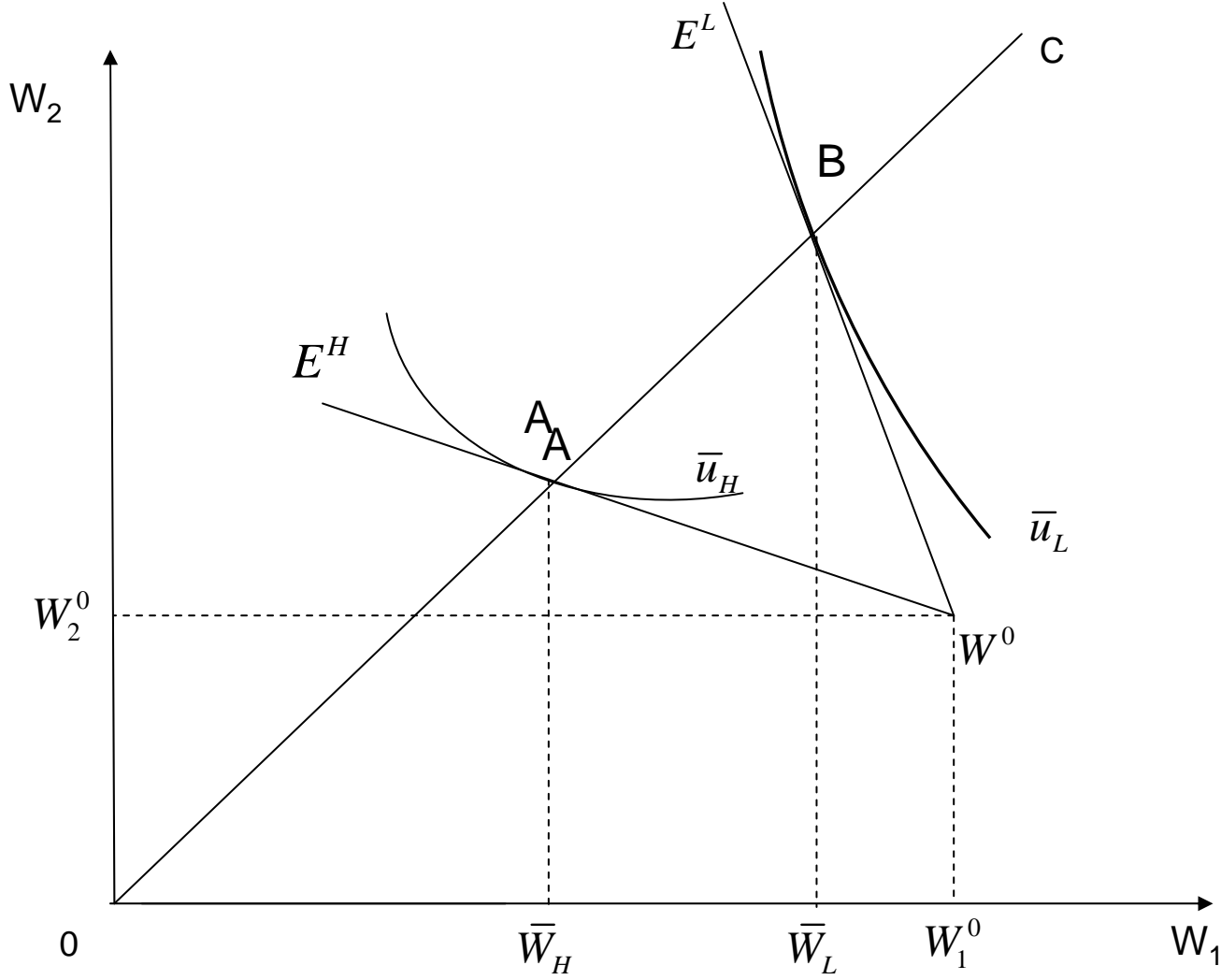
