The Hunger Trap

Introduction

Hunger causes poverty by denying its victims opportunities to enhance their lives. It debilitates people physically, physiologically and psychologically. Those who are weakened by hunger find themselves trapped in a vicious cycle of hunger-poverty-hunger.

Once a household falls into the hunger trap, escape is difficult even if an improved overall economic environment offers new opportunities. Hunger and poverty are thus assured for future generations.

The world’s hungry poor need help to break out of this vicious cycle and enter mainstream development for self-reliant growth. For many, this help is most useful when it comes in the form of well-targeted food assistance. Such assistance is an investment in the future.

Understanding hunger

The relationship between hunger and poverty is often misunderstood.

First, there is the notion that hunger is only a result of poverty. This notion ignores the reality that for most of the hungry poor, hunger itself is a cause of poverty. Hunger is a constraint to their economic and social development. Hunger and poverty have a two-way relationship. They feed off each other. Ignoring this relationship can lead to inappropriate or inadequate policy responses to the problems of hunger and poverty.

Second, it is often said that the most abundant asset the poor have is their labour, which they can use to earn a living. However, if hunger means that their potential labour power is ineffective, the poor do not really have an asset and will thus remain trapped in hunger and poverty.

Third, assistance to the hungry is often viewed, wrongly, as a mere consumption expenditure. If hunger is a constraint to the development of the poor, its removal is certainly an investment in building self-reliance. For the abjectly poor, the daily struggle of finding food for the family pushes aside any consideration of long-term development. Food assistance can provide a minimum level of short-term food security that is an essential first step to move the hungry poor onto paths of self-reliance. Hunger is the first threshold to cross on the way out of poverty.

Fourth, economic growth that provides lasting benefits to the poor is the surest path to sustainable poverty alleviation. However, for a large number of the hungry poor, there can be no growth without first overcoming today’s hunger. These people cannot wait until
nutritional benefits trickle down from tomorrow’s macro-economic growth. And even if
economies grow, the hungry poor are the worst-placed to take advantage of it.

**Hunger sets poverty traps**

The 1996 World Food Summit considered it intolerable that more than 800 million people
do not have enough food to meet their nutritional needs.¹ In local economies in which wealth
and status come from the land, the disadvantaged households are typically land poor or
landless.² A study by the International Fund for Agricultural Development (IFAD) indicates
that there are more than 324 million landless people in 64 developing countries; the “near-
landless”, who in most countries far outnumber the landless, are not included in this
estimate.³ In fact, the bulk of today’s poor consists of landless and near-landless people.

The landless and near-landless have to sell their labour to earn a living. The amount of work
they can do and how much they produce determine their standard of living.

Often, employers prefer not to employ the undernourished. *Those who do not find work
or have to work for meagre wages become hungrier, which makes it more difficult for
them to find work at a later time.* This is how hunger lays a poverty trap.⁴ And this trap
can be cruel: hungry today, hungrier tomorrow, hungry forever.

**Hunger stifles work capacity**

From a nutritional perspective, physical work capacity can be defined as the maximum work
per unit of time someone is capable of doing. People who are undernourished -- as
reflected by inadequate physical growth in both height and weight -- tend to suffer from
depressed levels of *maximal oxygen uptake*⁵ and, hence, depressed levels of ability to
perform physical activity.⁶ In addition, hunger has psychological effects: it takes away
motivation and breeds hopelessness. The net impact of these effects is low work capacity
and low productivity.

The relationship between nutritional status and physical work capacity is valid within any
community or ethnic group. The relevant question is whether a well-nourished person *in a
given community* has greater work capacity than an undernourished counterpart in the
same community. This is a key developmental question because of the observation that
adults and children from disadvantaged areas of developing countries are considerably
smaller than upper-class adults and children from the same countries.⁷

**Low nutrition, low incomes**

Many studies have examined how physical productivity of labour and, thereby, incomes are
related to nutritional status. For example, significant determinants of the tonnage of
sugarcane delivered by Colombian sugarcane cutters were workers’ height, weight and lean
body mass.⁸ The stature of Guatemalan labourers appears to influence the amount of
coffee beans picked per day, the amount of sugarcane cut and loaded, and the time taken to
weed a given area.⁹
Since the well-nourished tend to be more productive, they also tend to receive a better income for their work. Among Brazilian workers, a strong correlation has been observed between their height and the wages they received. Similarly, in a southern Philippine province, taller agricultural workers were found to earn higher wages. These observations on the link between height and wages are very important because for adults height is a given condition. Insufficient growth in height (stunting) is a reflection of past undernutrition; hunger (and infections) in early childhood result in stunting, which in adulthood often brings about substantial income losses.

