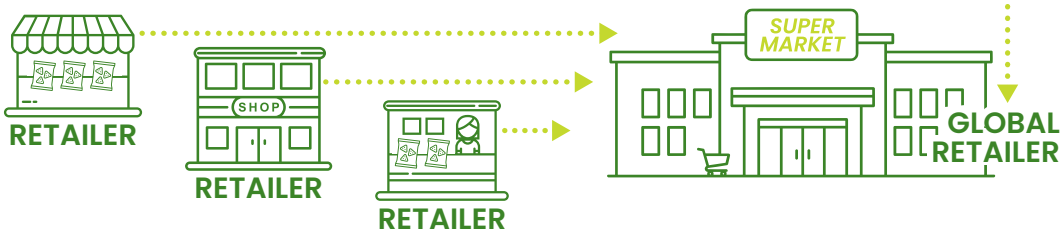
While increasing international trade has allowed more diverse foods to be available year-round to certain consumers, it has also led to a dietary shift towards increased consumption of staple grains, meat and dairy products, vegetable oil, salt, and sugar, and lower intake of dietary fiber.[9] Foreign direct investment in food processing and supermarkets, such as by Walmart and Carrefour, has made UPFs including sugar-sweetened beverages more available to consumers globally. Foreign direct investment predominantly facilitates the growth of food processing and has contributed to the global availability of ultra-processed foods and beverages.

Increasingly, fast-food restaurants, manufacturing and processing companies, and retailers dominate global trade investment and resultant supply-chains — particularly in low-income countries. The increased availability of these foods in low-income countries is shifting consumer food choices and dietary habits, accelerating the global nutrition transition, and leading to more countries experiencing the double burden of malnutrition and food supply vulnerabilities.[9,10]

- Following the North American Free Trade Agreement (NAFTA), American companies dramatically increased their investments in the Mexican food processing industry from $210 million in 1987 to $5.3 billion in 1999.[11] Sales of processed foods in Mexico also increased at a rate of 5–10% per year between 1995 and 2023.
- In sub-Saharan Africa, many governments liberalized food industry foreign direct investment during the 1990s, which led to UPFs making up about 22% of foreign direct investment in sub-Saharan African countries by 2021.[12]

Vertical integration: *company owns other companies at each level of food production within the value chain*

Horizontal integration: *company increases market share by purchasing competitors within the same industry*



- Structural adjustment programs throughout Africa encourage food imports, particularly wheat, milled rice, edible oils, milk powder, and some UPFs.[12] Rapid growth in food processing, food retail, and food service sectors has increased demand for processed foods in sub-Saharan Africa with large processors, supermarkets, and fast-food chains emerging in these markets.[12] As countries rely more on food imports, they also become less resilient to shocks such as weather events, conflicts, or other disruptions.

Upheavals & shocks

Geopolitical upheavals such as conflicts and natural disasters fueled by climate change have also exacerbated issues of healthy food access around the world.3 Corporate food supply chains utilize a "just-in-time" sourcing approach which relies on fractured sourcing across complex global supply chains. This type of sourcing exposes food provisioning to shocks and breakdown of supply chains.

Climate: Global climate impacts from drought, fires, unusually heavy rainfall, extreme temperatures, and other dimensions have led to food price increases across all global regions at various times in this century.[13] A study modeling climate scenarios, seasonal production data, and price volatility at the country level estimates that global crop production could reduce by 9% in the 2030s and by 23% in the 2050s.[13] South Asia is anticipated to be severely impacted by climate change because 70% of people in the region live in rural agrarian communities and make up about 75% of the poor in the region, despite their contributions to greenhouse gas emissions being low.[14] In sub-Saharan Africa, temperature increases and changes in precipitation have contributed to extreme weather events due to either too much or too little rainfall. Heavy rainstorms, flooding and droughts have thus become typical extreme weather events in sub-Saharan Africa and have significantly strained agricultural productivity in the region.[15]

Conflict: In Sudan, where a civil war has been ongoing since April 2023, half of the population (approximately 24.6 million people) are experiencing high levels of acute food insecurity, and agricultural production has been interrupted by farmers abandoning farms and mass displacement in the region.[16] The Russia-Ukraine war drove a rise in global food and other commodity prices in the first half of 2022, and its impact on wheat and maize exports from both countries threatens food security in several African countries where Russian wheat makes up 32% of total wheat imports by African Development Fund (ADF) countries and Ukrainian wheat, maize, vegetable fats, and oils make up 43% of total goods exported to ADF countries.[17] Gaza has been blockaded indefinitely since 2007, with Israel restricting the movement of people, goods, and commodities such as electricity — leading to widespread food insecurity and undernutrition.[18] In a November 2024 Integrated Food Security Phase Classification report on Gaza, the Famine Review Committee reported that the Food Consumer Price Index (CPI) increased by 312% compared to the pre-conflict Food CPI, with the price of cooking gas increasing by 2,612%.[19] Both the Russia-Ukraine war and the Iranian conflict of 2026 are impacting the global fertilizer supply, which will ultimately drive up food costs.[20]

