

## IMPACT OF LABOR-INTENSIVE PUBLIC WORKS ON NUTRITION SECURITY

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### Abstract

The importance of employment for poverty reduction is widely known and accepted. Labor-intensive Public Works Program (PWP) intend to reduce poverty directly in food-insecure households by income generating activities in the short-run. In addition to targeting short-term curative results, these employment schemes improve the technical and social infrastructure in the long-run for a sustainable, self-reliant food security in the target group.

The presented study analyzes the interaction between the local labor market and the situation of food security and nutrition at the micro household level after the implementation of labor-intensive employment schemes. The study was part of the Integrated Food Security Program (IFSP) Rukwa, Tanzania. People in the Rukwa region are facing chronic malnutrition. The region has good agricultural preconditions with fertile land and food production is higher than the food needs of the population, even though nearly 50 % of the children are chronically malnourished. People depend on income in order to obtain access to essential goods and services to fulfil their basic needs. The central point of the study is the potential of the labor-intensive employment schemes to reach food insecure, poor households and to improve their nutritional wellbeing on the short run. The benefits or burdens of the program for women, who are mainly responsible for the care of all household members, are the mainstay of the research.

Keywords: poverty alleviation, employment schemes, food security, nutrition security, micro household

### Introduction

Famine and poverty are among mankind's most serious and oldest problems and today more than 830 million people suffer from hunger worldwide. The right of adequate food is a human right, declared in the Universal Declaration of Human Rights or in the International Covenant on Economic, Social & Cultural Rights (SCN 1999). Amartya Sen, winner of the 1998 Nobel prize for economics, has postulated that hunger is caused by a lack of income not of food supply. The real problem lies in the shortage of purchasing power rather than anything else (Drèze, Sen 1989).

Discussion about the importance of employment and income generating for reducing poverty is not new, e.g. the "Poor Employment Act" of 1817 in England. The food security and poverty-targeting potential of employment-based income transfer has long been recognized in different countries in Africa, Asia and Latin America (Webb 1995).

### Labor-intensive Public Works Program

Although there is a wide consensus about the meaning of productive and remunerative employment to overcome poverty, there is still limited understanding and agreement how to implement and run such employment (von Braun 1995).

These employment schemes require two components: one of transfer and one of stabilization (Fig. 1). There is the direct impact on the labor market with income transfer on the one hand and the utilization of the infrastructure or long-term investments through the income transfer

as the stabilization effect on the other. PWP can have different objectives depending on circumstances. PWP as part of a program with the overall objective of improving the nutritional situation has to focus on the underemployed, food insecure poor as target group. The income transfer of people participating in the project could be in food (Food-for-Work), cash (Cash-for-Work), kind, education etc. .

How do we reach the target group? One way to reach the underemployed, food insecure poor is the self-targeting wage rate. This means, setting the wage rate below the minimum wage rate of a country or a region that only people with the lowest or no opportunity costs are ready to participate.

### **Conceptual Framework**

PWPs that aim to improve the nutritional wellbeing of the target group should consider various factors that influence the nutritional status. The UNICEF causal framework for nutrition identifies three levels of contributing factors (Fig. 2). The immediate factors on nutrition are dietary intake and health status. These are influenced by underlying factors: namely access to and availability of food at the household level, the caring capacity and access to the health services and a healthy environment (e.g. sanitation facilities; portable water etc.) (UNICEF 1990). In most cultures women take the main responsibility to give adequate care to all household members, including both children and adults. Care, sometimes referred to as social reproduction, is also essential for economic sustainability. It is not only an input factor for human development, but also an output factor, a factor of human well-being (UNDP 1999).

Inadequate or improper education or knowledge, particularly in women, is often an underlying cause of malnutrition. It exacerbates their inability to generate necessary resources for nutrition security in the household (UNICEF 1990).

These immediate and underlying factors at the household level are strongly influenced by basic factors: the political, ideological and economic structures, the institutional system and the potential resources (IBID 1990).

