# BOXES

**BOX NO. 1: INTERNATIONAL TAXATION AND GLOBAL PUBLIC GOODS**

Can global public goods provide a rationale and a justification for the creation of global taxes?

Public goods are both non-rival and non excludable.

Non-rivality means that consumption by one person does not reduce the quantities available to other individuals. A public good is available in equal measure to all consumers. Because of non-rivality, there is no incentive for anyone to voluntarily contribute to the production of a public good. All consumers will try and free ride on someone else contribution. In turn, free riding leads to underproduction of the public good.

Non-excludability occurs when it is technically impossible to prevent consumption by any individual. Because of non-excludability, it is impossible to charge a price for the use of a public good. Thus, the public good has to be publicly financed, i.e. directly or indirectly through a compulsory charge or tax.

Global public goods are those whose benefits extend beyond the borders of a single country (clean air, basic knowledge). Free riding may be especially pervasive in this case: for any single country, the costs of producing such goods are prohibitive and seldom matched by the benefits that the country would derive from its effort.

Consequently, global public goods have to be publicly financed. Whether this is best done through global taxes or other mechanisms, such as "traditional" ODA for those goods essential to developing countries, is a complex issue. It all depends on how the good is produced, its "technology".

- *With an aggregation technology*, output of the good is determined by a summation of all actions undertaken by individual countries. Examples would include the reduction of river pollution or the fight against global warming. Efficient production of such a good is dependant on appropriate policies being implemented in all countries. Traditional ODA, if necessary backed by conditionality, would appear to be the most appropriate financing for poor countries.

- *With a "weak link" technology*, the result (or output) is determined by the smallest of all individual contributions. The standard example is the eradication of a contagious disease, where failure to eradicate in one single country invalidates all actions undertaken elsewhere. Here again, decentralized and conditional financing- as provided by ODA- may be the most efficient approach.

- Finally, production of a public good may demand *a massive and concentrated effort( best shot technology)*: the output depends on the largest individual contribution. Production (though not necessarily dissemination) of new pharmaceutical drugs belongs to this category: In this case, it is optimal to allocate all the resources to the most efficient producer(s). If many countries are called to contribute, a global tax mechanism may be appropriate, and necessary to avoid free riding.

Funding through taxation may be most appropriate when production (a) extends over a long period of time, and (b) entails a risk, as is the case for research, especially medical and pharmaceutical research.

Research can be privately financed when intellectual property regimes ensure adequate rewards for innovation. For those medicines specifically necessary to the poorest countries, however, this might not be the case. Private demand is too financially constrained to make research and production profitable. Furthermore, patents regimes have been attacked as being unfair and regressive. Thus, there might be no alternative to publicly funding research on a great many pathologies prevalent in poor countries.

## *BOX no. 2 PRIVATE DONATIONS TO DEVELOPMENT*

### *facts and figures*

total private donations in the United States (including foundations): 220 billion US dollars (183 billion euros), of which 40% to churches and 3% to international aid.

- total private donations in France: 2 billion euros, of which 10% to international aid; donations to international aid are growing faster than GDP (+45% between 1991 and 2000).
- there are wide disparities in private donations to developing countries. The table below compares average per capita giving with per capita income in a sample of OECD countries.

| | Ger. | Bel. | Sp. | Fr. | Ita. | Neth. | Switz. | UK | US |
|---|---|---|---|---|---|---|---|---|---|
| average donation to development / (GDP per capita) * 1,000 | 46 | 9.2 | 8.1 | 22 | 5.6 | 44 | 42 | 22 | 53 |

### *Support for development aid*

- *Support for development aid in principle*: 92% in Germany, 79% in the United States, 78% in the United Kingdom, 74% in France and Japan.
- *Support for an increase in ODA*: 83% in Germany, 81% in the United States, 72% in the United Kingdom, 68% in Japan, and 96% in France.

### *Broad trends in France*

- Total giving (for all causes) increases with age, both as a proportion of donors (56% of people aged over 65 give, versus 36% of those aged under 25) and by amount given.
- Relative generosity declines with rising income: the least well off (€ 6,100/€ 7,600€ ) give an average of 2.05%, whereas the wealthiest (+€ 76,000) give 0.85%.
- International development does not rank high among the causes French people are prepared to support financially. With 24% of people willing to support international development, it comes after medical research 70%, protecting children's rights, and combating poverty and exclusion in France (46% each).
- Nevertheless, 47% of French people want the target of 0.5% of GDP in 2007 to be respected, and 37% would like it to be raised.
- Among institutions, the UN is most trusted, (69% want it to play a leading role in development), followed by the EU (61%), the NGOs (57%), the French government

(52%), the anti-globalisation movements (42%), and the IFIs (32%).