The Kondh Adivasis rural peoples group from Odisha have been impacted by India's changing rainfall pattern. Here a farmer in Muniguda holds spoiled corn cobs following an unseasonal rain during the harvest season, which impacted crops and led to large-scale spoilage of the corn crop. Photo by Aniket Gawade for Climate Visuals Countdown

Health Impacts

As the cost of UPFs has trended downward and availability has become more ubiquitous, the double burden of malnutrition (DBM) has trended upward.[12,21] DBM refers to the co-existence of diseases of undernutrition (e.g., stunting, wasting, or micronutrient deficiencies) and overnutrition (e.g., obesity, type 2 diabetes).[21]

- This can occur simultaneously at the individual level — such as an individual with obesity who also has nutritional anemia — or temporally over the life course where someone may carry excess weight as an adult but was stunted due to chronic undernutrition as a child.[22]
- DBM is particularly concentrated in Sub-Saharan Africa, South Asia, East Asia, and the Pacific regions with increases in DBM particularly higher in Asian countries.[21]
- Unhealthy snacks and beverages can contribute to the DBM when they replace foods that would otherwise contribute to a diverse and nutrient-filled diet.[23,24]
- Increasingly, low- and middle-income countries are seeing rising intake of UPFs including infant formula, complementary foods, and an array of toddler and follow-up milks.[25-27]
- To increase demand and promote overconsumption, UPF companies use persuasive and pervasive marketing — especially targeting children and their caregivers — and effective branding that is largely absent in the unprocessed and minimally processed food market.[28-36]

Ultra-processed foods have been linked to a variety of other chronic diseases and other poor health outcomes. Learn more about the impact of ultra-processed food on health and the environment in our factsheet, "Ultra-processed foods: a global threat to public health."

Below, we present a range of policy options to improve access to and demand for healthy, minimally processed foods. These include policies that aim to increase the supply of healthy foods, increase consumer demand and purchasing power, improve infrastructure to support healthy food production and distribution, and leverage procurement to prioritize healthy food in public spaces.

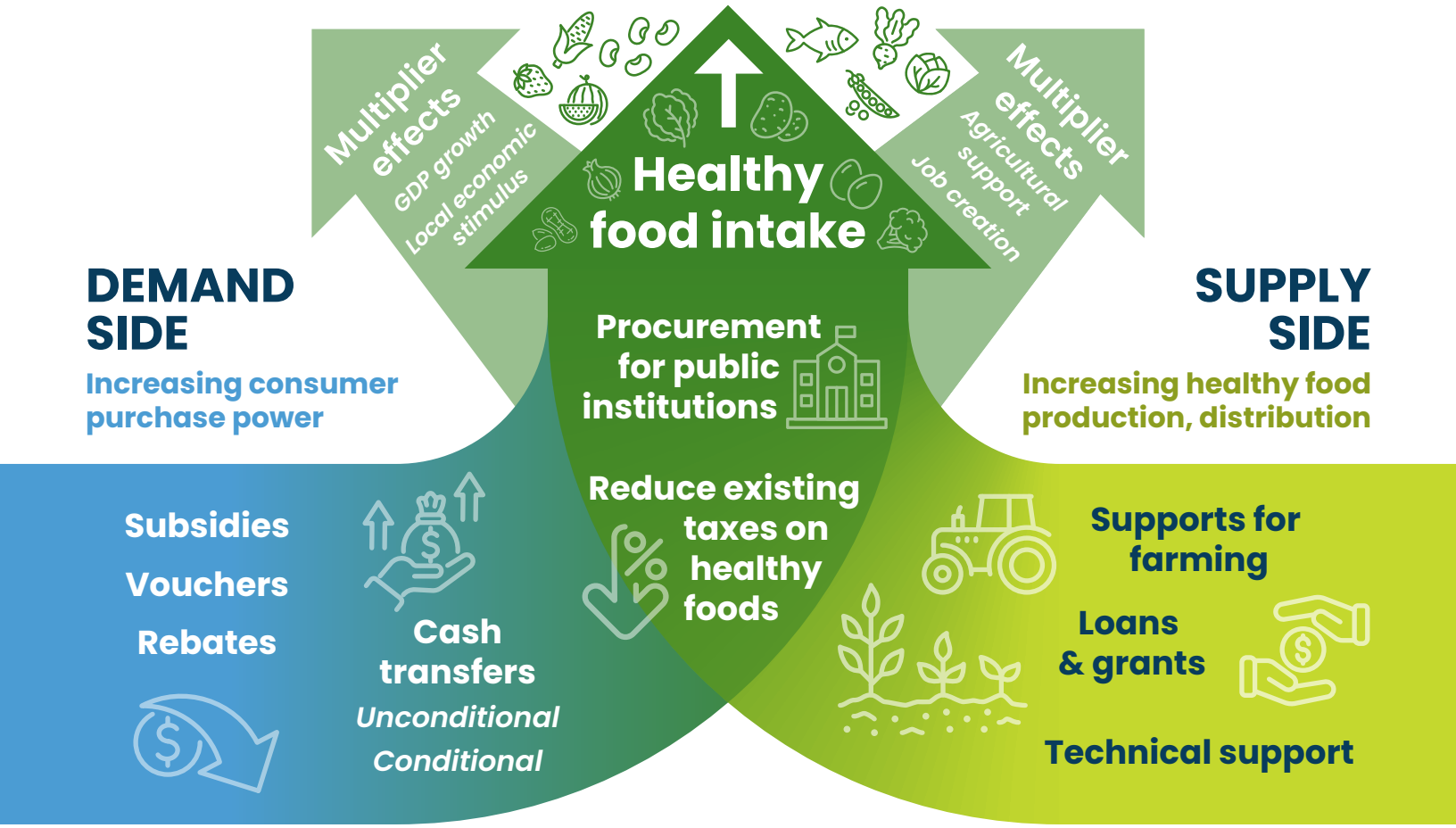
These approaches should ideally be complimented by policies that also discourage demand for and availability and consumption of UPFs, including targeted taxes, front-of-package warning labels, marketing restrictions, and removal from public spaces such as schools. Read more about each of these policy areas in our fact sheets.

