

Private Voluntary Health Insurance in Developing Countries: Supply Considerations

présenté à

Financement de la santé dans les pays en développement

CERDI F-Clermont-Ferrand , 1 et 2 Décembre 2005

by

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1. Motivation and objectives I

- Contribution of private voluntary health insurance to enrollment and coverage importantly depends on supply
- Little is known about behavior of (health) insurers, let alone community-based insurers (CBI)



1. Motivation and objectives II

This presentation seeks to obtain three objectives:

- (1) Define relevant dimensions of supply
- (2) Identify crucial determinants of these dimensions
- (3) Provide evidence confirming or rejecting the hypothesis of (2).

Reference: Zweifel P., with Krey B.B. and Tagli M. (2005), Supply of Private Voluntary Health Insurance, in: A. Preker (ed.), Voluntary Private Health Insurance in Low-Income Countries, Washington DC: World bank (forthcoming)



2. Dimensions and determinants of health insurance supply

Dimensions distinguished follow life of contract:

1. Scope of benefits
2. Risk selection effort
3. Loading (the price of insurance)
4. Degree of vertical integration
5. Degree of seller concentration



2.1 Scope of benefits I

Factor	Factor serves to increase (+) / decrease (-) benefit package			
	Private Insurance (Competitive Market)	Private Insurance (LIC)	Community - based Insurance (CBI)	Public Insurance (LIC)
(1) Risk aversion of insurer	+/-	+/- ↑	+ ↓/-	na
(2) Synergies among benefits	+	+	+ ↓	na
(3) Moral hazard	-	- ↓	- ↓	- ↑
(4) Diversity of preferences	+	+ ↓	+ ↓	+ ↓

↑ Reinforcement of relationship ↓ Attenuation of relationship na: not applicable



2.1 Scope of benefits II

Factor	Factor serves to increase (+) / decrease (-) benefit package			
	Private Insurance (Competitive Market)	Private Insurance (LIC)	Community-based Insurance (CBI)	Public Insurance (LIC)
(5) Diversity of risks	+	+ ↓	+ ↓	+ ↓
(6) Emergence of new health risks	+	+ ↓	+ ↓	+ ↑
(7) Regulation	+	+	+	+ ↑
(8) Fraud and abuse	-	-	- ↑	- ↓

Note: ↑ Reinforcement of relationship ↓ Attenuation of relationship na: not applicable



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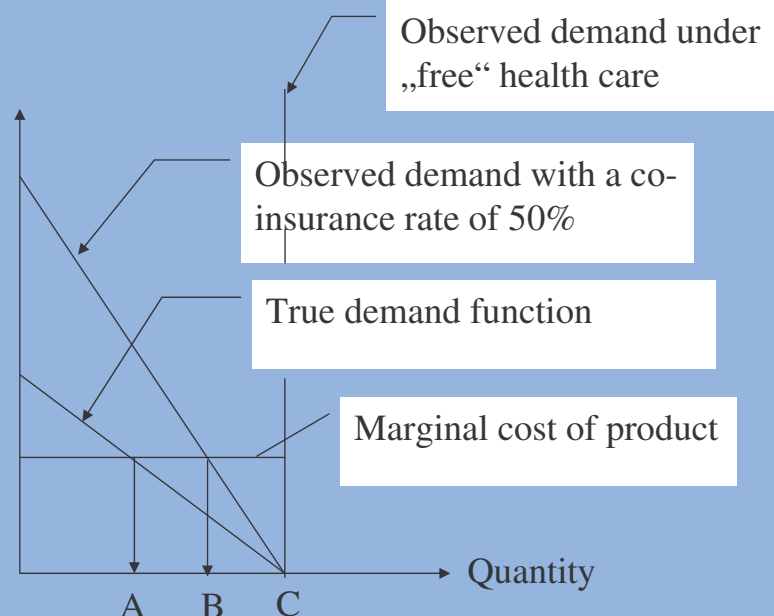
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2.1 Scope of benefits III

(3) Ex-post moral hazard as a determinant of scope of benefits

Price and marginal cost of health care

A: equilibrium quantity without insurance coverage
 B: equilibrium quantity with 50% coinsurance
 B-A: ex-post moral hazard effect with a coinsurance rate of 50%
 C-A: ex-post moral hazard effect in a scheme without coinsurance



