Research seminar
Pension information and retirement behaviour

Chair Susan Kuivalainen
Pension Information and Retirement Behaviour

22 March 2018 at 1:30 p.m. – 4:00 p.m.

The seminar presents recent and on-going research from Finland and Norway on people’s pension knowledge. The seminar shows how information campaigns influence knowledge, attitudes and retirement plans. It also outlines how the potential impact of information gains persist over time.

- **Olli Kangas** (Kela): Information and Legitimacy: Attitudes on the Finnish 2017 Pension Reform
- **Henning Finseraas** (ISF) The Short and Long run Effects of Information about the Pension System
- **Sanna Tenhunen & Satu Nivalainen** (Finnish Centre for Pensions): Retirement Plans and Knowledge of the Incentives in Pension System among 54-62-year-old Finns
- Commentator: **Reija Hyvärinen** (Keva)
Information and Legitimacy: Attitudes on the Fairness of the Finnish 2017 Pension Reform

Ilpo Airio, Sanna Tenhunen, Karoliina Koskenvuo, Susan Kuivalainen and Olli Kangas

Finnish Centre for Pensions, March 22, 2018
The presentation is based on a Finnish publication

Eläketiedon merkitys
Suomalaisten mielipiteet vuoden 2017 eläkeuudistuksesta

(Toim.)
SANNA TENHUNEN
ILPO AIRIO
OLLI KANGAS
KAROLIINA KOSKENVUO
SUSAN KUIVALAINEN
The aim of the study

- is to experimentally analyze the impact of information given by public authorities
- more specifically, we analyze to what extent, if any, additional information given on the 2017 Finnish pension reform affects people’s:
  - knowledge on the characteristics of the pension system;
  - their plans concerning their own retirement;
  - opinions on sustainability of the pension system and;
  - the legitimacy of the reform

Data

- An experimental design where
  - the treatment group of 1,000 Finns 25 to 60 years of age got treatment (= an information letter, next slide)
  - an identical control group of 1,000 respondents did not
- In November 2015 a telephone interview enterprise *Taloustutkimus Oy* interviewed the treatment group and the control group
  - the very same questionnaire.
- Questionnaire contained questions on the 2017 Finnish pension reform.
Information letter sent
Knowledge

- The ‘objective’ knowledge consists following four questions:
  What:
  - is the impact of postponing retirement?
  - will happen with the pension ages when the life expectancy increases?
  - will happen with the accrual rate?
  - will happen with the adequacy of the pensions when the life expectancy increases?
- Thus, the additive indicator of the (objective)‘knowledge' varies:
  - from 0 (all four answers were wrong)
  - to 4 (all the answers were correct).
Worries concerning the pension system and perceptions of legitimacy

- Changes in pension systems may increase the public's worries about their future
  - continuous scale where
  - 0 = “not at all worried”
  - 10 = “very worried”

- We asked about worries about:
  - adequacy of the pensions:
    - will the future pension be sufficient to guarantee a decent standard of living? (scale 7-10; 51%)
  - the increasing pension age (55%)
  - the sustainability of the system (60%).

**Fairness:** “Overall, do you regard the pension reform 2017 as fair”
  * scale 0 = not at all fair; 10 = totally fair
Worries about the adequacy of the pensions after the 2017 reform

- Age increases worries of the adequacy of pensions (total effect .05)
  - Direct positive effect (.07); Indirect effects: Negative effects via read & knowledge (.27*.56*.07=-.01); positive effects via education and knowledge (-.17*.05*.07 = .001); and negative effects via knowledge (.12*.07=-.01). Total effect = .05 (.07-.01+.001-.01)
- Income decreases worries
- Infoletter has indirect negative effect; no direct effect
- Men less worried than women
  - -.16 + .17*.09 = -.11
- Education diminishes worries
  - -.11 + .05*.07=-.11
- Model fit RMSEA =.054; LO90=.043; HI 90 = .063
Worried about the increasing pension age

- Infoletter and knowledge do not have association to worries about increasing pension age
- Neither is there association between income and worries
- Men are less worried than women
- Education dampens worries
- There is an indirect positive associating from age via education to increasing worries
- The model fit is satisfactory:
  - RMSEA = .049; LO90=.039 and HI90=.059.
Worries about the sustainability of the pension system

- Males less worried
- Age has indirect effects via read and knowledge (-.01) and via knowledge (-.01) and via education and knowledge (.001) Total effect is -.02. Age slightly decreases worries about the sustainability
- Knowledge decreases worries
- Income does not have significant association
- Model fit ok
  - RMSEA = .054; LO90 = .041 and HI90 = .061.
## Determinants of fairness