## *BOX no. 3: OFFICIAL DEVELOPMENT ASSISTANCE (ODA): KEY FACTS AND FIGURES*

### *An assessment of the needs*

- Net official development aid totalled USD 68.5 billion in 2003. An estimated additional USD 50 billion of ODA per year is required to meet the Millennium Development Goals (MDGs).

- By way of comparison, global economic growth spontaneously generates annual incremental wealth of between USD 800 and 1,000 billion. Consequently the effort required is equivalent to around 3 weeks of additional global growth.

### *Curent ODA trends*[1]

- Net ODA has been rising since 2001.

- It increased by USD 6 billion in 2002, including 3 billion in debt cancellation,1 billion in additional aid for Afghanistan and Pakistan, and 2 billion in additional flows to the developing countries.

- The sharp growth registered in 2003 (+USD 10.5 billion) was largely (8 billion) due to the dollar's decline against the euro, the yen and the UK pound, the currencies in which payments by non-US donors are denominated, as well as to contributions to the reconstruction of Iraq (2 billion).

- Actual cash transfers only amount to USD 35.3 billions in 2002 (61% of the total ODA), the remainder consisting of:
  - 15.5 billion in technical cooperation,
  - 4.5 billion in debt relief,
  - 3 billion in administrative costs.

- These cash transfers have only been growing since 1998 at half the rate of total ODA:

| In USD billion | 1998 | 2001 | 2002 | 98-03 change |
|---|---|---|---|---|
| Financial transfers proper | 33 | 33 | 35 | +6% |
| Net ODA | 52 | 52 | 58 | + 12% |

1 Sources: OECD/DAC Statistics, "Global Development Finance 2004: Harnessing Cyclical Gains for Development," World Bank, 2004.

## *BOX no. 4: HUMAN DEVELOPMENT AND GLOBAL FUNDS*

### The Global Fund to fight AIDS, Tuberculosis and Malaria

- UNAIDS estimates[2] that USD 12 billion will be needed in order to tackle AIDS in low and middle-income countries in 2005, USD 16 billion in 2006, and USD 20 billion in 2007.

- The Global Fund to fight AIDS, Tuberculosis and Malaria was set up in 2001 to meet this challenge. By January 1, 2004, the Fund had received pledges of USD 4.9 billion, and had actually collected USD 2.1 billion. Disbursements have thus far amounted to USD 285 million in the two years following the Fund's creation [3].

### The Education for All Fast Track Initiative

- An estimated annual USD 3.7 billion is required in order to achieve universal primary education, of which 2 billion for sub-Saharan Africa[4].

- The World Bank Development Committee launched the Fast Track Initiative in April 2002. This is not a specialized fund but a donors' coordinating mechanism. Eighteen countries have been declared eligible for the mechanism based on general economic criteria, and ten of these[5] have effectively submitted programs. These countries' annual financing needs (excluding three of them[6]) are estimated at USD 510 million. At December 31, 2003, donors had pledged a total of USD 170 million, of which USD 6 million have actually been spent[7].

### The Vaccine Fund

- The Vaccine Fund was set up to finance access to vaccination in the 75 poorest countries in the world (per capita GDP < 1,000 US dollars). An estimated USD 400 million a year is required until 2006. The development of new vaccines is expected to increase the needs significantly thereafter, up to USD 1 billion annually as from 2011.

- The Fund was set up in 1999 and began operating in 2000. Since then, it has collected pledges totalling USD 1.3 billion, including 750 million from the Bill and Melinda Gates Foundation. The Vaccine Fund had disbursed a total of USD 500 million by the end of 2003.

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2 UNAIDS, *2004 Report*, 2004.

3 Cf. interviews held by the mission with the Global Fund.

4 IMF/World Bank Development Committee, *Global Monitoring Report: Policies and Actions for Achieving MDGs and Related Outcomes*, April 16, 2004.

5 Burkina Faso, Gambia, Guinea, Guyana, Honduras, Mauritania, Mozambique, Nicaragua, Niger, and Yemen.

6 Gambia, Mozambique and Yemen.

7 IMF/World Bank Development Committee, *op. cit.*

## *BOX no. 5: HOW VOLATILE IS ODA?*

### *Volatility of aid flows*

Several recent studies have highlighted the volatility of official aid flows received by the developing countries. They show that:

- For developing countries, aid flows are more volatile than tax revenues. The results are summarized below:

| Ratio of variance of aid to that of tax revenues | | |
|---|---|---|
| | countries for which aid accounts for less than 50% of public revenues | countries for which aid accounts for more than 50% of public revenues |
| aid and revenues as % of GNP | 4.96 | 7.42 |
| aid and revenues in dollars per capita | 1.73 | 3.00 |

- Program aid tends to be more volatile than project aid.

