

## **Comment on Finn Tarp: Aid and economic growth: An alternative interpretation of the evidence**

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The present paper by Finn Tarp is, in his own words, mainly a review of issues that have been in focus in the foreign aid literature, including articles penned by himself and collaborators. The paper is long and rich, and I will restrict my comments to the section (four) on the aid-growth nexus where he discusses estimation problems and findings in recent contributions. The characteristics of the more advanced studies based on cross-country regression analysis and panel data are that:

- Other variables than aid that may affect growth are controlled in the regressions along the lines of recent empirical growth studies.
- Interdependence between the growth regressors (multicollinearity) is controlled.
- Simultaneity, i.e. the possibility that recipient country growth affects the allocation of aid (reverse causality), is controlled.
- The possibility that aid has different effects in different recipient country environments is considered (e.g. through the use of fixed-effect estimations or dummy variables).
- Robustness tests are carried out, i.e. checks of whether results are sensitive to small changes in the estimation specification, variable definitions, proxy variables used, countries included, time period covered, etc.

### **1. What does the evidence show?**

In the paper, Tarp argues that, “Overall, the view that aid works in promoting growth and development has gained ground in recent years in the academic literature...” (p. 12) and that “the single most common result in modern aid-growth literature is that aid has a positive impact on per-capita growth” (p. 26).

I am inclined to take issue with these claims. My assessment of the literature leads me to conclude that none of the recent (or earlier)

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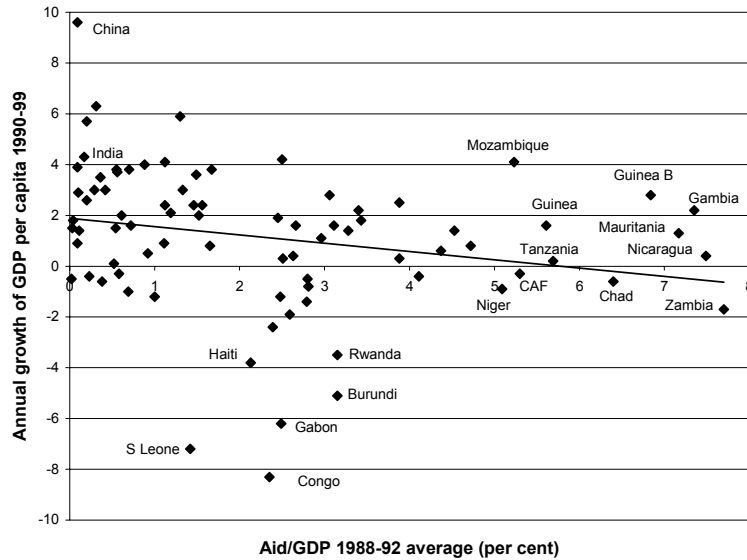
studies has demonstrated that aid has an unambiguous positive effect on the recipients' growth in general, once all relevant tests and checks have been carried out. Two studies co-authored by Tarp find aid to have positive effects on growth, although with declining marginal efficiency (Hansen and Tarp, 2001) and not in countries in the "tropics", an euphuism for Sub-Saharan Africa (Dalgaard et al., 2004). Two other studies report positive effects of aid on growth in countries pursuing "good" policies, but not in other countries (Burnside and Dollar, 2000; Collier and Dollar, 2002). The latter results have not stood up to various robustness tests, such as the inclusion of an alternative set of conditioning variables and outliers (Dalgaard et al., 2004) or the use of a larger and more complete data panel (Easterly et al., 2004). Moreover, no positive results have been found in more recent investigations (Rajan and Subramanian, 2005b; Djankov et al., 2006; Doucouliagos and Paldam, 2006). Results are simply not robust, as observed by Easterly et al. and Rajan and Subramanian.

The basic reason for the lack of robust positive results can be illustrated with the help of a simple scatter diagram, depicting the association between growth of per capita GDP 1990-1999 and aid received (in relation to GNP \$PPP) at the beginning of the 1990's (average for five years so as to even out short-term fluctuations) across 81 developing countries (Figure 1). For this particular period and country set, there is a significant negative association, although a rather weak one (Table 1). When a dummy for the SSA countries is entered, the significance disappears, while the dummy itself turns out to be negative and highly significant.

Figure 1 is only intended to show how loose the association is between growth and aid-intensity; it says nothing about causality. Countries with low initial incomes and sluggish growth tend to attract more foreign aid (Table 1) and the aid-growth nexus is confounded by an array of other factors. All this has to be controlled in order to establish causality. However, with no (or weak) *bivariate* correlation between growth and aid, the results from *multivariable* regressions, aimed at establishing the causality, become very sensitive to changes in model specification, definition of what should be counted as aid, choice of control variables, inclusions or exclusions of outliers, use of different proxy variables, time period covered, and methods for handling endogeneity. There is then plenty of scope for trying out alternative statistical methods and data until the expected correlation turns

up. Simply, if one tortures the numbers for a sufficiently long time, they will confess to anything.

