

Credit: [Wikimedia Commons](#) Like many countries in the developing world, Brazil has been witness to a paradoxical transition in malnutrition: a shift from hunger to over-nutrition. As [Brazil fought to end hunger](#) in the country and lift millions out of poverty through its Zero Hunger and Bolsa Familia programs, the programs and the changing political climate prompted the subsequent increase in [income, urbanization, and mechanised labor](#). These phenomena left Brazil victim to heightened levels of obesity. Indeed, rampant urbanization exacerbated the divide between urban and rural inequality in Brazil and highlighted the mounting [presence of rural poverty](#), which is more pressing than urban poverty due to lack of services like health care and education in rural zones.

In 2009, Brazil developed an ingenious system of structured demand to address the two-pronged problem of poverty and malnutrition: to support rural farmers and nutrition security, Brazil requires that a [minimum of 30% of funding for its school lunch program \(PNAE\) be spent on produce from family farms](#). The result? PNAE dovetails rural resilience with nutritional attainment, and demonstrates how public policies that empower the bedrock of Brazil's labor force can have positive ramifications throughout rural and urban communities. Importantly, it exhibits that the solution to malnutrition and poverty starts with educating farmers and students first. As the US faces very similar realities of rural underdevelopment and swelling rates of obesity, we may be able to learn from Brazil's method of structured demand in their school lunch program.

The Paradox of Malnutrition and Rural Poverty in Brazil

Poverty elevation and reform of social security programs have been at the forefront of Brazil's economic strategy over the past several decades, and they have helped lead to Brazil's emergence as an important member of the global economy. Nevertheless, in Brazil's transition, acquiring hiring incomes and changing lifestyles caused [serious changes in consumption](#). Soda, processed foods and salty foods have become more readily available and have caused incredible increases in overconsumption. The ramifications of this over-nutrition include [growing rates of cardiovascular diseases and obesity](#). This is no small issue. In Brazil today, [obesity is now an even more pressing concern than hunger](#). Problems associated with obesity, like type 2 diabetes, have incredible ramifications for health care and labor-force productivity; in fact, people diagnosed with [diabetes have shorter life expectancy than those diagnosed with HIV](#). Further, according the Harvard School of Public Health, the US and Brazil have seen rates [of obesity escalate more drastically amongst children](#). Because obesity is increasingly a problem for children, creating solutions that encourage healthy eating is crucial for public health, development, and productivity.

The coincidence of obesity and poverty is exacerbated in rural areas of Brazil. Extreme

poverty is up to 5 times more concentrated in rural areas than urban areas, and rural populations in the developing world are more likely [to develop issues related to obesity](#). Indeed, [poor students are more likely to be poorly nourished](#) and are more susceptible to issues like obesity. Because almost [half of poor rural households in Brazil are comprised of smallholder farmers](#), poverty elevation strategies that target rural farming are crucial to effective policies and address swelling rates of obesity across the country.

Supporting Rural Resilience and Nutritional Intake through School Lunch: Programa Nacional de Alimentação Escolar and Structured Demand

Brazil's national school lunch program (PNAE) is the country's oldest social assistance program, and requires that all public schools provide lunch for students. Feeding 40 million children a day, PNAE is also one of Brazil's largest social assistance programs, and it functions in all Brazilian municipalities (C Rocha et al, 522). The program functions during the school year by transferring financial resources to school districts at all public institutions for basic education (the equivalent of K-12). While the program has been running since the 1950s and has worked alongside other important poverty elevation programs like [Zero Hunger and Bolsa Familia](#), Brazil adapted important changes that put education and nutrition at the forefront of food assistance. In 2003, Brazil developed the Food Acquisition Program (PAA), a program which was [designed to help grant smallholder farmers access to markets as a part of Zero Hunger strategy](#). In 2009 the PNAE mandated that a [minimum of 30% of instalments be used to purchase produce from family farms](#), a policy that was made possible by the PAA's structural changes which allowed smallholder easier access to markets. This system has been described as "[structured demand](#)", a term coined by the Bill and Melinda Gates Foundation, which "connects large, predictable sources of demand for agricultural products to small farmers". Along with the PNAE's structured demand for family-farmed produce, it created metrics for nutrition that [integrated the oversight of nutritionists and emphasized fresh fruits and vegetables](#). [These two programs created an important synergy](#) by establishing a system of structured demand to address food and nutrition policy.

