Erasmus University Rotterdam

How can we make individual health insurance affordable for the high-risks in a competitive insurance market?

Wynand P.M.M. van de Ven

Professor of health insurance

Department of Health Policy and Management

Erasmus University Rotterdam

vandeven@bmg.eur.nl

Agenda

1. Effects of a free insurance market;
2. Taxonomy of premium subsidies:
   a. Explicit premium subsidies;
   b. Implicit cross-subsidies;
3. Some critical issues;
4. Dutch healthcare system: a case study;
5. Discussion questions on Australia.

1. Free competitive insurance market

Starting point: a free, unregulated competitive health insurance market.

The focus is on affordable *individual* health insurance, irrespective whether this is in the context of a voluntary or mandatory health insurance.

Risk rating and risk selection

Erasmus University Rotterdam

- In a free competitive insurance market insurers have to break even, in expectation, on each contract either by adjusting the premium to the consumer's risk (***risk-adjusted premiums***) or by adjusting the accepted risk to the premium (***risk selection***).
- The premium differences can easily go up to a factor 100.

Risk factors for health insurance

- Age/gender;
- Health (e.g. yes/no AIDS, cancer);
- Yes/no disabled;
- Health habits (smoking, drinking, exercising);
- Prior costs & prior utilization (hospitalization, prescription drugs);
- Occupation, socio-economic status, region;
- Duration of coverage;
- Level of chosen deductible.

Selection

Actions (not including risk-rated pricing by insurers) by insurers and consumers to exploit unpriced risk heterogeneity and break pooling arrangements

(Newhouse, JEL, 1996)

Examples of selection

- Selection by insurers:
  - Denial of coverage;
  - Exclusion of preexisting medical conditions;
  - Waiting periods;
  - Termination of contract.
- Selection by consumers:
  - Within each risk group the high-risks are more inclined to buy insurance than the low-risks.

No long term insurance

- There is no market for insurance against the risk of becoming a high risk in the future.
- In a free market the premium for an insured who develops AIDS, cancer or heart disease has to be raised in the next contract period. Or the insurer may not renew the contract.
- Voluntary health insurance can *only* provide protection against *unpredictable* variation of costs *in the contract period* (usually a year).

Conclusion

Erasmus University Rotterdam

Without restrictions on free competition a system of implicit cross-subsidies, for example community-rated premiums, can not be sustained because unrestricted competition minimizes the predictable profit per contract.

Without any external intervention individual health insurance may be unaffordable for the (low-income) high risks in a competitive insurance market.

Agenda

1. Effects of a free insurance market;
2. **Taxonomy of premium subsidies:**
   a. **Explicit premium subsidies;**
   b. **Implicit cross-subsidies;**
3. Some critical issues;
4. Dutch healthcare system: a case study;
5. Discussion questions on Australia.

2. *Affordable health insurance*

Question: *How can we make individual health insurance affordable for high-risk individuals in a competitive insurance market?*

Answer: Subsidies.

Question: What is the best form of subsidies?

Assumption: open enrollment

Erasmus University Rotterdam

- We assume that there is an open enrollment requirement for a specified coverage.
- As long as insurers are free in setting their premiums, this assumption is non-restrictive.
- The ‘access’-problem that would occur in case of rejection can be reformulated as an ‘affordability’-problem to be solved by subsidies.

Erasmus ERASMUS UNIVERSITEIT ROTTERDAM

Two types of subsidies

Two types of subsidies:

1. explicit premium subsidies;
2. implicit cross-subsidies, enforced by premium rate restrictions and open enrollment.

Explicit premium subsidies

- Insurers are free to set their premiums;
- A subsidy system is organized by a sponsor (e.g. government) such that high-risk persons with unaffordable premiums receive a subsidy from a Fund that is filled by mandatory contributions.
- High risks pay their premium partly with the subsidy and partly out of pocket.

Several types of subsidies

- Risk-adjusted subsidies;
- Premium-adjusted subsidies;
- Means-tested (premium/risk-adjusted) subsidies;
- Tax deductibles/credits;
- Excess loss compensations to insurers.

Premium-adjusted subsidies

Erasmus University Rotterdam

Premium-adjusted subsidies are not optimal:

1. they reduce the incentive for high-risk consumers to shop around for the lowest premium;
2. they induce over-insurance resulting in additional moral hazard;
3. they create a misallocation of subsidies.

ERASMUS UNIVERSITEIT ROTTERDAM

Risk-adjusted subsidies

Erasmus University Rotterdam

An effective way to deal with these problems is to have ***risk-adjusted*** subsidies rather than premium-adjusted subsidies.

