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The Timeliness and Cost-Effectiveness of the Local and Regional Procurement of Food Aid

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Summary. — Local and regional procurement (LRP) of food aid is often claimed to lead to quicker and more cost-effective response. We generate timeliness and cost-effectiveness estimates by comparing US-funded LRP activities in nine countries against in-kind, transoceanic food aid shipments from the US to the same countries during the same timeframe. Procuring food locally or distributing cash or vouchers results in a time savings of nearly 14 weeks, a 62 percent gain. Cost-effectiveness varies significantly by commodity type. Procuring grains locally saved over 50 percent, on average, while local procurement of processed commodities was not always cost-effective.

Key words — Emergency response, Food assistance, Foreign aid, Humanitarian aid

1. INTRODUCTION

Advocates of local and regional procurement (LRP) of food aid and cash and vouchers often argue that sourcing food nearer to distribution sites is both faster and more cost-effective than traditional food aid sourced in and shipped from the donor country ("transoceanic food aid").[1] Some reasonable evidence exists to support the cost-effectiveness and timeliness claims of LRP advocates (Clay & Benson, 1990; Coulter, Walker, & Hodges, 2007; Haggblade & Tschirley, 2007; Hanrahan, 2010; Organization for Economic Cooperation and Development (OECD), 2005; United States Department of Agriculture (USDA), 2009; United States Government Accountability Office (USGAO), 2009; United Nations World Food Programme (WFP), 2006, 2010). But the data come largely from WFP operations rather than from deliveries by the US-based nongovernmental organizations (NGOs) that have traditionally served as the primary delivery channel for US project and emergency food aid. Moreover, past timeliness and cost-effectiveness estimates have relied largely on comparisons with hypothetical shipments or with broad program averages that do not match by destination, source, delivery time period, and commodity very well. It therefore remained unclear whether US NGOs, typically dealing in much smaller volumes than WFP does, could truly improve on the timeliness and cost efficiency of transoceanic food aid deliveries if they could employ an LRP option for sourcing commodities. The LRP Learning Alliance projects described in Lentz, Barrett, Gomez, and Maxwell (2013) afforded an unprecedented opportunity to carefully evaluate these key claims.

In this paper, we generate timeliness estimates by comparing LRP LA activities against carefully matched in-kind, transoceanic US food aid shipments to the same countries during the same timeframe. All LRP transfers reached recipients faster than food aid from our matched transoceanic shipments. Our findings indicate that procuring food locally or distributing cash or vouchers results in a savings of nearly 14 weeks, a 62 percent gain in timeliness. The amount of time saved varies by country. Not surprisingly, landlocked countries tend to receive transoceanic shipments more slowly than coastal countries, so the timeliness benefits of LRP vary spatially in intuitive ways.

As with the timeliness estimates, we estimate cost-effectiveness by comparing LRP activities against carefully matched in-kind, transoceanic US food aid shipments, now matching by commodity type as well. We find that cost-effectiveness var-

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ies markedly by country and commodity. Procuring unprocessed grains and some pulses locally seems to result in significant cost savings—procuring grains locally resulted in cost savings of over 50 percent, on average—while locally procuring processed commodities such as vegetable oil or corn soy blend (CSB) may or may not be cost-effective relative to transoceanic shipments.

The appropriateness of LRP relative to transoceanic food aid often depends on the objectives of the project. Our findings do not indicate that LRP is always superior to transoceanic food aid in cost-effectiveness terms, although it is always superior by timeliness criteria. However, where markets can adequately meet increased demand for food generated through LRP, LRP can often afford valuable cost and time savings, potentially allowing donors to reach more recipients and/or reach them faster. In an environment of growing demand and diminished resources for food aid, such gains make LRP a valuable part of the international food assistance toolkit.

2. LITERATURE REVIEW

A 1996 European Commission (EC) regulation stating that local purchases can reduce transport costs and delivery times heralded a series of policy changes across major food assistance donors and agencies (Coulter *et al.*, 2007; EC, 1996). In the following 14 years, WFP, the Canadian government, and the US government all cited the timeliness and cost effectiveness of LRP relative to transoceanic food aid as major reasons for the evolution of their policies (Hanrahan, 2010; USGAO, 2009; WFP, 2006).