Learn more about ultra-processed foods, including trends in intake, associated health risks and environmental impacts, and policy approaches to improve the food supply.

Below: Small tienda with Coca-Cola and other ultra-processed beverage advertising, in Tulum, Mexico. The coutnry faces a double burden of high obesity and undernutrition prevalence, driven in part by diets high in ultra-processed foods.

Policy options, examples, and evidence

Policy interventions can increase demand for and supply of healthy foods. While international agencies have historically focused primarily on increasing supply, there is growing evidence that demand creation is also critical.[10]



Demand-side policies

One way to support greater intake of healthy food is to raise consumer demand by increasing availability as well as financial or physical access. This can be accomplished via policies and programs such as targeted public procurement (which also serves as a supply-side stimulus), increasing purchasing power via financial resources in a variety of forms, and enhancing physical access to buy and consume healthy foods. Economists provide many studies where increased demand leads to rapid supply increases.[10] Examples of demand-side interventions are described below, with a focus is on examples from low- and middle-income countries.

Demand-creating interventions may have significant costs but can be paired with health-promoting taxes such as on sweetened beverages, UPFs, single-use plastics, tobacco, and alcohol as funding revenue sources. This approach can also enhance equity by taxing corporations that produce health-harming products and redirecting revenues to support low-income households, while also sending a consistent public signal aligning fiscal policy with health goals and recommendations.

Program design is particularly important, as many challenges can arise in getting resources to households and inexact program requirements can result in unintended consequences and mis-targeted benefits.

Demand-side policies

continued...

Procurement for school or childcare feeding programs and other public institutions

Procurement of local foods for institutions such as schools, hospitals, military bases, and government venues can support small and family farmers and increase access to healthy food while also encouraging increased supply. This can be done by requiring that such public institutions procure a minimum percentage of foods for school meals from family farms or from healthy food groups such as vegetables, fruits, or legumes.

- **Brazil's** *Programa Nacional de Alimentação* (PNAE), also known as the National School Feeding Program mandates that 45% of foods must be purchased directly from family farming (increased from 30% in January 2026).[37,38] Additionally, 90% of all food purchasing funds must be used for procuring unprocessed or minimally processed foods (Nova groups 1 and 2), and no more than 10% of funds may be used for processed foods (Nova group 3).[39] Ultra-processed foods (Nova group 4) should be avoided completely. In addition to these national-level regulations, some municipalities have policies related to procurement:
  - In **Sao Paulo**, all school food supplies must be sourced from producers who practice sustainable farming, and all school meals served must be 100% organic by 2030.[40-42]
- In **Bhutan**, the School Agricultural Program teaches students in public schools agricultural skills and provides employment opportunities in the agricultural sector.[43] The program supplies participating schools with about 20% of fresh vegetables needed and 35% of animal produce needed for the school's feeding program.
- In **Cambodia**, with assistance from the World Food Programme, schools in poor districts began offering school meals with locally procured food from 2017–2018.[44] The program has been shown to positively impact childhood health and education attainment as well as local economies:
  - The introduction of school meals decreased student absences whereas, prior to the program, approximately a third of students would leave class every day because they were hungry.[44] After the program, parents, teachers, and municipal representatives reported that students concentrated better in class and the rate of students repeating a grade decreased.
  - Increased demand for local foods from schools led to villages growing more and a greater diversity of vegetables.[44] Participating producers generated additional income, and the wider supply of vegetables led to increased demand from additional third parties, further stimulating increased production.

