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The Willingness to Pay, Accept, and Retire

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The decision problem of retirement timing

Retirement decision

When should I retire and claim social security benefits?

Incentive structure

Which reduction in benefits do I accept to retire early?

Choice architecture

How is the decision problem presented to me?

Motivation

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Willingness to pay and willingness to accept

- Willingness-to-pay (WTP):

maximum buying price you are willing to pay for a good that is not in your possession.

$$ (WTP) → Market
← Good

- Willingness-to-accept (WTA):

minimum selling price you are willing to accept for a good that is in your possession.

← $$$ (WTA) Market
Good →

Disparity between WTA and WTP

- WTA and WTP have been elicited for many goods (e.g., coffee mugs, chocolate, pens, health risks, public goods, lotteries)
- in general WTA >> WTP (by a factor of 2 to 100)
  Kahneman, Knetsch and Thaler (1990), Horrowitz and McConell (2002)

  → apply the concept to the retirement decision

Background

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Typical structure of social security for retirement

In the U.S. and Germany (and many other countries)…

…employees contribute to social security during work live
…obtain retirement benefits after a claiming age they choose
…there is a mandatory or full retirement age (FRA), as well as an
   earliest and latest possible claiming age
…benefits depend on accumulated contributions and claiming age
…early claiming leads to a reduction in retirement benefits

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Example of social security information

Pension benefits that can be paid if the full retirement age is reached amount to **736,79 EUR** per month. For this calculation only the contributions until today are taken into account. You will **reach full retirement age on 03.08.2017**.

If you contribution until you reach full retirement age would amount to the average contribution of the last five years, pension benefits would amount to **882,40 EUR** per month at full retirement age.

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What do people do?

22/01/2016

7

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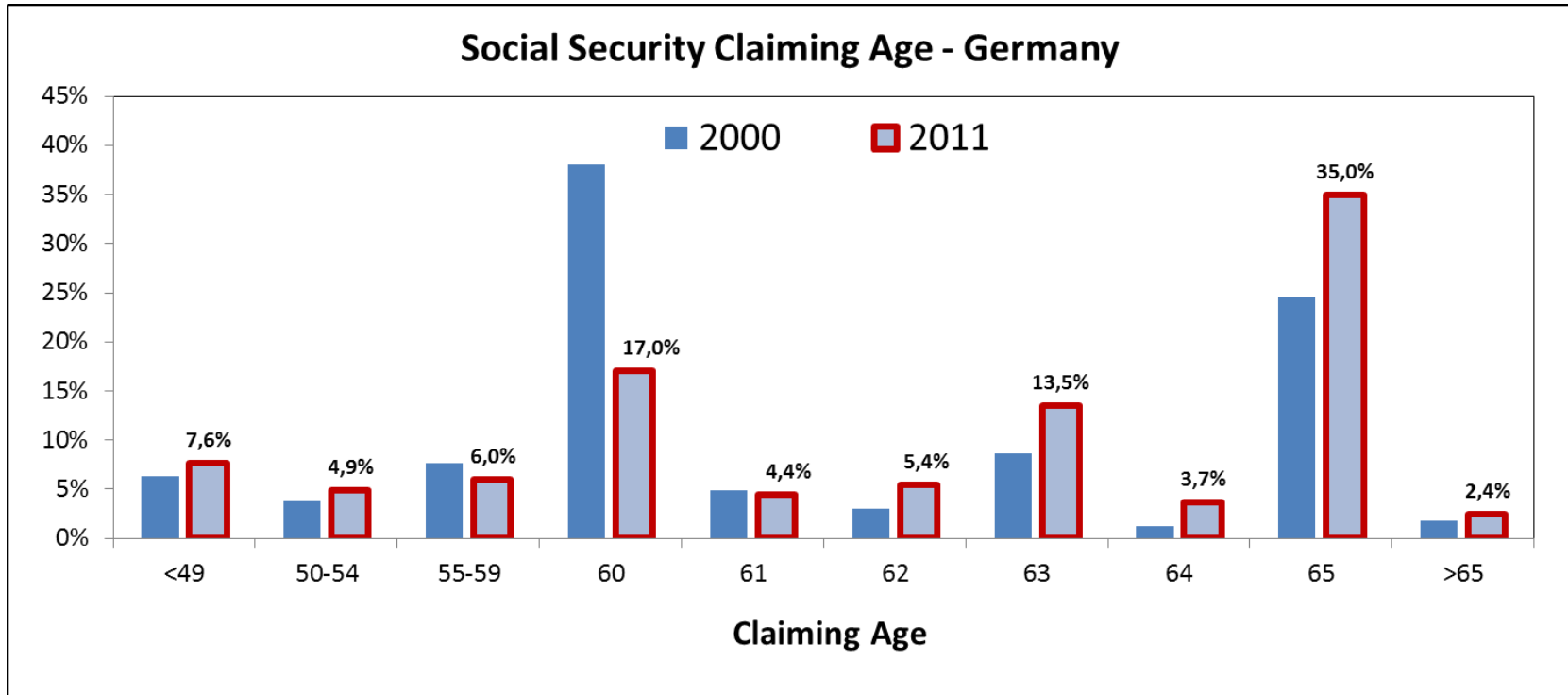
Framing the retirement decision

