

# Administrative social security data in Estonia

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# Social security registers

- ▶ State Pension Insurance Register (PKR)
  - Social Insurance Board – 1999
- ▶ Funded Pensions Information System (KOPIS)
  - Central Depository of Securities – 2002
- ▶ Health Insurance Database (RKAK)
  - Health Insurance Fund – 2000
- ▶ Social Services and Social Benefits Register (STAR)
  - Ministry of Social Affairs – 2010
- ▶ Unemployment Insurance Database (TKAK)
  - Unemployment Insurance Fund – 2002

# State Pension Insurance Register

Data on the following schemes:

- ▶ **State pension schemes**
  - State pension insurance: old age, work incapacity, survivors, superannuated, national and special pensions
- ▶ Social benefits for disabled persons
- ▶ Parental benefit scheme
- ▶ Family benefit scheme

Administered by National Social Insurance Board



# State Pension Insurance Register

## Data composition

- ▶ Data on personal identification (from Population Register)
  - ID code, DoB, sex, first and last names, temporary identification code
- ▶ General personal data (from Population Register)
  - *current address data, place of birth, migration (date, country of previous residence or destination), DoD, work permit data, family status, citizenship data*

# State Pension Insurance Register

## Data composition

- ▶ Data on social tax (from Tax Register)
  - Amount of social tax (*33%*), pension insurance component (*20%*) and state pension insurance component (*16%*)
    - calculated (tax liability) and paid (collected)
  - Period to which the social tax amount relates
  - Data of transfer
  - Type of social tax (by payer: employer, self-employed, state)
  - Identifying code of the tax payer in the Tax Register
  - Name of tax payer
- ▶ Individualised data on social tax from March 1999, **first full calendar year 2000**

# State Pension Insurance Register

## Data composition

### ▶ Data on pensions and benefits

Base data for determining eligibility and amount of pension:

- pensionable years of service (up to 1999)
- pension insurance period (from 1999 onwards)
- annual coefficients (pension points)
- degree of work incapacity
- degree of disability
- data on circumstances giving entitlement to pension supplements, pension on favourable conditions etc
- data on working or studying
- data on detention or imprisonment of the pensioner
- data on family composition and family members

# State Pension Insurance Register

## Data composition

### ▶ Data on pensions and benefits

Data on granted and payable pensions and benefits:

- type of pension (code)
- date of application
- start date of granting/commencement
- end date of granting
- calculated amount of pension/benefit
- payable amount of pension/benefit
- data on suspension or termination of pension
- mode of payment
- bank account data

# Funded Pensions Information System

## Data composition

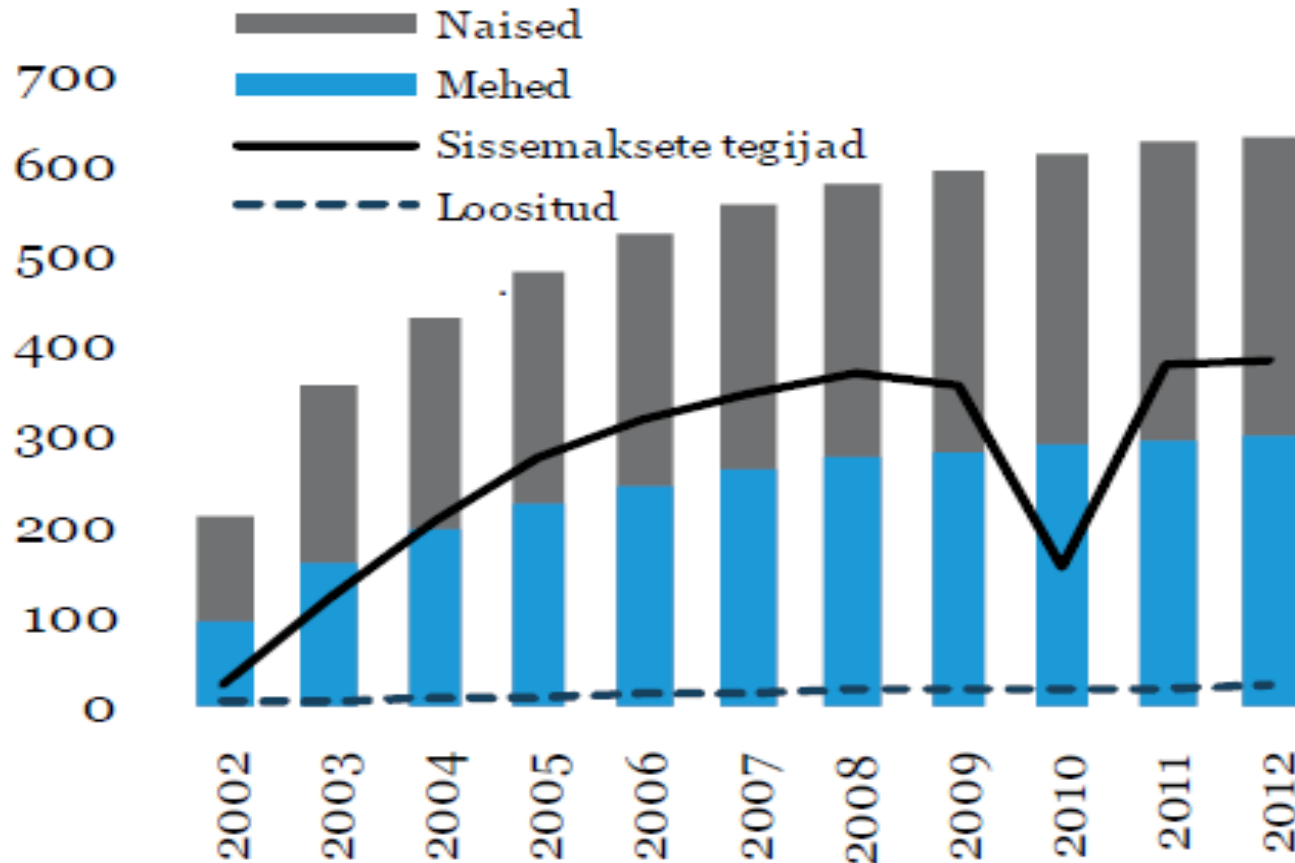
- ▶ Personal identification data
- ▶ Contact data
- ▶ Date of joining the funded pension scheme
- ▶ Choice of pension fund
- ▶ Funded pension contributions (amount, date)
- ▶ Number of issued pension fund units (by fund)
- ▶ Data on exchange of pension fund units
- ▶ Data on pension payments
  - Date of application
  - Choice of pension modality (lump sum, programmed withdrawal, annuity)
  - Disbursed amounts

