Basics of health economy according to demographic changes
The Demographic Challenge:

Ethics or a Question of Resource-Allocation

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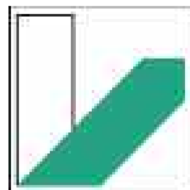

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The key questions: why we gather and enter a discussion with an economic view?

- **What conception of solidarity can be the basis of modern society?**
- **How can the health care system be financed in a sustainable way, which guarantees access to modern health care for all current and future members of society?**

1. Preliminaries

- **Resources are scarce**
  - **Demand exceeds the possibilities to supply**
  - **Opportunity costs are relevant**
- **No society can afford to offer all the health care that is medically possible to all its members.**
- **Priorities have to be established**

1. Preliminaries

Ethics and Economics - an Interrelation

- **Economics:**
  - Analysing the means of reducing scarcity and their results under the aspect of efficiency.
  - Comparing the marginal utility and the marginal costs in according to opportunity costs

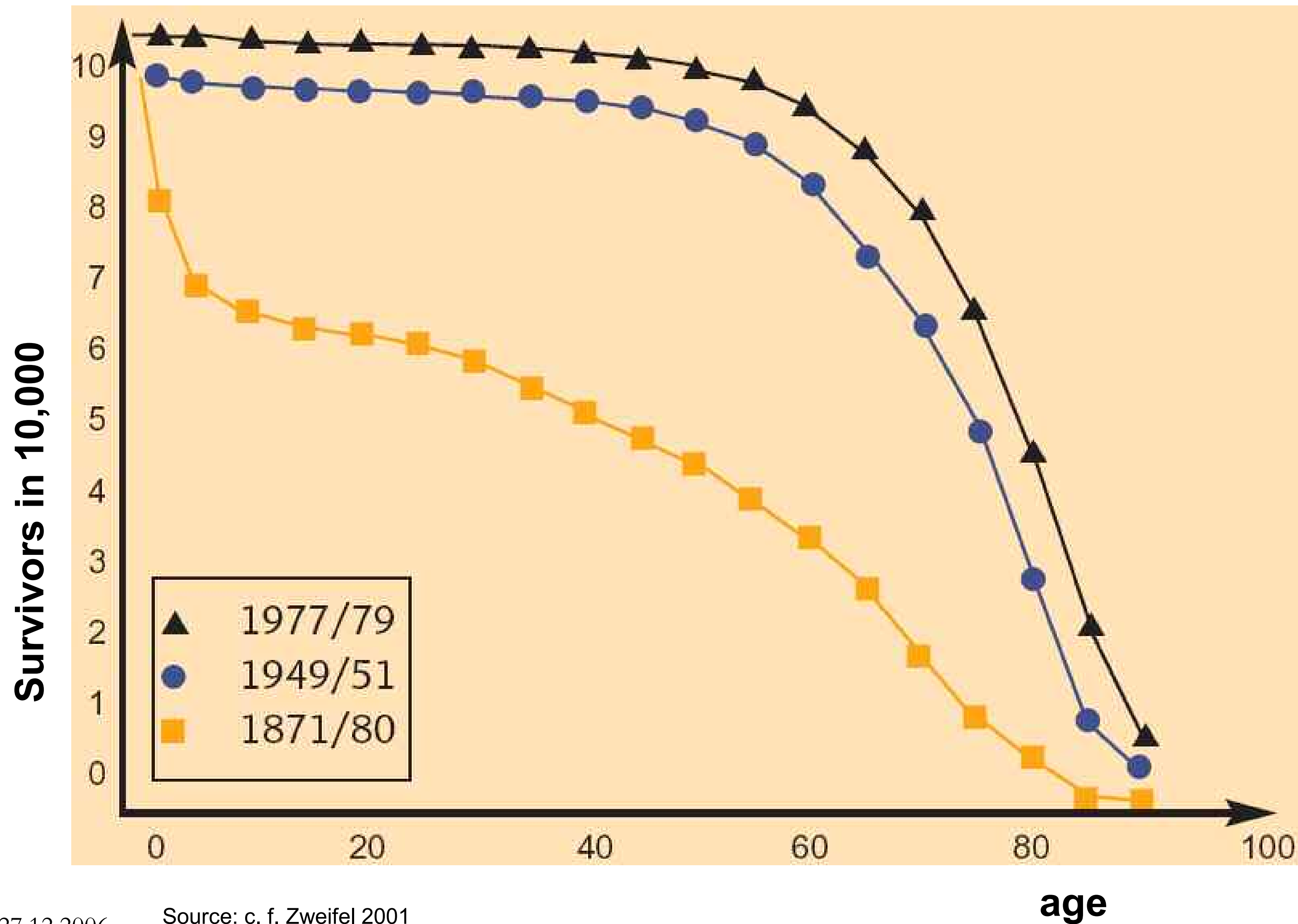
- **Ethics:**
  - Analysing the methods to solve the problem of scarcity and their results by taking into consideration generally accepted norms of a society.

