

Behavioral economics

- There are characteristics of decision problems that make it very likely that revealed preferences \neq normative preferences EVEN when markets work and people are well informed and educated (in Camerer et al)
- What are these characteristics? (in Beshears, Choi, Madrian, Laibson)

These are

1. There is intertemporal choice with immediate gratification
2. Choice is complex
3. There is a passive choice or prevalent social norm
4. No/little possibility to learn from mistakes
5. Third party marketing (= behavioral industrial organization topic)

1) There is intertemporal choice with immediate gratification

Intertemporal choice

- Any choice where there is a trade off between current and future wellbeing
- “You can’t have your cake and eat it”
 - > Intertemporal utility maximization, Samuelson 1937
 - > However, note that Samuelson remarks that it is unlikely that real people behave according to “his” model

Immediate gratification

- One of the possibilities to choose from gives you instantaneous utility

Health related behavior

Choosing Today

Eating Next Week

Time

If you were
deciding **today**,
would you choose
fruit or chocolate
for **next week**?



Patient choices for the future:

Choosing Today

Eating Next Week

Time

Today, subjects typically choose fruit for **next week**.

74%
choose
fruit



Choosing fruit vs chocolate

Choosing and Eating
Simultaneously



If you were
deciding **today**,
would you choose
fruit or chocolate
for **today**?



