



## Speaker Summary Note

**Session:** Economic Levers

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**Title:** (Some of the) Surprising Economics of Infant Foods<sup>1</sup>

Improvements in child nutrition have been rapid in some regions but slow in others, and we are still discovering how best to improve health outcomes where stunting and underweight remain prevalent. Much of the success to date can be attributed to clinical and epidemiological discoveries about specific nutrients, foods, environmental and medical interventions that can be delivered directly to individuals, households and communities to help each child grow to their full potential. Nutritional improvements have typically occurred first in wealthier settings, and our challenge is to find interventions that can work on a large scale even in the poorest places, where under-nutrition remains widespread. We can accomplish this by making known interventions cheaper and easier to implement, and we may also be able to find new interventions that have not yet been tried in developing countries.

Tufts University is fortunate to be working with USAID and other partners to launch the Nutrition Collaborative Research Support Program in Africa and Asia, a five-year project whose goal is to discover what works best, where and how. The Nutrition CRSP is focused on population-scale outcomes, taking account of interactions among interventions and variation among people. We will begin this year in Uganda and Nepal, and hope to work elsewhere soon as well. The project brings together all kinds of researchers to study all kinds of interventions. A good illustration of the interdisciplinary linkages we might find involves the surprising economics of information about complementary feeding, which could lead to a game-changing intervention that helps low-income people access high-quality infant foods.

For infants to thrive, they need foods that mix a low-cost staple with more expensive ingredients and are carefully processed for digestibility. Production at home is labor-intensive, and the market for purchased foods is dominated by expensive branded products such as Nestlé's Cerelac. Many people cannot afford either enough time for home preparation or enough money for brand-name foods. Donors, NGOs, governments and private enterprises have long been investing in start-ups to produce cheaper infant foods, and these are effective under controlled conditions—but consumers rarely buy them, even those who cannot afford enough of the branded products to avoid under-nourishment.

Why might consumers choose a small quantity of an expensive brand instead of a larger quantity from a cheaper source? One answer is the economics of asymmetric information: if consumers cannot see how

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<sup>1</sup> The market experiment in Mali was funded by USAID, with publications and photos available at: <http://sites.tufts.edu/willmasters/research/infant-foods>. The scoping study in Ghana was funded by DFID, and is available at <http://www.theigc.org/people/william-masters>.

much of the expensive ingredients and processing methods were used, they may not believe that the off-brand product is worth anything at all. George Akerlof won the 2001 Nobel Prize in economics for this idea, which leads to the striking prediction that these unbranded products are simply impossible to sell commercially—unless they become a high-priced brand name themselves, or a third party provides laboratory tests and inspections to certify that the off-brand products are actually worth their price.

To test Akerlof's hypothesis in the real world, we used a market experiment in Bamako, Mali that asked mostly illiterate mothers to make trade-offs between quantities of real infant foods, which they took home at the end of the experiment. In that setting, the value of a hypothetical quality-certification program for these very low-income mothers was US\$1.75/kg. In other words, about one-third of what they were paying for brand names such as Nestlé's Cerelac was for quality assurance, which could be provided by a third party at much lower cost.

To design an actual intervention capable of delivering these benefits, we recently conducted a scoping study in Ghana, where there has been a particularly strong effort to develop and spread locally-made infant foods, often under the name Weanimix. Using a novel survey of availability by neighborhood and laboratory tests to measure actual nutrient density, we found the few products available were of very uneven quality. Products from the same manufacturer varied in nutrient density, sometimes far below benchmarks and labels. So consumers are right to mistrust local suppliers, and in response producers are justified in their reluctance to invest in quality control or wide distribution.

Introducing quality certification would allow new entrants and small producers to compete with Nestlé's Cerelac and other heavily advertised global brands, and thereby help families meet more of their infants' nutritional needs at lower cost than is currently possible. For these impacts to be measured and the intervention improved over time, the rollout could be randomized.

The specific certification trial we propose, tentatively named the Infant Nutrition Quality Assurance Project (INQAP), would involve the following steps:

- (a) An INQAP board of advisors would determine precise standards for locally-appropriate nutrient densities;
- (b) Current and potential manufacturers of foods that could meet INQAP standards would be invited to enroll those products, based on inspections of their production plants;
- (c) The INQAP staff would purchase random samples of enrolled products from targeted markets, and contract with laboratories for measurement of nutrient densities;
- (d) Manufacturers of acceptable products would be given "INQAP OK" stickers to place on the acceptable products' packaging, with a clearly printed expiration date;
- (e) The INQAP staff would conduct a randomized rollout of "INQAP OK" publicity services at selected marketplaces, with billboards and other signage, mobile demonstration teams and promotional discount vouchers; and
- (f) Producers' and consumers' responses to the certification labels and publicity services would be monitored through market and household surveys at the target locations.

In summary, infant-food quality certification could significantly improve nutrition outcomes at population scale. Doing so in a randomized fashion would allow the impact of those services to be rigorously measured, to construct the most cost-effective package for sustainable replication elsewhere on a fee-for-service basis, either with or without donor support to accelerate its spread. This is the kind of discovery we hope to find through the Nutrition CRSP, and have an exceptionally valuable opportunity to discuss at this IFPRI 2020 conference.