- **Institutional economics**
  - Referring to incentives schemes
  - Legitimation of societal rules is not independent of ethics aims

2. The demographic challenge

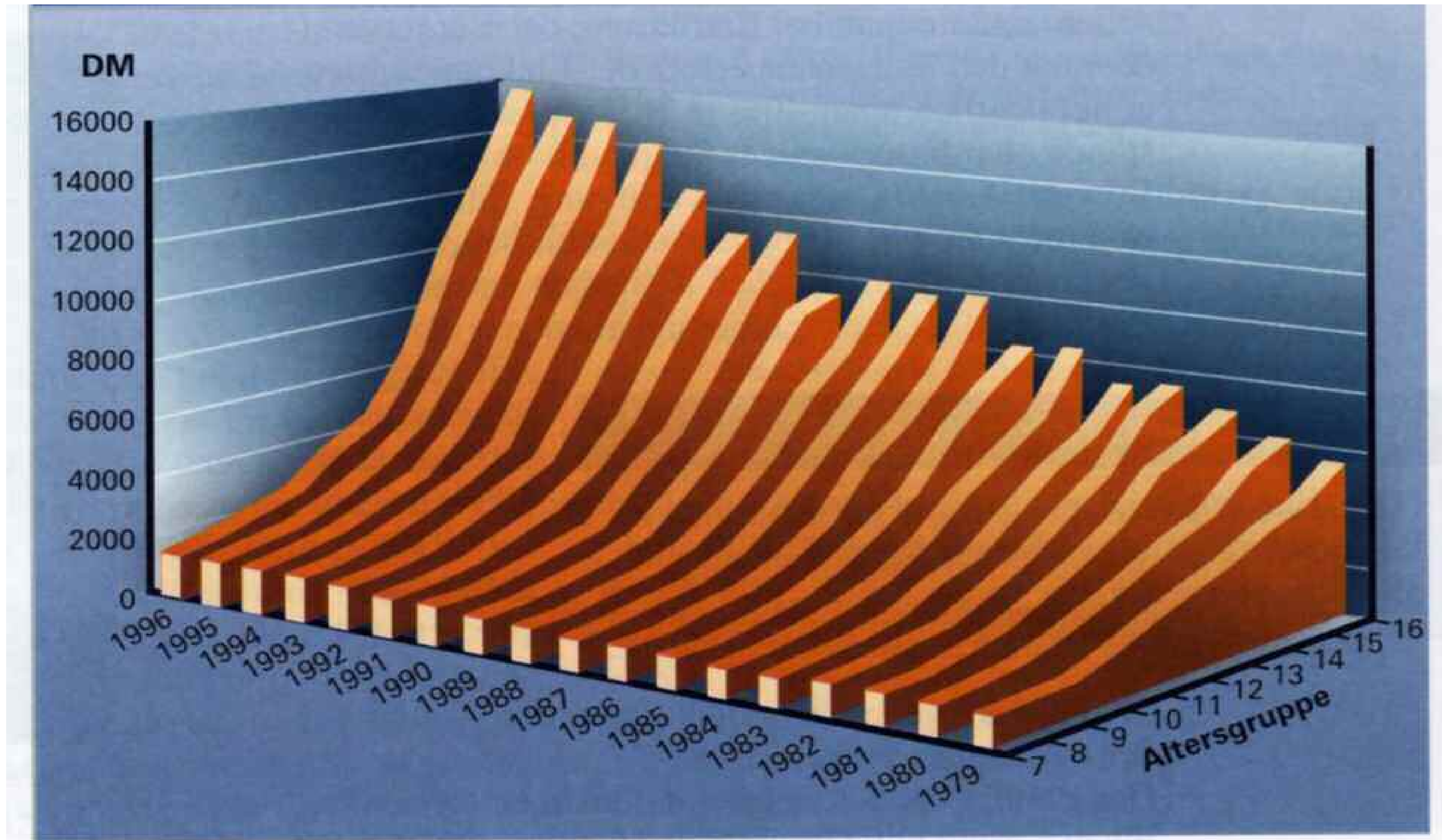
- Population ageing: a true economic challenge?
  - What aspects have to be checked?
    - Impact of population ageing on health care expenditures
    - Impact of population ageing on health care financing
    - Combination with respect to technological progress
- Double aging process changes demographic structures:
  - 2000: 100 people between 20 and 60 years of age account for **35** persons older than 60.
  - 2050: 100 people between 20 and 60 years of age account for **70** persons older than 60.

Changes of the survival curve in Germany (women): the effect of rektangularisation