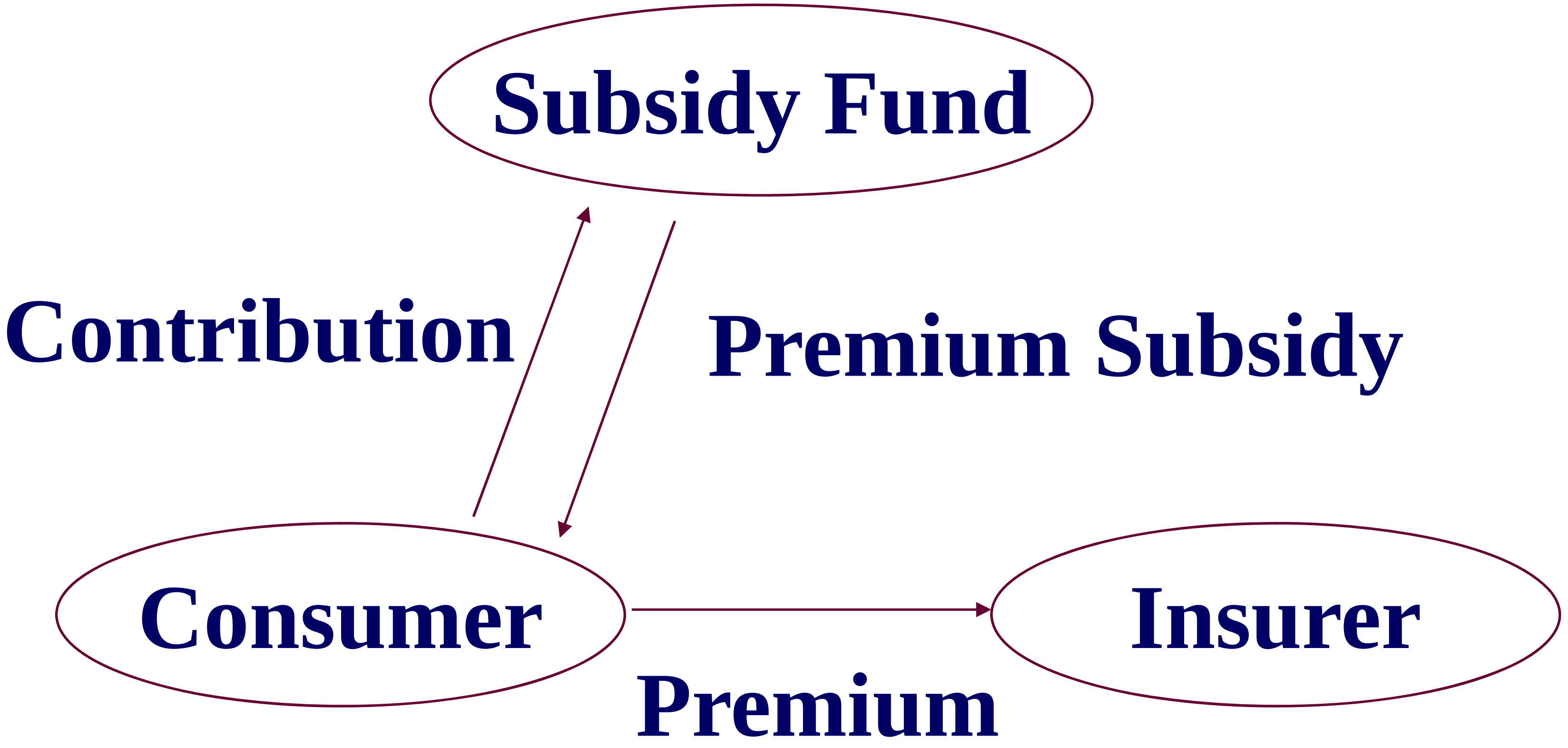
Risk-adjusted premium subsidies are based on the risk factors X that insurers use, such as age and health status.

Risk-adjusted subsidies

If the risk-adjusted premium subsidies are equal to the predicted expenses based on X minus a fixed amount, they do not distort competition because the consumer is fully price sensitive at the margin.

Premium subsidies (Modality A)