- Volatility increases with a country's dependence on foreign aid, (volatility rises from 50 to 75% when the ratio of aid to tax revenues crosses the 50% threshold).

- Aid tends to be (slightly) pro-cyclical: it rises (or falls) with economic activity, amplifying rather than attenuating fluctuations. This is especially true for grants and technical assistance.

### *Unpredictability of aid flows*

Aid is also unpredictable:

- On average, actual disbursements amount to roughly 80 % of commitments ( 65% only for program aid and 90% for project aid). In a sample of 71 countries studied, only 18 had received amounts in excess, on average, of what had been promised.

- There may be temporary sharp increases in commitments, which are then not followed up by actual disbursements. These can be explained by fluctuations in donors' sentiment, following, for instance, a change in the political environment (e.g. the Central African Republic following the demise of the Bokassa regime).

- Generally speaking, the statistical relationship between commitments and disbursements is very weak; and the poorer the country, the weaker the correlation.

What are the causes? The quality of recipients' macroeconomic policies is an important factor. But the studies also assign some responsibility to the fluctuations in donors' behaviour and the uncertainties resulting from their own fiscal constraints and decision-making processes.

[ Sources : [ a ] Bulir and Hamann : “How Volatile and Unpredictable Are Aid Flows and What Are the Policy Implications?”, IMF Working Paper WP/01/167 (2001); [ b ] Bulir and Lane : “Aid and Fiscal Management”, IMF Working Paper WP/02/112 (2002); [ c ] “Foster (Mick) : The Case for Increased Aid”, Report to the Department for International Development; (UK). December 2003.]

**BOX NO. 6: INTERGENERATIONAL ISSUES IN OFFICIAL DEVELOPMENT ASSISTANCE**

Is borrowing for ODA economically sound and ethically justified? In those countries (such as United Kingdom) where fiscal rules formally make a distinction between current expenditures and investment, ODA is treated as a current expenditure, which means it cannot be financed through borrowing.

Proposals for "innovative" forms of financing, such as the IFF and international taxation, cast the issue in a new light. One essential difference between these two instruments is their impact over time. The IFF is based on borrowing and, as a consequence, the burden is ultimately borne by future generations of taxpayers, whereas, with international taxation, payments are made by existing generations.

Thus, the choice between those instruments raises important intergenerational issues, which are discussed in this box.

The rationale for borrowing is twofold: (1) to allow for a decoupling in time between fiscal payments made by donors and aid flows received by recipients; and (2) as a consequence, to make it easier to accelerate (frontload) aid disbursements to poor countries. We examine each of these aspects in turn.

(1) Time decoupling between donors' contributions and aid flowing to recipient countries:

- Taking the total amount of aid as given over a period of time, it makes economic sense to have different schedules for donor's contributions, on one hand, and payments to recipients, on the other[8]. There is no reason for those schedules to coincide optimally over time[9]. It also makes sense to use capital markets to make adjustments between those schedules, if total contributions and aid payments are actuarially equivalent [10].

- This decoupling carries some risks, however, if future ODA flows are uncertain. Since borrowing will have to be repaid in any case, the risk is entirely borne by future aid flows to poor countries, i.e. by future generations of poor[11]. How important is this risk? ODA expenditures are projected to increase, but whether this will actually happen depends on several factors. Amongst them:

    - The degree of financial constraints on donor countries' budgets. An easing seems unlikely. Most developed countries have high public debt/GDP ratios and will have to absorb the fiscal burden of aging populations. This will raise

8 Source : Schneider (Jean-Luc): "Du bon usage de l'IFF" mimeo; French Ministry of the Economy, Finance and Industry (2004).

9 Formally, the optimum time profile for fiscal payments should be such that it equals the marginal rate of taxation for each year [ 3 ]; at the same time, the optimum timetable for transfers to beneficiaries should equal the marginal return on aid each year.

10 Source : Schneider (Jean-Luc) : "Du bon usage de l'IFF," op.cit.

11 The logic behind the currently envisaged mechanisms consists in basing borrowing on future increases in ODA, i.e. in anticipating fulfillment of the 0.7%/GNP target. But if this increase fails to materialize, the operation would result in a steep drop in aid actually paid when the loan falls due for repayment, which would hit the poor at that time especially hard.

the opportunity cost of ODA.

- On the other hand, some public expenditures which, today, are seen as unavoidable and urgent (such as unemployment benefits) may decrease or disappear in the future, thereby leaving more room for ODA.

