



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search  
<http://ageconsearch.umn.edu>  
[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

## In-Kind Transfers and Household Food Consumption: Implications for Targeted Food Programs in Bangladesh

Carlo del Ninno and Paul A. Dorosh

In the ongoing debate on the merits of food and cash transfers, one key factor is the extent to which food transfers have a greater positive impact on food consumption than do cash transfers of an equal monetary value. In other words, to what extent is the marginal propensity to consume food greater for in-kind than for cash transfers? The magnitude of this effect is important, because food transfer programs incur high costs in handling and transportation, thus making them less efficient in terms of the cost incurred per unit value of food or cash delivered to the target household. Moreover, if food transfers do not lead to significant increases in consumption, then market prices of food are more likely to be depressed by the increase in supply, to the detriment of local producers.

### *Two Ways of Looking at the Problem*

*Traditional neoclassical theory* suggests that the size of the transfer matters in determining its effect on consumption. If the in-kind transfer is less than the amount of the food the household would normally purchase, then it simply replaces cash purchases and thus has the same effect as an income transfer. If there are significant transaction costs of reselling food, however, a large in-kind transfer might result in more food consumed than a cash transfer of equal value.

*The modern theory of the household* suggests that *who* receives or controls the transfer is also important. For example, transfers-in-kind received by female members of the household might result in higher levels of household food consumption than do cash transfers, particularly if cash transfers are controlled by male members of the household. Thus, the character-

istics of program participants may influence household consumption behavior.

### *Purpose of This Paper*

This paper uses data from a 1998/99 survey of rural households in Bangladesh to econometrically estimate marginal propensities to consume (MPCs) wheat out of wheat transfers in several distribution programs: Food For Education, Vulnerable Group Feeding (VGF), and Gratuitous Relief. The resulting MPCs are then used to calculate the potential impacts of these programs on household wheat consumption and wheat market prices.

### *Methodology*

The empirical calculation of the marginal propensity to consume wheat out of wheat transfers was estimated using two methodologies. First, the authors use propensity score matching (PSM), in which the set of program participant households that receive wheat is compared to a set of counterfactual households drawn among nonparticipants that “look like” program participants. As an alternative, they use the parameters of an econometrically estimated Engel function to calculate the MPC wheat out of income and wheat transfers.

### *Findings and Discussion*

The evidence indicates that the MPC wheat out of wheat transfers is significantly higher than the MPC wheat out of income, and that this addition to demand is large enough to potentially have significant effects on market prices. Using propensity score matching techniques, the MPC for wheat is, on average, 0.33, ranging from essentially zero for Food For Work (a program with large transfers) to 0.51 for

***The analysis clearly indicates that in-kind transfers targeted to poor women and children in Bangladesh lead to greater wheat consumption than would result from an equivalent increase in cash income.***

VGf. Similarly, using a functional form that allows for differences in MPCs according to size of transfers and income levels, regression results indicate that the total MPC wheat out of small wheat transfers (15 to 25 kilograms per household per month) is approximately 0.30. Thus, small wheat transfers do not lead to an equivalent increase in consumption, but are partially offset by lower purchases of wheat (and to a lesser extent, sales of transfer wheat). Programs that involve larger transfers of wheat, such as Food For Work, have much smaller MPCs, however.

The econometric evidence suggests that increases in cash incomes (and cash transfers) do not lead to significant increases in wheat consumption. Calculated MPCs wheat out of cash income is near zero. Overall, programs involving small rations of direct transfers in wheat (FFE, Vulnerable Group Development and Vulnerable Group Feeding) are estimated to have increased wheat demand by 287,000 tons in 1998/99 from their transfer of 717,000 tons. Cash transfers of an equivalent value would likely have resulted in only a very small increase (or possibly even a decrease) in wheat demand. Thus, the potential impact of these wheat transfer programs on market prices (when prices are below import parity) is approximately only two-thirds the magnitude of the impact of cash transfer programs (and a release of the same amount of wheat in the market). The demand-enhancing effect of direct distribution in small rations does not necessarily imply

that targeted direct distribution programs are preferable to other programs or open market sales, however, since other factors, including cost of delivery, efficiency of targeting, and policy objectives, are also important determinants of policy choice.

Further analysis is needed to explain the reasons behind the varying MPCs in terms of the opportunity costs of households' time, stigma effects, and other factors. Nonetheless, the econometric analysis of the survey data presented in this paper clearly indicates that in-kind transfers targeted to poor women and children in Bangladesh lead to greater wheat consumption than would result from an equivalent increase in cash income. Moreover, this increased marginal propensity to consume wheat from wheat transfers is large enough to have significant implications for wheat consumption, market prices, and program design.

**Keywords:** targeted food programs, disincentive effects, food markets, household consumption, Bangladesh

#### RECENT FCND DISCUSSION PAPERS

*Avoiding Chronic and Transitory Poverty: Evidence from Egypt, 1997-99*, Lawrence Haddad and Akhter U. Ahmed, **DP133**

*Weighing What's Practical: Proxy Means Testing for Targeting Food Subsidies in Egypt*, Akhter U. Ahmed and Howarth E. Bouis, **DP132**

The full text of this document and other FCND Discussion Papers are available on our Website ([www.ifpri.org/divs/fcnd/dp.htm](http://www.ifpri.org/divs/fcnd/dp.htm)) or via [B.McClafferty@cgiar.org](mailto:B.McClafferty@cgiar.org)

## FCND BRIEFS



International  
Food  
Policy  
Research  
Institute

2033 K Street, N.W.  
Washington, D.C. 20006 U.S.A.

---

*The analysis clearly indicates that in-kind transfers targeted to poor women and children in Bangladesh lead to greater wheat consumption than would result from an equivalent increase in cash income.—DP134*

---