**Figure 1. Correlation between growth of GDP per capita and aid-intensity across 81 developing countries in the 1990's**



Sources: Aid data from OECD/DAC online; growth of per capita GDP from World Bank (2003); per capita GDP (US\$PPP) in 1988-92 from Maddison 2003.

There are, however, many genuine methodological, measurement and data issues that have yet to be adequately resolved (many of these are aptly discussed by Tarp in his present paper). This implies that for the lack of unambiguous positive results in the literature to be convincing for real reasons, rather than being statistical artefacts, we need stringent analyses of *why* aid fails to foster growth in the recipient countries. Aid should have some positive impacts, e.g. it brings foreign exchange, technological knowledge and expertise. We also know that evaluations of aid projects at the micro level often show high returns. This should encourage growth. There must hence be other impacts that work in the opposite direction, dwarfing the positive effects, at the macro level. Several possible negative impacts have been discussed and tested in the aid literature (some are mentioned by Tarp).

We should then distinguish between pathways related to the selection of recipient countries and the underlying motives (Section 2) and the possibility that aid itself discourages growth (Section 3).

**Table 1. Associations between economic growth, per capita income, population size and aid received in the 1990's (N=81)<sup>a)</sup>**

Dependent Variable	Growth of per capita GDP 1990-1999				Aid % of GDP 1988-1992 (aid intensity)	
	Aid % of GDP (\$PPP) 1988-92		Per capita GDP (\$PPP) 1990 <sup>b)</sup>		Per capita GDP (\$PPP) 1990 <sup>c)</sup>	
<i>β</i>	-32.7	0.086	0.0003	-3.2E-05	-0.0006	-0.0004
<i>t/t</i>	2.16	0.48	2.01	0.18	6.25	3.39
<i>P</i>	0.033	0.636	0.048	0.856	0.000	0.001
					<b>Population 1990</b>	
<i>β</i>	-	-	-	-	-0.0035	-0.0023
<i>t/t</i>	-	-	-	-	2.95	2.08
<i>P</i>	-	-	-	-	0.004	0.041
		<b>SSA dum</b>		<b>SSA dum</b>		<b>SSA dum</b>
<i>β</i>	-	-2.72	-	-2.57	-	1.71
<i>t/t</i>	-	3.64	-	3.71	-	4.12
<i>P</i>	-	0.000	-	0.000	-	0.000
<b>Adj R<sup>2</sup></b>	0.04	0.17	0.04	0.17	0.36	0.47

Notes: <sup>a)</sup> 81 low and middle income countries for which required data are available. High income countries (GNI/C > \$10 000 PPP) are not included. Half a dozen new countries in Central Asia and many mini-nations in the Pacific and the Caribbean are also excluded as they were not included in the multiple regression studies of aid and growth referred to in the text (data are also lacking in some cases). <sup>b)</sup> The best fit between growth of per capita GDP and initial level of per capita GDP is obtained in a power-regression (Adj R-square = 0.44). <sup>c)</sup> Per-capita GDP and size of population are internally unrelated.

Sources: World Bank (2003), OECD/DAC (2006), Maddison (2003).

## 2. Selection of recipient countries

If advancing growth and concomitant poverty alleviation were the chief, or only, objective for aid, as many donor representatives officially claim, the distribution of aid among recipients would be different. Aid would then be given exclusively to countries that are poor (the need criterion) *and* have the fundamental necessary preconditions

for growth in place (the merit criterion). In reality, most aid is not allocated according to these criteria.

### **2.1. Donor self-interests**

A large part of the official resource transfers to developing countries that are included in the aid statistics is given for purposes other than to enhance the recipients' economic growth. Alesina and Dollar (2000) examined the motives behind bilateral aid in the aggregate and by individual donors over the 1970-1994 period. They found that "the political-strategic variables have more explanatory power than the measures of poverty, democracy and policy" (p. 41). Still other aid is provided in order to favour donors' commercial (trade and natural resource control) interests (Berthélemy, 2006). The latter study also finds empirical support for the hypothesis that donors' political and commercial interests dominate the recipients' needs (being poor) and merit (good governance) in the allocation of bilateral aid across countries. That is, much of the aid has been given (also to corrupt and incompetent regimes; cf below) to serve the donors' political and commercial interests, not to foster growth and poverty alleviation in the recipient countries. It would then be surprising if it actually did.