Administered by Central Depository of Securities





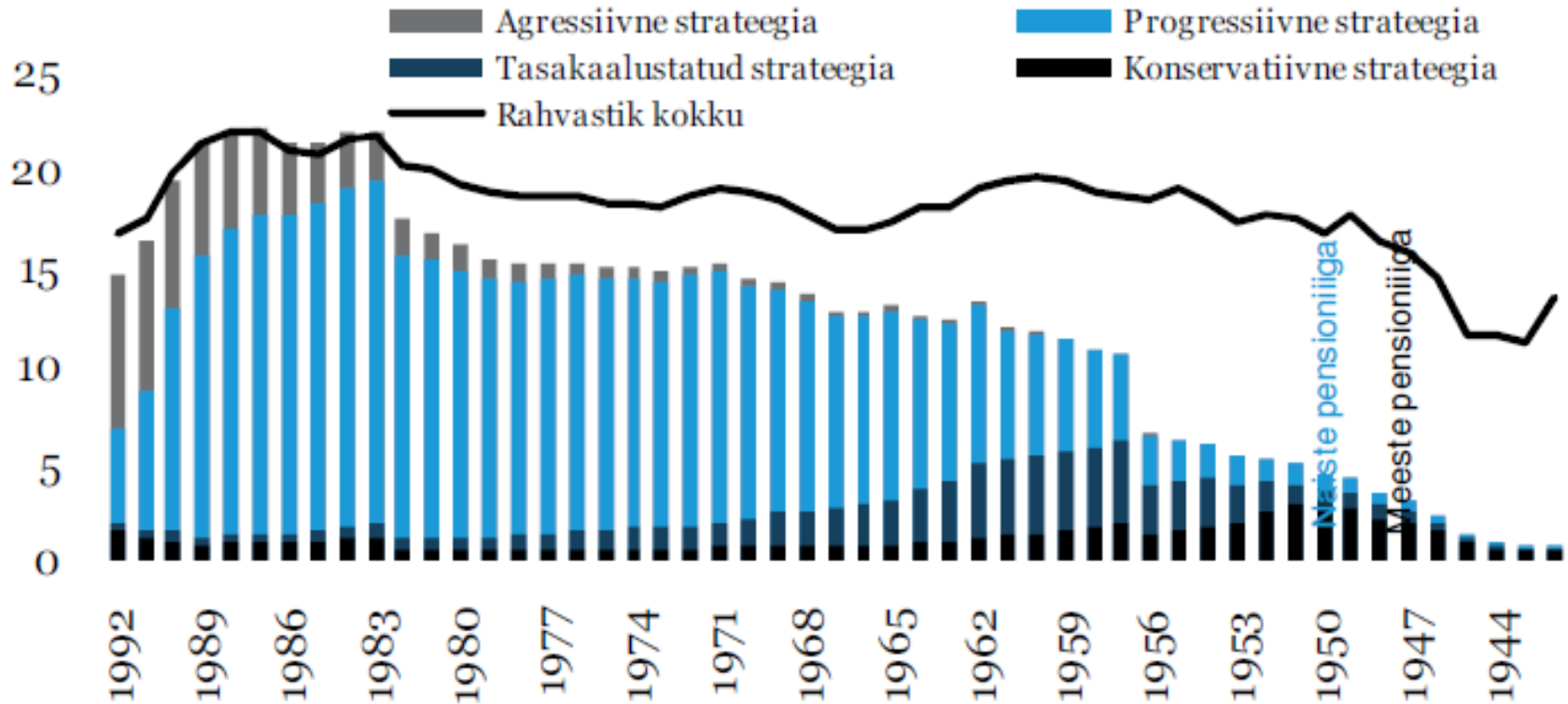
# Funded Pensions Information System



Participants of the funded pension scheme by gender (thousands)