*Current* nutritional status (as reflected in the weight of a person) is also important for productivity and wages. Among factory workers in India and agricultural workers in South India, weight-for-height was found to be an important indicator of productivity and wages. In rural Sri Lanka, workers with higher calorie consumption tended to receive higher wages. These findings are highly compatible with the technical relationship between nutrition and physical productivity established in nutritional science.

**With surplus labour - hunger denies employment**

Do the hungry have a chance of being employed if labour markets are functioning well? When there is surplus labour in a competitive market, wage rates may go down, allowing more labour to be employed. However, wage reductions do not go on indefinitely. There may be an “efficiency wage” below which wages may not drop. This is the wage level that will help workers to get an amount of food that will give them enough energy to produce the output expected by employers. In jobs where physical energy is important, the likely persons to be excluded are the already undernourished poor. They will not be able to provide the quality of labour required at the going wage rates.

Those who cannot find wage employment in regular labour markets do not perish. They somehow survive, and that is one reason why their hunger problems do not receive sufficient attention. The poor try in many ways to assure their survival -- living off the “commons”, such as forests in rural areas, depending on friends and relations, or even resorting to begging. Their nutritional situation continues to deteriorate, however, removing even the slightest chances of their entering a competitive labour market. Hunger has trapped them, perhaps, forever.

Are the poor lazy? A combination of long-standing factors -- low-energy intake, undernourishment and also behavioural adaptations to conserve energy -- result in lethargy, which is often misunderstood as laziness.

This relationship between hunger, lethargy and poverty is not just a theoretical construct. History provides evidence of its existence. Nobel laureate Robert W. Fogel, in his trailblazing analysis of economic history, estimated that at about the time of the Industrial Revolution, the poorest 20 percent of the population of England and France subsisted on diets of such low-energy content that they were effectively excluded from the labour force.
Many of them lacked the energy even for a few hours of strolling. And this appeared to be the principal factor explaining why beggars constituted as much as a fifth of the population.\textsuperscript{16}

\textit{With scarce labour - hunger denies employment}

The link between hunger, productivity, and poverty is relevant not only in labour-surplus poor countries, such as those in Asia. It is also relevant in labour-scarce poor countries, such as those in Africa.

In most of rural Africa, agriculture is the main source of both the supply of and the demand for food. Seasonal food shortages are a common phenomenon, especially in areas with unimodal rainfall and little or no dry season cultivation. A key question arises: do seasonal food shortages constrain agricultural production by limiting the quantity and quality of labour input in agriculture?

The answer to this question unfortunately appears to be “yes”.

- During the months of peak agricultural activity in a grain-surplus province in Zambia, the nutritional status of more than half of the adults declined to a level at which work capacity may have been impaired. Nearly all were from households whose food stocks finished early in the planting season.\textsuperscript{17}

- In the Zaria region in Nigeria, some households managed to increase their food consumption but not to a degree to meet the nutritional requirements of the peak workload.\textsuperscript{18}

- In Zambia, it was also found that non-availability of food stocks seriously limited the hiring of labour because food was a common mode of wage payment. Insufficient labour use curtailed both the extent of area planted to crops and the productivity that can be expected from a given area. If a 10 percent increase in food stocks were possible during peak labour demand, it may have resulted in a 3.5 percent increase in the aggregate output.\textsuperscript{19}

The links between labour, hunger, and employment make a strong case for targeted food assistance to help the poor achieve food security and self-reliance.

\textbf{No skills, no future}

Do the hungry poor have any other developmental chance, say, by acquiring skills for self-employment or working for a salary in jobs that do not demand strenuous physical labour?

Gaining new skills or enhancing existing skills improves the prospects for increasing incomes whether the skills are in the farm sector or non-farm sector: skilled labour is paid more than unskilled labour and additionally, skills make self-employment possible. When small farmers
have to adopt new technology to increase crop productivity, those with some education will be among the first to do so. Many migrate to cities to escape from rural poverty; of these, those with some education and skills are likely to have better chances of improving their economic condition.