1) WTA frame

Suppose you have the opportunity to retire at age 63. At this time you would receive a pension of EUR [hypothetical retirement benefits] per month. Please imagine that you would be able to delay retirement by four years and retire at age 67. This would lead to an increase in monthly benefits. What would the minimum monthly increase have to be, so that you would be willing to delay retirement from age 63 to age 67?

2) WTP frame

Suppose you have the opportunity to retire at age 67. At this time you would receive a pension of EUR [hypothetical retirement benefits] per month. Please imagine that you would be able to speed up retirement by four years and retire at age 63. This would lead to a decrease in monthly benefits. What maximum amount of monthly benefits would you be willing to give up in order to be able to retire at age 63 instead of age 67?

Other features of the experiment

- between subjects design (WTA or WTP)
- assumption: "early retirement" represents the good in a money-good exchange
- to levels of hypothetical retirement benefits (65% and 110% of current income), within subjects
- loss aversion, risk aversion (Likert scales)
- demographic variables
- control variables (life expectancy, planned retirement age, financial literacy, private pension, etc.)

Hypotheses

H1a: The reservation price for early retirement in the WTA treatment will be significantly higher than the reservation price in the WTP treatment.

H1b: Participants in the WTA treatment group are more likely to choose early retirement than participants in the WTP treatment group.

H2a: The more loss averse participants are, the higher is their WTA/WTP ratio.

H2b: The increase of the WTA/WTP ratio in loss aversion is caused by an increase of the WTA and a decrease of the WTP.

Results

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Descriptive statistics

The experiment is conducted as an online survey in cooperation
with the FAZ, a major German newspaper
➜ featured online and in print
➜ 3,077 participants

Variable	Mean	Std. Dev.
Age	43.04	14.24
Gender	0.84	0.37
Income	3,449.10	3,164.02
Number of Children	0.87	1.20
Number of Grandchildren	0.18	0.84
High School Degree	0.91	0.29
University Degree	0.66	0.47
Married	0.51	0.50
Retired	0.09	0.28