Source: Ministry of Finance 2012

# Funded Pensions Information System



Participants of the funded pension scheme by age and fund investment strategy (thousands)

Source: Ministry of Finance 2012

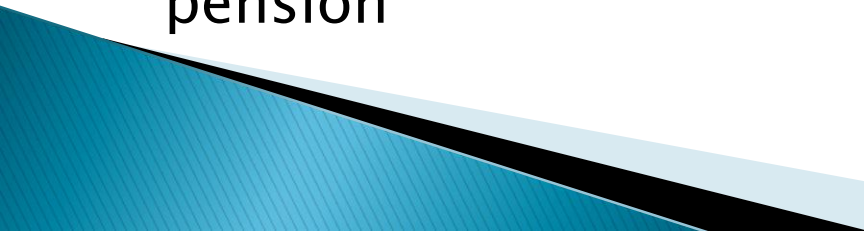
# Studies using individual data of pension insurance register

- ▶ Praxis Center for Policy Studies 2004
    - Impact of EU pension objectives on the Estonian Pension System
  - ▶ Praxis Center for Policy Studies 2011
    - Possibilities for Sustainable Financing of Estonian Social Security System
  - ▶ ENEGE 2012
    - Gender Gap in Pensions in the EU
  - ▶ Estonian Institute for Population Studies 2012
    - Changes in retirement patterns
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# Praxis 2004

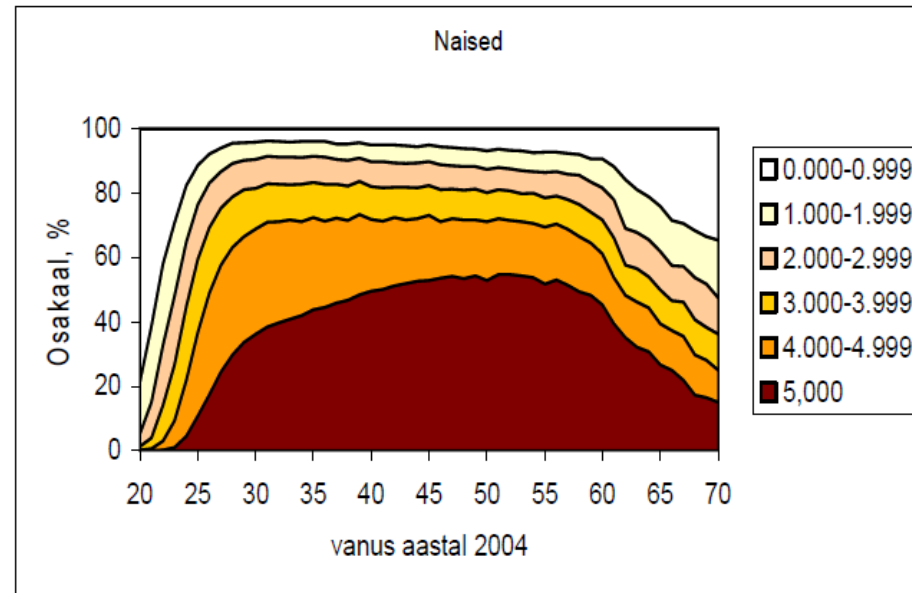
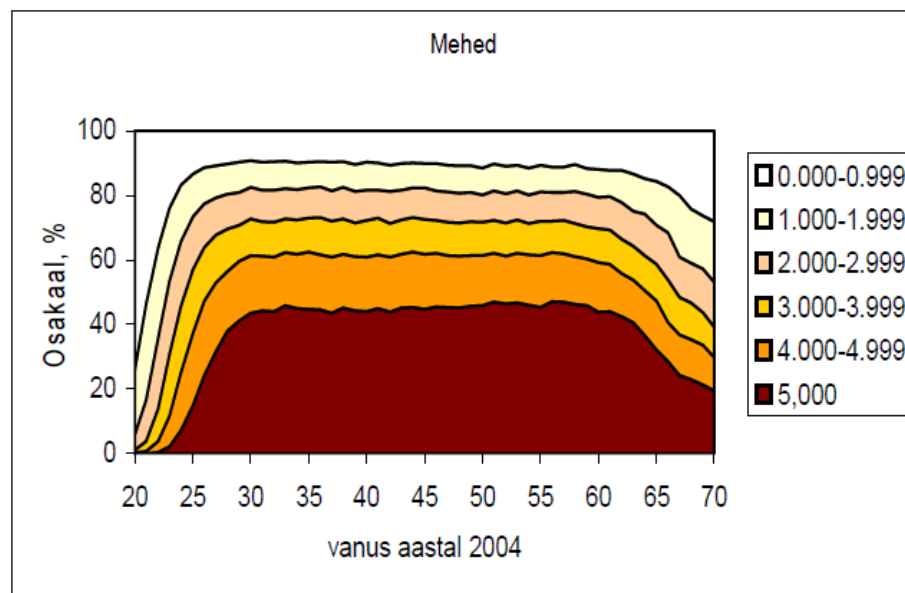
## Impact of EU pension objectives on the Estonian Pension System