Erasmus University Rotterdam



Risk Equalization

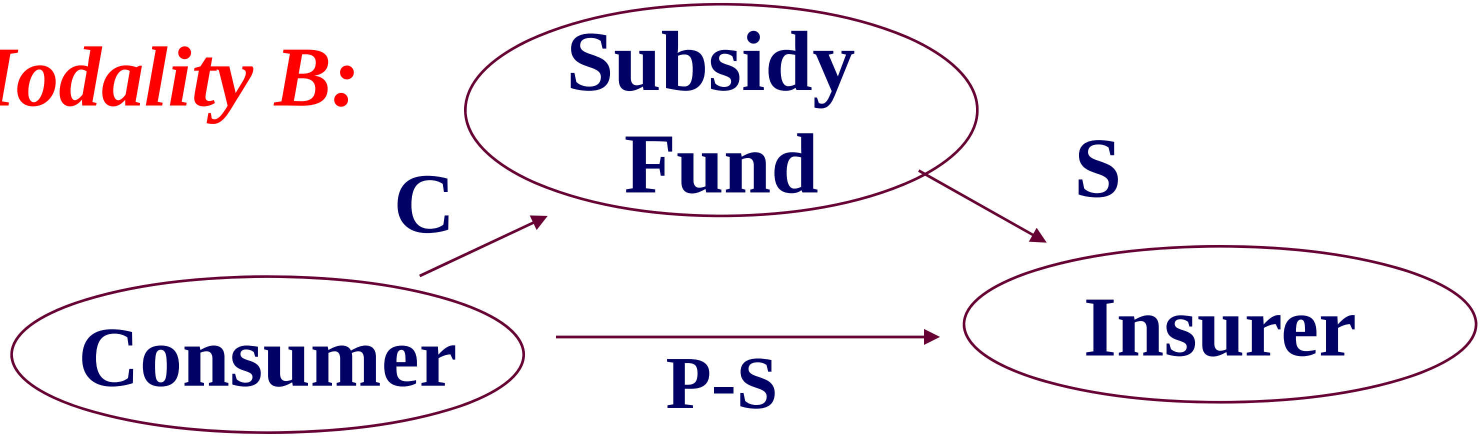
All countries that apply risk-adjusted subsidies give the subsidy to the insurer who deducts it from the premium. In this way the different ***risks*** that consumers represent for the insurer are ***equalized***. We refer to this as ***Risk Equalization.***

Two modalities of risk equalization are observed:

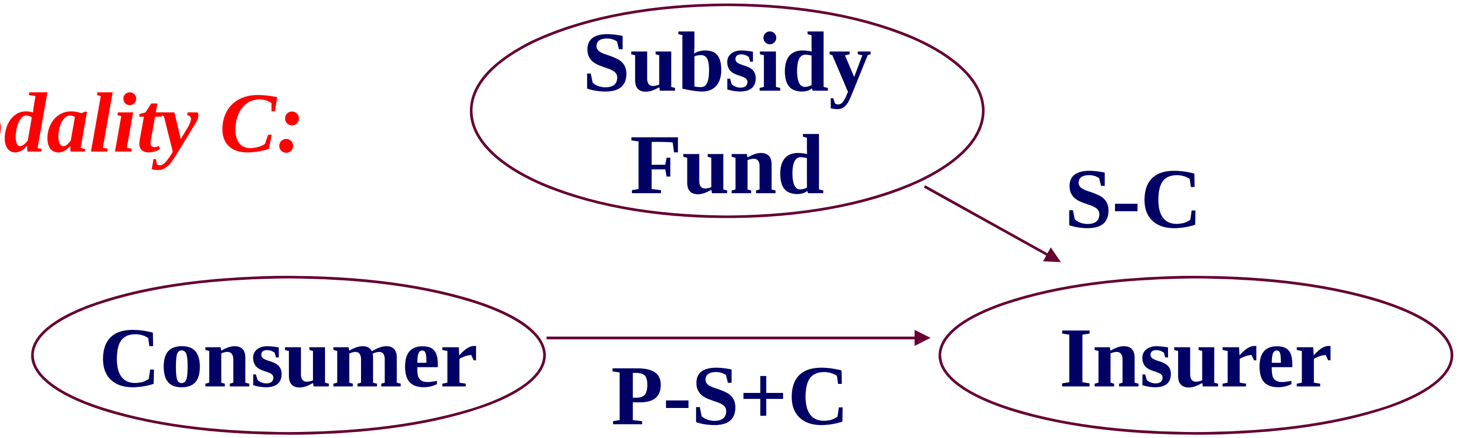
- The consumer pays the contribution C directly to the Subsidy Fund (*Modality B*);
- The consumer pays the contribution C to the Subsidy Fund *via* the insurer (*Modality C*).

Modalities of risk equalization

Modality B:



Modality C:



C=Contribution; S=Subsidy; P=Premium

Additional subsidies

To the extent that some high-risk consumers are insufficiently subsidized, the risk-adjusted premium subsidies can be complemented by premium-based subsidies or by excess loss compensations (= compensations to the insurers by the sponsor for some or all expenses above a certain threshold for each individual).

→ tradeoff affordability - efficiency.

Implicit cross-subsidies

- An alternative is implicit cross-subsidies enforced by premium rate restrictions (and open enrollment) for a specified insurance coverage.
- Examples of premium rate restrictions:
  - Community rating;
  - A ban on certain rating factors;
  - Rate-banding.

Premium rate restrictions

- *Goal*:
  - to create implicit cross-subsidies from the low-risks to the high-risks.
- *Effect*:
  - such pooling of people with different risks creates substantial predictable profits and losses for subgroups;
  - and thereby create incentives for *risk selection*.