Results

WTA and WTP

Results

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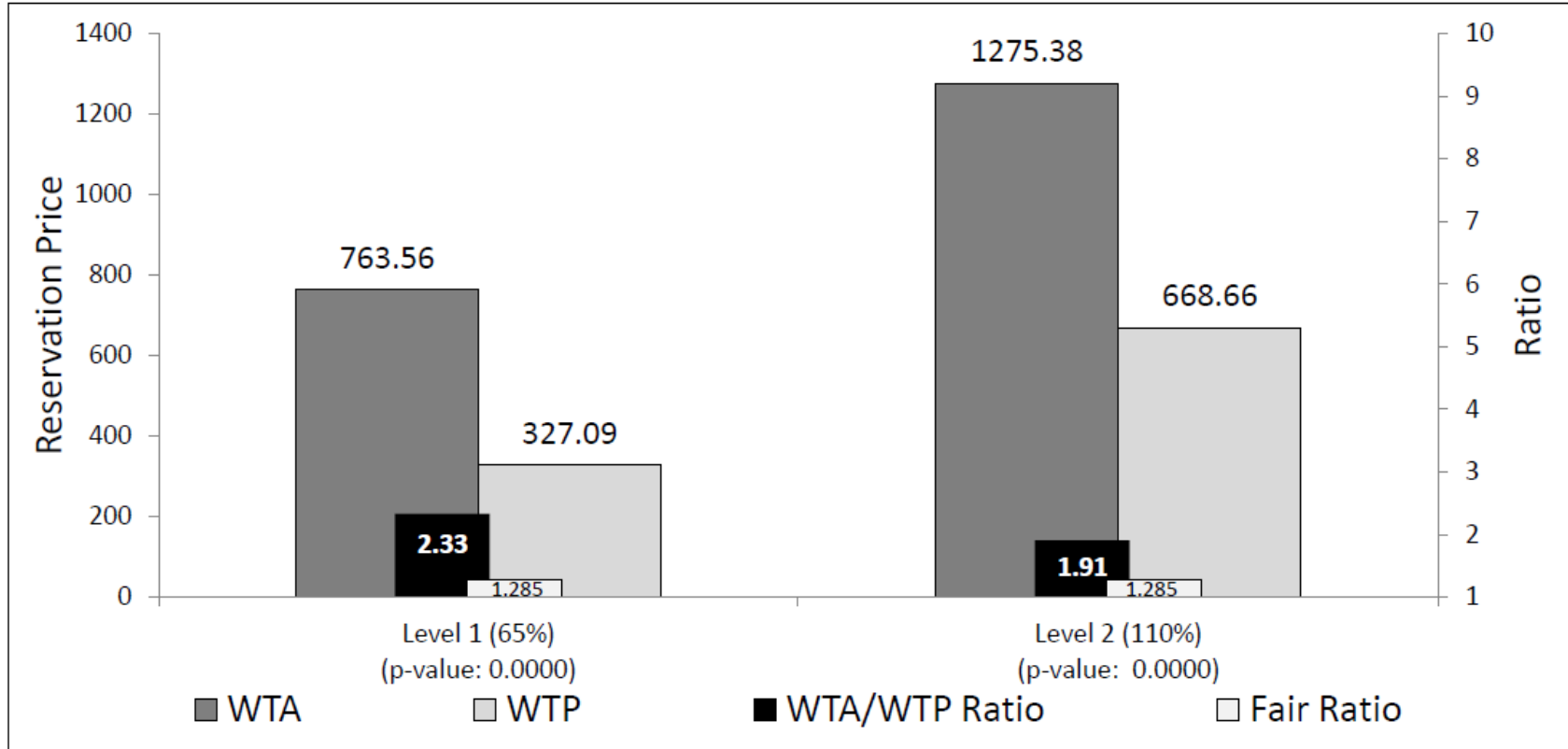
Could this affect the retirement decision?

➔ depends on what the actual "market price" (= conversion rate offered by social security) is