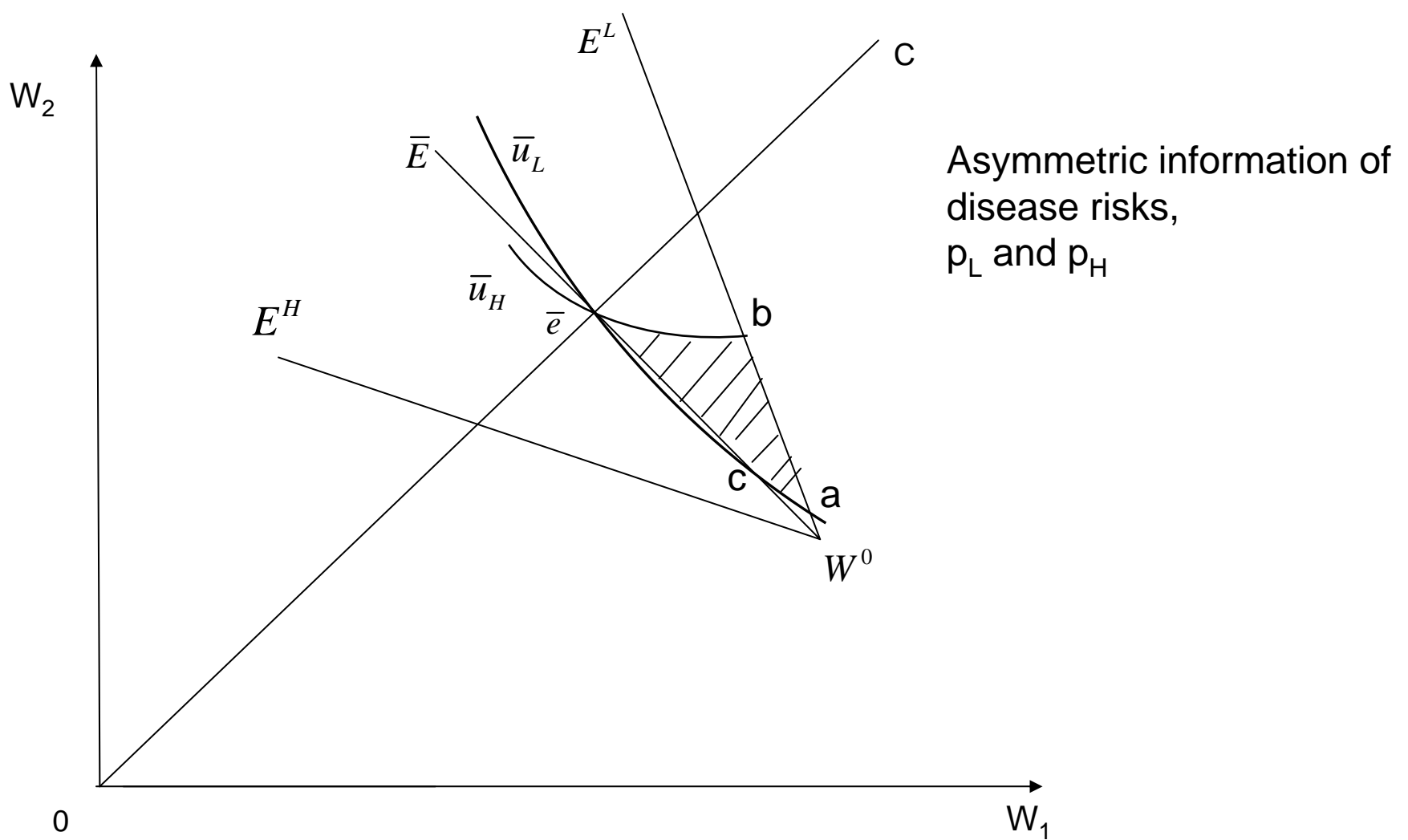