Below: Students in Brazil eat lunches provided by the Programa Nacional de Alimentação*, also known as PNAE or the National School Feeding Program. Source: World Food Programme (WFP) Centre of Excellence against Hunger in Brazil*

Increasing purchasing power: Non-cash resources

Pricing incentives to decrease the cost of healthy foods can be provided in many ways, including via subsidies, vouchers, discounts, matches, or rebates. Programs may focus specifically on reducing or subsidizing the cost of healthy foods or in some cases may aim to lower the cost of food more broadly. These programs can increase demand for healthy foods by increasing household purchasing power. Combining non-cash resource programs with policies that increase the supply of healthy foods can ensure that prices do not increase due to rising demand.[46]

Types of non-cash resources

Subsidies	Subsidies are often provided to households to help purchase food items. Subsidies can also be paid to farmers by governments as a supply-side intervention to lower prices for consumer through government-ran stores.
Discounts	Discount programs offer a reduced price on specific products, typically a percentage off of the regular price. Discounts can be offered as an automatic discount at the point of sale or via a coupon received prior to purchasing that food.
Matches	Match programs will match a portion or the total amount spent on specific foods (such as $1 provided for every $1 or $2 spent) and are often provided to the consumer as a voucher or token during the shopping trip
Vouchers	Voucher programs provide coupons or cash vouchers that consumers can use to purchase food at the point of purchase.
Rebates	Rebate programs repay customers an rebate based on a portion of their purchases such as the amount spent on sales tax or on fruits and vegetables.

Non-cash policy examples

- **Bangladesh's** *Open Market Sale* program is a national food-subsidy scheme that sells essential staples, primarily rice and wheat, at prices lower than the market rate to stabilize food access for low-income households. A 2022 systematic review of Bangladesh's social protection system found that food-subsidy programs such as the Open Market Sale reduce food insecurity, improve nutritional outcomes, and increase household food consumption among beneficiaries.[47]
- **India's** *Public Distribution System* (PDS), the world's largest food distribution network, aims at supplementing the cost of essential household goods such as wheat, rice, sugar, and kerosene via "fair price shops."[48] However, the program has struggled with mis-targeting, low utilization, poor data collection, and corruption. Since 1997, PDS has based its targeting on asset ownership which excluded many food-insecure households which were classified as above the poverty line. This shift to a targeted program reduced sales for PDS dealers, who already earned small commissions, and led to dealers siphoning off goods to earn a larger profit. Overall, the PDS program demonstrates how well-intended targeting can lead to unintended consequences which weaken program impact.

Demand-side policies *continued...*

- **Chile's** *Bolsillo Familiar Electronico* program was an electronic transfer program that provided $13,500 CLP ($14.24 USD) per month, which operated from July to September 2024 to help low-income families cope with increased food prices.[49] To participate, a family had to be participating in other Chilean social assistance program (the *Family Subsidy, Family or Maternal Allowance*, or *Chile Solidario* programs). The electronic transfer was intended for purchases of all types of food in stores, supermarkets, or open-air markets or to pay electricity bills.The program has not yet been renewed or made a permanent benefit.[50]
- **Mongolia's** food stamp program was first piloted during the 2008 economic downturn to improve access to basic foods for the poorest 5% of households. Recipients could use stamps to purchase from a specified list of ten high protein foods and staples at specific shops.[50] This has since become a large-scale government-sponsored program across Mongolia, providing funds to roughly 200,000 Mongolians every year.[51,52]
  - An evaluation found that Mongolia's food stamp program was effective at addressing food insecurity: The program increased the diversity of foods consumed, decreased the number of months households reported not having adequate food, and decreased reliance on coping strategies commonly used in food insecure households such as purchasing food on credit, reducing quantity of food, or selling assets to purchase food.[50]
- In **Australia**, the Supermarket Healthy Eating for Life (SHELf) project tested whether a 20% discount on fruits and vegetables was effective at promoting fruit and vegetable intake.[52] This randomized controlled trial found that participants who received the discount purchased 233 more grams per week of vegetables and 364 more grams per week of fruits than control group participants.
- A **South African** health insurer, Discovery, launched the HealthyFood program as part of its health promotion program in 2009 which provided up to a 25% rebate to members of the program on healthy food purchases such as raw or minimally processed fruits and vegetables.[53] From November 2009 to March 2012, participating households increased their ratio of fruits and vegetables purchases to total food purchases by 5.7%.
- The **United States** has multiple national programs providing financial assistance to low-income and nutritionally vulnerable households to purchase foods.[54] These are often supported by additional benefit programs implemented at state, regional, and local levels. For example, produce prescription programs are an evidence-based intervention wherein health care providers write a fruit and vegetable "prescription" that provides patients with funds to purchase fruits and vegetables at participating retailers or their medical clinic.[55] Recent systematic and scoping reviews have found that produce prescription programs are effective for decreasing food insecurity and increasing fruit and vegetable purchase and consumption.[56-58]

Man shopping using the Mongolia's food stamp program. Photo source: Asian Development Bank

Demand-side policies

continued...