Forms of selection

Erasmus University Rotterdam

- Design of benefits package, selective contracting, selected utilization management techniques;
- Selective advertising;
- The design of supplementary health insurance;
- Via the insurance agent;
- Golden handshake.

ERASMUS UNIVERSITEIT ROTTERDAM

Effects of selection

- Disincentive for insurers to be responsive to the high-risk consumers and to contract the best quality care for them;
- Disincentive for providers to acquire the best reputation for treating chronic diseases;
- Selection more profitable than efficiency;
- High premiums for high-risk patients;
- Instability in the insurance market.

How can we prevent selection?

- Risk equalization;
- Less severe premium rate restrictions:
  → tradeoff selection - affordability;
- Excess loss compensations to insurers (‘risk sharing between the sponsor and the insurers’):
  → tradeoff selection - efficiency.

Conclusion

Given insufficient risk equalization we are confronted with a *trade-off* between:

- affordability,
- efficiency,
- and the potential effects of selection, notably low quality care for the chronically ill.

The preferred strategy

Risk-adjusted subsidies or risk equalization is the preferred strategy because:

- The better the risk equalization is, the less severe is the resulting tradeoff.
- In the (theoretical) case of perfect risk equalization there is no need for any other strategy and the tradeoff no longer exists.
- Each of the other strategies alone inevitably confronts policymakers with a tradeoff.

The only effective escape

Good risk equalization offers the only effective escape from the tradeoff between affordability, efficiency and selection.

For the full background paper see:

http://www.fresh-thinking.org/

Click Workshops;

Click: The structure of health plan competition, 3-4May07

Agenda

Erasmus University Rotterdam

1. Effects of a free insurance market;
2. Taxonomy of premium subsidies:
   a. Explicit premium subsidies;
   b. Implicit cross-subsidies;
3. **Some critical issues;**
4. Dutch healthcare system: a case study;
5. Discussion questions on Australia.

ERASMUS UNIVERSITEIT ROTTERDAM

3. Some critical issues

Some critical issues:

a. Community rated premiums: why?
b. Is risk selection really a serious problem?
c. Does one size fits all?
d. How to organize the subsidy payment flows?

3a. Community rating: why?

Drawbacks of community rating:

- Selection;
- Indirect premium differentiation via product differentiation.
- Sponsor forbids the high risks to pay extra premium to buy good quality care;
- Cross-subsidies most likely disproportional:
  – Also subsidies to high-income high-risks;
  – Also cross-subsidies for risk factors such as oversupply and ineffiency.

Advantages of community rating:

- Transparency;
- Good guarantee for making health insurance affordable for high risks;
- Low transaction costs;
- Implicit cross-subsidies are mostly not considered as ‘public finance’ (like explicit contributions to the Subsidy Fund).

Why community rating?

Conclusion: The justification of community rating is less straightforward than its popularity in practice suggests.

3b. Is risk selection really a problem?

We do not need a ‘perfect’ formula:

- Insurers’ costs of selection, including the loss of reputation;
- By refining the formula the uncertainty about the profits of selection increases;
- Do insurers really have additional information to discern the high/low risks *within* the subgroups of a sophisticated equalization formula?

3c. Does one size fit all?

- Should the purchase of health insurance be mandatory?
- If so, how much freedom should the individual consumer have in choosing his concrete insurance entitlements?
- It is important to make a distinction between mandatory *contributions to a Subsidy Fund* and mandatory *health insurance.*

Motives for mandatory cross-subsidies

Erasmus University Rotterdam

Economic motives to enforce mandatory cross-subsidies are related to:

1. externalities;
2. the financial risk of becoming a high risk in the future;
3. the moral hazard effects induced by cross-subsidisation.

Motives for mandatory insurance

Economic motives to make health insurance for certain *services* mandatory for certain *groups of individuals* can be:

1. the prevention of free riding;
2. a lack of foresight;
3. high transaction costs of otherwise organizing cross-subsidies;
4. the prevention of adverse selection.

Different motives

The motives to enforce mandatory cross-subsidies for health insurance are not the same as the motives to make health insurance mandatory.

Policy makers are advised to take into account these different sets of motives.

Consumer choice of entitlements

Erasmus University Rotterdam

If consumers are allowed to make a choice among different sets of insurance entitlements based e.g. on price and quality, this consumer choice does not affect the cross-subsidies *as long as* the premium differences across insurance products reflect the differences in predicted expenses among these products.