Source: c. f. Zweifel 2001

Higher expenses due to steeper medical treatments as a consequence of age



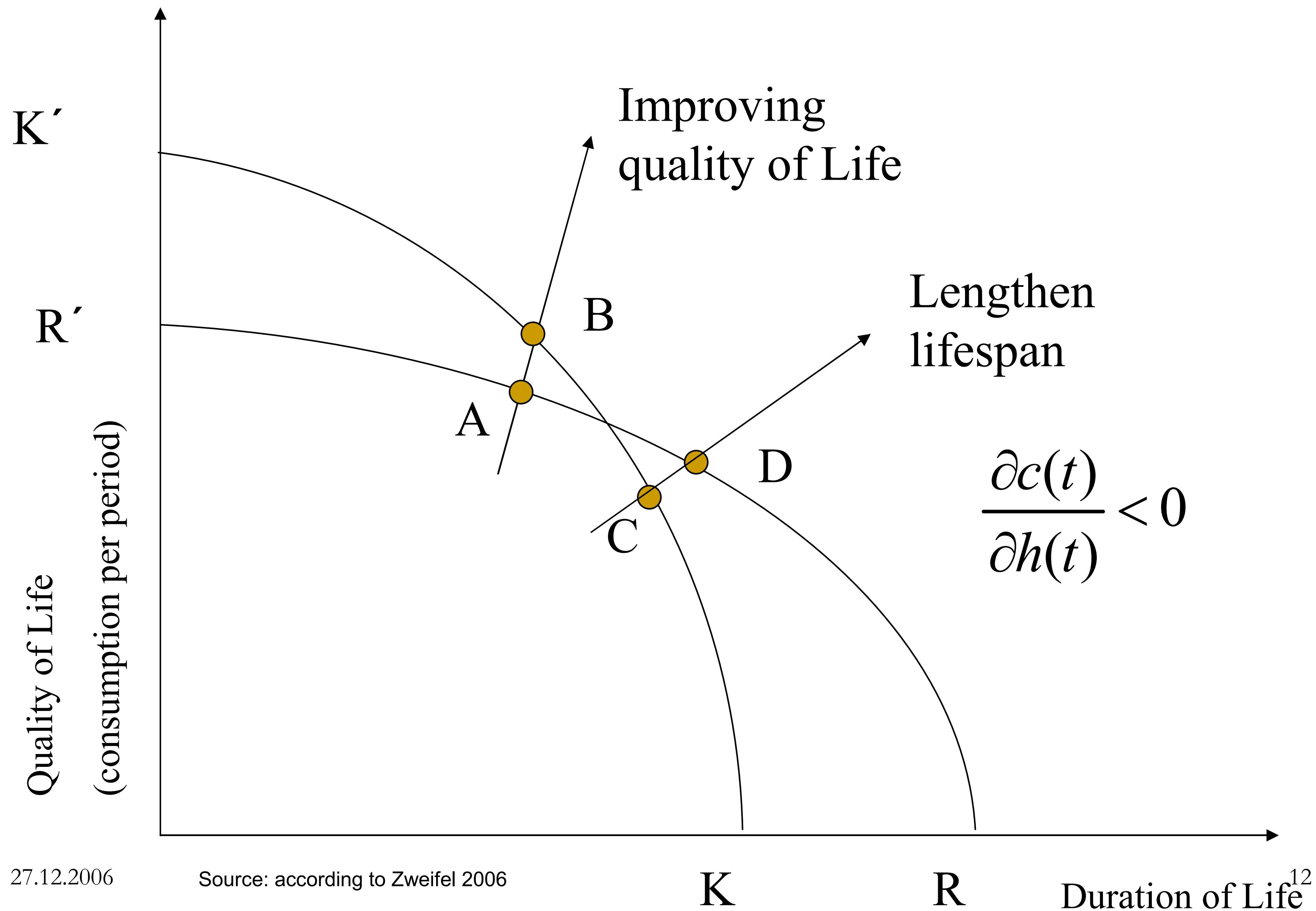
Source: cf. Ulrich 2004, Buchner 2002

Challenge of Technology

- Process innovations hardly exist!
- Product innovations preponderate (e.g. transplantations, genetic engineering)
  - Add-on technologies (the impossible is made possible)
  - Half-way technologies: Progressive course of a disease can be halted!
  - Medicine trapped in progress!

(Source: Oberender et. al. 2006a)

Increasing health expenditures: the effect of changing values within life span



Source: according to Zweifel 2006

Willingness to pay for access for innovations

Amounts in CHF / month							
Socioeconomic characteristics	**Physicians selected on cost criteria (1)**	**Physicians selected on quality criteria (2)**	**Physicians selected on cost & quality criteria (3)**	**Access to new therapies and drugs delayed by 2 years (4)**	**Reimburse-ment of generics only (5)**	**No reimburse-ment of drugs for minor complaints (6)**	**No small local hospitals (7)**
Total sample	103 (13.2)	53 (8.8)	42 (7.8)	65 (7.9)	3 (5.5)	-6 (5.3)	37 (5.7)
By region							
German-speaking	88(11.8)	38 (7.8)	26 (6.8)	56 (7.1)	5 (5.5)	-5 (5.3)	31 (5.2)
French-speaking	191 (76.3)	138 (58.5)	136 (56.9)	117 (45.4)	-14 (19.6)	-13 (19.2)	74 (31.0)
By average monthly income per household member							
< CHF 1500	67 (17.5)	44 (14.7)	35 (13.4)	52 (12.2)	-5 (10.0)	-2 (9.7)	28 (9.1)
CHF 1500 to 4000	108 (17.5)	56 (11.6)	42 (9.9)	66 (10.3)	9 (7.2)	-5 (6.8)	42 (7.8)
CHF 4000+	148 (55.8)	62 (29.9)	63 (29.7)	81 (29.4)	-14 (17.5)	18 (17.8)	33 (16.8)

Note: 1 CHF equals 0.7 € at 2003 exchange rates. Standard errors in parentheses.