<table>
<thead>
<tr>
<th>Variable</th>
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<th>st.error</th>
<th>sig</th>
<th>Beta</th>
<th>st.error</th>
<th>sig</th>
<th>Beta</th>
<th>st.error</th>
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<td>.055</td>
<td>.000</td>
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<td></td>
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<tr>
<td>Adequacy</td>
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<td>-.056</td>
<td>.053</td>
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<td>.067</td>
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<td>.054</td>
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</table>
Information matters

- **Adequacy**: Info letter increases knowledge which in turn decreases worries about adequacy, income and education decreases worries, males less worried, the older the more worried

- **Increases in pension age**: men and highly-educated less worried about pension age (no impact from info letter)

- **Sustainability**: info letter increases knowledge which in turn decreases worries about adequacy, men and highly-educated less worried

- Information increases the acceptance / perception of fairness of the reform
  - Even when all relevant background factors are controlled for
  - Information letter important even though it is not read: *recognition*
The Short and Long run Effects of Information about the Pension System

Henning Finseraas
Institute for Social Research, Oslo
Background

My talk is structured around two published papers


A structural pension reform was implemented in 2011

- Pension rights placed in a notional account which are adjusted annually by wage growth

- Upon retirement, the annual pension is (largely) determined by expected number of years as a pensioner

- Flexible retirement age, beginning at 62
Strong incentives to postpone retirement

- Subsidy of Early Retirement Scheme removed for private sector

- Annual pension reduced if retirement is not postponed as a response to the increase in life expectancy

- Pension depends on work history throughout life
Background

The changes in incentives lead us to expect a positive effect on labour supply

More flexibility makes it easier to retire at younger age

*But effects are conditional on knowledge about the reform*
Knowledge about pension

Studies typically find that knowledge about the pension system is limited.

Knowledge tends to have a socio-economic gradient.

Ignorance might be costly when decisions are “privatized.”
The Norwegian Labour and Welfare Service made an information brochure about the reform to reduce the costs of becoming informed

- Describes the reform and the new pension system
- Provides examples of e.g. how the pension depends on life expectancy and retirement age
- Links to a pension calculator and phone numbers
The experiment

Does the brochure improve knowledge about the reform?

Does increased knowledge change retirement plans?
The experiment

Survey to 3000 individuals between 40 and 67 years of age (YouGov panel)

50% randomized to receive the brochure six days before the survey (treatment group)

70% response rate in the treatment group, 83% in the control group
Dependent variables

Knowledge

- Higher pension if retiring later
- Lower pension if life expectancy of her cohort increases
- Pension is unaffected by the unemployment rate of her cohort

Retirement plans

- Will combine work and pension
- Has decided the age of retirement
- Planned retirement age
## Results

<table>
<thead>
<tr>
<th></th>
<th>Higher if retire later</th>
<th>Lower if life exp. increases</th>
<th>Pension unaffected by unemp.</th>
<th>Will combine</th>
<th>Decided when to retire</th>
<th>Planned age of retirement</th>
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<tbody>
<tr>
<td><strong>Treatment</strong></td>
<td>0.10***</td>
<td>0.07***</td>
<td>0.05**</td>
<td>-0.03</td>
<td>0.01</td>
<td>0.07</td>
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<td></td>
<td>(0.019)</td>
<td>(0.021)</td>
<td>(0.021)</td>
<td>(0.021)</td>
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<td><strong>Constant</strong></td>
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<td>0.52***</td>
<td>0.48***</td>
<td>0.50***</td>
<td>0.53***</td>
<td>64.60***</td>
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<td>(0.013)</td>
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</table>

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1
### Results after matching

<table>
<thead>
<tr>
<th></th>
<th>Higher if retire later</th>
<th>Lower if life exp. increases</th>
<th>Pension unaffected by unemp.</th>
<th>Will combine</th>
<th>Decided when to retire</th>
<th>Planned age of retirement</th>
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<td><strong>Treatment</strong></td>
<td>0.14***</td>
<td>0.10***</td>
<td>0.05*</td>
<td>-0.01</td>
<td>-0.001</td>
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<td>(0.028)</td>
<td>(0.031)</td>
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<tr>
<td><strong>Constant</strong></td>
<td>0.64***</td>
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Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1
## Results after matching

<table>
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<th>Higher if retire later</th>
<th>Lower if life exp. increases</th>
<th>Pension unaffected by unemp.</th>
<th>Will combine</th>
<th>Decided when to retire</th>
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<tr>
<td><strong>Read</strong></td>
<td>0.18***</td>
<td>0.12***</td>
<td>0.07*</td>
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<td>0.48***</td>
<td>0.51***</td>
<td>0.57***</td>
<td>64.77***</td>
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<tr>
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<td>(0.019)</td>
<td>(0.022)</td>
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<td>(0.175)</td>
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<tr>
<td><strong>Observations</strong></td>
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<td>1040</td>
<td>1040</td>
<td>1040</td>
<td>492</td>
</tr>
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</table>

Instrument: Treatment group indicator
Cragg-Donald Wald F statistic (first-stage): 2043 and 1179 (planned age).
Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Are the knowledge effects persistent or short-lived?