A. Explain to what extent health insurance contracts in equilibrium may depend on whether the insurance company has information about an individual's health risk.

Since equilibrium is explicitly asked for in the text, the exposition should be detailed enough to allow for a proper discussion of how the equilibrium may be affected



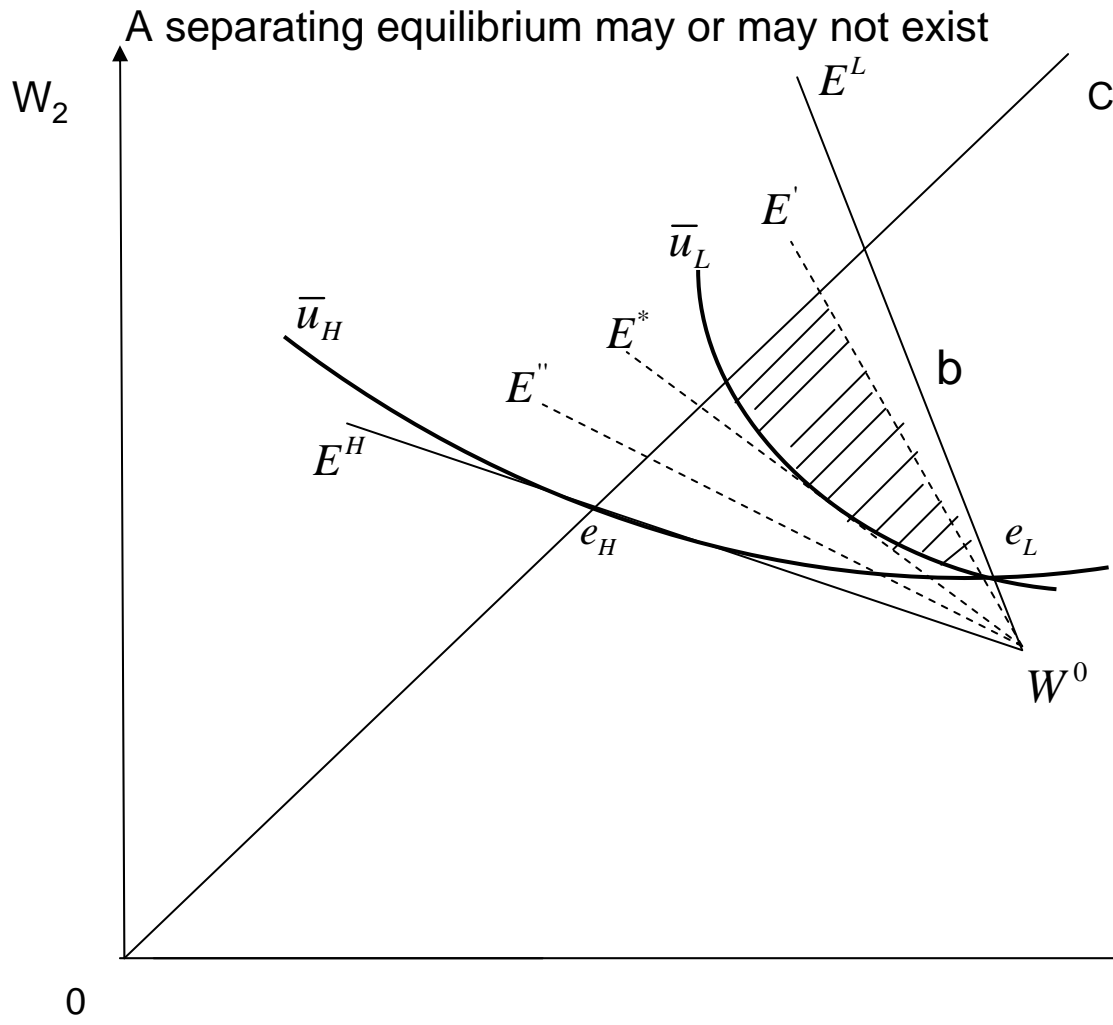
Full information of
disease risks,
 p_L and p_H :
Separating equilibrium



Assume that \bar{e} is offered. An insurer would then find it feasible to offer a new contract if:

- it would not make a loss
- it would be preferred to \bar{e} by L
- it would not be preferred to \bar{e} by H

Any point between a and b satisfies these conditions - no pooling equilibrium exists.



Three conditions:

- (i) Self-selection condition
- (ii) Break-even condition
- (iii) No entry condition

e_L and e_H satisfies (i) and (ii), and may or may not satisfy (iii),
and hence, may or may not be an equilibrium

E' does not satisfy (iii), while E'' does

Boundary - E^*

B. Discuss from an economic perspective advantages and disadvantages of voluntary versus compulsory health insurance

Distinguish between full information and asymmetric information

Asymmetric information: Compulsory insurance may imply a Pareto-improvement. When?

Full information: Compulsory insurance with equal premiums may be preferred from equity reasons.

It may also be justified behind the veil of ignorance: You do not know whether you are going to be L or H.