WTA or WTP ≥ market price   => early retirement
WTA or WTP < market price   => late retirement
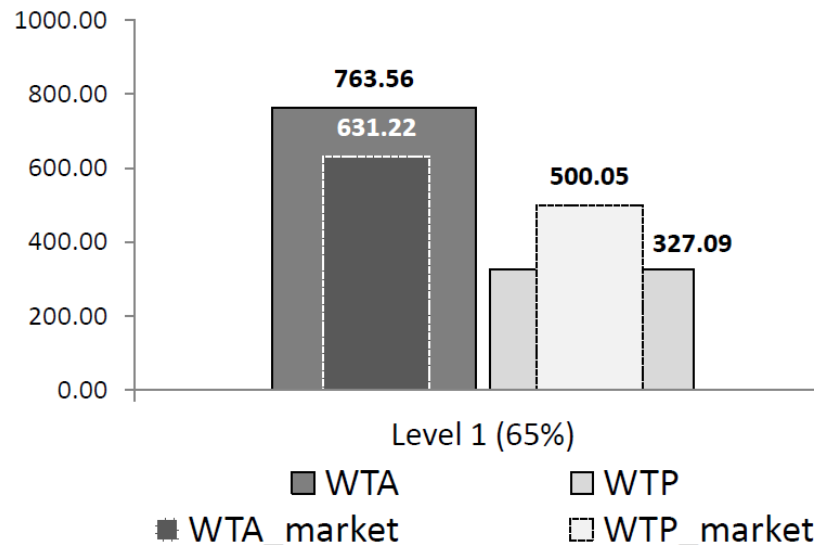
Under WTA frame, 51% would retire late,
under WTP frame 81%

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The impact of loss aversion on WTA/WTP
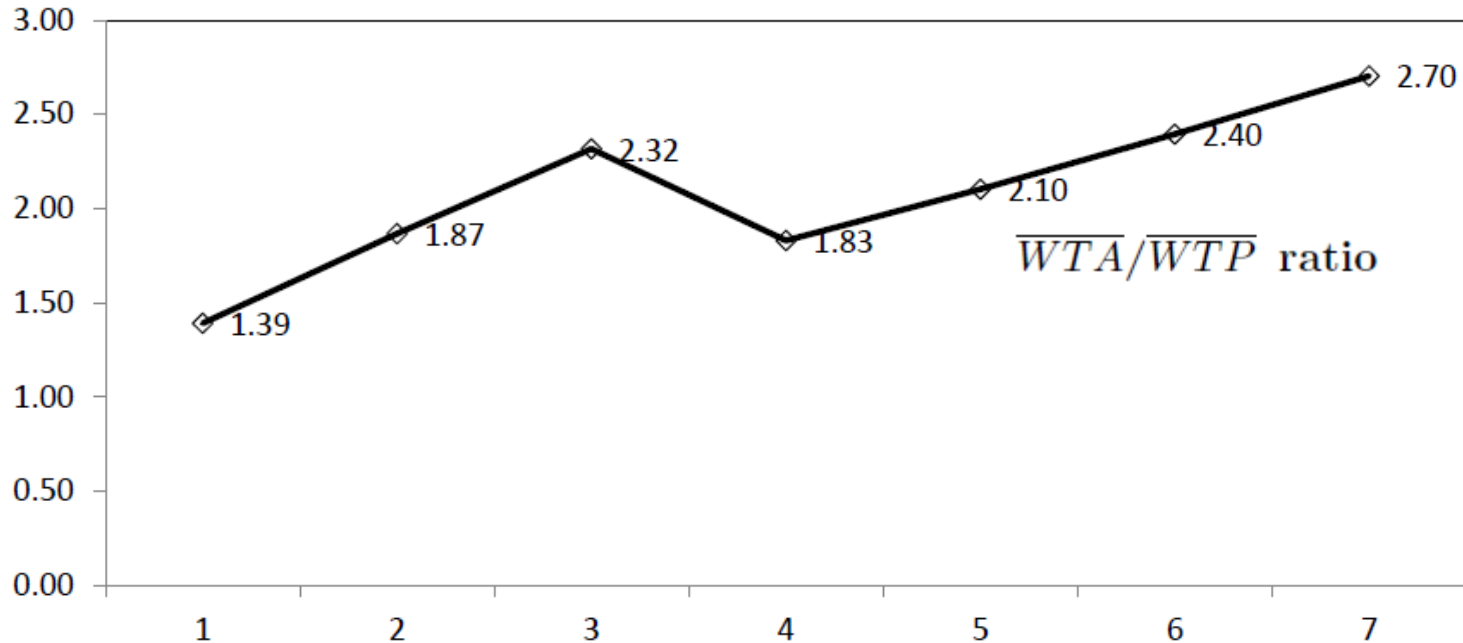
"I am very afraid of losses" (agreement on Likert scale 1-7)