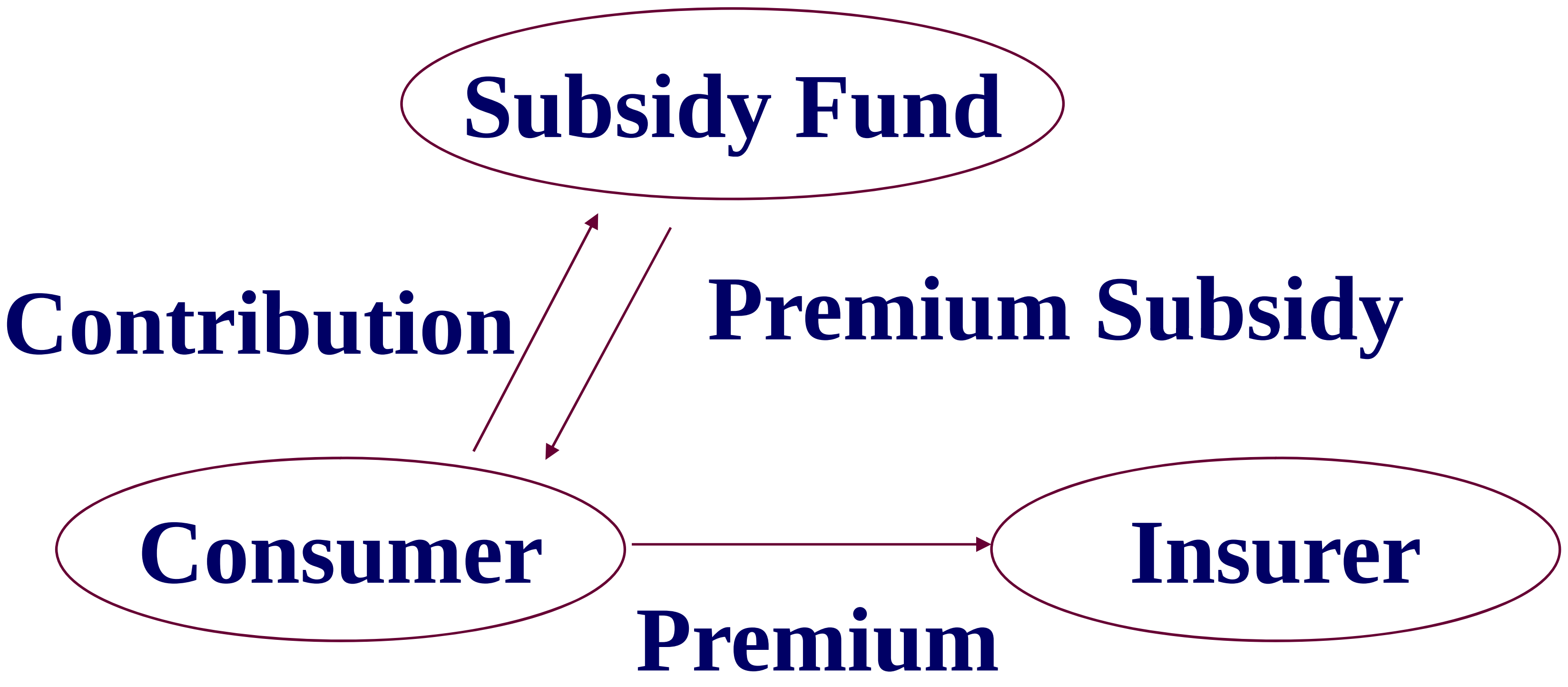
ERASMUS UNIVERSITEIT ROTTERDAM

3d. Criteria organizing the payment flows

1. Subsidies only for low-income people only?
2. Level of transaction costs;
3. Option of income-related contribution;
4. High premium responsiveness of consumer;
5. Chance of default of premium payment;
6. *Mandatory* contributions and *voluntary* insurance;
7. Amount of money through the Subsidy Fund;
8. The insurers perception of ‘winner’ or ‘loser’.

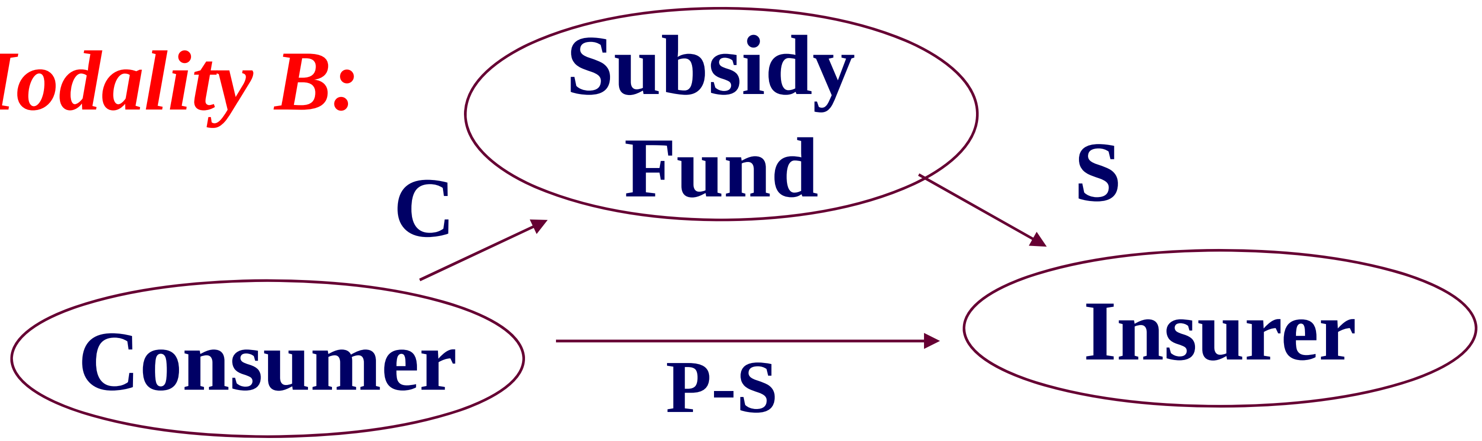
Premium subsidies (Modality A)