Impatient choices for today

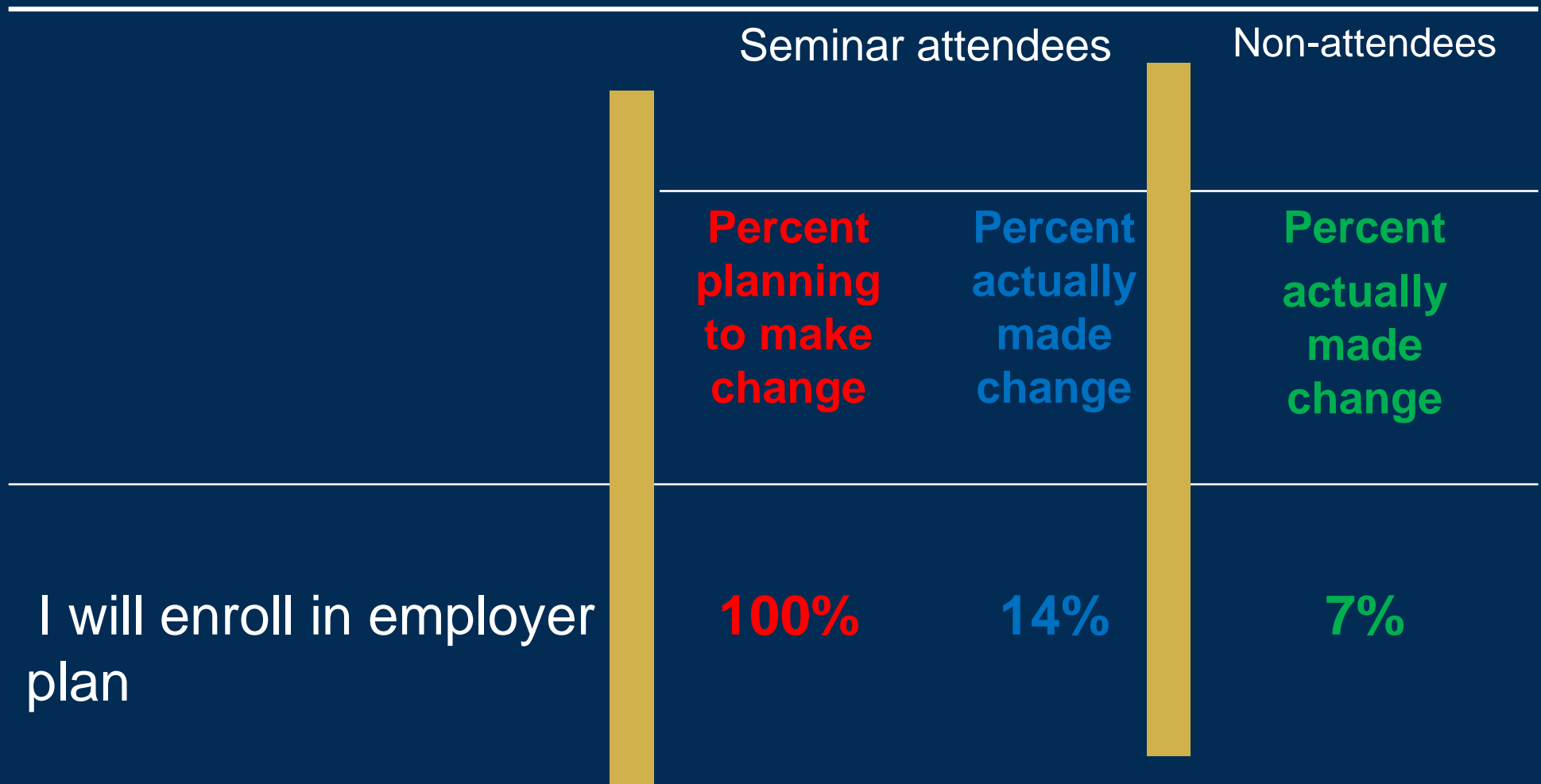
Choosing and eating
today



70%
chooses
chocolate



Pension behavior, US firm



- Imagine you would be informed that your pension will be lower than you expected thus far. Would you take action?
- Yes 21 %
- No 28 %
- **Should, but wouldn't 34%**
- Don't know 17%

Should take action, but won't

- Don't know what to do 9 %
- Can't do anything 24%
- Don't want to think about pension 23%
- Would delay taking action 33%

2. Choice is complex

Complex choice

Tversky & Shafir (1992)

Money or pen

\$1.50 v.



(\$2 value)

75% chooses pen

25% chooses money

Complex choice: pens

Tversky & Shafir (1992)

Money or pen

\$1.50 v.



(\$2 value)

75% chooses pen
25% chooses money

Money, pen or two pens

\$1.50 v.



(\$2 value)

v.

