

A blue-tinted world map with text overlaid. The map shows major landmasses and some country names like CANADA, UNITED STATES, BRAZIL, RUSSIA, and CHINA. The text is centered and reads:

**Funding HIV-vaccine trials in
developing countries –
What’s wrong with IAVI’s
recommendation?**

Diana Sonntag

Vienna University of Economics and Business

“IAEN: Pre-Conference Meeting”

Vienna, 16 – 17 July 2010



Overview

→ **Background**

→ **International unconditional income transfers**

→ **International in-kind versus income transfers**

→ **Conclusions**

A light blue world map serves as the background for the slide. The map shows the outlines of continents and some major countries labeled, such as Canada, United States, Russia, China, and India. The text is overlaid on this map.

Background: The dilemma in vaccine research

- A vaccine is the key to accelerate the achievement of MDG 6.
- Pharmaceutical companies are little involved in HIV-vaccine research, because
 - discovery is an international public good (Kremer, 2006).
 - asymmetries in R&D interests
- AIDS-vaccine trials in developing countries as an alternative (IAVI, 2004)?



Basic message and approach

- Targeting income or in-kind transfers to developing countries in order to accelerate the development of an AIDS vaccine is counterproductive.
- Concept of international public goods; supply-side characteristics as additional perspective.

Overview

→ **Background**

→ **International unconditional income transfers**

→ **International in-kind versus income transfers**

→ **Conclusions**

International unconditional income transfers (I)

The basic model:

- o n agents,
- o two commodities (y_i, G) ,
- o private good y_i ,
- o public good “finding an AIDS vaccine“ G ,
- o utility function $U_i(y_i, G)$,
- o marginal cost differentials,
- o endowed with income I_i

A light blue world map serves as the background for the slide. The map shows major continents and countries, with labels for Canada, United States, Russia, China, India, and Africa. The map is centered on the Atlantic Ocean.

International unconditional income transfers (II)

Time structure of actions:

- o 1. Stage:
Which part of income should be transferred to recipients?
- o 2. Stage:
How much will be spent on both commodities?

International unconditional income transfers (III)

◦ **Proposition 1:** The overall public good provision level cannot fall if a non-contributor makes an income transfer to a contributor.

◦ **Proof:**

$$\Delta G < 0$$

$$\Rightarrow G' < G^* \quad (1)$$

$$\Rightarrow y' > y^*$$

$$\Rightarrow y' = h_i(G') < y^* = h_i(G^*)$$

$$\Rightarrow y' < y^*$$

A light blue world map serves as the background for the slide. Major countries like Canada, United States, Brazil, India, China, and Russia are labeled. The map is centered on the Atlantic Ocean.

International unconditional income transfers (IV)

- Funding R&D in developing countries is justified by the epidemiology of HIV.

However: small global benefit spillovers;
recipients have incentives to spend money for other purposes

⇒ **Assistance in kind as an alternative?**

Overview

→ **Background**

→ **International unconditional income transfers**

→ **International in-kind versus income transfers**

→ **Conclusions**

International in-kind versus income transfers (I)

- o budget constraint changes due to in-kind option:

case 1: agent i receives an in-kind transfer

$$y_i + p_i g_i^i + p_j g_i^j = I_i + p_j g_i^j \text{ für } g_j \leq G \quad (2)$$

case 2: agent i gives an in-kind transfer

$$y_i = I_i - (p_j g_j^j + p_i g_j^i) + p_j g_j^j \text{ für } g_j > G \quad (3)$$

International in-kind versus income transfers (II)

- **Proposition 2:** An-kind transfer may be pareto-superior to an income transfer if a recipient is more cost-efficient than a donor.
- **Proof:** Summing up (2) and (3) for $n = 2$:

$$y_1 + y_2 + p_1 G + (ep_1 - p_2) g_1^2 = eI_1 + I_2 \quad (4)$$

International in-kind versus income transfers (III)

- Optimal strategy depends on the relative price of providing a health-promoting public good.
- Vaccine research has to be monopolized in industrialized countries.
- Asymmetries in R&D interests ⇨ incentive compatible mechanisms ⇨ pull strategies

A light blue world map serves as the background for the slide. The map shows the outlines of continents and some major countries labeled in all caps, such as CANADA, UNITED STATES, RUSSIA, CHINA, and INDIA. The title 'Overview' is centered at the top in a large, bold, dark blue font.

Overview

→ **Background**

→ **International unconditional income transfers**

→ **International in-kind versus income transfers**

→ **Conclusions**

Conclusions

- Funding HIV-vaccine trials in developing countries will not be effective because of aid dispersion.
- In-kind transfers are preferable only if recipients have a cost advantage.
- Asymmetric interests in R&D can be addressed by vaccine purchase commitments.
- **However:** Analyses possess some methodological limitations.

A blue-toned topographic map of the world, showing landmasses and oceanic features. The map is centered on the Atlantic Ocean. Overlaid on the map is the text "Thanks a lot for your attention!" in a bold, red, sans-serif font. The text is positioned in the center of the image, spanning across the Atlantic Ocean and parts of North and South America.

Thanks a lot for your attention!



Additional Slides