Follow-up survey five months after the first survey

662 respondents from the treatment group, 736 from the control group
Results follow-up

Table 3. *Intention to treat estimates: short- and long-term effects, marginal effects from probit regression*

<table>
<thead>
<tr>
<th></th>
<th>Easier</th>
<th>Retire later</th>
<th>Life expectancy</th>
<th>Unaffected unemployment</th>
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<td>Wave 2</td>
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<td>Treatment</td>
<td>0.08***</td>
<td>-0.02</td>
<td>0.10***</td>
<td>0.04</td>
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<td></td>
<td>(0.027)</td>
<td>(0.026)</td>
<td>(0.025)</td>
<td>(0.026)</td>
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<tr>
<td>Pseudo-$R^2$</td>
<td>0.02</td>
<td>0.01</td>
<td>0.09</td>
<td>0.06</td>
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<td>Observations</td>
<td>1,398</td>
<td>1,398</td>
<td>1,398</td>
<td>1,398</td>
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</tbody>
</table>
Conclusion

The brochure increases knowledge in the short-run, but the effects are gone five months later.

This type of information unlikely to reduce knowledge inequalities.

Providing personalized information more powerful?
Pension knowledge, impact of economic incentives and retirement intentions

Satu Nivalainen & Sanna Tenhunen

22.3.2018
• Incentives matter
  – economic incentives affect retirement timing (e.g. Brinch et al. 2014)
  – people do react to the incentives in pension system, but only if they know about them (e.g. Chan & Stevens 2008)
  – the effect exists, but magnitude may remain low (e.g. Uusitalo & Nivalainen 2013)
Background

• Incentives matter

• Do people know about incentives in pension system?
  – Gaps in knowledge of pension issues (e.g. Boeri & Tabellini, 2012)
  – Key characteristics of pension system well known in Finland
    (Tenhunen & Kuivalainen, forthcoming)
Background

• Incentives matter

• Do people know about incentives in pension system?

• Pension reform 2017 changed e.g. retirement age and effect of advancing or postponing retirement on the amount of pension
  – Are people aware of new rules?
  – Do incentives still matter?
Aim of the study

• Twofold:
  1. To study
     - Pension knowledge → effectiveness of economic incentives
  2. To study
     - Economic incentives → retirement intentions
Outline of this presentation

• Introduction of data

• Measures of pension knowledge

• Views on the effectiveness of economic incentives
  – and how (if at all) pension knowledge is related to them

• Retirement intentions w.r.t. own pension age
  – and how (if at all) economic incentives are related to them

• Conclusions
Data

• Collected by postal survey in 2016

• Questionnaire included info boxes on the reform

• Respondents
  – N: 2 179 (response rate 56%)
  – Finns
  – aged 54-62 years
  – non-retired
Pension knowledge
Pension knowledge

• Measured by three factors
  – Has given an estimate of the amount of future pension

<table>
<thead>
<tr>
<th>Yes</th>
<th>47</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>54</td>
</tr>
</tbody>
</table>

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Pension knowledge

- Measured by three factors
  - Has given an estimate of the amount of future pension (47%)
  - Knows the effect of life-expectancy coefficient

![Bar chart showing yes and no responses to pension knowledge questions](chart.png)
Pension knowledge

• Measured by three factors
  – Has given an estimate of the amount of future pension (47%)
  – Knows the effect of life-expectancy coefficient (41%)
  – Has good knowledge on how continuing at work affects the amount of accrued pension

![Bar chart showing 64% Yes and 36% No]
Pension knowledge

• In general, better knowledge among respondents of
  – Older age (60-62)
  – Higher education (tertiary)
  – Higher pensionable income
  – Entrepreneurs and upper white-collar workers

• Three measures of knowledge,
  – only weakly correlated
    » a fifth of respondents knew all three points, another fifth knew none of them
  – Using all three gives a fuller picture of knowledge
Economic incentives
The effect of economic incentives

- Measured by three factors
  - A person intends to postpone retirement due to life-expectancy coefficient and delayed retirement benefit

![Bar chart showing the percentage of people who intend to postpone retirement due to economic incentives.](chart-url)
The effect of economic incentives

- Measured by three factors:
  - A person intends to postpone retirement due to life-expectancy coefficient and delayed retirement benefit (16%)
  - Delayed retirement benefit encourages to postpone retirement

![Bar chart showing 57% yes and 43% no]
The effect of economic incentives

- Measured by three factors:
  - A person intends to postpone retirement due to life-expectancy coefficient and delayed retirement benefit 16%
  - Delayed retirement benefit encourages to postpone retirement 57%
  - Early retirement deduction encourages to postpone retirement