Free rider – rely on charity care

Less individual choice regarding the content of the contract

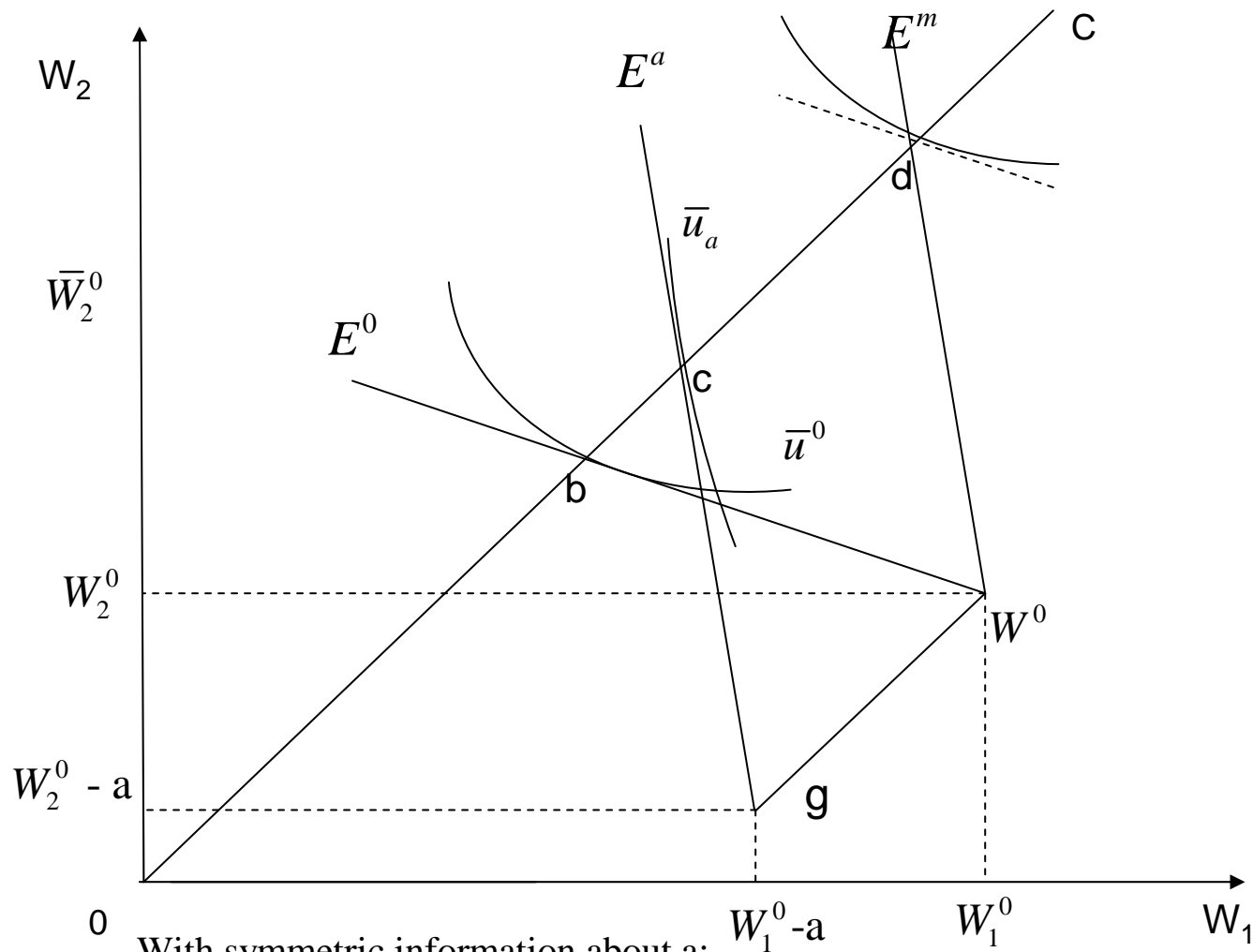
Loss of efficiency because of less competition in the insurance market.

Less incentives for prevention with compulsory insurance

Is there an optimal mix of compulsory and voluntary insurance?

C. An individual's lifestyle and preventive actions may influence the probability of disease. Discuss to what extent the option of preventive actions may influence the equilibrium in an insurance market.