### **Aim of the Study**

Objective of the study was to answer the following questions:

- Does the self-targeting remuneration policy identify food insecure poor households?
- Does the participation rate in the employment scheme differ among men and women?
- Does participation in the project improve the access to and the availability of food in participating households?
- Is there any influence of participation in the employment scheme on the nutritional status of participants or other household members?

### **Field Study**

Empirical research was conducted in the labor-intensive Special Public Works Program of the Integrated Food Security Program in the Rukwa Region in Tanzania. The remote region produces enough food, especially maize, to guarantee food security for the population. Despite this, nearly 50 % of children under five are underweight and chronically undernourished. People starve, despite food production in the region being greater than their requirement. The situation in Rukwa region demonstrates that the access to food for all household members is one essential precondition to reduce malnutrition.

According to this situation a decision was made in that a labor-intensive employment scheme would be an adequate instrument to overcome the periods of food shortage in the region. The employment scheme aims to increase purchasing power in the short term by generating additional sources of income and to promote long-term self-driven development potential by improving the technical and social infrastructure. The PWP, which ran from October 1993 to

December 1994, created an additional income of about 50,000 work days during this period. The daily salary for each male or female worker was around 60% of the federal minimum salary. The difference of 40% between the paid salary and the minimum salary was paid into a Village Fund for community development expenditure in the villages. The infrastructure construction covered that of roads, nutrition centers and latrines.

### **Design and Methodology**

In two of the eight program villages, a cross-sectional analysis was conducted to examine how the PWP contributed to food security and nutrition in a total of 154 households from November 1993 to December 1994. Two villages were selected, each with different structures with regard to proximity to markets, infrastructure, labor market and consumption patterns. The hypotheses established were examined by collecting data which had be evaluated quantitatively (for example, using standardized questionnaires, 24-h recalls or anthropometric measurements) and using participative methods (such as village mapping, ranking, individual case studies, group discussions, interviews). The study concentrated on the short-term effects of PWP on food and nutrition security. Analyzing the effect of the long-term stabilization component after utilizing and running the infrastructure properly for a longer period is beyond the scope of this study.

### **Results**

- Food insecure poor households were not targeted solely by the type (food/cash/kind) and amount of salary. Reasons for or against participating depended on local circumstances, i.e. market situation, social situation, responsibility for the household and in particular availability of productive power and of time in the household. A typical household with the highest participation rate had a middle-aged, male head and two family members working in PW.
- One of the first steps of implementing Public Works with self-targeting wage rate mechanism is to discuss the concept with the target group and to reach a consensus on the meaning of poverty. Inhabitants of the project village inquired about their criteria of poverty.
- Women worked a total of 1/3 (29%) of all working days. The degree to which women are involved varied, depending firstly, on the amount of time and the physical burden they spent in tasks outside the program, and secondly, on their decision-making power in the household and the amount of support they received from others in the household. Most women with a high PWP participation rate were from male headed households with a high degree of self-supply in food.

Women from the village with easier market access and different income possibilities participated less than those from the remote village.

- The amount spent on food showed no clear gender-related differences. An average women spent 42% and an average men 40% on their PWP income on food; however women spent more on staple food (91%) than men (80%). Among the women, the middle-aged spent the largest amount on food (63%) whereas the younger women spent nearly 50% of their salary on clothes.

Some households significantly improved their short-term access to food during program participation; however these households were not at a particularly high risk of food insecurity.

Households with a food energy requirement of less than 60% of their needs participated only to a very minor degree.

- Participation in Public Works had generally neither a positive nor a negative effect on the nutritional status of workers and their household members. Only the group of workers with medium participation improved their nutritional status to a small degree. However, caution must be exercised in interpreting this as an influence of Public Works participation.