To the extent that the recipient countries' situations are influencing the allocation of aid, need (being poor) and merit (good governance) are the commonly applied criteria. The aid enigma is that these two criteria often clash. The poorest, most deserving, countries normally have the weakest merits on governance and, hence, prospects for growth.

### **2.2. Recipient need**

Donors have in general prioritized the need criterion and provided proportionally much more aid to countries in Sub-Saharan Africa (SSA) than to countries in other regions. A regression with aid-intensity as the dependent variable and recipients' per capita income and population as the two explanatory variables finds both to be significant (Table 1). Adding a dummy for the SSA countries improves the overall fit considerably and the dummy turns out positive and highly significant. This suggests that the SSA countries receive more aid than motivated solely by being poor and having (on average) small populations. In Figure 1, we see that among the most aid-intensive countries, where aid corresponds to above 5 per cent of GDP (\$PPP),

10 countries out of 11 are in SSA. The fact that proportionally more aid is given to the many low-performing or stagnant countries in SSA is hence one of the chief reasons why aid does not correlate positively with growth in cross-country investigations.<sup>1</sup>

### 2.3. Recipient merit

By most measures of governance (merit), SSA countries are with few exceptions found at the bottom of the ranking lists and also when outcome (growth) is considered. For a considerable time, it was commonly thought that aid could be instrumental in establishing good governance (merit) through conditionality and technical assistance in various forms. Recently, several empirical studies have shown that very little change in the political and institutional structures in the recipient countries can be “bought” through aid (Svensson, 2000a,b, 2003, 2006; Easterly, 2003; Collier and Dollar, 2004; Collier, 2006). Instead, more strict selectivity has been advocated. That is, aid should predominately go to countries which already have the necessary preconditions for growth, or are in a new situation when the prospects for establishing these preconditions are promising.<sup>2</sup>

In judging the possibilities for political and institutional change in the poorest and, in that sense, most deserving countries for aid, one should try to separate what is endogenous and exogenous (although it will never be possible to draw a definite line). The least merited group includes many countries where the internal political situation is too confrontational and polarised to allow any coherent set of growth-promoting economic policies, at least in the foreseeable future. These countries often have small- or large-scale internal wars waging on-and-off and armed opposition groups that conduct sabotages and try to overthrow the sitting government through violent actions. Examples abound in Sub-Saharan Africa and also in Central Asia after the collapse of the Soviet Union. In these countries, the political situation is almost invariably marred by ethnical and religious fragmentation and polarisation. There is mounting evidence that such inherent divisions stifle economic growth significantly (Montalvo and Reynal,

<sup>1</sup> Out of the 81 country observations in Figure 1, almost half (36) are from Sub-Saharan Africa. The SSA countries also dominate in almost all the multiple cross-country regressions referred to earlier.

<sup>2</sup> Some fresh thoughts on to whom, when and how aid should be re-allocated to be more conducive for change in such situations—and advance growth in the longer term—is offered by Collier (2006) in the present volume.

2005; Alesina and La Ferrara, 2005). It is not easy to see how aid could help dissolve these exogenous growth-reducing fundamentals.

### **3. Does aid create growth disincentives?**

The allocation of aid across recipient countries, as discussed above, is one determinant of the discouraging outcome in terms of growth promotion. The further question to be addressed is whether there are reasons to expect aid to impede growth by tilting the political and economical preconditions in the recipient countries in an unfavourable direction. A few such hypotheses have been ventured in the literature and, in some instances, also tested. Tarp mentions some of these hypotheses in brief. I will elaborate a little.

#### **3.1. Aid spurs consumption, not investment?**

For aid to contribute to growth in a recipient country, it must either add directly to investments—in a broad sense—or indirectly by helping to improve the domestic capacity for resource mobilisation. If the recipient government does not have growth and poverty alleviation on its priority agenda, it has wide scope for diverting aid to its preferred ends. Almost all types of aid (project, program, and budget) are fungible and can be used for purposes other than investment. That is, by reallocating domestic resources in the budget, the recipient government can re-direct aid in accordance with its own preferences. For instance, aid intended by donors for investments in human capital (health and education) can be diverted into higher salaries or other perks for ministers and politically favoured groups by reducing domestic budget allocations to the health and education sectors. The money thus freed can be used to finance whatever the government prefers.

Easterly (2003) shows that aid, which supposedly should mainly go to supplement domestic investment, did so only in a few (6) of the 88 countries he examined. He found that, through fungibility, most of the aid ends up as “unproductive government consumption”. Results in the same vein are reported by Djankov et al. (2006). If aid has no or a minuscule additive effect on investments (in a broad meaning), it is not surprising that growth is unaffected as well.<sup>3</sup> Donors can be

<sup>3</sup> There is also evidence showing that in many aid-receiving countries, massive resources are used for building “white elephants” (Robinson and Torvik, 2005).

reasonably assured that aid is not squandered through fungibility only in totally aid-dependent countries with no own resources to reallocate in the budget (although aid may still be inefficiently used).