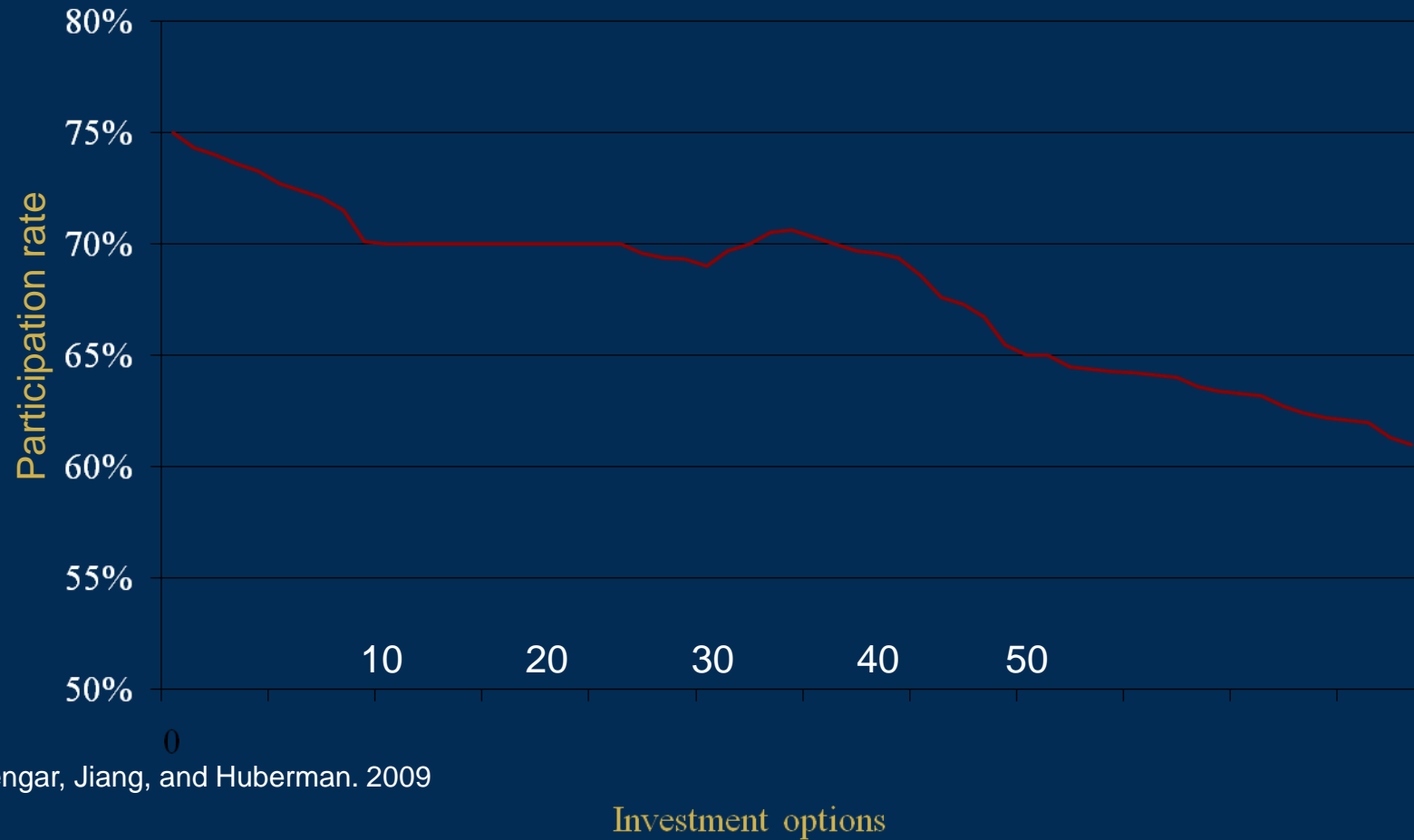


(\$2 value)

47% chooses pen(s)
53% chooses money

Complex choice: pensions

Plan Participation and Number of Funds



Iyengar, Jiang, and Huberman. 2009

Pension savings

- If employer pension plan offers more funds, less employees participate
 - > Each additional 10 funds produces a 1.5 to 2.0 percentage point decline in participation (Iyengar, Huberman and Jiang 2004)

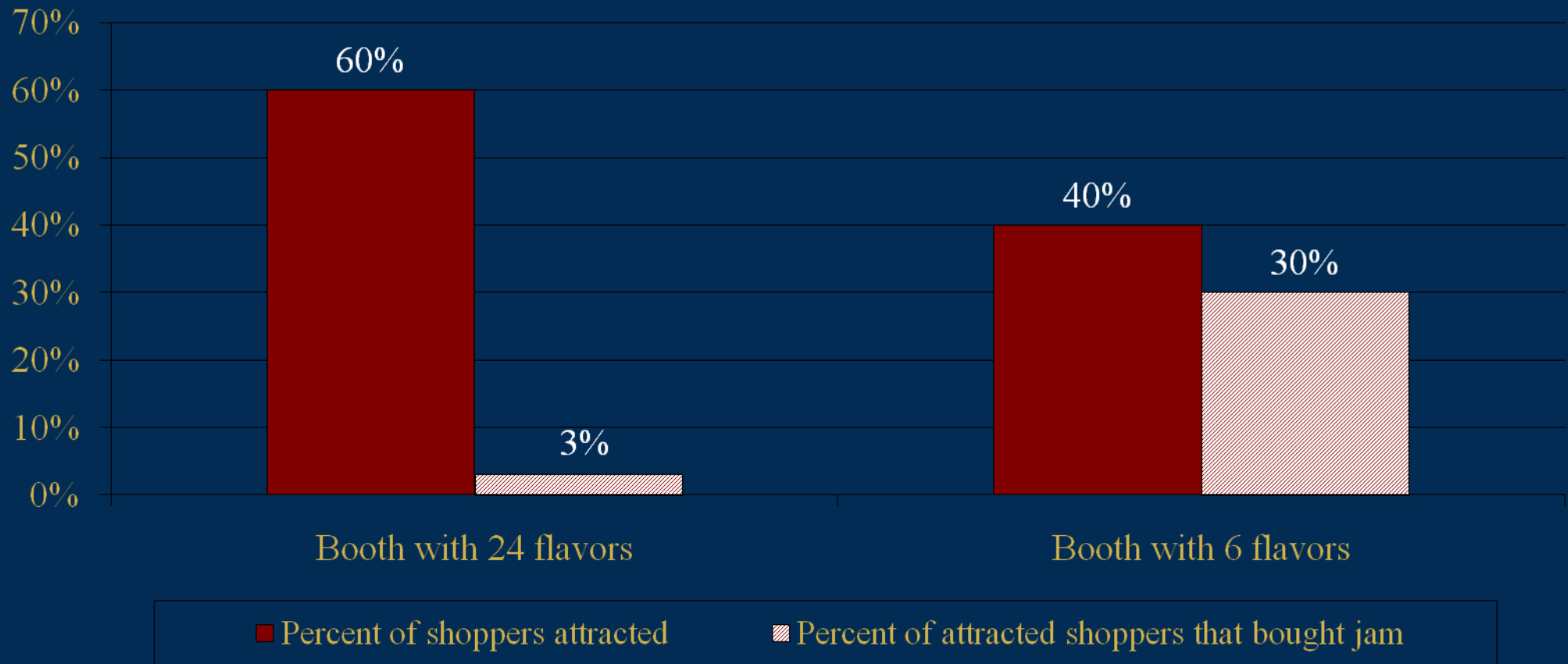
Why this effect?