Thus, donor and agency interest in and use of LRP—including cash and voucher transfers—has been spurred in part by evidence that tends to find that LRP outperforms transoceanic food aid and that cash and vouchers are often faster, and may be cheaper, than transoceanic food aid and LRP food. Yet, comparisons among food assistance forms are often hampered by lack of comparable data. Ideally, comparisons among transoceanic food aid, LRP, vouchers, and cash instruments would utilize data generated from projects targeting similar people in similar locations at similar times for similar purposes, with the only parameter varying being the type of transfer. Such similarity is rarely—if ever—achieved, due to ethical, logistical, and political constraints on the allocation of scarce food assistance, especially in emergency settings. Instead, analysts use the best available data to compute comparisons across different types of food assistance. A further difficulty is that because much of the funding for LRP and for transoceanic food aid is directed toward sub-Saharan Africa, many of the cost and time comparisons are findings for sub-Saharan Africa and may not generalize well to other regions, such as Latin America.

A number of studies report faster LRP deliveries relative to transoceanic food aid deliveries, although the amount of time saved varies by region and by computational techniques. Barrett and Maxwell (2005) report the median delivery time of United States Agency for International Development (USAID) Title II emergency food aid to be almost five months, for shipments occurring in 1999 and 2000. Haggblade and Tschirley (2007) report that WFP in Zambia saved between four to eight weeks by procuring white maize locally or regionally relative to shipments from the US. USGAO (2009) also examined delivery times for WFP purchases relative to US food aid for ten sub-Saharan countries between 2004 and 2008. Local (regional) procurement took on average 35 (41) days, while international in-kind donations required, on average, 147 days to arrive.

Prepositioned food aid, or the stockpiling of food aid in or near areas likely to need assistance, may be a way for transoceanic shipments to be delivered faster than LRP. A Department of Transportation (DOT) analysis estimated that US prepositioned food aid could have been faster than a 2008 regional procurement from South Africa to Somalia (USGAO, 2009, p. 23). But gains in timeliness come at a cost. Due to higher storage and freight costs, prepositioned food aid tends to be more expensive than other forms of assistance. USGAO (2007) reports that prepositioned food aid costs 25 to 40 percent more than transoceanic food aid due to additional loading, unloading, and waiting time at port, as well as storage charges. Thus, prepositioning may be a more expensive means than LRP, cash, or vouchers to improve on timeliness relative to traditional, transoceanic food aid.

Cash and vouchers are generally considered faster than either transoceanic food aid or LRP (Harvey, 2005). However, there are few side-by-side timeliness comparisons between cash or vouchers and transoceanic food aid or LRP. Rather, cash and voucher timeliness comparisons tend to rely on information regarding average or median delivery times for transoceanic food aid, such as the five-month median delivery time computed by Barrett and Maxwell (2005). The time savings associated with cash and vouchers depends on how administratively cumbersome or simple distributions are (Upton & Lentz, 2012).

Many LRP—transoceanic cost comparisons are hampered either by a lack of actual LRP procurement costs or a lack of comparable transoceanic food aid costs, reflecting both difficulties in data collection and that it is rare for LRP and transoceanic deliveries to occur in the same country within the same time period. In previous studies, LRP costs are computed as actual (or estimated) local commodity costs and may also include internal transport shipping and handling (ITSH) while transoceanic costs are computed as actual (or estimated) commodity costs and actual (or estimated) ocean freight. Some transoceanic costs also include actual (or estimated) ITSH. Yet, to date a lack of data has prevented analysts from comparing these two activities directly. Instead, analysts used one set of actual costs (LRP or transoceanic) and relied on cost estimates for the other.

OECD (2005) computes ratios of the reported actual cost of transoceanic food aid to estimated alternative commercial costs of procuring food in a recipient markets, sometimes known as "alpha values." The authors compare reported major donor food aid costs to estimated import parity prices in various countries during 2002–2003. OECD (2005) estimated the overall inefficiency of food aid relative to estimated alternative commercial transactions as 27 percent, finding the greatest cost savings are associated with maize, wheat, and rice. The study's authors acknowledge that using an estimated import parity price approach understates the actual savings that LRP could achieve (Lentz & Barrett, 2007; OECD, 2005).

Yet, local prices often differ from import parity prices. Lentz and Barrett (2007) refine OECD's (2005) findings by using local commercial costs rather than estimated commercial import costs and by using delivered food aid costs. They compute alpha values for hard red wheat and yellow maize using data on actual USDA food aid commodity and ocean-shipping costs, which they compare to domestic commercial commodity market prices—but not the cost of actual LRP procurements—in Tanzania, Kenya, and Ethiopia. The authors find that the median food aid delivery was 21 percent more expensive than