_Hunger obstructs education_

Learning new skills or improving existing skills becomes easier with basic education. There are clear demonstrations that providing education is one of the surest ways of relieving poverty. A major multinational study estimated the private returns to primary and secondary education to be 49 percent and 27 percent, respectively. These investments were valuable for the society as well as the individuals. They returned 27 percent on primary education and about 17 percent on secondary education to the society through increases in productivity.  

But can the hungry poor benefit from education programmes? Not likely.

Little girls, who must contribute to the struggle to provide food for the family, do not go to school, and hungry listless children do not learn well even if they do go to school. Hungry children cannot concentrate and assimilate knowledge. Thus, hunger robs children of the benefits of education. It seals their poverty well into adulthood and beyond.

_Hunger denies women empowerment_

Seven out of ten of the world’s poor are women or girls, so a focus on women is essentially a focus on the poorest. Moreover, there is strong evidence that empowering women is the surest way to rapid poverty reduction. Research has shown that increasing women’s education and skills and improving their nutritional level lead to higher incomes and greater food security for their households.

Many countries now have programmes especially geared to the empowerment of women. These include literacy programmes as well as programmes for providing skills and training and social group formation. To make use of these, however, the poor have to invest their time.

The hungry poor cannot afford to invest their time with the hope of having better future incomes. They put almost all of their household labour and time into activities that earn their daily bread. Poor women play key roles in all aspects of food security, food production, and nutritional security. For example, rural women in Nepal spend between eight and 10 hours per day supporting agricultural production, collecting fuel, leaf fodder, grass and water, and processing and cooking food. The situation is the same or even worse in the case of rural women in most parts of Africa.

Women from hungry households simply cannot participate in empowerment programmes. Hunger robs them of their opportunities to move away from poverty.
Hunger makes poverty intergenerational

In households facing continuing hunger, babies in mothers’ wombs, the newborn and young children do not receive adequate nutrition. This results in inadequate development of physical and mental capacities of the new generation.

A physically and mentally weak new generation is doomed to continue being hungry. It will have no chance of escaping from poverty. Poverty stays because hunger has made it dynastic.

Hungry mother, hungry child

A hungry mother is the first link. What maternal malnutrition can do to a child is devastating. It is a virtual guarantee of low birthweight, stunted growth, susceptibility to disease, and, too often, intellectual impairment. Mothers with small physical stature, who themselves have been victims of hunger and poverty, tend to give birth to small babies. Why this happens may be due to nutritional reasons (insufficient nutrition to the foetus) or physiological reasons (growth potential of a foetus may be constrained in a small woman). Whatever the reason, the relationship between maternal size and birth-weight is strong and consistent.

Low-birthweight babies begin life disadvantaged. The potential damage from being born undernourished is compounded when further undernourishment occurs during infancy and early childhood. The first taste of poverty for a newborn is the scanty milk that comes from a malnourished mother. An anaemic mother has neither the quality nor the quantity of breast milk needed to help a low-birthweight baby. Early weaning is the usual way out but this puts the child at severe risk of infections and disease. Without breastmilk, an infant’s immune system does not develop properly. The infant becomes prone to such diseases as malaria, respiratory tract infections and pneumonia. A hungry mother means not just a hungry child but a sick and hungry child.

Hungry child, hungry adult

Protein-energy malnutrition during the early stages of a child’s life can lead to permanent impairment of central nervous system functions. Iodine deficiency in utero and iron deficiency during infancy may even also cause permanent neurological damage.

A person’s physical work capacity is determined by his entire nutritional history. Early nutrition and the extent of freedom from infections leave a deep imprint. Resources permitting, some catch-up growth may occur during later childhood or adolescence, but this process is slow and often inadequate.

How an adult recognizes, thinks about and reacts, both mentally and physically, to situations is primarily fashioned by the degree of childhood development of cognitive and motor capacity. Such development is seriously affected by undernutrition, both of energy and nutrients. Studies from developing countries and developed countries as well have shown that treating undernutrition during early stages of life can enhance motor and mental
development. Such treatment would also reduce the differences in cognitive development due to high and low socio-economic class. Malnutrition and infections also do not allow proper school achievement by children; they affect cognitive processes such as attention and concentration. There is evidence that children who suffer from nutritional deficiencies and infections perform badly in aptitude tests.