- If there are more options, you forgo more by choosing one of them
 - > People anticipate more regret

- People may be distracted instead of helped by information (Herbert Simon, 1955)

Complex choice: jam

- Iyengar and Lepper (2000): when choice is demotivating

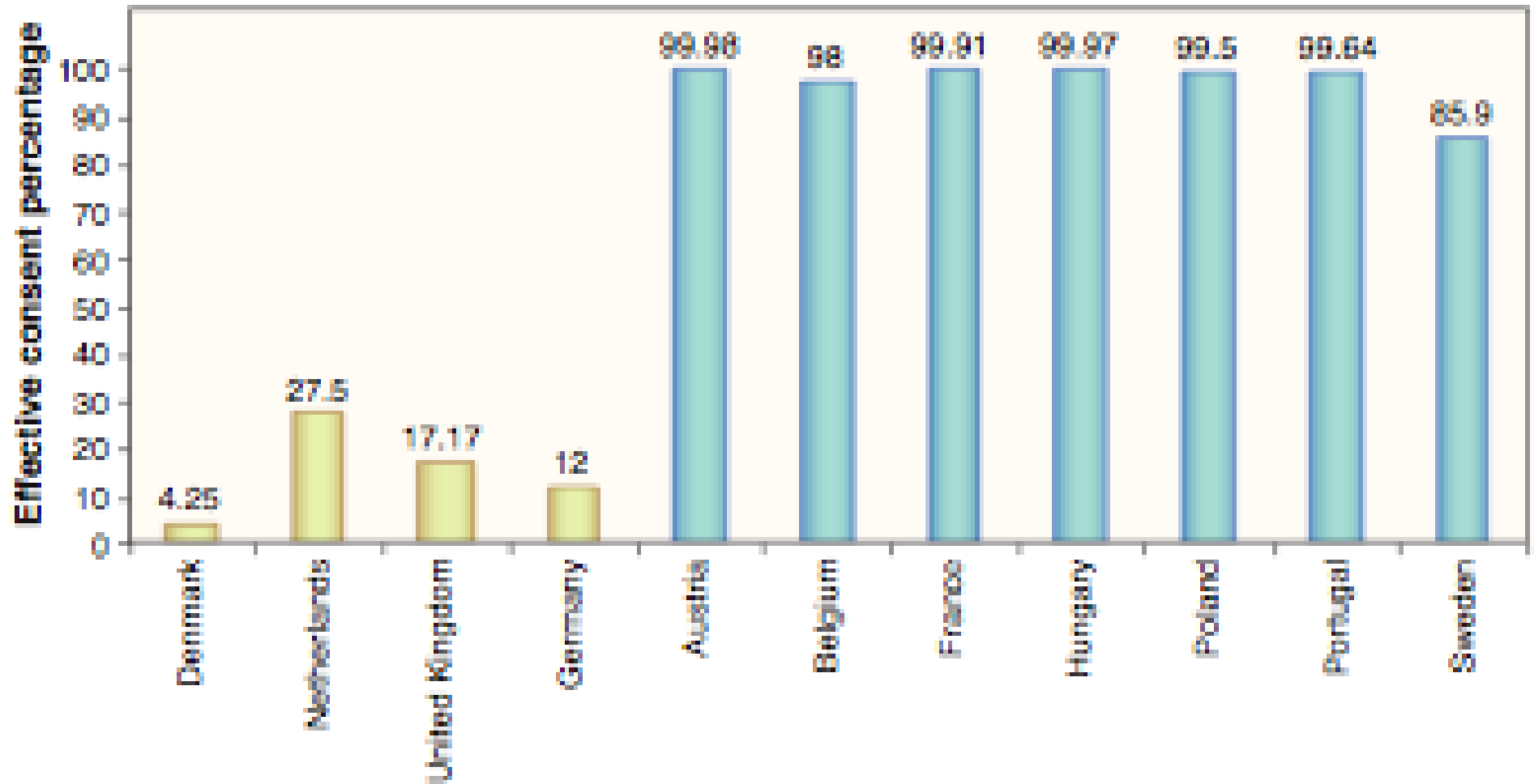


3) Passive choice/status quo bias

Passive choice

- What you choose when you do not make an active choice
 - > Silent consent
 - > Default choice
 - > Standard
 - > Opt in (standard: no)
 - > Opt out (standard: yes)