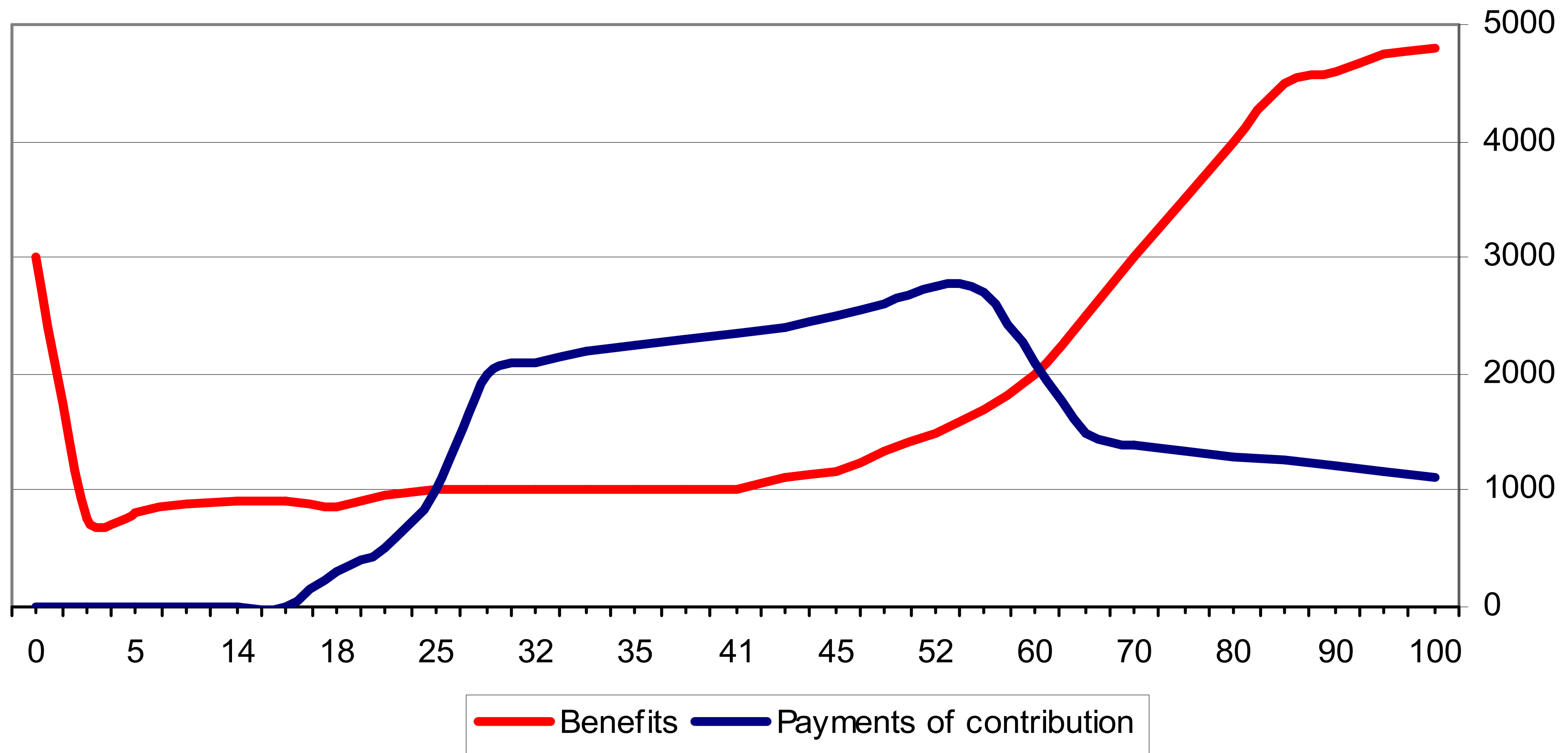
Quelle: Zweifel 2005.

Conclusion

- Although the number of beneficiaries of the CHI is decreasing in the long run, the demand for age-based health care services will increase due to the changing demographics and the higher probability of illness with increasing age.
- The current system also lacks internal control!
  - ⇨ It is incapable of coping with external challenges!
- Consequently: Correctional steering from the outside is required!

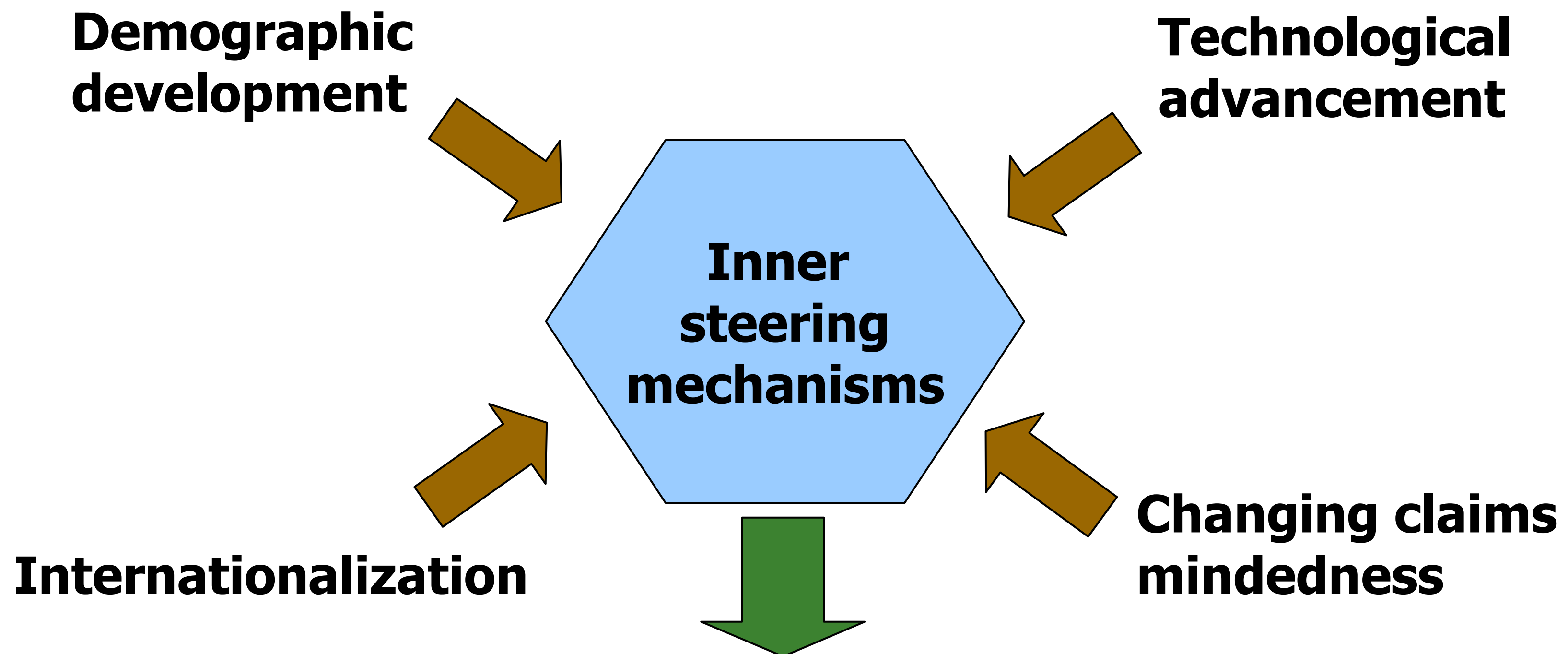
3. Scope of a sustainable health system reform