Assessing Estonian pension system against EU pension objectives and OMC indicators:

- ▶ Coverage of state pensions compared to population
  - ▶ Variability of annual pension coefficients (pension points)
  - ▶ Gaps in pension insurance periods
  - ▶ Variability of state pension amounts
  - ▶ Individual replacement rates
  - ▶ Old age pensions by age and gender
  - ▶ Timing of pension take-up
  - ▶ Employment of pensioners
  - ▶ Economic activity before take-up of early retirement pension
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# Praxis 2004

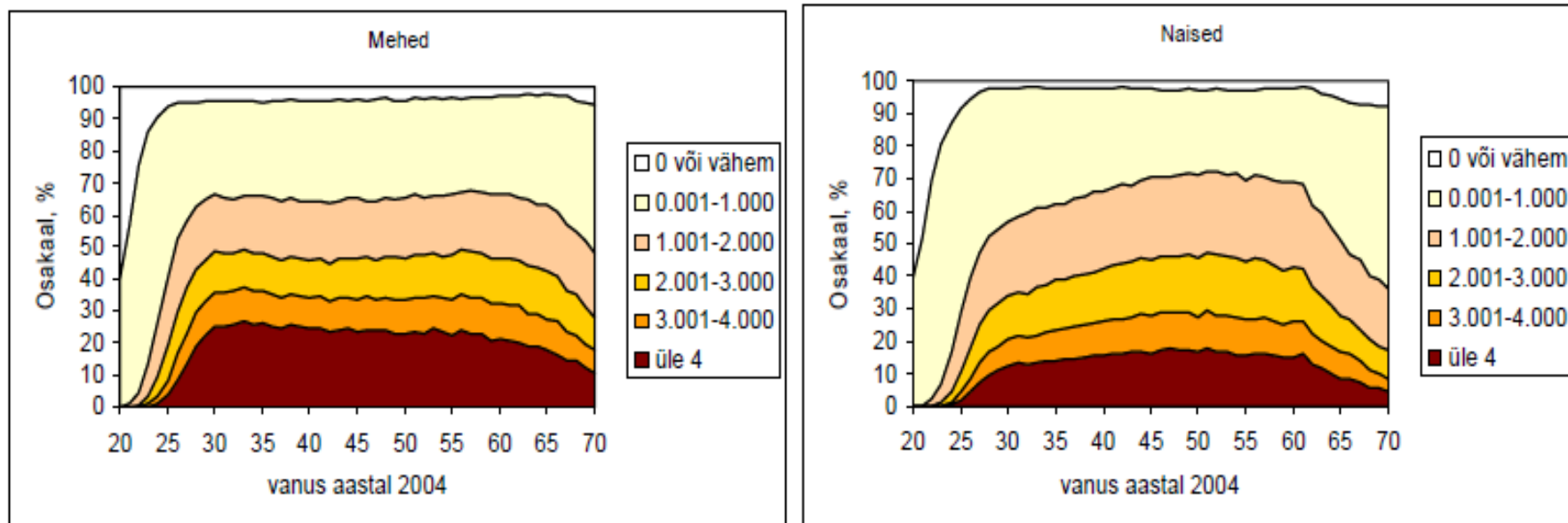
Pension insurance periods accumulated over 1999–2003 by age and gender



Tiit, E.-M., Leppik, L., Vörk, A., and Leetmaa, R. (2004). The Impact of EU pension objectives on the Estonian Pension System. Praxis Proceedings No 14

