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# Commodity Versus Capital Transfers*

Tran Huu Dung**

## I. Introduction

Sharp disagreements between aid-giving and aid-receiving countries often occur on the composition as well as on the level of aid. While the majority of recipients consider capital transfers more desirable, a significant portion of most donor-determined aid packages is in the form of commodity.[1] There is no dearth of explanations for this divergence in preferences. The most widely accepted points to the desire of the donors to dispose of their agricultural surpluses and to the understandable thirst of the recipients for capital much needed for their development efforts.

The primary aim of this Note is to show that this difference is preferences over the form of aid can also be explained strictly within static general equilibrium trade theory.[2] In particular, it suggests that there is a fundamental link between the preferred aid composition and the pattern of trade.

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[**] Assistant Professor, Department of Economics, Wright State University, Dayton, Ohio, U.S.A.

[1] Anecdotal evidence of these preferences is ample. Unfortunately, statistical support is hard to come by, especially on the recipients' preferences which, truth be told, rarely carry and weight. It can be noted, however, that commodity transfer has accounted for about one-fourth of all foreign assistance extended by Western countries in the last twenty years or so (OECD). On the other hand, a perusal of the Declaration on the Establishment of a New International Economic Order (UN), a document which largely reflects the desire of the developing countries, reveals that it contains not a single demand for commodity transfer.

[2] For a recent survey of trade theoretic studies of the (commodity) transfer problem, see Bhagwati, Brecher and Hatta (1983). For an extension of this literature to include international investments, see Dung. This Note compares two kinds of transfers, commodity versus capital, a study of which has not been undertaken.

tively.

The objective of country A is to maximize (3) subject to (1) and the income-expenditure equality:

$$(4)\ C_1 + p^*C_2 = X_1 + p^*X_2 - V$$

where p* is B's (relative) price, and V is the amount of commodity transfer (in terms of good 1) given by A.

From (3) we can write:

$$(5)\ dU/U_1 = dC_1 + (U_2/U_1)dC_2$$

where $U_i = \partial U/\partial C_i$ ($i = 1,2$). Utility maximization in the absence of domestic distortions implies that $U_2/U_1 = p$. In addition, it is well known that $dU/U_1$ could be regarded as representing a small change in A's real income, dI. Hence (5) can be written as

$$(6)\ dI = dC_1 + pdC_2$$

Totally differentiating (4) and using (2) and (6), we have

$$(7)\ dI = -M_2dp^* - (p^*-p)dM_2 - rdK - dV$$

where $M_2 = C_2 - X_2 > 0$.

Assuming free trade, $p^* = p$, (7) reduces to

$$(8)\ dI = -pM_2\hat{p} - rdK - dV$$

Likewise, for country B (assuming $r^* = r$):

$$(9)\ dI^* = M_1^* + rdK + dV$$

where $M_1^* = C_1^* - X_1^* - V$.

In equilibrium, p adjusts to balance trade:[4]

[4] The transfer does not explicitly appear in (10) since $M_1^*$ is defined net of V.

$$(15)\ dI = -\alpha dV - (\alpha + \beta)rdK$$

and

$$(16)\ dI^* = \alpha dV + (\alpha + \beta)dK$$

where $\alpha \equiv 1 + (1\text{-}m\text{-}m^*)/\Delta$ and $\beta \equiv (\gamma\text{-}\gamma^*)/\Delta$.

The first term in either (15) or (16) represents the familiar effect of a commodity transfer. Clearly, with $\Delta > 0$ and $m + m^* - 1 < 0$, $\alpha$ cannot be negative, hence the long standing result that a (commodity only) transfer can never make the donor better off and the recipient worse off.[7]

The second term captures the welfare effect of a capital transfer. It can be further divided into two parts. The first part, $\alpha rdK$, is but the return on the donated capital which would have accrued to country A if the capital had been invested, not transferred. In other words, this return to capital is an additional commodity transfer. Again, this part of the effect of capital transfer cannot be beneficial (harmful) to the donor (recipient). The second part, $\beta rdK$, reflects the effect of the transferred capital as it goes through the production process. It is affected by the dissimilarity in production technologies as summarized by the elasticities of rental rate with respect to commodity price. As is well known, the sign of a country's $\gamma$ (whose absolute value must exceed unity by virtue of the Stolper-Samuelson theorem) corresponds to the relative factor-intensity rankings of the two commodities in that country. Specifically, it is negative if commodity 2 (commodity 1) is capital- (labor-) intensive; it is positive if commodity 2 (commodity 1) is labor- (capital-) intensive.

Evidently, the second term can be of either sign: the capital transfer could raise (lower) the welfare of the donor (recipient). Of course, this counter-intuitive possibility is just another variation of the theme of immiserizing growth.[8] To focus on the orthodox case we assume that $\alpha > \beta$, hence the aid package would create a positive cost (benefit) to the donor (recipient) as we would

[7] See, e.g., Bhagwati, Brecher and Hatta (1983).

[8] For an insightful discussion of the link between transfer and growth, see Bhagwati, Brecher and Hatta (1984).

tions (e.g., the Scandinavian countries) and their recipients in the developing world: their commercial ties, through which the magnified effect works, are relatively weak. It also sheds light on South-South assistance (including aid given by the less industrialized Communist countries such as China to developing nations): Since the donors here are exporting labor intensive goods themselves, they could paradoxically affort (once the aid level been fixed for other reasons) to give a higher proportion of aid in the form of capital (e.g., infrastructure assistance).

Of course, in the real world many other factors affect the level as the composition of international transfers[9] which explains why the final package is rarely pure in one form or another as implied by our analysis. This note nevertheless highlighted one of the basic forces shaping the observed outcome.

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[9] See, for instance, Dudley and Montmarquette and references cited therein.