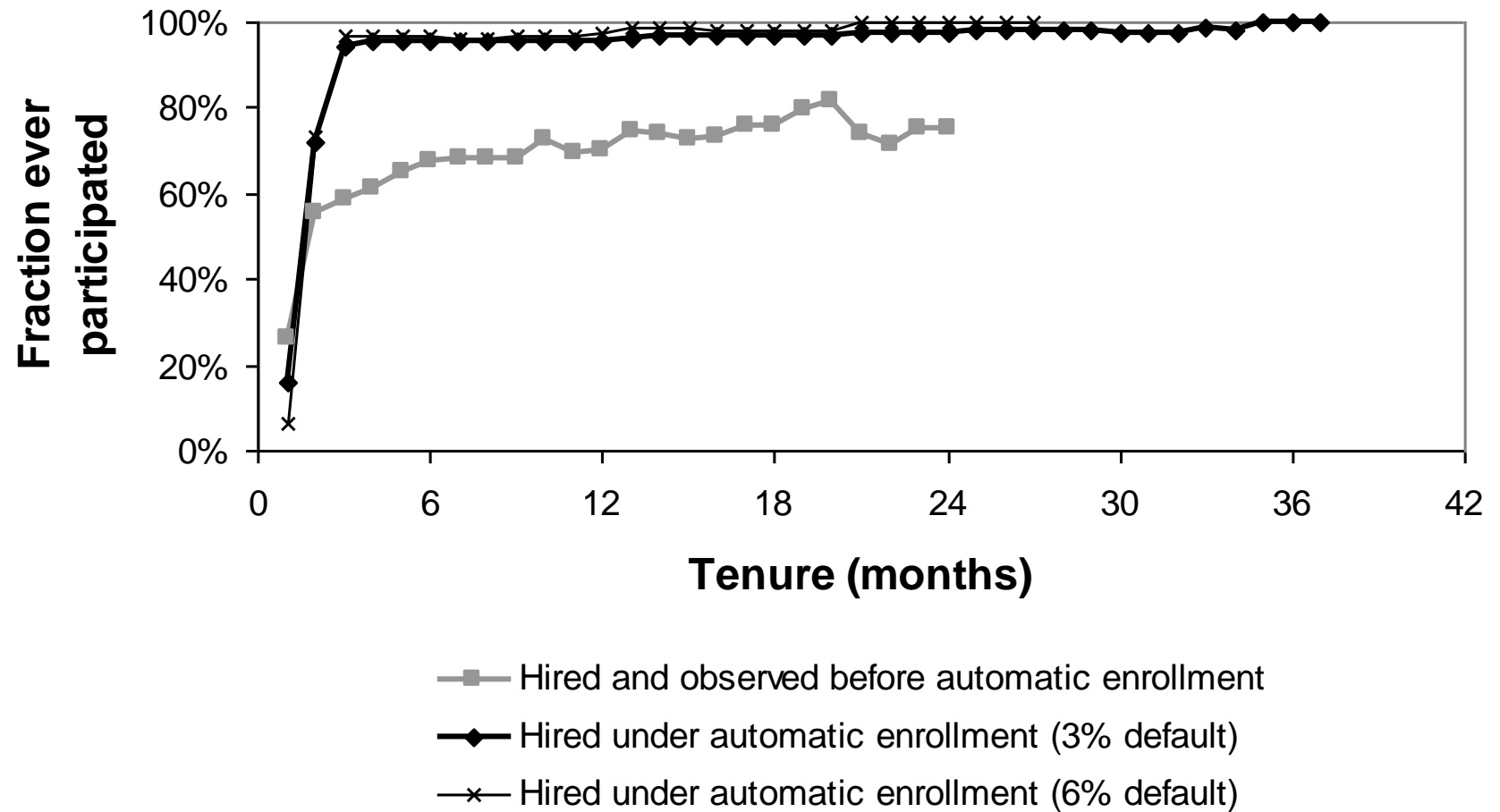
Passive choice: organ donation



Effective consent rates, by country. Explicit consent (opt-in, gold) and presumed consent (opt-out, blue).