Increasing purchasing power: Cash resources

Cash transfer programs provide households with money to increase their income.[59] Programs are either conditional or unconditional. **Conditional** programs have certain criteria that a household must meet in order to receive benefits such as income limits, age, disability, or presence of young children in the home. These programs are often linked to specific goals such as increasing student school attendance or healthcare check-ups. **Unconditional** transfer programs require only an income threshold to qualify or to continually receive funds. Unconditional cash transfers are often funded through government-run social grant programs or as small-scale pilot projects through donor agencies and non-governmental organizations.[60] Unconditional programs tend to have much lower administrative burdens and costs. While cash transfers are not typically focused specifically on increasing spending on healthy foods and can be used for any households needs, these programs have been shown to increase dietary diversity and increase positive, nutrition-related birth outcomes such as birth weight and preterm births.[59,60]

Cash transfers

	CONDITIONAL	UNCONDITIONAL
TARGETED	Provide financial assistance: • Only if certain requirements are met *(e.g., mandated school enrollment or regular health check-up attendance)* • Only to those who fit certain criteria *(e.g., income below set limit, nutritionally vulnerable)*	Provide financial assistance: • With "no strings attached" • Only to those who fit certain criteria *(e.g., income below set limit, nutritionally vulnerable)*
UNTARGETED	Provide financial assistance: • Only if certain requirements are met *(e.g., mandated school enrollment or regular health check-up attendance)* • To everyone in a given geographic area, regardless of need *(i.e., universal basic income)*	Provide financial assistance: • With "no strings attached" • To everyone in a given geographic area, regardless of need *(i.e., universal basic income)*

Conditional cash transfer program examples:

- **Mexico's** *PROGRESA* program — launched in 1997 as a conditional cash transfer initiative to improve health, nutrition, and education — provided cash to families who completed health clinic visits, attended health talks, ensured school attendance, and offered supplements to pregnant women and young children.[61] The program later evolved into *Oportunidades* and then *PROSPERA* and expanded to include vocational training and financial tools until it ended in 2019. Evaluations of *PROGRESA* showed increases in both macro- and micronutrient intake, including gains in vitamin A and iron, and higher fruit and vegetable intake among participating households.[62,63] During the *Oportunidades* era, participants and lower out-of-pocket health expenses and reduced obesity risk among low-income, rural, adolescent girls.[64,65] *PROSPERA* participation was associated with lower food insecurity and decreased food poverty incidence, intensity, and inequality.[66,67]
- **Colombia's** *Familias en Acción* program provides low-income households with $5–16 USD per month in conditional cash transfers tied to regular medical check-ups and school attendance.[68] Early evaluations showed that participation increased children's vegetable consumption by roughly one additional day per week and boosted intake of both animal- and plant-based protein foods, with effects differing by age and location.[68] The program also improved the quality of foods purchased, increasing household spending on high-protein foods and cereals by $2–5 USD per month.[69]

- **Indonesia's** *Program Keluarga Harapan* (*PKH*) is a national conditional cash transfer program launched in 2007 that provides quarterly cash transfers to extremely low-income households with pregnant women, lactating mothers, or school-aged children, conditional on completing key health and education requirements.[70] Six years after implementation, the program led to a 23% decrease in stunting, doubled the likelihood that births were assisted by trained health professionals, and significantly increased school enrollment among children ages 7–15 years.
- **Brazil's** *Bolsa Família* program is the largest conditional cash transfer program in the world and aims to alleviate poverty and food insecurity by providing cash transfers contingent upon children in participating families attending schools and receiving vaccinations.[71] Participation has been associated with children in families receiving *Bolsa Família* were found to have higher prevalence of healthy food consumption and lower risk of poverty-related causes of death.[72,73]

Photo by Anderson Schneider for the Ministério da Cidadania (Minsitry of Citizenship)

Unconditional cash transfer examples:

- **Ethiopia's** *Productive Safety Net Programme* (*PSNP*) targets chronically food-insecure households with both conditional and unconditional transfers in addition to food aid.[74,75] It is the second largest social protection program in Africa, serving about 8 million Ethiopians annually.[74,76] *PSNP* funds labor-intensive public works that promote climate-resilient infrastructure such as terraced fields to reduce soil erosion and increase water retention.[77] *PSNP* provides cash transfers for up to five days of work per month per household member for six months a year or, for participants who are unable to work, unconditional cash or food transfers.[77]
  - A longitudinal survey found that beneficiary households reduced their "food gap months" (when the household was unable to satisfy food needs from its own food production) from 3.6 to 2.3 months out of the year.[77,78]
- In **Kenya**, the non-governmental organization GiveDirectly provided unconditional cash transfers from 2011 to 2013.[79] Randomized controlled trials three years after disbursement began found households that received the cash transfers had over $400 USD more in assets than households that did not. They spent $47 more per month on non-durable consumption, and they reported greater food security and educational outcomes for their children as well as psychological well-being.[79]