Undernourished children adopt behavioural patterns to conserve energy. These leave an imprint on the capacity to work in adulthood. Reduced physical activity is a first natural response to low energy intake. If small children are inactive and slow-moving, sleeping or lying down most of the time, these are not demonstrations of “laziness” but reflections of behavioural adaptation to hunger. Inactive children with retarded growth do not make productive adults.

The price that undernourished children will have to pay is low productivity and low earning ability as adults. Almost always, this price is paid.

Hungry households, hungry children

For children and mothers, the impact of inadequate food at the household level is compounded by intra-household inequities in food distribution. Often their food requirements receive a lower priority relative to the food needs of the more physically productive adults. Adults in assetless households, who seek wage employment, cannot find work easily unless they have enough nutrition to perform satisfactorily for employers. Hence, unequal food distribution in the household becomes a necessary evil.

A study of poor households in the Central Province of Sri Lanka observed that infants and children began receiving their required amounts of food only after the total food availability in the household was sufficient to ensure a minimum of 1800 calories per day per working adult. Without a preference for the breadwinners, the very survival of poor households may be at stake.

Hunger has a long arm that reaches from childhood to adult life and even to the generations that follow.

What can be done?

The response of the World Food Programme

Food aid is a key instrument that can help remove the poverty traps that hunger causes. The World Food Programme (WFP), the food aid arm of the United Nations system, focuses on
hungry poor households for whom food aid is an effective means of assuring both relief from their present hunger and help in their efforts to move out of poverty.

WFP helps build assets and promotes self-reliance of poor people.

- In poor rural areas, food aid is used in food-for-work projects, especially during periods when hunger is most prevalent -- the agricultural lean season. Food-for-work during the lean season not only creates rural assets but also equips the poor nutritionally to work in normal agricultural production activities.

- Food-for-work projects assure short-term food security to the poor in ways that also create community assets that support self-reliant growth. These projects build rural roads and irrigation facilities, protect land from soil erosion and floods, develop markets, build public amenities, and enhance forest resources. An improved productive base gives the poor a better chance of escaping from poverty. Improved nutrition gives them a chance to use the opportunities provided.

WFP also supports human resource development.

- Its food aid projects help poor people obtain literacy and education. School feeding projects improve the nutrition and health of children and increase their physical energy and alertness. They also help increase enrolment and reduce drop-out rates. In some countries, food aid is used especially to encourage girls’ enrolment and continued school attendance.

- Where hunger constrains the poor from developing special skills and receiving training for self-reliance, WFP intervenes with food aid to remove this constraint. With food assistance, vulnerable groups in rural communities, especially poor women, can afford the time required to make use of literacy and skills training programmes to enhance their lives.

WFP works to prevent the transfer of poverty to future generations.

- Intercepting hunger before it passes to a new generation is a unique function of WFP’s food assistance -- unique because there is no such thing as “retroactive feeding”. WFP’s supplementary feeding programmes target pregnant and lactating mothers, infants, and children. Often, they complement other programmes for nutritional monitoring, nutritional education, immunization, and promotion of proper health and nutrition practices.

- WFP is actively engaged in responding to the problem of micronutrient deficiencies, which can lead to serious consequences, including learning disabilities, impaired work capacity, illness and death. Inclusion of specific health and micronutrient components in food assistance projects and support to women’s health and nutrition programmes at the policy level are the major components of this effort.
The poor deserve a developmental chance; the first step is to relieve them of their hunger.

End notes


5 See, Dasgupta, ibid. There are several technical ways of measuring a person’s physical work capacity. The most compelling indirect measure is a person’s maximal oxygen uptake, usually denoted as VO$_2$ max. VO$_2$ max measures cardio-respiratory fitness; the higher its value, the greater is the capacity of the body to convert energy in the tissues into work. This capacity depends on the (metabolically) active tissue mass, which is very nearly the same as muscle cell mass. Of two people with the same body mass index, the taller person typically possesses greater muscle cell mass; so his VO$_2$ max is higher. Broadly then, taller and heavier, non-obese people have greater physical work capacity.


15 Several have proposed or tested this concept. See Rogers, G. 1975. Nutritional based wage determination in the low-income labour market. Oxford Economic Papers 27, 61-81; Mirrlees, J.A.


22 Kumar, S.K. ibid.


