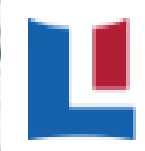


Behavioral Insurance : Theory and Practice

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People's decisions are always made rational?



No



Yes



Maybe



Why do people make irrational decisions?

- Would more people want to buy insurance after a flood?
- After a few years without flooding, would people want to terminate their contracts?

Theory of Behavioral Insurance



Traditional Economics Theory

- **People always act sensibly**
 - People have complete information
 - Making rational actions to choose the one with the greatest expected utility among the options

Will it be?



Allais and Ellsberg's Paradox

- **People do not always make rational decisions.**
- **They could not explain why.**

Behavioral Economics



- **Kahneman and Tversky published Prospect theory in 1979**
 - Presenting empirical research results that the decision-maker's selection process violates the expected utility theory
 - Describing abnormal phenomena that cannot be explained by expected utility theory
- **Behavioral economics began with psychologists**
 - Incorporating lessons from psychology into economics



Prospect Theory_Value Function

① Reference point dependence

- Everyone has a different reference point
- Value is measured as a change from a reference point

Who will be happier when assets change in the past year?

A: From 400 mil. to 300 mil., B: From 100 mil. to 200 mil.

- Traditional economics: A is happier
- Behavioral economics: B is happier
- Reference point: A is 400 mil., B is 100 mil.



Prospect Theory_Value Function

② Loss Aversion

Subjective value of loss $>$ Subjective value of profit

Negative value when lose \$100 $>$ Positive value when earn \$100

Prospect Theory_Value Function

③ Diminishing sensitivity

When the size of profit or loss is small, it is sensitive to the change of the value and has a great influence on the subjective value, but the effect on the subjective value decreases as the value of profit or loss increases.

Value of 100 profits obtained twice in a row $>$ Value of 200 profits at one time

Practice of Behavioral Insurance



Framing Effect

Which product will you choose?

Insurance 1(Negative Frame)

- Premium is \$1,000
- \$600 deductible

Insurance 2(Positive Frame)

- Premium is \$1,600
- Not deductible
- \$600 refund in case of no accident

Framing Effect

- Intention to purchase insurance

Insurance 1 < Insurance 2
44% 68%



Status-quo Bias:

Default option of retirement pension

- Retirement pension was first introduced in the U.S.
- Workers subscribed to retirement pension if they wanted

➔ Subscription rate was very low

- **Introduced default option(Sep. 2001)**

➤ If not want to join a retirement pension, withdraw it within 90 days

➔ Subscription rate increased considerably



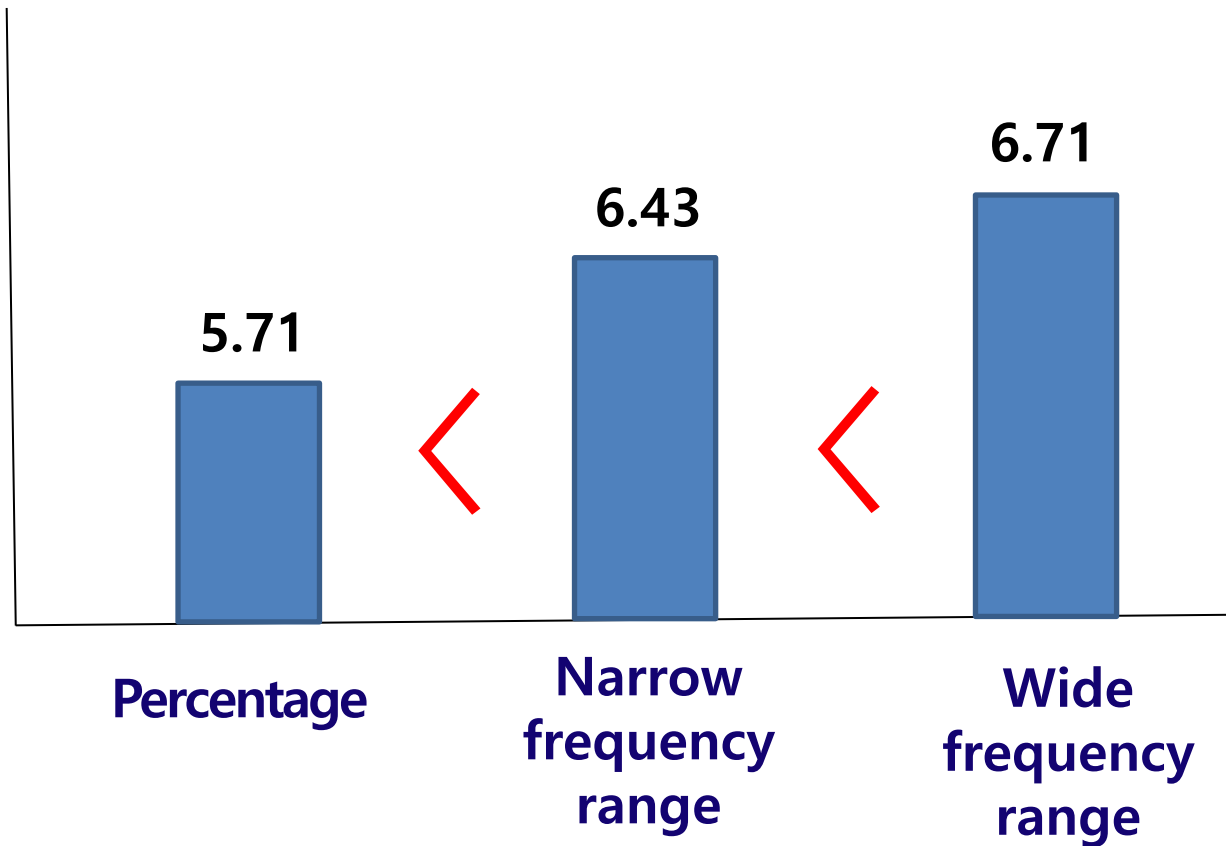
Numerical Information and Risk Perception

How dangerous do you feel about disease A?

- Group 1
Every year, **12%** of adults die of disease A
- Group 2
Every year, **12 out of 100** adults die of disease A
- Group 3
Every year, **1,200 out of 10,000** adults die of disease A

Numerical Information and Risk Perception

Degree of risk



Thank You !!

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