- Greater altruism in developed countries is possible in the future, which would allow for increased taxation for development. While this cannot be ruled out, it would be hazardous to build an innovative approach to development financing on this assumption alone.

- Finally, better public information in the developed countries, raising awareness of the difficulties facing the poor and of the more or less direct risks those difficulties pose for the welfare of developed countries' citizens.

(2) faster ODA disbursements.

Frontloading a given amount of ODA may be justified in three cases:

a / - if more value is attached to the welfare of today's poor than of tomorrow's poor,

This is the basis for discounting future costs and benefits when assessing the impact of any economic action. Is this methodology applicable to poverty reduction? The discount rate has two components, namely:

- a "pure" social time preference rate, which, for poverty reduction, cannot be given any objective value. Whether one puts more value on immediate, rather than future, poverty reduction is purely a matter of personal choice and cannot be rationalized.

- an economic component, resulting from the decreasing marginal utility of consumption. Since future generations will (on average) be richer, the argument goes, a smaller value should be attached to an incremental increase in their income. But, by definition, poverty is measured by reference to an *absolute* level of income. The poor to-morrow will be as poor as the poor today; so the marginal utility attached to an increase in their consumption should be the same.

In sum, the correct discount rate for calculating the benefits of poverty reduction is very low, possibly zero. To choose any other number would be to favour one generation over another, on purely subjective grounds. That choice would be all the more problematic that it would entail a geographic choice as well: the majority of today's poor are in Asia; in the future, they will mainly be in Africa.

B/ - if aid disbursed today is more efficient in reducing poverty than aid disbursed tomorrow

This might well prove true in some cases:

- Studies show the social return on aid—measured at the microeconomic level of projects—is very high (of the order of 20%); which suggests that a great many efficient projects are not currently being financed [12].

12 Source: Foster (Mick): "The case For Increased Aid" Report to the Department for International Development; (UK). December 2003 (Annex III).

- There may be increasing returns to ODA whereby aid disbursed today raises the efficiency (i.e. increases the return) of aid disbursed tomorrow. Human development may be a case in point.

But there is no certainty. It is also possible that absorption capacity increases with time. This is so, notably, if technical progress is "endogenous," i.e. if the return on capital in the economy rises in line with per capita GDP. In that case, on the contrary, future aid will be more effective than today's aid. Frontloading would lead to an economic loss since it would substitute less efficient investments today to more efficient ones tomorrow. If absorption capacity does increase over time, some analysts recommend a "reverse IFF" mechanism, whereby donors' immediate contributions would be paid into trust funds, which would then be used to finance future transfers to the developing countries[13].

c/ - if a decline in the number of poor reduces future aid requirements

The decline in the number of poor people by 2015 is a certainty. The MDGs will be achieved in a number of countries. Whether this will reduce aid requirements significantly is less certain. Residual poverty after that date may prove much harder-and more costly-to roll back.

*Conclusion*

- There is no ethical nor economic justification for "choosing" between present and future generations of poor people, and hence for establishing mechanisms whose effect would not be to increase the overall impact of aid on poverty reduction, but solely to shift it over time.

- Consequently, frontloading ODA disbursements (and recourse to borrowing) can only be justified on the basis of increased efficiency. Frontloading must apply to expenditures generating high (and if possible rising) social returns, at any rate greater than the returns on expenditures made at a later date. More precisely, expenditures made today must have a greater overall impact on poverty across all generations than expenditures made tomorrow. This requirement calls in turn for precise definition of the expenditures eligible for this mechanism and of the conditions for its implementation. The other aid expenditures must be financed by the present generations. This distinction must be applied rigorously especially with regards to arguments such as : "all useful investments are an investment for the future," which, if taken literally to justify frontloading, could reduce the overall efficiency of aid.

- Finally, on the same ethical grounds, future generations of the poor must be protected from the risk of a drying-up of aid resulting from the repayment of previously contracted loans. And any such schemes should be designed with cast-iron guarantees on that score.

13 Source: Heller (Peter); Gupta (Sanjeev), "Challenges in Expanding Development Assistance" IMF Policy Discussion Paper 02/5 (2002).

**BOX no. 7: THE VACCINE FUND AS AN EXAMPLE OF CONDITIONAL FUNDING MECHANISM FOR HUMAN DEVELOPMENT**

The Vaccine Fund has established an original system of governance for programs aimed at reconciling predictability of aid for beneficiary countries with effective oversight by the Fund of how resources are used.