Demographic Financing Effect



Excurses: interconnection with instutitonal settings: inside steering

Consequences



System is unable to cope with challenges!
Focus: Burden of current beneficiaries and payers

3. Scope of a sustainable health system reform

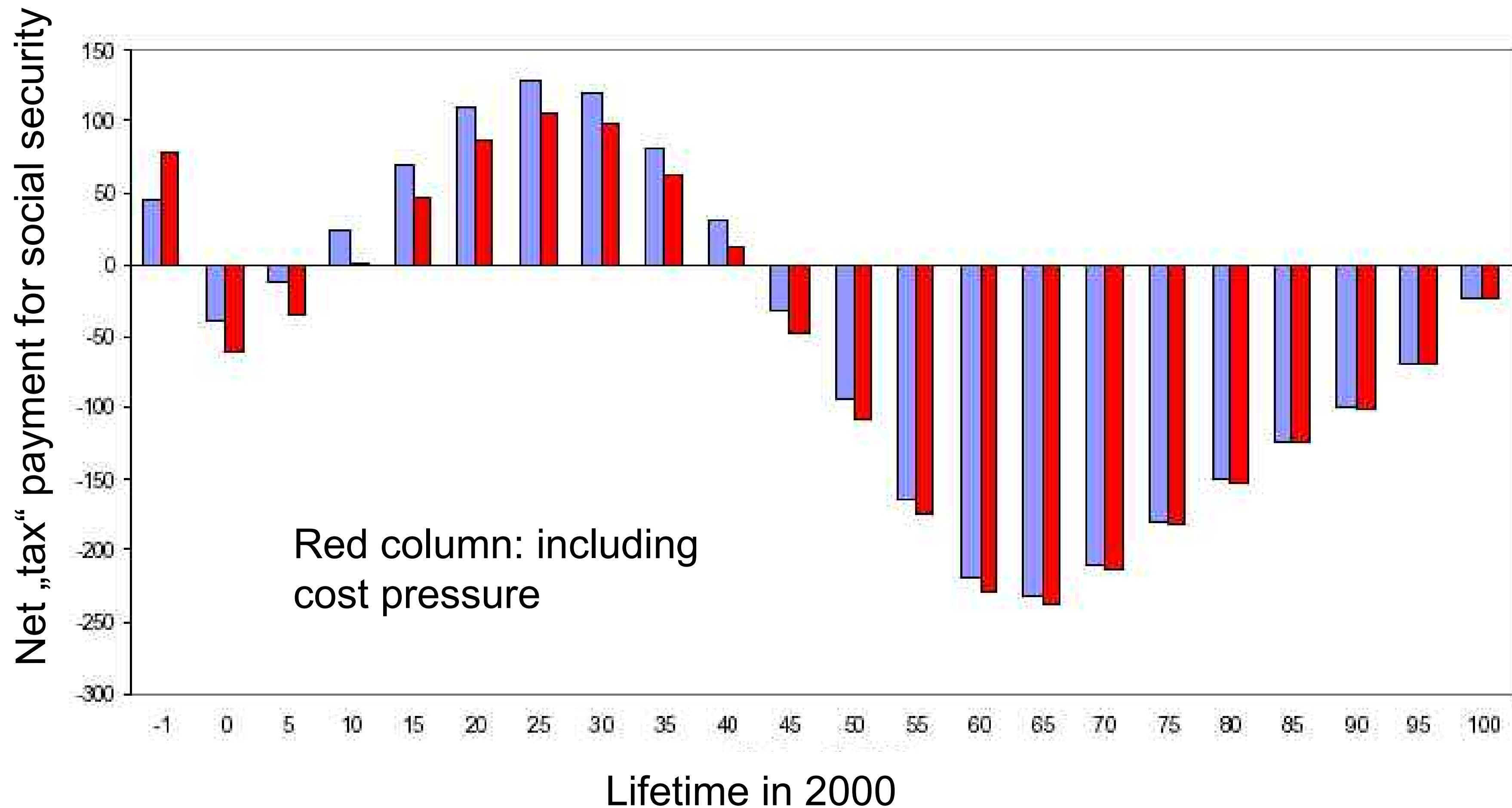
- Dilemmata of a pay as you system
  - Proportion of insured people (retired) increases
  - Proportion of insured people (employed) decreases

$$cR * W = \alpha_{VK_1} VK_1 + \beta_{VK_2} VK_2$$

  - CR=contribution rate, W=Wage; $\alpha_{VK_1} VK_1$ =proportion of insured persons type 1
- Problems
  - ΔExpenditures continously exceeds Δearnings of CHI
  - Economic growing is more less than technological progress
  - Given outcome, equilibrium induces higer CR or higher W