![Yes 46 No 54](chart.png)
The impact of pension knowledge on the effectiveness of economic incentives

• To find out if there is an impact, we modelled each three claims on the effectiveness of economic incentives

  – Controlling for
    » demographics
    » working sector (public/others)
    » views on health and economic situation at retirement
    » and the three measures of knowledge

  – Logit model, presenting marginal effects
### The impact of pension knowledge on the effectiveness of economic incentives

<table>
<thead>
<tr>
<th>Intends to postpone retirement due to life-expectancy coefficient and delayed retirement benefit</th>
<th>Delayed retirement benefit encourages to postpone retirement</th>
<th>Early retirement deduction encourages to postpone retirement</th>
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</thead>
<tbody>
<tr>
<td>Has given an estimate of the amount of accrued pension</td>
<td>Age 54-56 or 60-62</td>
<td>Secondary or lowest level tertiary education</td>
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<tr>
<td>Knows the effect of life-expectancy coefficient</td>
<td>Secondary education or higher</td>
<td>Upper white-collar workers</td>
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<td>Has good knowledge of how continuing at work affects the amount of accrued pension</td>
<td>Entrepreneurs and upper white-collar workers</td>
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<tr>
<td></td>
<td>not concerned of their work ability</td>
<td>not concerned of their work ability</td>
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<tr>
<td></td>
<td>no spouse</td>
<td>no spouse</td>
</tr>
<tr>
<td></td>
<td>assessing retirement income to be moderate or worse</td>
<td>assessing retirement income to be moderate or worse</td>
</tr>
</tbody>
</table>

Sanna Tenhunen   FINNISH CENTRE FOR PENSIONS  22.3.2018
Retirement intentions
Retirement intentions

• Based on the *difference* between
  – self-assessed age of retirement and
  – the lower limit of each person’s old-age retirement age

• Lower limit of old-age retirement age is defined by
  – retirement age of each birth cohort

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</thead>
<tbody>
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<td>63 y 3m</td>
<td>63 y 6 m</td>
<td>63 y 9 m</td>
<td>64 y</td>
<td>64 y 3 m</td>
<td>64 y 6 m</td>
<td>64 y 9 m</td>
<td>65 y</td>
</tr>
</tbody>
</table>

  – or by person’s public sector personal retirement age (or other supplementary pension with a different retirement age)
Retirement intentions

• Retirement intentions w.r.t. person’s own retirement age

- Exactly at retirement age: 56%
- After retirement age: 27%
- Before retirement age: 17%
The effect of economic incentives on retirement intentions

• To find out if there is an impact, we modelled intentions to retire before/exactly at/after own retirement age

  – Controlling for
    » demographics
    » working sector (public/others)
    » views on health and economic situation at retirement
    » and the three measures of incentives

  – Multinomial logit model, presenting marginal effects
The effect of economic incentives on retirement intentions

<table>
<thead>
<tr>
<th>Economic Incentive</th>
<th>Intends to retire</th>
<th>Before his own old-age retirement age</th>
<th>Exactly at his own old-age retirement age</th>
<th>After his own old-age retirement age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intends to postpone retirement due to life-expectancy coefficient and delayed retirement benefit</td>
<td>-0.062**</td>
<td>-0.183***</td>
<td>0.245***</td>
<td></td>
</tr>
<tr>
<td>Delayed retirement benefit encourages to postpone retirement</td>
<td>-0.049</td>
<td>0.065***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Early retirement deduction encourages to postpone retirement</td>
<td>public sector workers</td>
<td>those concerned of their work ability</td>
<td>assessing retirement income to be moderate or better</td>
<td></td>
</tr>
</tbody>
</table>

Age 60-62
- Entrepreneurs, upper and lower white-collar workers
- public sector workers
- those not concerned of their work ability
- no spouse
- assessing retirement income to be rather poor or poor
Conclusions

• Pension knowledge
  – Considerable variation, others know, while some don’t

  – Relation to effectiveness of incentives
    » Knowing the effect of postponement on pension level emphasizes the view that later retirement is motivated by
      ▪ delayed retirement benefit
      ▪ early retirement deduction

    » Two other measures of pension knowledge did not affect
Conclusions

• Retirement intentions
  – There are both advancers and postponers, although majority plans retirement at the earliest eligibility age

• The effect of economic incentives on intended retirement age
  – Intention to postpone increases
    » when the person intends to postpone retirement due to life-expectancy coefficient and delayed retirement benefit
    » When delayed retirement benefit are seen as an effective incentive
  – Views on the early retirement benefit did not matter
Thank you for your attention

Research available at:
https://www.etk.fi/julkaisu/elaketietous-taloudellisten-kannustimien-vaikuttavuus-ja-elakeaikeet/

For further information:
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Sanna.Tenhunen@etk.fi