Passive choice: pensions

FIGURE 1. Automatic Enrollment for New Hires and Savings Plan Participation: Company A



Neuro-science

- Old brain: Instinct
- Limbic system (mid brain): Emotions
- Neocortex : Intellect
 - > Prefrontal cortex is unique to human brain
 - > It is the planning authority: long term consequences of behaviour

Neuroeconomic evidence

- When faced with choice for the distant future: neocortex (planner) is in control
- When faced with choice involving immediate rewards/temptations: limbic system (doer) is in control – no role for future utility; no optimal intertemporal decision making

Pension behavior NL

- Majority of employees support the system of mandatory participation in 2nd layer
(Van Rooij, Kool, Prast 2007)

Main reasons:

“I do not want to think about retirement”

“I am afraid that otherwise I would not save for retirement”

- Imagine you would be informed that your pension will be lower than you expected thus far. Would you take action?
- Yes 21 %
- No 28 %
- **Should, but wouldn't 34%**
- Don't know 17%

Should take action, but won't

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4. No/little possibility to learn from mistakes

No learning from mistakes

- A one-time event, no second chance
 - > Fatal accident, fireworks
 - > Casino, stock market
- A large number of small “mistakes” results in a bad outcome in long run
 - > Saving for retirement: in my next life, I will save enough

5. Third party marketing (= behavioral industrial organization topic)

Exploiting lack of self control

- **If you want to close a credit line, please visit your local branch. You may also call (during office hours, 0900 - € 0,10 per minuut) and ask for a form.**

Let op!

Geld lenen kost geld  

Business models exploit biases

- Printer cheap, cartridges expensive (“I will print less”)
- Year card for gym expensive (“I will go more often to the gym”)
- Time sharing (“I will go often on vacation”)
- Mobile phone contracts (bundle and phone cheap, use above bundle v expensive (“I will phone less”))

Going to the gym

- DellaVigna, S. and U. Malmendier (2006),

“Paying Not to Go to the Gym”

American Economic Review

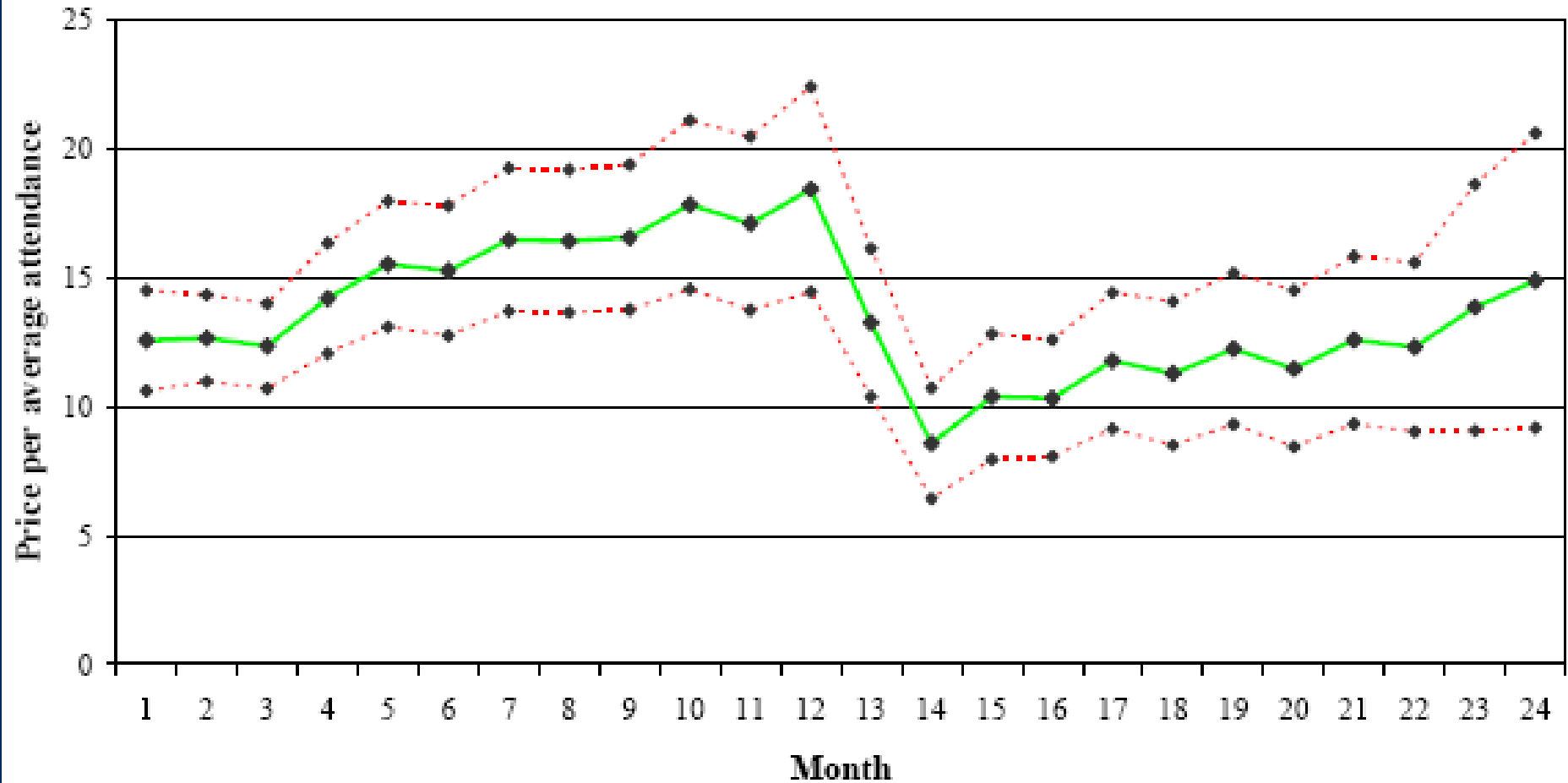
- 8000 members of 3 health clubs
- Contract type
 - > Flat fee per year \$700
 - > Flat fee per month
 - > 10-visit card \$ 100
- Attendance?