Erasmus University Rotterdam

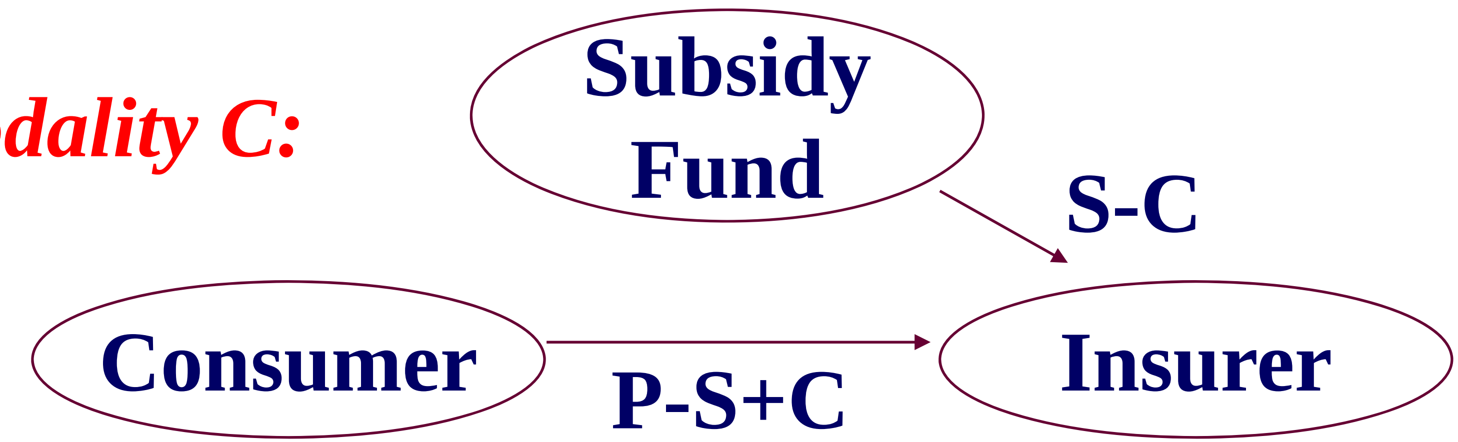


Modalities of risk equalization

Modality B:



Modality C:



C=Contribution; S=Subsidy; P=Premium

Erasmus University Rotterdam

Agenda

1. Effects of a free insurance market;
2. Taxonomy of premium subsidies:
   a. Explicit premium subsidies;
   b. Implicit cross-subsidies;
3. Some critical issues;
4. **Dutch healthcare system: a case study;**
5. Discussion questions on Australia.

4. Dutch health care system

Erasmus University Rotterdam

- health care costs 2006: >10% GNP;
- much private initiative and private enterprise;
- still much (detailed) government regulation;
- GP-gatekeeper;
- separation of finance and delivery of care;
- mandatory health insurance for the whole population.

Health Insurance Act: 01jan06

- Mandatory private health insurance for everyone;
- Annual consumer choice of insurer;
- Insurer:
  - also commercial for-profit insurers from any EU-country;
  - also allowed to sell other types of insurance.

Health Insurance Act (2)