### **Conclusions and Recommendations**

*The central feature of the study is the link between employment-based cash income transfer (cash-for-work program) and the improvement of food security and nutrition for participating food-insecure, poor households.*

- Precondition for an implementation of employment based income transfer programs is a detailed knowledge of the local labor market, the situation of poor households and existing social security systems.
- The decision of the target group about program participation does depend not only on the wage rate setting; other objective and subjective criteria influence the decision.
- The participation of one household member does not automatically lead to a benefit for the entire household. A household cannot be seen as a unit of solidarity. The income is mainly used to fulfill individual needs of program participants.
- Strengthening the participation rate of women in the program does not necessarily improve the nutritional status of children in the household. Women are not a homogenous group in relation to consumption priorities.
- Supporting women by additional employment opportunities should take into account the attitude of men. Often women in their activities depend on the agreement of men, e.g. husbands. Program components focusing on women in particular should seek male acceptance.
- Employment based programs with the intention of improving food security and nutrition at the household level, have to consider other determinants of nutritional status. Improving the access to food through income generation is insufficient to improve the nutrition situation in both the short and long term. Other influencing factors like hygiene, health, portable water, caring capacity of women and training should be essential modules of such a program.

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Figure 1. Impact of labor-intensive Public Works

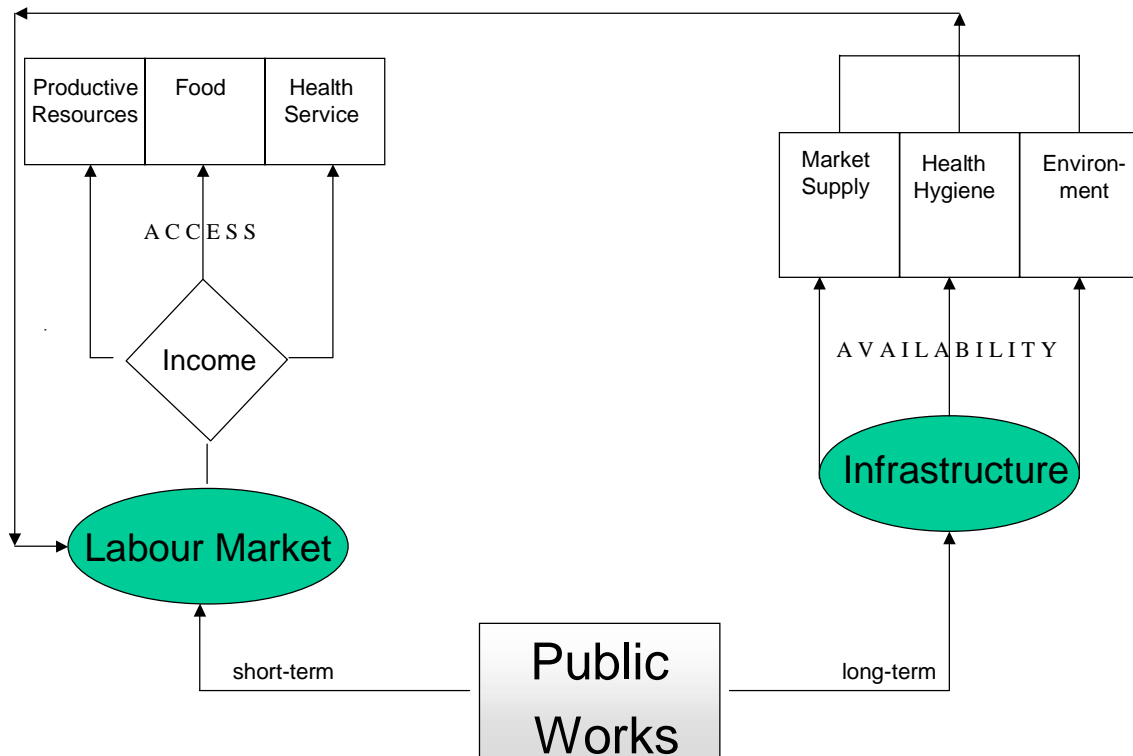


Figure 2. Determinants of food and nutrition security (adopted from UNICEF 1990)