# Praxis 2004

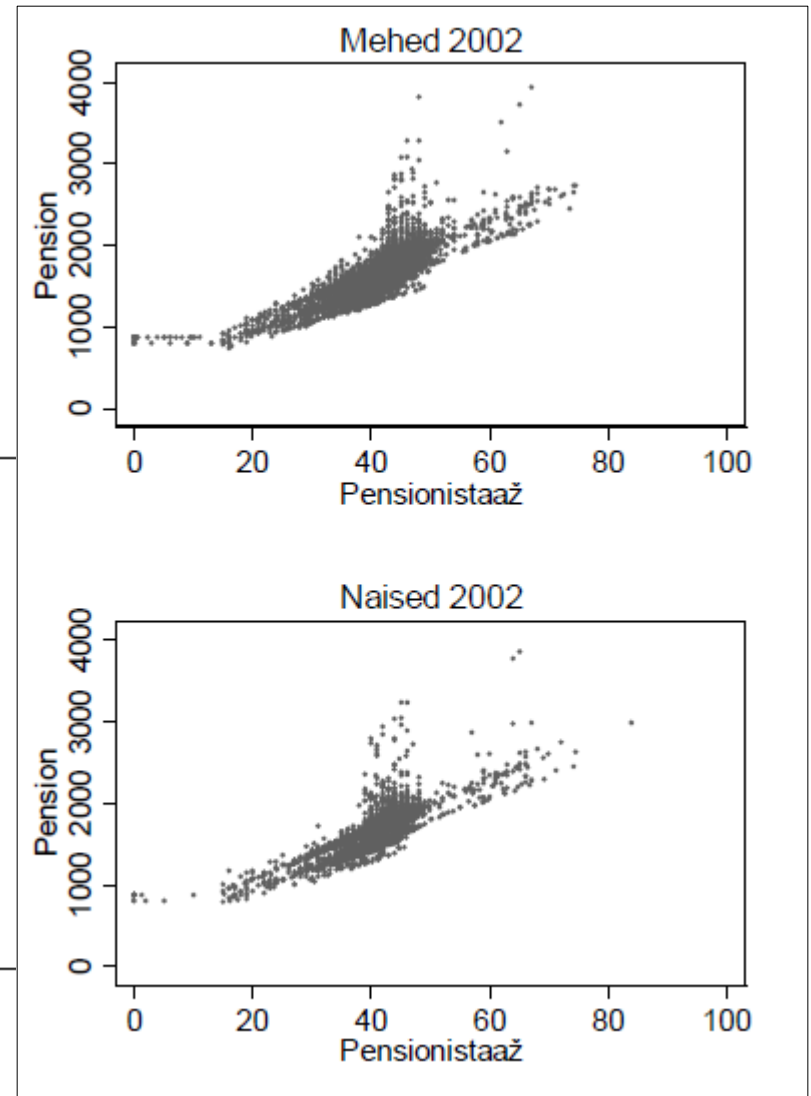
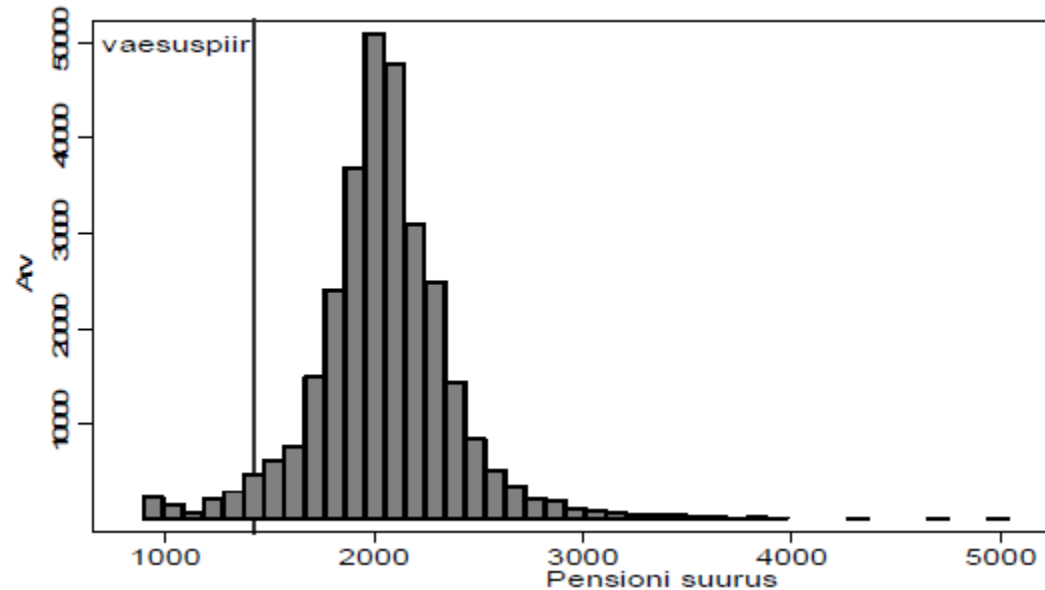
Sum of pension points accumulated over 1999–2003 by age and gender



Tiit, E.-M., Leppik, L., Võrk, A., and Leetmaa, R. (2004). The Impact of EU pension objectives on the Estonian Pension System. Praxis Proceedings No 14