A cornerstone of Brazil's rural development and school lunch programs are their emphasis on education. School-aged children and rural farmers alike have become the target of knowledge extension: Rural farmers are being trained and informed about important farming practices through technical assistance like [no-tillage to increase soil fertility](#); whereas children in public schools learn through methods of exploratory learning like school gardens, they choose what fruits and vegetables they would like to produce while [building a better understanding of nutrition](#).

Benefits for Rural Resilience and Nutritional Attainment

The PNAE and PAA have successfully supported rural resilience through the incorporation of important crediting agencies that favor small-scale, family farmers. The National Programme for Strengthening Family Agriculture ([PRONAF](#)), is a crediting agency that works to provide grants and subsidies to family farmers. [With well-defined rules, only smallholder family farms working with rural farmer unions can access these credits](#): the farm must reside in rural zones, a majority of farm workers must be familiar, and the majority of the family's income must come from farm operations. Consequentially, PNAE is making school lunches a matter of social justice and agrarian reform. PRONAF has targeted marginalized groups like indigenous peoples and women by providing grants exclusively for them, including [issuing farm credit with discounted rates, and financing agricultural equipment](#). PAA regulations for the school lunch programme state that school districts should [prioritize purchasing food from minorities](#) like land reform settlers and indigenous communities. In fact, PAA witnessed a [240% increase in involvement of women](#) from its start in 2009 to 2012.

[Straightforward pricing policies](#) have helped stabilize market prices for smallholders' produce and have led to a more consistent funding stream. PAA has had direct positive ramifications for rural farmers—not only increasing incomes, but also encouraging associations and extension programs for educating farmers, diversifying food, and promoting biodiversity—and the program has simultaneously promoted nutritional attainment for rural and urban populations.

Studies have shown that children who receive food through PNAE are [more likely to eat and have improved nutritional attainment](#) compared to control groups tested, especially for poor youth attending public schools.

These education policies come alongside new nutrition and marketing metrics across the country. Brazil has implemented what is arguably one of the most straightforward and [easily understood nutrition guidelines in the world](#)—it simply emphasizes fresh, unprocessed foods—which makes educating children much easier. Further, Brazil has developed a [national marketing code to regulate unhealthy food](#) and has banned sodas and sugar from school food programs.

Conclusion

Brazil's rural development and school lunch programs demonstrate effective public policy interventions to support nutritional security and poverty elevation, but are favoured by a

host of economic policies and laws which are unique to Brazil. Brazil is in a distinct position to promote locally-sourced fare for its school lunch program, and a number of other factors have allowed its family-farming and nutrition-assistance programs to expand: [Brazil is among the top five largest producers](#) and exporters of food in the world, and has used progressive [policies to buttress family farms](#); it has enshrined the [right to food and nutrition](#) in its federal constitution; and [protectionist policies deter outside competition](#), making a program to support local, domestic produce an appropriate solution to Brazil's interest in promoting food and nutrition security. These policies highlight important strides for the nation, and demonstrate that a strong impetus to invest in research for food and agriculture policy can help to [incentivize family farming and poverty alleviation in the process](#).

Programs like PNAE have been so effective for Brazil because the program has leveraged the power of its agrarian population, who produce around [70% of Brazil's overall food staples](#), and it has worked in parallel with educational programs, infrastructure, agrarian reform, and social security programs. While PNAE may not be replicable elsewhere because of Brazil's unique economic policies and laws mentioned above, other programs addressing food and nutrition insecurity can borrow best-practices from Brazil's experience by underscoring education in their efforts.

Safeguarding nutrition in programs that aim to address food insecurity, target vulnerable populations, and, most importantly, focus on education are paramount to efforts in program extension. While structured demand helped enable small-scale farmers to enter the market, without educating consumers about the importance of healthy foods and effective farming practices, it is impossible to change buying behavior or to empower people to make healthy eating choices.

The United States shares similar problems to Brazil, including rural poverty, increasing incidence of obesity, and food and nutrition insecurity. In fact, just like Brazil, [food insecurity, poverty, and obesity are most prevalent in poor rural populations in the US](#). Washington D.C. could learn from Brasília's best practices by creating food assistance programs that measure nutrient attainment (rather than a monetary value spent on food); encourage healthy eating habits through education extension programs; empower rural communities; and incentivize consumption of produce, fruits and vegetables.

SOURCES:

Rocha, Cecilia, Luciene Burlandy, and Renato Maluf. "Small Farms and Sustainable Rural Development for Food Security: The Brazilian Experience." *Development Southern Africa* 29.4 (2012): 519-29. Print.



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