Child support grants

- These publicly funded cash transfer programs provide financial assistance to caregivers of children in low-income households.[80] These grants are designed to reduce child poverty, support early development, and improve access to basic needs such as nutrition, education, and healthcare.
  - In **South Africa**, the *Children Support Grant* (*CSG*) is the country's largest social assistance program and reaches over 13 million children with monthly payments to primary caregivers of children under 18, with eligibility based on household income thresholds.[81,82] The CSG has been shown to reduce poverty and improve child health outcomes, particularly in early life, with recent evidence linking access to grant funding during pregnancy and infancy to reduced risk of stunting and better long-term development.
  - In **Lesotho**, the *Child Grants Programme* is an unconditional cash transfer targeting low-income rural households with children, especially orphans and vulnerable children.[83] Its primary objectives are to improve children's well-being, reduce malnutrition, and increase school enrollment. While the program initially focused on resource provision, it gradually integrated broader goals such as improving women's economic empowerment and community inclusion. Over time, it has been linked to "Cash Plus" interventions aimed at increasing livelihoods and agency among recipients.

Supply-side policies

Increasing the production and supply of healthy foods can address the imbalance between availability of unhealthy UPFs and healthier minimally processed foods. Government investment in agricultural infrastructure such as highways can connect wholesale markets in towns and cities to rural areas, allowing rural communities to access an increased supply of natural resources such as water or energy and other production inputs that are not manufactured locally (such as fertilizer, feed ingredients, machinery etc.). Improving infrastructure can then promote small- and medium-sized farming operations.[10] Small farms produce the largest proportion of the world's fruits, pulses, roots, and tubers, while medium-sized farms produce more tree nuts and vegetables.[84] Large farms, meanwhile, allocate more production towards livestock feed and oil crops.[84] Intentional investment and increasing the supply of healthier food items such as fruits and vegetables can, in turn, lead to higher household consumption of fruits and vegetables.[10]

Above: Small holder farmers Ramata Niass and Faty Penda Niasse, who lost crops due to a lack of rainfall in Senegal. They came to the Tool Baye Seed Cooperative processing unit in Kaolack to benefit from the West African Agricultural Productivity Program's seed distribution. Photo by Daniella Van Leggelo-Padilla for the World Bank

Increasing production of healthy foods

Support for small & family farming

Family farms constitute 98% of farms globally but only produce about 53% of the world's food.[85] However, not all family farms are small farms, which are estimated to produce only 30-34% of the food supply.[84] This shows the potential for increasing the global food supply that comes from family farms instead of agricultural conglomerates, but also the need for context-specific policies to support small and family farms.[85]

- Territorial markets form the groundwork for the livelihoods of millions of food producers, providing them with fair prices and a steady income.[86] United Nations assessments and civil society studies have found smaller, territorial markets to be the most profitable for small farms.[86]
  - For example, **Thai** farmers markets offer higher sales margins than large retailers and farmers market sales make up 60-80% of small farmers income.[86]
- Increasing agricultural outputs among small commercial farming aids in reducing poverty in low- and middle-income countries, especially in rural populations.[87] More than two thirds of the 700 million people living in extreme poverty live in rural areas with limited health care and public infrastructure.[88] Policies can direct investment and infrastructure building (roads, water supply, electricity) toward small farming to accelerate production and the growth of the sector.[87]

Supply-side policies

continued...

- As the climate crisis and natural disasters worsen and become more frequent, the need to build resilient agricultural systems increases.
  - **Rwanda**, in partnership with international aid agencies, launched "Rwanda Climate Services for Agriculture" in 2016 and "Weather and Climate Information Services for Africa" (WISER) to develop climate services for farmers and strengthen the national meteorological service capacity as well as scaling up of climate services for climate risk management. 89 Participants in this program experienced a 24% increase in crop value and a 30% increase in income from crops.[89] Climate-smart improvements to rural agriculture can improve poverty levels and local economies.
- Close-to-home food markets and supply chains support sustainability and climate resilience:
  - Territorial markets reduce "food miles" or the distance that food must travel through the supply chain to reach consumers with longer food miles leading to higher greenhouse gas emissions.[86]
  - Public markets also facilitate the exchange of diverse and traditional crops, sustaining both local food cultures but also promoting the growth of drought resistant crops. [86]
  - Large corporate food supply chains through "just-in-time" sourcing approaches expose food provisioning systems to shocks and undermines resilience as this form of food sourcing is difficult to maintain when it depends on fractured sourcing across complex global supply chains – as was made evident during COVID-19 lockdowns. [86]
- **Brazil's** mandate that public institutions procure food from family farmers creates predictable demand, supporting producer income and local food systems.[90] Evaluations show benefits including direct sales gains and stronger connections between farmers and institutional buyers, along with a significant increase in employment among family-run farms.[91]
- When **Cambodia's** locally sourced school meals program created predictable demand for vegetables and fish, producers began growing more food than was needed by schools and selling surplus food at local markets, increasing their income as well.[44]

Below: "Training of Trainers" in Rwanda's ClimateServices for Agriculture program. This one-week training held in June 2016 included officers from Rwanda Meteorological Agency, Rwanda Agriculture Board, non-governmental organizations, and the media. Photo by V. Atakos for Climate Change, Agriculture and Food Security

Loan and grant programs

Supply-side policies *continued...*

Governments can provide loans to help farmers start or expand their operations. Similarly, government grants can incentivize the growth of certain crops or help farmers expand their crops.