# Praxis 2004

## Variability of old age pension



Tiit, E.-M., Leppik, L., Võrk, A., and Leetmaa, R. (2004). The Impact of EU pension objectives on the Estonian Pension System. Praxis Proceedings No 14

# Praxis 2011

## Possibilities for Sustainable Financing of Estonian Social Security System

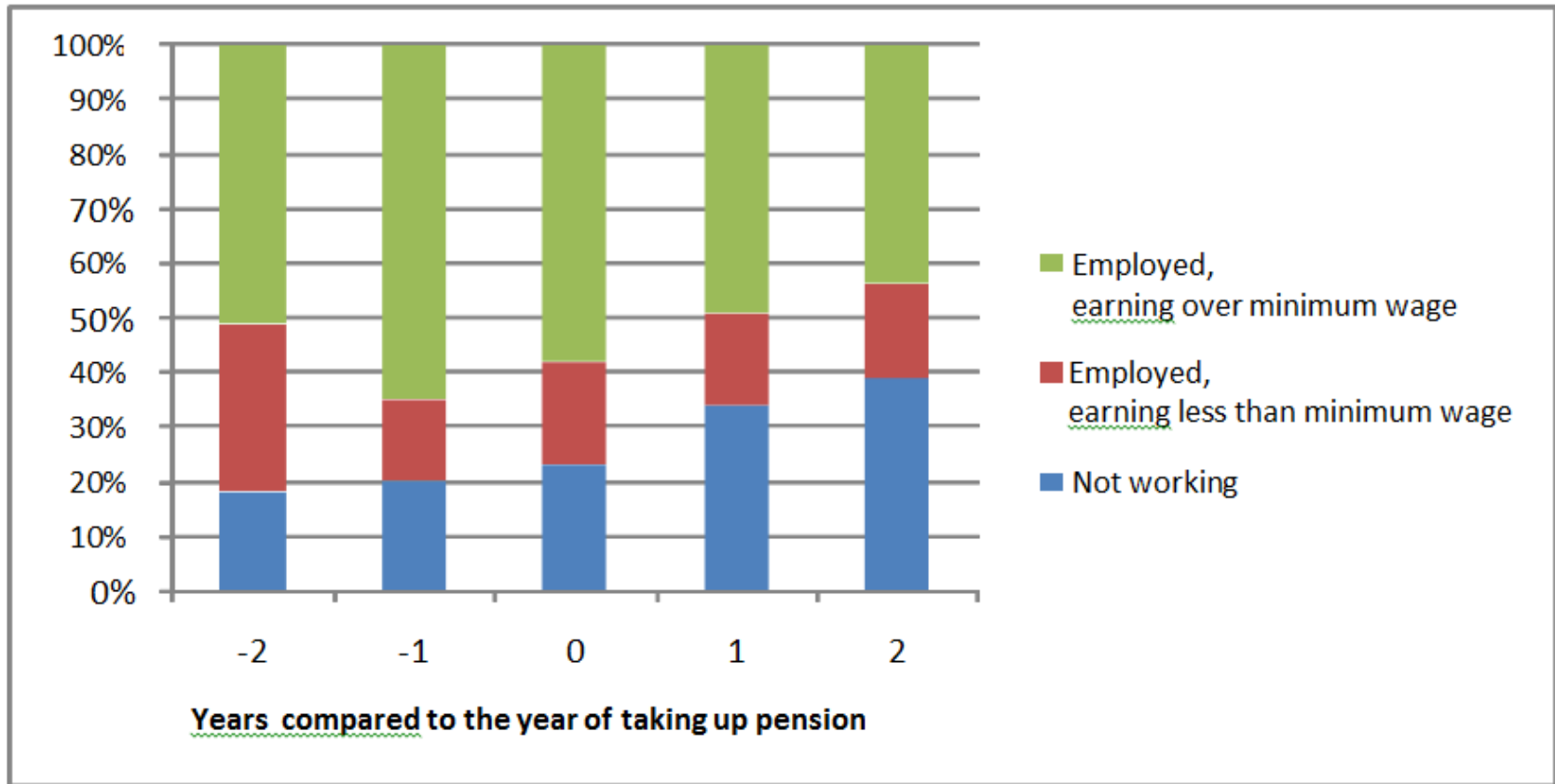
Ex ante policy analysis of various policy alternatives:

- ▶ Impact of social tax floor and ceiling
  - distribution of pensionable earnings by age and gender
- ▶ Impact of raising the qualification period
  - insured persons compared to population by cohorts
  - distribution of pension insurance periods accumulated over 1999–2010 by age, gender and type of pension, gaps in pension insurance coverage
- ▶ Impact of setting a floor and/or ceiling on annual pension points
  - distribution of annual coefficients
- ▶ Impact of limiting early retirement options
  - take-up of early retirement by former economic activity and wage level
- ▶ Introducing partial pensions
  - Employment of retirees 2 years before and after retirement
- ▶ Impact of limiting accumulation of pension with earnings from work
  - Distribution of old age pensioners by economic activity and earnings level
- ▶ Impact of modifying invalidity pension scheme
  - invalidity pensioners by economic activity and wage level 5 years before and after granting of invalidity