The system is based on the following rules:

- The Vaccine Fund and recipients jointly define vaccination goals, establish a funding plan, and calculate resources to be supplied by the Fund in consequence. This planning adopts a five-year time frame during which the Fund pledges to supply the agreed assistance.

- Plans for each country and the level of contributions by the Fund are approved by an independent committee of experts which is also responsible, during the five-year period, for verifying compliance with the states' and the Fund's respective undertakings. The Fund commits to programs only if it is certain of being able to finance them.

- Recipients are free to utilize the funds provided at their discretion and are accountable to the Vaccine Fund and to the panel of experts solely for the results of their actions.

- Disbursements occur in two steps. Between a third and a half of the total amount is paid up-front; the balance is paid after completion of an intermediate verification of the receiving state's performance and that it has respected its undertakings.

- In some countries, government agencies have been deemed unfit to manage the programs financed by the Fund. The latter has therefore cut off their funding, redirecting resources to NGOs entrusted by it with carrying out the program in place of the government agencies.

## BOX NO. 8: THE DOUBLE DIVIDEND

There is a “double dividend” when a tax yields two benefits simultaneously, i.e. generates revenues and also eliminates economic distortions. A double dividend potentially arises whenever taxation serves to correct a market imperfection, especially in the environment.

There might be a double dividend in two different situations:

- When revenues are used to fund public expenditures, such as ODA. This definition is most commonly used in everyday language.

- When the proceeds serve to reduce or eliminate other more distorting taxes such as, for instance, social security levies. The overall revenue is unchanged, but there is a net gain in economic efficiency. This definition is found more commonly in the economic literature.

The existence of the double dividend is sometimes disputed. If the tax fully eliminates the distortion, it eliminates the tax base at the same time, thereby doing away with the revenue. If, conversely, it continues to generate substantial revenues, this means the tax has not succeeded in changing people’s behavior and eliminating the distortion.

The reality is more complex, however, and intermediate situations may occur. All depends on the price elasticity of demand for the good. With low (but not zero) elasticity, the tax will yield revenues without eliminating the tax base.

Elasticity may be low in the short run and higher in the longer run. In that case, the tax will generate revenues in a first stage, while acting as an incentive for changes in technology, choices and behaviors in the longer run. In that case, a strategy of progressively raising the tax rate can generate revenues in the short term while signaling a long-term need for adjustment. This could be an appropriate approach for a carbon tax.

**BOX NO. 9: THE IOPC FUND: AN EXAMPLE OF AN EXISTING "INTERNATIONAL TAX"**

The International Oil Pollution Compensation (IOPC) Fund is an international organization created in 1971 whose purpose is to pool the financial risks incurred by oil and gas carriers as a result of oil spills. The organization compensates victims with revenues levied oil companies.

The IOPC Fund's legal structure illustrates how a tax-like international financial contribution might operate:

- The IOPC was created by an international treaty signed by the Fund's 83 members states (the United States is not a member).
- This treaty has been ratified and implemented through national legislation by the signatories (in France, a law and a decree), thus making annual contributions by the companies compulsory.
- Contributions are decided annually by a simple majority vote in the executive organ of the IOPC Fund.
- Contributions are directly collected by the IOPC ( no transit through national budgets).
- Governments have a legal obligation to ensure implementation of the Treaty, through verification of companies' returns and imposition of sanctions in case of non-payment. Those sanctions are determined in accordance with the national legislation in each country (fines and jail sentences are applicable in some countries).

**BOX NO. 10: INTERNATIONAL GEOSTATIONARY ORBITAL POSITION ASSIGNMENT PROCEDURE**

Positions on the geostationary orbit and broadcasting frequencies are assigned on a first-come, first-served basis by the International Telecommunications Union (ITU), a specialized agency of the United Nations with 172 member states. Licenses are delivered free of charge[1] with flexible limits on their duration:

- The duration of the license is left to the applicant's discretion (durations of 30 years are common, and several recent applications have opted for 60-year durations);
- Holders may prolong their licenses unilaterally, subject to notifying the ITU three years before expiration.

This system leads countries to reserve more orbital positions than they need, since it costs nothing to hold a concession; there is practically no limit on its duration; holders' rights take precedence over those of new applicants in case of interference; and it gives holders room for maneuver in negotiations in the event of a new application, since it allows them to offer concessions to an "inconvenienced" country.

Under this system, countries and operators with a large number of reserved positions thereby enjoy an advantage over others. Finally, the system creates barriers to entry for new operators or countries.

1 Since 2001, a fee of between 1,500 and 700,000 Swiss Francs is payable to cover costs incurred by the ITU in examining applications. This system is not working very well at present, the ITU having recorded more than CHF 12 million in unpaid fees in 2003.