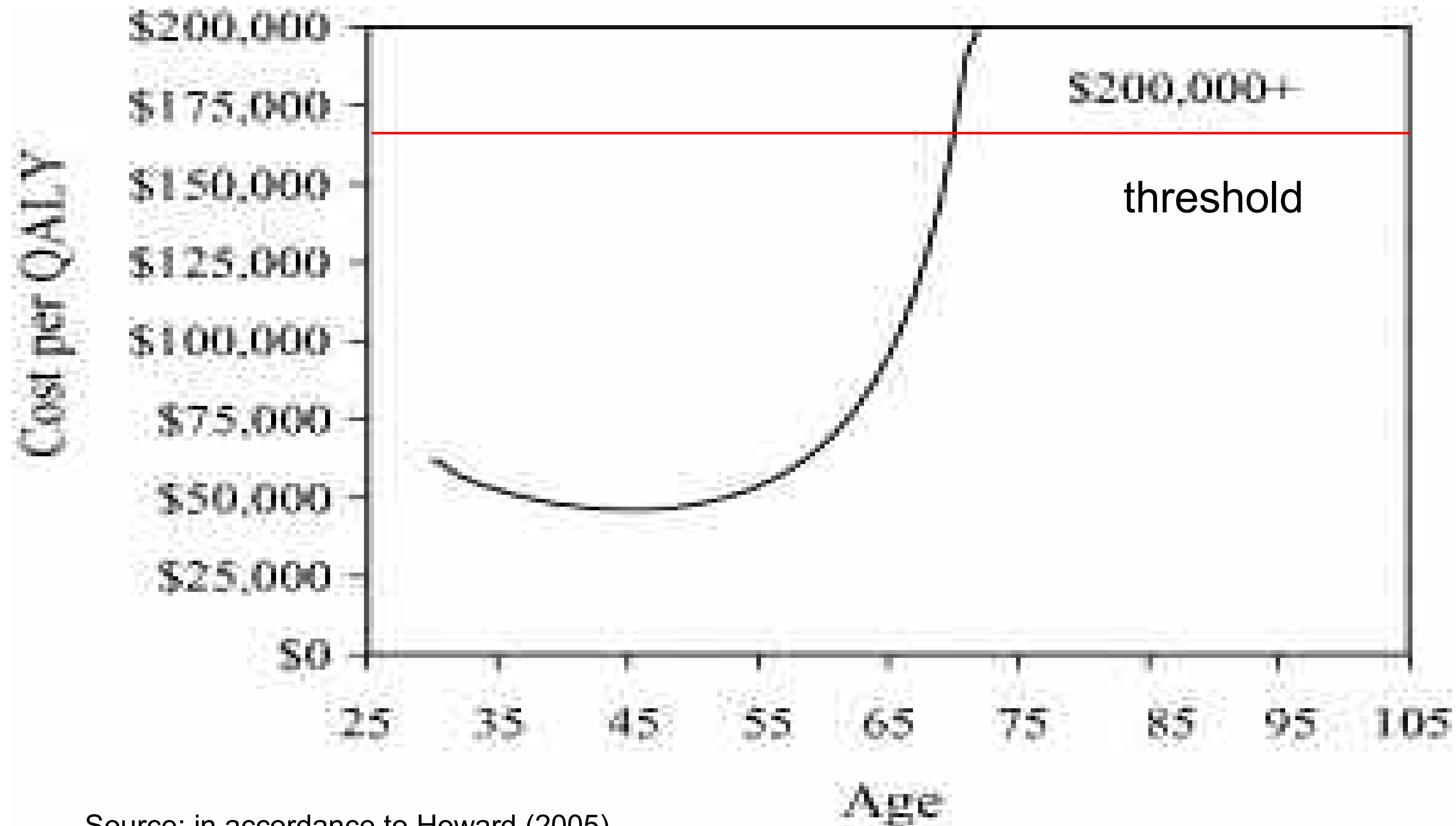
Source: Oberender et. al. 2006b

Comparing generations contributions to the social security



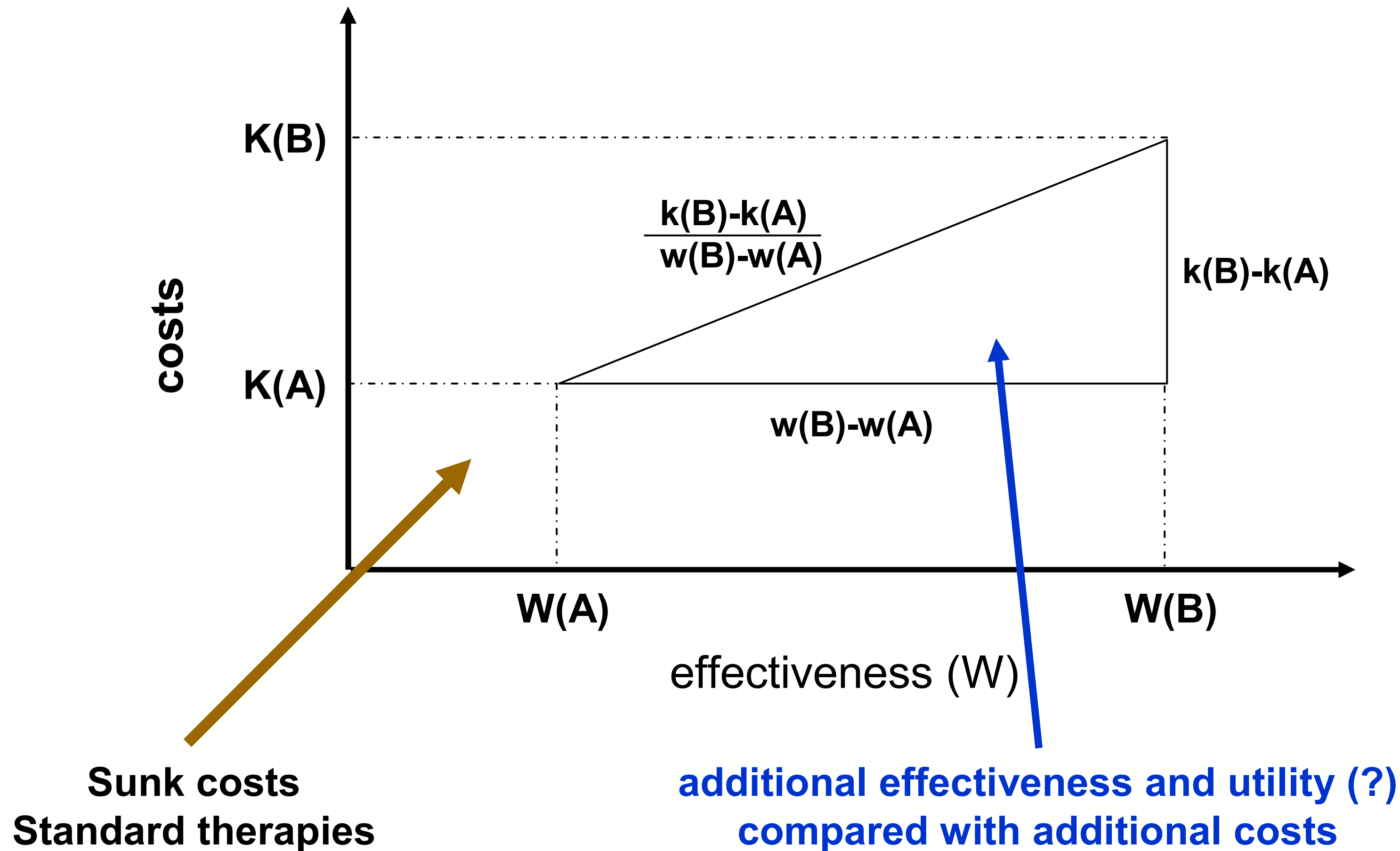
Quelle: according to *Fetzer/Raffelhüschen* 2004