# Praxis 2011

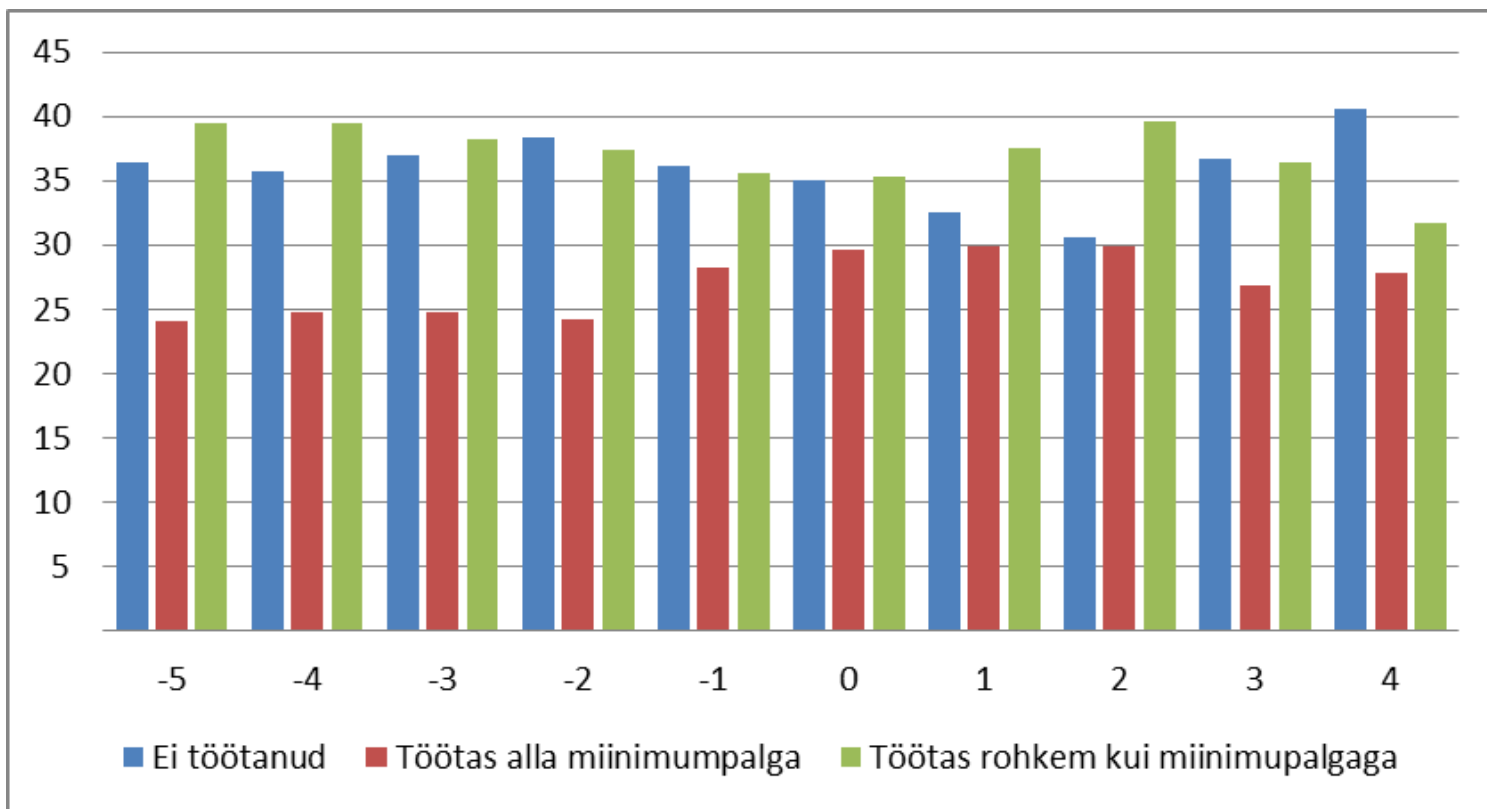
Employment before and after taking up pension  
new pensioners taking up old age pension 2001–2005 in normal pension age



Aaviksoo, A., Kruus, P., Leppik, L., Sikkut, R., Veldre, V., Vörk, A. (2011). Possibilities for Sustainable Financing of Estonian Social Security System. Tallinn: Praxis

# Praxis 2011

Employment of invalidity pensioners with 40% work incapacity before and after granting of invalidity pension new pensioners 2005 and 2006



Aaviksoo, A., Kruus, P., Leppik, L., Sikkut, R., Veldre, V., Vörk, A. (2011). Possibilities for Sustainable Financing of Estonian Social Security System. Tallinn: Praxis