Erasmus University Rotterdam

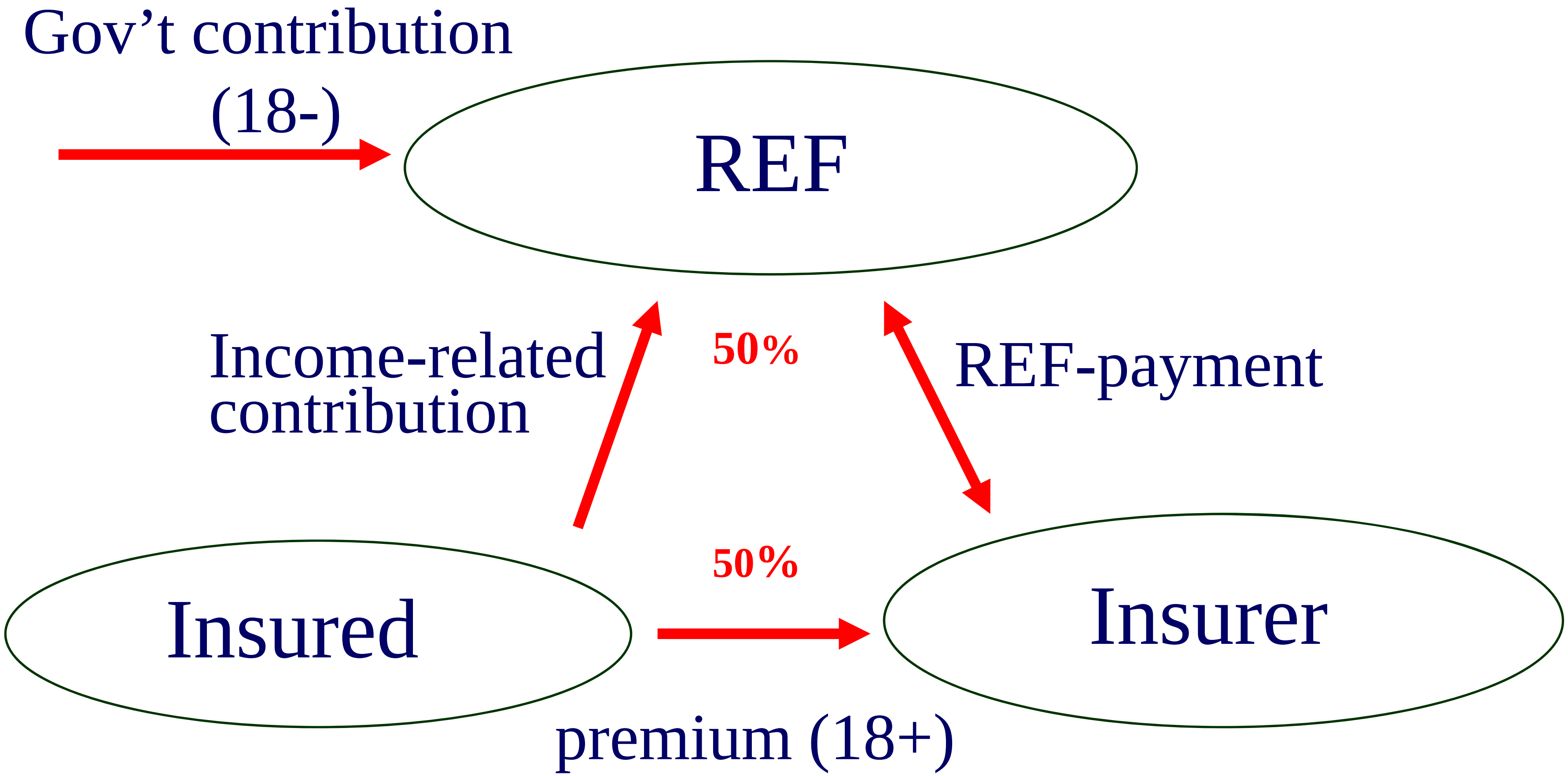
- Standard benefits package: described in terms of functions of care;
- with consumer choice:
  - in kind and/or reimbursement;
  - preferred provider arrangement;
  - voluntary deductible: 100, …, 500 euro per person 18+ per year; with a premium rebate;
  - premium rebate (<10%) for groups.

Erasmus
ERASMUS UNIVERSITEIT ROTTERDAM

Health Insurance Act (3)

- Individual insurer is assumed to be(come) the prudent buyer of care;
- Selective contracting in principle allowed;
- Open enrolment for each type of health insurance contract;
- Community rating per insurer for each type of health insurance contract;
- Risk equalization;
- Care allowances for two thirds of all households.

Risk Equalization Fund (REF)



Two thirds of all households receive an income-related care allowance
(at most € 420 per person per year)

Premium

Erasmus University Rotterdam

The average premium (the consumer directly pays to her insurer) per person of 18+ per year:

- 1988: €0
- 1998: €98
- 2000: €188
- 2003: €356
- 2006: €1060
- 2007: €1147

Risk adjusters in the Dutch REF

Year	*New risk adjuster*
1992	Age/gender
1995	Region, yes/no employee, disability
1997	Age/disability
2002	Pharmacy-based Cost Groups (PCGs) (13 PCGs and about 7% of population)
2004	Diagnostic Cost Groups (DCGs) (about 2% of pop) yes/no self-employed
2007	Multiple PCGs allowed (co-morbidity); New PCGs: mental health (3% pop.), cancer and growth hormons (20 PCGs and about 16% of population)

Erasmus University Rotterdam

Pharmacy Costs Groups (PCGs)

Erasmus University Rotterdam

- An outpatient morbidity measure based on information about chronic conditions deduced from the use of prescribed drugs.
- Extending the demographic model with PCGs substantially increased the predictive power of the model.