Attendance

- Attendance of rational members with flat fee contract should be such that they pay less than \$ 10 per visit

“New Year Resolution”

Figure 2a. Price per average attendance
Annual contracts with annual fee \geq \$700



Important policy issues

- Becoming aware of biases in decision making
- Becoming aware of third party marketing
- Evaluating current policy in light of behavioral evidence
- Assessing behavioral policy options

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Executive Order -- Using Behavioral Science Insights to Better Serve the American People

EXECUTIVE ORDER

USING BEHAVIORAL SCIENCE INSIGHTS TO

BETTER SERVE THE AMERICAN PEOPLE

A growing body of evidence demonstrates that behavioral science insights -- research findings from fields such as behavioral economics and psychology about how people make decisions and act on them -- can be used to design government policies to better serve the American people.

Where Federal policies have been designed to reflect behavioral science insights, they have substantially improved outcomes for the individuals, families, communities, and businesses those policies serve. For example, automatic enrollment and automatic escalation in retirement savings plans have made it easier to save for the future, and have helped Americans accumulate billions of dollars in additional retirement savings. Similarly, streamlining the application process for Federal financial aid has made college more financially accessible for millions of students.

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NOW, THEREFORE, by the authority vested in me as President by the Constitution and the laws of the United States, I hereby direct the following:

Section 1. Behavioral Science Insights Policy Directive.

(a) Executive departments and agencies (agencies) are encouraged to:

- (i) identify policies, programs, and operations where applying behavioral science insights may yield substantial improvements in public welfare, program outcomes, and program cost effectiveness;
- (ii) develop strategies for applying behavioral science insights to programs and, where possible, rigorously test and evaluate the impact of these insights;
- (iii) recruit behavioral science experts to join the Federal Government as necessary to achieve the goals of this directive; and
- (iv) strengthen agency relationships with the research community to better use empirical findings from the behavioral sciences.

(b) In implementing the policy directives in section (a), agencies shall:

- (i) identify opportunities to help qualifying individuals, families, communities, and businesses access public programs and benefits by, as appropriate, streamlining processes that may otherwise limit or delay participation — for example removing

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What are the alternatives?

- Make people aware of their biases
- Offer people commitment contracts to help them resist temptation
- Remove the possibility to make a passive choice
- Decouple choices
- Use the effect of passive choice to help people make decisions that improve their wellbeing