Efficiency of prostate screening in relation to life expectancy



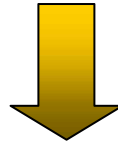
Source: in accordance to Howard (2005).

Incremental cost-effectiveness: a new discussion of rationing



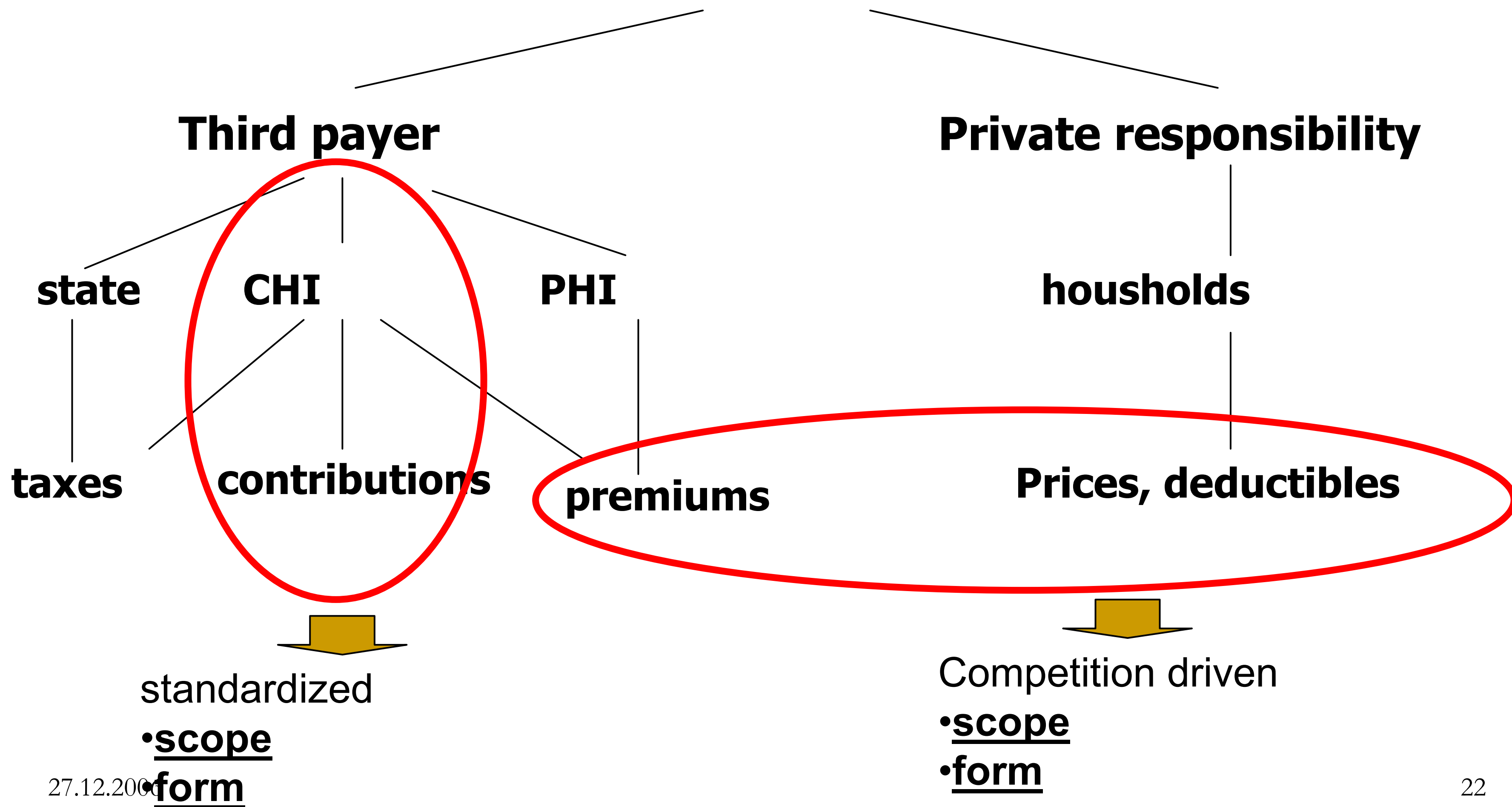
4. Institutional consequences?

1. Scope of solidarity
2. Enhancing medical innovotion progress
3. Guaranteed access to health care



Challenge for institutional building!

Sustainable financing of medical innovations



Governing social principle

Solidarity principle

Income orientated premiums

Contributions are determined by income.
Services are determined by needs

- Limited competition among health insurance companies!
- Mix of insurance incentives and resdribution incentives
- No sustainable financing

Liberal principle

Risk orientated premiums

Every insurant pays equitable (or risk-adjusted) premiums for covering catalog of standard benefits!