Additional annual REF-payment

Risk Group		Additional annual premium subsidy (in €)
PCG 0	Reference group	0
1	Asthma / COPD	876
2	Epilepsy	1051
3	Rheumatism	1176
4	Heart diseases	1495
5	Crohn's disease/ c. ulcerosa	1538
6	Stomach diseases	1932
7	Diabetes (insuline dependent)	2807
8	Parkinson	2653
9	Organ transplants	4363
10	Cancer	4796
11	Cystic fibrosis	5382
12	HIV / AIDS	11455
13	Kidney problems	18225

Diagnostic cost groups (DCGs)

The essence of DCGs lies in the allocation of people to a restricted number of groups according to the diseases diagnosed during <u>previous</u> hospitalizations and incorporating this information in the risk-equalization model.

Additional annual REF-payment

Risk Group		Additional annual premium subsidy (in €)
DCG 0	Reference group	0
7	Brain injury	1735
9	Colon cancer	2261
11	Liver disorders	3487
12	Rectal cancer	3636
13	Congestive heart failure	3578
14	Hypertension, complicated	4491
15	Neurologic disorders	5390
16	Brain / nervous system cancers	6165
19	Chemotherapy	7591
20	Diabetes with chronic complications	7288
21	Pulmonary fibrosis and brochiectasis	8603
22	HIV / AIDS	9780
23	Renal failure / nephritis	24020

Financial risk for sickness funds

The financial risk for sickness funds
(= the proportion of efficiency gains or inefficiency losses that on average is reflected in the financial result of a sickness fund):

- 1992: 0%
- 1995: 3%
- 2000: 36 %
- 2006: about 53%
- 2007: about 53%.

Groups with a predictable loss

	size	Indication predictable loss per year
Perceived health: poor/fair	20,1%	€540
At least 3 medical conditions	7,0%	€890
3-4 prescriptions in 14 days	9,0%	€280
At least 5 prescriptions in 14 days	3,3%	€1650
Contact with specialist 2 year ago	37,0%	€300
Hospital admission 2 year ago	9,6%	€760
Hospital admission 4 year ago	6,8%	€960
At least 2 Hospital admission 4-8 year ago	8,9%	€2100
Perceived health: poor/fair 5 year ago	17,9%	€490
At least 3 medical conditions 5 year ago	17,7%	€770

New (potential) risk-adjusters

- Diagnostic information not only from prior hospitalization, but from all prior medical encounters (DBCs); expected to be implemented from 2009;
- Multiyear-DCG's;
- A better indicator of invalidity (or functional heath status);
- Yes/no voluntary deductible;
- ……

The proof of the pudding…

The Risk equalization system is OK if insurers advertise:

"Chronically ill, please come to us. We have contracted the best doctors specialized in your disease!"

Agenda

Erasmus University Rotterdam

1. Effects of a free insurance market;
2. Taxonomy of premium subsidies:
    a. Explicit premium subsidies;
    b. Implicit cross-subsidies;
3. Some critical issues;
4. Dutch healthcare system: a case study;
5. **Discussion questions on Australia**.

ERASMUS UNIVERSITEIT ROTTERDAM

5. *Discussion questions on Australia*

a. Why, ***given*** a universal public health insurance system, mandatory cross-subsidies for private health insurance?

b. Why not ***risk-adjusted*** premium subsidies?

c. Why a ***competitive*** health insurance market ?

d. Who acts as the prudent ***buyer of care*** on behalf of the consumer?

5a. Why subsidies for PHI?

Why does Australia have, ***given*** a universal public health insurance system, regulations to enforce mandatory cross-subsidies among those who buy private health insurance?

Why does Australia spend, ***given*** a universal public health insurance system, about 2 billion AUD tax money on subsidies for private health insurance?

5b. Why not risk-adjusted subsidies?

Erasmus University Rotterdam

The current tools to achieve mandatory cross-subsidies for private health insurance:

a. 30% premium-related subsidies;

b. Ex-post cost-based compensations;

c. Community rating per product.

- Effects of a and b: reduction of incentives for efficiency;
- Effects of c: risk selection; and premium differentiation via product differentiation.

Why not risk-adjusted subsidies?

5c. Why <u>competitive</u> insurance market?

A competitive health insurance market:

- Health insurance is a complex product, with a lot of small print →
  → intransparant market;
- risk-rating and risk-selection;
- complex regulations;
- high administrative costs.

What is the rationale of having a ***<u>competitive</u>*** health insurance market in Australia?

5d. Prudent buyer of care: WHO?

Who acts as the prudent ***buyer of care*** on behalf of the consumer?

- Consumer / patient?
- Private health insurer?
- Government (Federal, State)?
- …….?