- Incentivizing farm-grown foods can motivate small-farmers by providing financial assistance. **Mexico's** *Production for Well-Being* program primarily supports grain farmers (such as corn, beans, rice, chickpeas, or barley) and beekeepers with annual grants dependent on the amount of hectares or hives a farmer owns, with grants ranging from 6,000–24,000 pesos per beneficiary (approximately $307–$1,229 USD).[92]
- **Brazil** is a leading global producer of agricultural commodities such as soy, beef, coffee, and sugar. However, family farms play a significant role in national food security by supplying about 70% of total domestic food consumption.[85] Family farms are also supported by PNAE, the national school feeding program's food procurement policy. Brazil has expanded loans to the family farming sector through the Brazilian Ministry of Agriculture while simultaneously developing food security programs through the 2010 Law of Food Security. This policy involves family farms by distributing local food to schools, hospitals, and food security initiatives.[93]
- In **Malawi**, 44% of agricultural land is farmed by family farms. Under British colonialism, much of the agricultural resources including land, subsidies, and market supply channels were taken from these small farmers, causing poverty rates to increase.[85] A national agricultural input subsidy program (AISP) in Malawi provides discounted fertilizers and hybrid maize seed to smallholder farming households and has increased the sale and affordability of maize.[85]

Technical support

Small-scale farmers produce over one-third of the world's food, yet they face consistent global barriers that limit their ability to improve production and adopt nutrition-sensitive technologies.[94] These barriers include high input costs, weak infrastructure, limited access to training and technical information, and broader institutional gaps that provide insufficient extension or policy support. Together, these structural challenges create widespread barriers to technological advancement and constrain productivity across regions. Strengthening technical support systems through advisory services, improved information access, and institutional investment, is critical to improving food system resilience and sustainability.[94] Examples include:

- In **Ethiopia**, small farming systems make up 90% of agricultural output, but farmers face barriers such as shortage of input materials and lack of land or resources.[95] In 2002, the Ethiopian government established farmer training centers aimed at providing community-level services to farmers. A 2022 assessment found that the training centers had a positive impact on crop production among trainees versus non-trainees, which echoed findings from other training impact studies around the world.[96]
- A 2025 review of the challenges faced by resource-poor farmers in **India** found that strengthening technical support systems such as farmer training, mobile-based advisory services, and access to shared equipment through cooperative or custom-hiring models plays a central role in enabling these farmers to improve their farming practices.[97] By expanding access to agronomic guidance, operational assistance, and institutionally supported service platforms, these technical support mechanisms enhance farmers' capacity, efficiency, and resilience, contributing to more sustainable and productive agricultural systems.

Global development organization staff filming Indian farmers in how-to videos on agricultural practices.Source: Digital Green

Supply-side policies *continued...*

Remove or lower existing taxes on healthy foods

Removing or lowering taxes on healthy foods — especially alongside levying or raising taxes on ultra-processed foods high in nutrients of concern — serves as a tandom supply-side and demand-side policy intervention that incentivizes greater production and sales of healthier options.

- A 2025 study simulated purchase changes that might occur in **Mexico** if prices on fruits and vegetables were reduced by 20% and found 8–24% increases in household purchases of fruits and 9–28% of vegetables, depending on the subsidy level.[98]
- A 2024 modeling study found that combining national taxes on unhealthy, ultra-processed foods and beverages with targeted subsidies for minimally processed foods could reduce purchases of taxed products and increase fruit, vegetable, and healthy beverage consumption among low-income **US** households.[99] Low-income households were also predicted to have the greatest reductions in calories and volume purchased from taxed items, with subsidies promoting healthier purchases without substantially increasing calorie intake. These combined fiscal policies could narrow nutritional disparities at relatively low cost to the federal government.

Multiplier effects

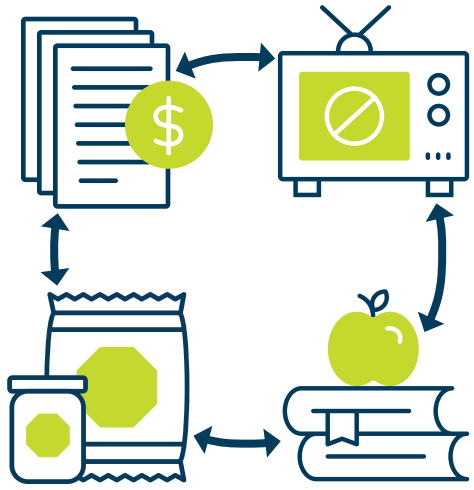
Endowing low-income families with needed financial supports has been shown to have multiplier effects for economies. Providing financial support increases food security and frees up resources to spend at other stores or markets, which in turn improves the income and success of other businesses. For example:

- A large-scale randomized controlled trial in rural **Kenya** examined the impacts of one-time, unconditional cash transfers of $1,000 USD (roughly 75% of mean annual household expenditure) distributed to over 10,500 households from 2014–2017.[100] Researchers found that each dollar transferred sparked more than twice that amount in local economic activity among both recipients and non-recipients, highlighting significant spillover benefits.
- A 2023 study found that for every R$1 transferred through **Brazil's** *Bolsa Família* unconditional cash transfer program, local GDP increased by 2.2 times within one year.[101]
- Participants in the **US** *GusNIP* program redeemed $52.1 million in fruit and vegetable incentives during the program's fourth year (2022–2023) and yielded local economic impacts of $107.4 million — a 25% increase from year the previous year's $85.6 million.[101] This suggests a multiplier effect of about 2.06 within US communities.

Fiscal policies can be combined with front-of-package warning labels, food marketing restrictions, and school food environment protections for a stronger synergistic public health impact than a standalone policy. Learn more about these policy approaches at GlobalFoodResearchProgram.org.

Coordinating multiple policies

Evidence supports implementing policies as part of a coordinated package of mutually reinforcing measures to create more meaningful shifts in the food environment and consumer behavior, including but not limited to: sweetened beverage taxes, food marketing restrictions, mandatory front-of-package warning labels, and school food environment protections applied to ultra-processed products high in sugar, salt, saturated fat, and other harmful ingredients.[103,104]



- Combining taxes on sweetened drinks and ultra-processed, non-essential foods with subsidies or price incentives to lower the cost of healthier foods and drinks can have a greater health impact than a sugary drink tax, alone.[105,106]
- Two years after increasing a tax on sugary drinks in 2014, **Chile** implemented front-of-package warning labels, marketing restrictions, and a ban on marketing and sales in schools for foods that do not meet nutritional criteria.[107–109] Changes in consumer behavior observed after these policies took effect are larger than those achieved in many countries with standalone policies, and evaluations to date have found significant improvements in the nutritional profile of products sold and purchased in Chile with no negative economic impacts observed.[110-116]

Less effective interventions

- **UPF corporations' self-regulation:** Industry has often succeeded in preempting mandatory government regulation by committing publicly to voluntary, self-regulatory pledges and schemes. These have been shown repeatedly to be ineffective at improving the food environment, dietary intake, or health outcomes.[117] Companies are more likely to reformulate their products and improve the healthfulness of their portfolios under mandatory policies such as sweetened beverage taxes, front-of-package warning labels, marketing restrictions, and bans on UPFs in schools.
- **Untargeted agricultural subsidies:** Broad, untargeted subsidies for agricultural producers are unlikely to effectively improve diets, as they are predominantly based on price and output and not designed to promote dietary diversity or nutrition-sensitive food production.[118] Additionally, these subsidies are historically associated with inefficiencies, high fiscal costs, and significant implementation and environmental challenges.
- **Government support for local healthy gardening:** Although community or village-level garden initiatives in low- and middle-income countries can improve access to fruits and vegetables, evidence shows that without sustained technical support, market integration, and targeting of low-income groups, these interventions often primarily benefit only those already in relatively better socioeconomic positions.[119,120] Higher return-on-investment interventions outlined above will more effectively support low-income groups in increasing fruit and vegetable intake.

Learn more about policy approaches to regulate the ultra-processed foods industry.

Conclusion

Improving demand for and access to healthy foods requires coordinated fiscal policies that operate across the entire food system, from production and distribution to affordability and consumption. Evidence from diverse global contexts demonstrates that investments in increasing household resources, public procurement, support for small and family farming and food market infrastructure can meaningfully shift food environments toward healthier and more resilient outcomes. Importantly, these approaches are most effective when implemented as mutually reinforcing policy packages, rather than as isolated interventions.

Programs such as Brazil's National School Feeding Program (PNAE) illustrate how a single, integrated policy can advance multiple goals simultaneously: supporting local farmers, strengthening territorial food systems, improving diet quality among children, and limiting reliance on ultra-processed foods.

More broadly, fiscal policies that combine health-promoting taxes on ultra-processed products with targeted subsidies, incentives, or cash transfers for fruits, vegetables, legumes, whole grains, and other whole or minimally processed staple foods can increase purchasing power for low-income households while sending a consistent public health signal and generating sustainable funding streams.

As global food systems face increasing pressure from corporate consolidation, climate shocks, and geopolitical instability, fiscal policies that prioritize minimally processed foods alongside targeted investments offer a powerful tool to improve nutrition, reduce diet-related disease, and build more resilient food systems. Designing and implementing these policies as part of a comprehensive, context-specific package will be essential to achieving lasting improvements in healthy food access worldwide.

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