Again: Since equilibrium is explicitly asked for in the text, the exposition should be detailed enough to allow for a proper discussion of how the equilibrium may be affected



With symmetric information about a:

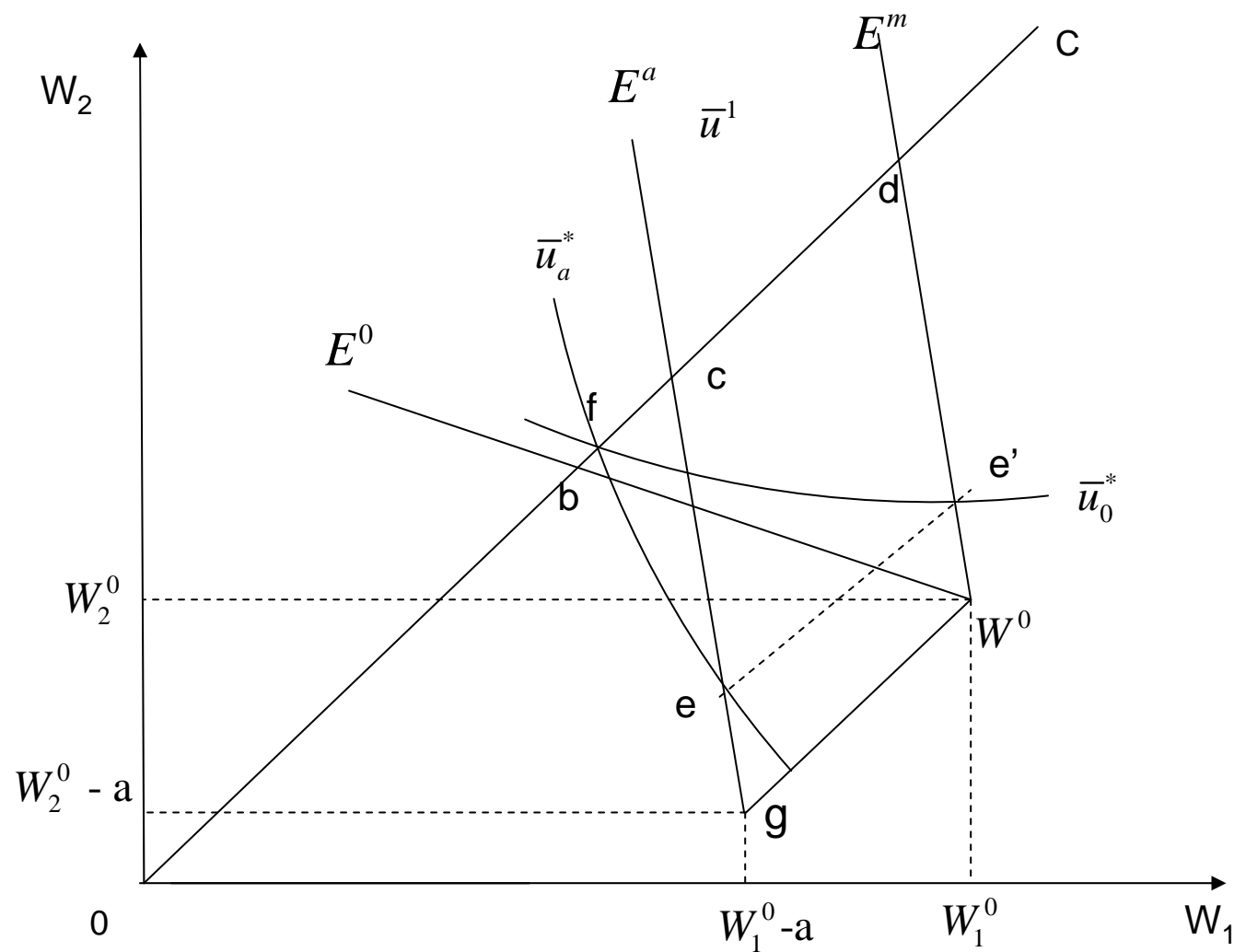
Contract b is offered without prevention

Contract c is offered with prevention

Contract c is chosen

With asymmetric information: The individual prefers d, which is not feasible - why not?

The moral hazard problem



The solution to the moral hazard problem: Let the individual carry some of the risk
 Less than full insurance $C^* < L$ - positive patient copayment

If the contract denoted by e is offered, the individual is equally well off by undertaking prevention compared to just pretending (e'), since $\bar{u}_0^* = \bar{u}_a^*$. Hence, e denotes the highest coverage that could be offered.

- By letting the individual carry some of the risk himself ($L-C^*$), he gets an incentive to do prevention even when cheating is still an option.
- But how could we know that an individual in general would prefer e to W^0 or b ?
 - High 'a' and small $p_0 - p_a$ makes prevention less likely
 - Could be analysed more in detail
- What is the expected impact of a subsidy of prevention offered by the insurer? Have to be subsidy in kind – or in cash related to an activity that is contractible - why?