- Incentives to innovative management of supply!
- Strict division of redistribution and insuring!
- Complemantary accumulation of capital

Source: according to Oberender et. al. 2006b

Summary

Reform Perspectives: some proposals of an economist

- Self steering is pursuant to the principles of a liberal society!
- Sustainable financing structures needs
  - Accumulation of capital (insured based) could relief the demographic expenditure problem
  - Explicit commitment (on a societal range) of need ist necessary
  - Competition as core element could help covering the challenges
    - Incentives for innovation
    - Instruments for control
    - Sovereignty of patients and insured persons
- Competition orientated health care requires a proper order!

Excurses: interconnection with instutitonal settings: inside steering

Insurance contract - CHI

- Mandatory insurance.
- Includes: Hired employees earning less than income limit.
- Full coverage.
- Contributions are determined by income.
- Services are determined by needs.
- Financing on equal terms.
- Limited competition among health insurance companies! (limited through compensation for risk structures)

Solidary principle

Excurses: interconnection with instutitonal settings: inside steering

Service Contract - CHI

- Free choice of physician!
- Benefit-in-kind principle! Billing per chip card-system!
- Little financial participation!
- High density of regulations through rank privileges!
- Intransparency for insurance companies!

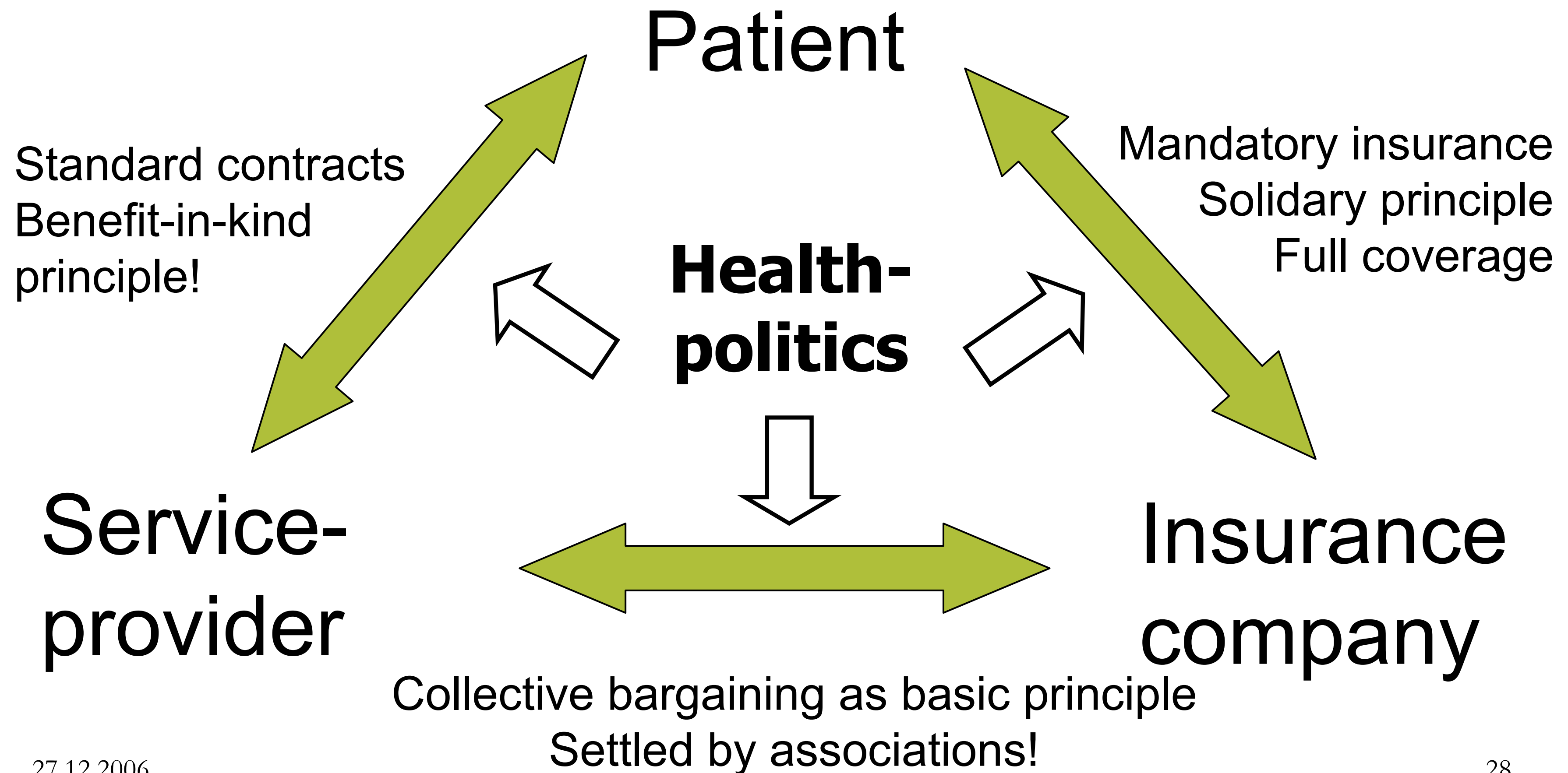
Excurses: interconnection with instutitonal settings: inside steering

Provision Contract - CHI

- Corporatistic structures (e.g. panal-doctor association).
- Less competition in medical care provision
  - Exception: „Integrationsverträge“ according to Managed Care
  - New organisational forms of producing (MVZ)
- Especially:
  - Agreement on reimbursement scheme (in outpatient care: Score system, in inpatient care: DRGs)
  - Structure of reimbursement
- Strict distinction between outpatient and inpatient care.

Excurses: interconnection with instutitonal settings: inside steering

Fundamental Structures - CHI



Excurses: interconnection with instutitonal settings: inside steering

Vicious Circle