Results

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Channel of loss aversion

Literature on the endowment effect:

Loss aversion for good, not for money ("intended for exchange")

Kahneman, Knetsch and Thaler (1990), Kahneman and Novemsky (2005)

⬆ WTA ⬌ WTP

Alternative view:

Loss aversion for both, good and money

Bateman et al. (1997, 2005)

⬆ WTA ⬇ WTP

⬌ WTA ⬇ WTP

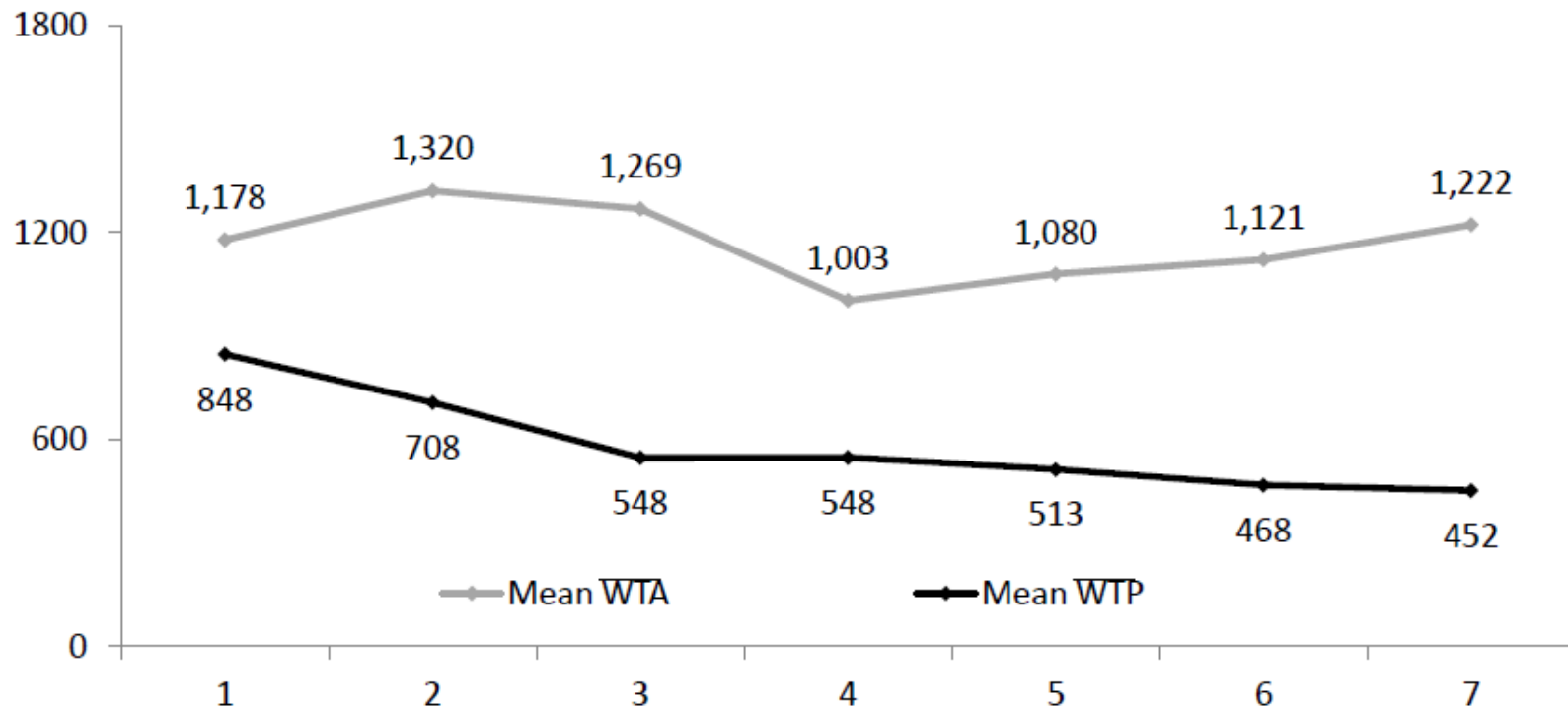Specific finding for decisions on time or leisure:

Small loss aversion and weaker endowment effect

Abdellaoui and Kemel (2014), Tuncella and Hammitt (2014)

Loss aversion reduces WTP

- WTP decreases strongly and monotonically with loss aversion
- no significant effect on WTA

Results

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Robustness: SAVE study

16. Wenn Sie im Alter voraussichtlich eine Rente der gesetzlichen Rentenversicherung beziehen werden: Würden Sie im Austausch für die Möglichkeit, ein Jahr früher in den Ruhestand zu gehen, auf einen Teil Ihrer Rente verzichten?

Ja, und zwar auf .... % meiner Rente

Nein ....

Weiß nicht ....

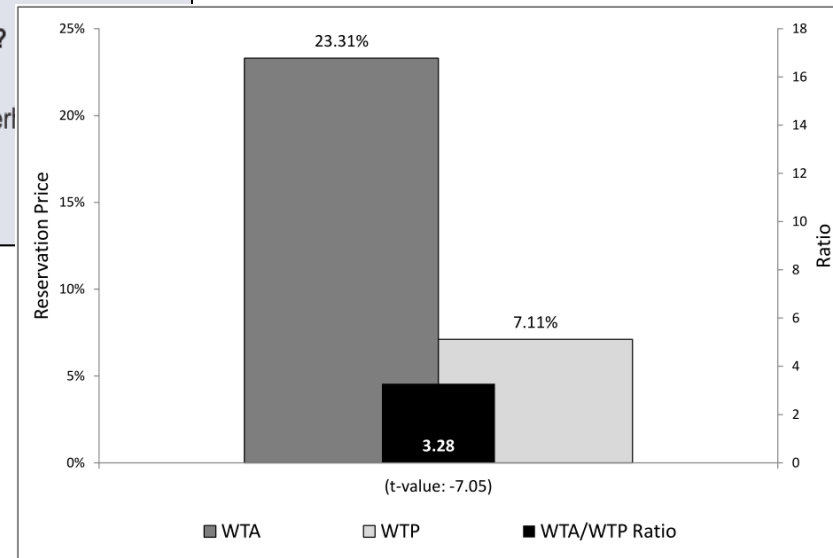Trifft nicht zu, werde voraussichtlich keine GRV-Rente beziehen .... ➜ Frage 23

17. Wären Sie im Austausch für eine höhere GRV-Rente bereit, ein Jahr länger zu arbeiten?

Ja, wenn meine Rente sich dadurch um .... % erl

Nein ....

Weiß nicht ....

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"Nudge" people into later retirement?

Result: Presenting information in a WTP frame can induce later
claiming of retirement benefits

- many countries have raised the FRA (to 67 in the U.S. and GER)
- effective retirement age also increased, but still < FRA
- WTP frame might push effective retirement age closer to FRA

Should policy makers do it?

➔ motivation for change in choice architecture different than for raise of FRA (lower the burden on social security)

➔ assumption: fair conversion rate (market price) for early retirement = no direct costs to social security

Reasons for later retirement (or later claiming)

- higher implicit rate of return in social security than for alternative low risk investments
- later retirement creates tax revenues
- early retirement increases poverty risk and dependence on other sources of social security
- early retirement diminishes the overall workforce of an economy

However, it is also argued that

- early retirement helps the young to enter the workforce
- probably beneficial for countries with high youth unemployment

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What is currently done?

