

## A Compendium of Theoretical and Empirical Results by Various Subsets of

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- Pierre-André Chiappori (Chicago)
- Bruno Jullien (Toulouse)
- Bernard Salanié (Paris)
- François Salanié (Toulouse)



## When Does Adverse Selection Matter in Theory ?

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- In the Principal-Agent model : always (underefficient outcomes).
- What of competitive equilibria à la Rothschild-Stiglitz (RS) ?
- Chiappori-Salanié-Salanié (mimeo 2004) : if values are private (for any given contract, uninformed's objective does not depend on informed's type) then *adverse selection does not change the set of competitive equilibria*.
- but with common values (as in RS model) it does.





## **A General Theoretical Model**

From Chiappori-Jullien-Salanié-Salanié (f'ing  
Rand)



## A Revealed Preference Argument

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- definition :  $C_2$  covers more than  $C_1$  iff  $R_2 - R_1$  is non-decreasing
- **Proposition 1** : if insuree  $\theta$  chooses  $C_1$  over  $C_2$  even though  $C_2$  covers more than  $C_1$ , then

$$P_2 - P_1 \geq \int (R_2(L) - R_1(L)) dF_1^\theta(L)$$

where  $\theta$  chooses  $F_1^\theta$  under  $C_1$ .

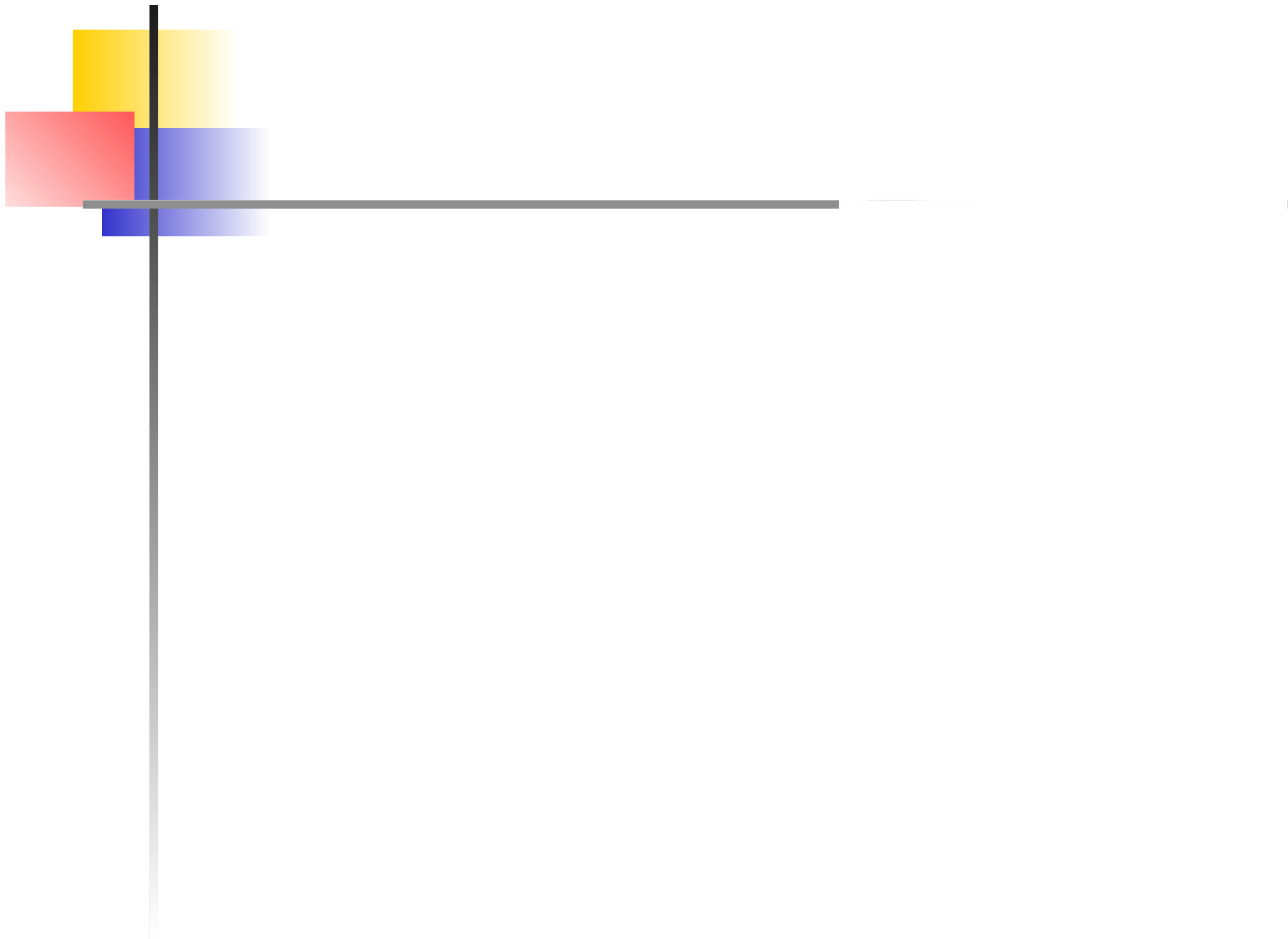


## Proof of Proposition 1

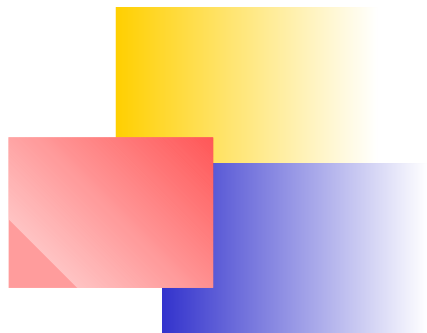
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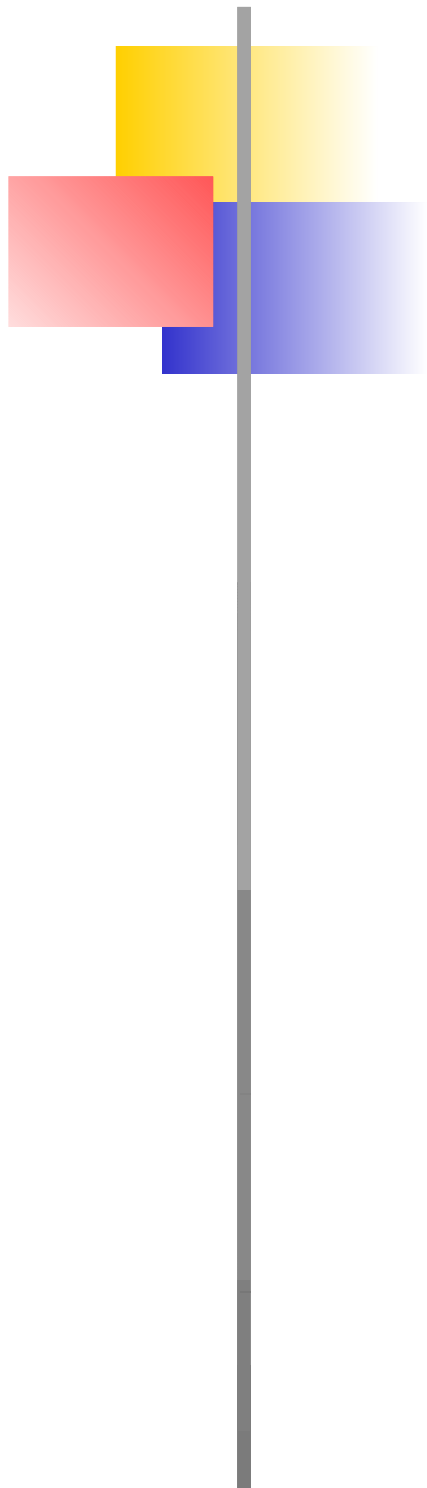
- define wealth under  $C_i$  as
$$W_i(L) = R_i(L) - P_i - L$$
- demean it under  $F_1^\theta$  :