### **3.2. Aid encourages rent-seeking and corruption?**

Foreign aid can be considered as windfall money for the receiving country's government, for which it is not accountable to the population or electorate (when existing). This type of money is therefore easier for a government to divert than domestically mobilised funds (e.g. through taxes) to ends that are not conducive for economic growth and poverty alleviation. Aid may hence increase the incentives for corruption and rent-seeking. Alas, aid also provides money to feed such unproductive activities. Svensson (2000a, b) found that aid leads to more corruption in countries that are ethnically fragmented (as in most of SSA). Djankov et al. (2006, p. 11) report empirical findings suggesting that through rent-seeking activities, aid (and other windfall money) "damage the political institutions of the recipient country by reducing checks and balances in government and democratic rules". They further argue that the countries thereby "become less democratic and consensual".

### **3.3. Aid prolongs bad governance?**

As noted, aid has in many instances been given with an aim to improve governance in the recipient countries, although there is little to show for it. It could even be the other way around, that aid has helped "bad" governments stay in power and thus prolonged growth-stifling policies. Aid provides financial resources that the incumbent government can use (through fungibility) to muzzle the opposition in various ways. Although systematic empirical evidence seems to be lacking (for rather obvious reasons), there are anecdotic indications that aid money has been used by governments to buy votes in various ways, sponsor government-friendly media, allocate public spending along political lines, and boost the government's military and police power to oppress the opposition—whether democratic or not.

### **3.4. Aid causes Dutch disease?**

The "disease" story is basically the following. Substantial amounts of aid increase the net supply of foreign exchange in the recipient country, which leads to an appreciation of its exchange rate (overvalua-



tion). An overvaluation is tantamount to tilting relative prices in favour of the non-traded sectors and, consequently, against the export and import-competing sectors. Export and import-competing firms become less competitive and scarce resources are increasingly concentrated in the non-traded sectors.

Until recently, there was no strong empirical support for the notion of aid-induced Dutch disease. In a study by Rajan and Subramanian (2005a), based on cross-country and cross-industry observations, such evidence is now reported. They find, first, that aid actually does appreciate the recipients' exchange rates. Second, they show that aid and overvalued exchange rates lead to slower growth in labour-intensive trade sectors. Third, they find overall economic growth to be positively correlated with the concentration of production in labour-intensive sectors. Through the effect on the exchange rate, aid hence stifles growth in the sectors with the highest growth potential in developing countries. All these results are subjected to a whole battery of checks and robustness tests and survive.

#### **4. Where from here?**

To me, it is not surprising that none of the recent studies based on cross-country (panel) regression analysis has found an unambiguous positive effect of aid on growth in general. Much of hitherto aid has been allocated in accordance with donors' political and commercial self-interests, which are seldom aligned with growth in the recipient countries. To the extent that recipient-country concerns have been directing aid flows, the dominating allocation criterion has been need, defined as being a poor country. Since being a poor country almost always means that governance is bad, the growth prospects in the countries receiving most aid (relative to GDP) are especially low. In most of these countries, aid seems to add little or nothing to domestic investment; it mainly goes to consumption in various forms for selected groups. Moreover, it is almost inevitable that aid causes Dutch Disease in the most aid-intensive recipient countries, allocating resources away from the trade sectors with the highest growth potentials.

That aid has no discernible effect on growth in the average recipient country in cross-country regressions is the flip side of large inter-country variation (see also Figure 1 above). This variability suggests that there is more to be learnt from the "positive" and "negative"

outliers, but then we probably have to go beyond cross-country regression analysis. Several other methods have been tried, time-series analysis, before-and-after assessments, and in depth country studies. The first two methods have largely been discharged, but perhaps refined country analyses can provide clues to what works and what does not (Tarp, Bigsten and Gunning have recently filed a research proposal along that line). However, having been responsible for such a country study (Svedberg et al., 1994), I am aware of the limitations.

In case we will fail to find convincing prescriptions for how to make aid conducive for long-term growth in the countries with the weakest governance, this does not necessarily mean that all aid to such countries should be abolished. There are many other urgent and important humanitarian objectives to which aid may contribute, such as relieving the plight for those who suffer the most in the poorest countries. Examples are the some 30 million external refugees, most of whom live under appalling conditions. Combating HIV/Aids and other (tropical) diseases also seems highly important and non-controversial. The same holds for more timely and generous assistance in the wake of large catastrophes. There are certainly many worthwhile objectives for foreign aid besides economic growth.

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