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2.2 Risk selection effort

Factor	Factor serves to increase (+) / decrease (-) risk selection effort			
	Private Insurance (Competitive Market)	Private Insurance (LIC)	Community-based Insurance (CBI)	Public Insurance (LIC)
(1) Risk aversion of insurer	+ (0)	+ ↑	+ ↑	n.a.
(2) Moral hazard	+ (0)	+ ↓	+ ↓	n.a.
(3) Size of the benefit package	+ (0)	+	+ ↑	n.a.
(4) Diversity of risks	+ (0)	+	+ ↓	n.a.
(5) Access to risk information	+ (0)	+ ↓	+ ↓	n.a.
(6) Sellers' concentration	- (0)	-	- ↑	n.a.
(7) Regulation	+ (0)	+	+	n.a.



2.3 Loading – true price of insurance I

$$P(I) = \text{net premium} + \text{loading}$$

$$= \pi(V)(1-c)I + \mu\pi(V) + \lambda\{\pi(V)(1-c)I\}$$

$$\text{Amount of loading} = \mu * \pi(V(I)) + \lambda * (1-c) * \pi(V(I)) * I$$

P : premium, depends on benefits I (in money units)

π : loss probability, depends on preventive effort V

c : rate of coinsurance, $c < 1$

μ : loading factor for variable administrative expense

λ : loading factor for acquisition cost, risk, and profit (Zweifel and Breyer, 1997, ch. 6.2)



2.3 Loading – true price of insurance II

	Factor serves to increase (+)/decrease (-) the amount of loading			
Factor	Private Insurance (competitive market)	Private Insurance (LIC)	Community-Based Insurance (CBI)	Public Insurance (LIC)
(1) Administrative expenses (including capital charge)	+	+	+ ↓	+
(2) Reinsurance	+ / -	+ / - ↑	+ / - ↑	n.a.
(3) Pool size	+ / -	+ / -	+ / -	-
(4) Benefit package	+	+	+	+
(5) Share of high-income members	+ / -	+ / - ↓	+ / - ↓	+ / -



Factors affecting the net price of health insurance (cont'd)

	Factor serves to increase (+)/decrease (-) the amount of loading			
Factor	Private Insurance (competitive market)	Private Insurance (LIC)	Community-Based Insurance (CBI)	Public Insurance (LIC)
(6) Copayments and caps	-	-	-	- ↓
(7) Moral hazard	+	+ ↓	+ ↓	+ ↑
(8) Quality and proximity of health care services	+	+ ↑	+	+
(9) Regulatory framework	+ / -	+ ↑ / -	+ ↓ / -	+ ↑ / -
(10) Fraud and abuse	+	+ ↑	+ ↓	+ ↑

Note: ↑ Reinforcement of relationship, ↓ Attenuation of relationship, n.a. not applicable



2.4 Degree of vertical integration

- Note: vertical integration can originate with insurers or healthcare providers
- Examples for insurer-driven vertical integration are Health Maintenance Organizations and Preferred Providers Organizations
- Examples for provider-driven vertical integration are
 - Blue Cross/Blue Shield plans in the U.S.
 - Apollo hospitals group in India
 - Kisiizi hospitals in Uganda



2.5 Degree of seller concentration

- Law of large numbers believed to induce returns to scale in insurance
- However, the empirical evidence points to constant returns to scale (Fecher, Perelman, and Pestieau, 1991)
- Krugman and Venables (1999) emphasize positive externalities, which may favor CBI in rural areas
- No tendency to national monopoly !



3. Concluding remarks

- On the whole, private health insurers are predicted to offer less comprehensive benefits in low-income countries than in industrial ones.
- The amount of risk selection effort is likely to be particularly marked in low-income countries to the extent that premium regulation tends toward uniformity.
- The loading tends to be high in low-income countries, mainly due to fraud and comprehensive regulation
- In low-income countries, CBI schemes may be able to vertically integrate thanks to good reputation with providers
- The degree of seller concentration likely is high in low-income countries, due to high barriers to entry.