The European Commission in a white paper states its goal to

"review good practice with regard to individual pension statements with the aim of encouraging Member States to provide better information to individuals for their retirement planning and decisions on how much to save through supplementary pension schemes."

➔ How should information be presented?

Examples:

Old U.S. social security statements resemble WTA frame

Since 2009 neutral presentation

German social security information rather WTP frame

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Online tool of the CFPB

Age 65 **reduces** your monthly benefit by **13%**
Compared to claiming at your full benefit claiming age.

By age 85, an average lifespan, your total benefits will be
**$347,040** (in today's dollars)

About your early benefit claiming age:
- Earliest age you can claim your benefit is 62.
- If you claim your benefit before your full claiming age, it will be reduced.

Remember, claiming age here refers only to your Social Security retirement benefit, and not when you decide to stop working or apply for Medicare.

Learn how estimates are calculated.

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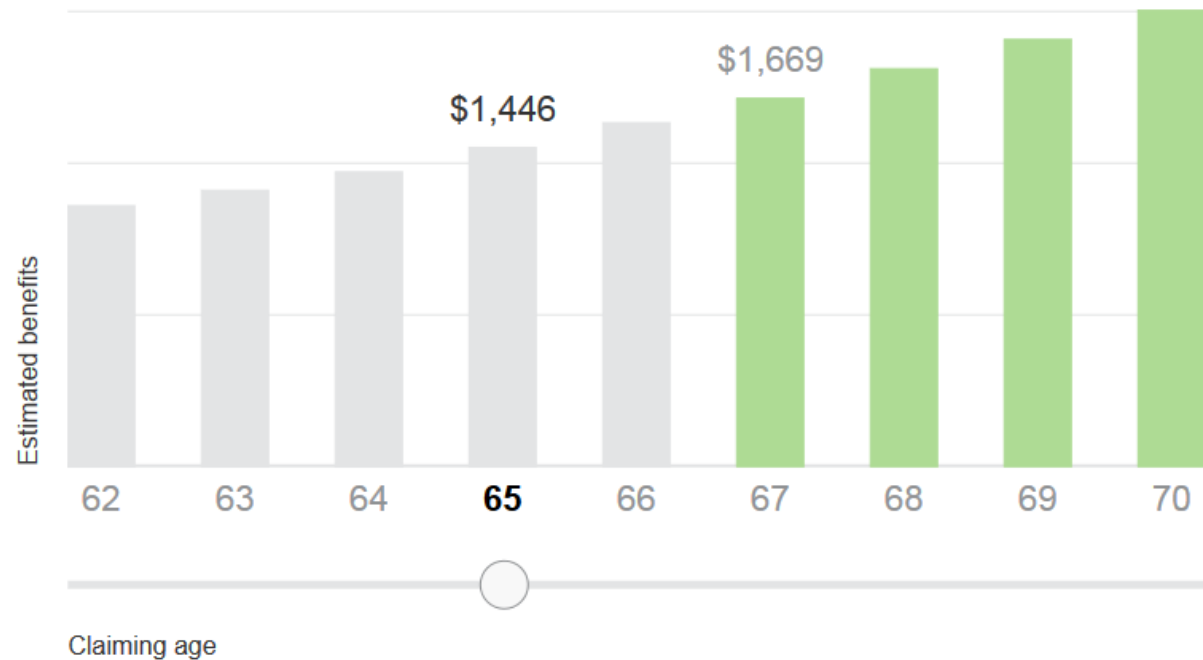
Conclusion

- the retirement timing decision is one of the most important financial decision in later life
- retirees are susceptible to decision framing either as WTA or WTP decision
- they demand more compensation if early retirement is their reference point, i.e., WTA > WTP (WTA/WTP ratio is about 2)
- the WTA/WTP positively depends on loss aversion through the channel of a lower WTP

This offers many possibilities of choice architecture, in particular as many countries are developing online tools to retrieve retirement information (EU, 2013)