$$X_i(L) = W_i(L) - \int W_i(L) dF_1^\theta(L)$$







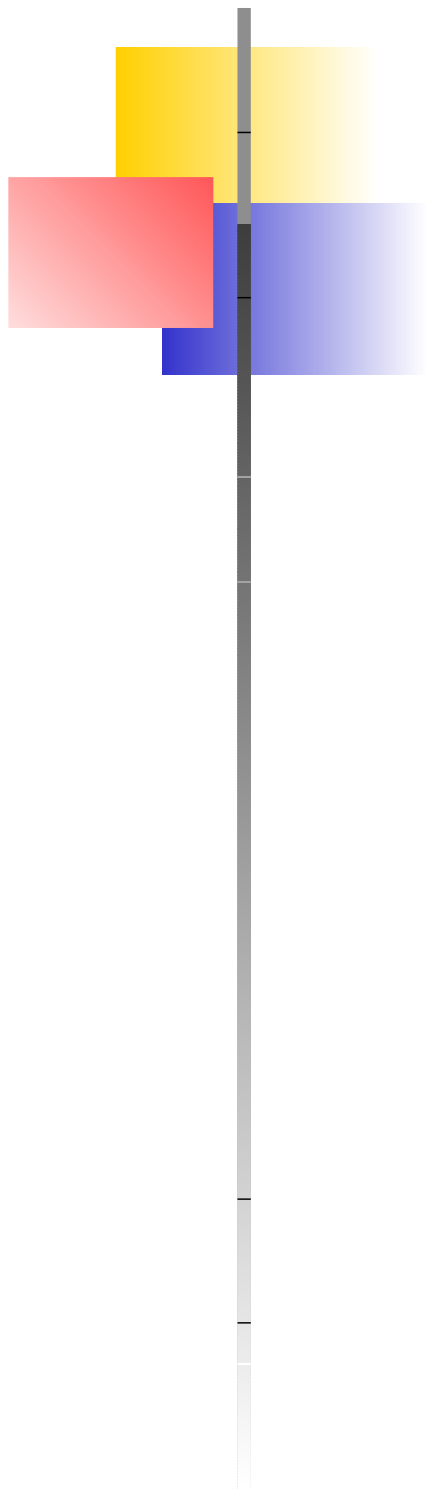




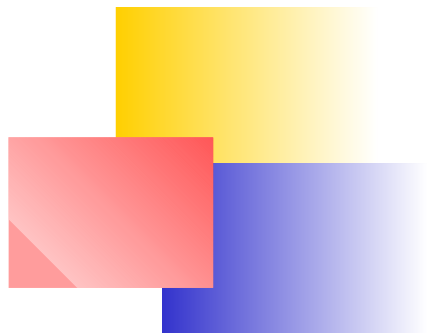
## Interpretation

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- a rejection of Proposition 1 would point towards
  - risk-loving behaviour by insurees
  - optimistic beliefs
  - irrational behaviour
- → no evidence for any of these.









## Public Risk-aversions

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- assume nothing on market structure, but
- insurees' risk-aversions are publicly known
- then with 0-1 risks, we get the corollary again : the contract with higher coverage has higher ex post risk
- example : the monopoly insurer model of Stiglitz (RES 1977).

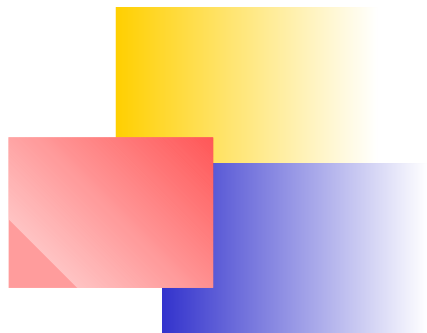


## CJSS Test of Proposition 2

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- uses the same data, the same two contracts
- allows for taxation and loading factors
- again builds 64 cells and computes the standardized  $\zeta(X)$
- finds that their distribution does not significantly differ from  $N(0, 1)$
- which rejects Proposition 2.







## The Need for a New Model

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- it cannot be perfectly competitive
- it must give a crucial role to private risk-aversions
- —→ Jullien-Salanié-Salanié : adverse selection (private risk-aversions) + moral hazard (choice of effort) + monopolistic insurer.



## Predictions of the New Model

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- under weak assumptions, single-crossing property  $\longrightarrow$  more risk-averse insurees buy more coverage
- standard results of adverse selection models hold :
  - the highest type (most risk-averse) has undistorted coverage
  - all other types have lower coverage than under public risk-aversions
  - all but the least risk-averse have an informational rent.





## What About Other Insurance Markets ?

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- no risk-coverage correlation on other car insurance markets
- or on life insurance markets (Cawley-Philipson AER 1999)
- positive correlation in unemployment mortgage insurance (Bach 1999).