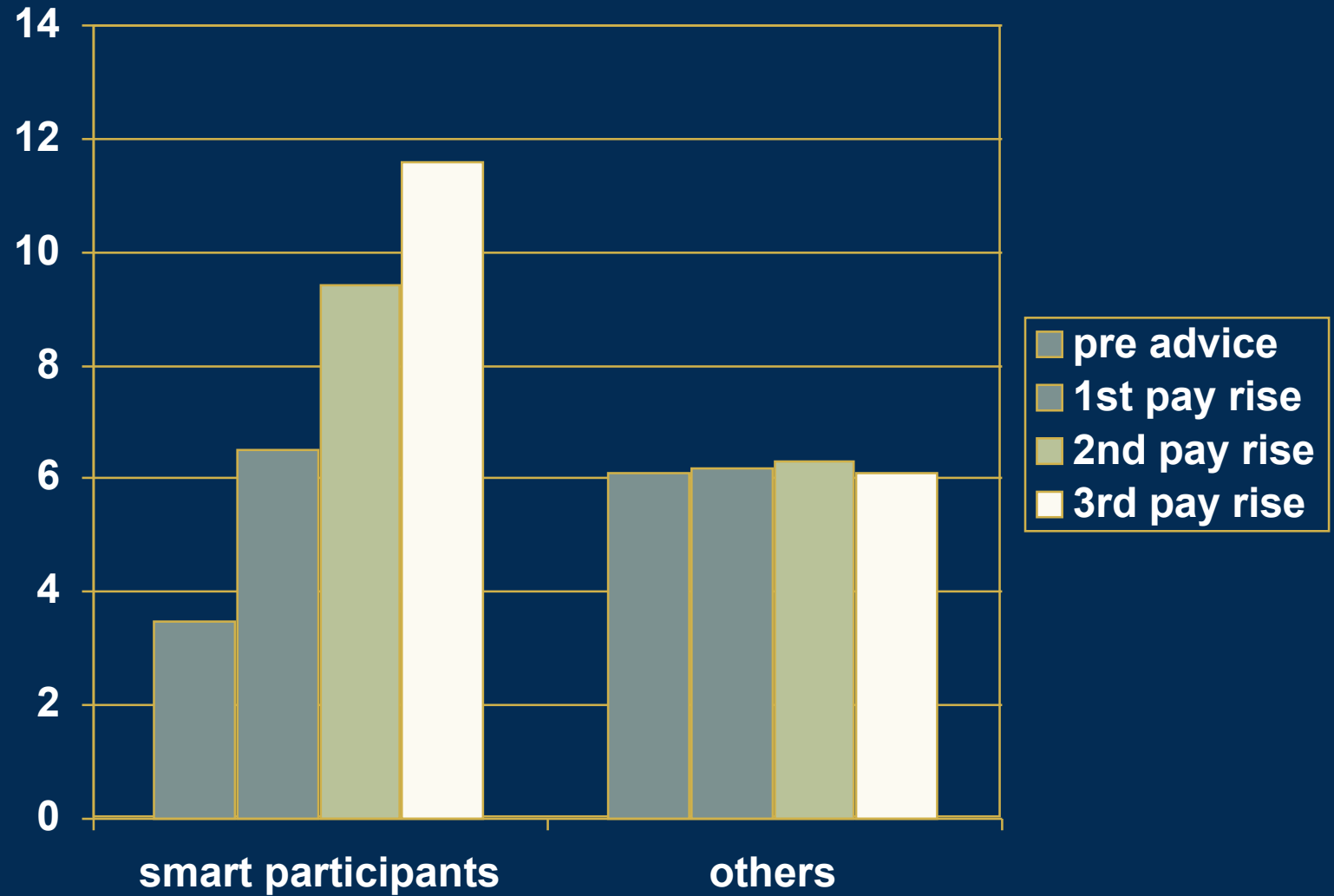
Making aware of biases

- Not because biases will disappear (they won't)
- But because being aware of biases may help people realize they should for example take part in commitment mechanisms

Commitment contract

- If you sign this contract now, you will start saving more for retirement 2 years from now
- You will contractually save a higher percentage of your wage with each wage increase
- You can opt out anytime, but cannot withdraw your savings

SMaRT results: savings rate



Remove passive choice

- Also called “mandatory active choice”
- Do you want to save for retirement?
 - > yes/no
 - has the effect of 25% more pension plan participants on board

KLM does it (why?)

Select an insurance

Cancellation Insurance.

Travel & Cancellation Insurance

No insurance

[Proceed to payment details](#)

Decouple choices

- Separate the choice to
 - > save for retirement
 - from
 - > how much to save for retirement
 - > how to invest pension savings
- Postcard on desk of employee

Good passive choice (“default”)

- “If we don’t hear from you”
- Has the biggest effect on behavior
 - > organ donation
 - > saving
- Is accepted by vast majority
- Even among those who do not want the default

Behaviorally inspired regulation

- Check financial institutions on
 - > how they offer choices
 - > how quick you find info that is good for you vis a vis supplier
 - > how difficult they make it to resist temptation
 - > whether business model exploits biases

“Debiasing” is not easy

- People tend to believe what they want to believe (and shoot the messenger)
- Disaster myopia: people tend to estimate a probability based on salience
- Pain of paying: paying with tangible money makes paying more salient and hence painful; credit card, mobile fingerprint
 - > Payment technology is not neutral, but reduces saving/increases overspending

Summing up

- Instead of changing people, we should accept people's weaknesses and reduce possibility that they will fall prey to them

Thank you for your attention!