# ENEGE 2012

- ▶ Pension coverage by pillar and age group
  - In 65+ age group: women 100%, men 97.3%
- ▶ Mean pension and gender pension gap by pillar, age group and pension type
  - 65+ gender pension gap: 3.4%
    - 65–79 age group: 2.25%
    - 80+ age group: 8.5%
  - old age pension: 3.6%
  - early retirement pension: 0.1%
  - survivors pension: 0.3%
  - invalidity pension: 3.8%

# EDI 2012

Changes in retirement patterns 2000–2011  
(work in progress)

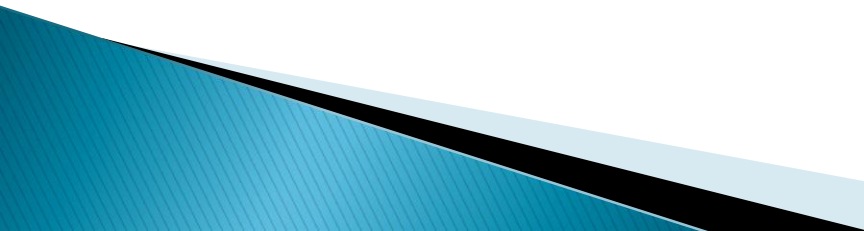
Data:

- ▶ Longitudinal pension histories of individuals
  - episodes of pension payment 2000–2011
    - start and end dates, type, sum, additional characteristics
  - monthly pension insurance contributions
    - type and amount of contribution income

# EDI 2012

## Changes in retirement patterns 2000–2011 (work in progress)

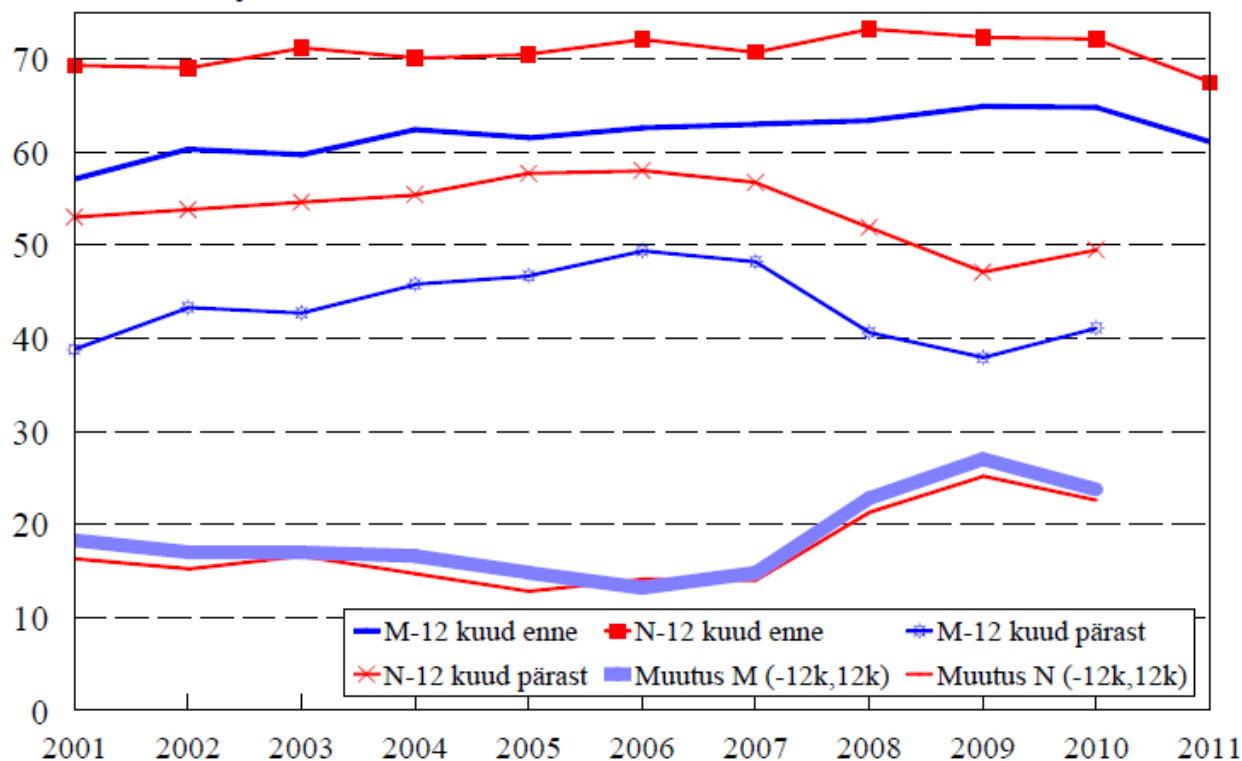
### Research topics:

- ▶ Trends in the take-up of pensions by types
  - ▶ Effects of increasing pension age on take-up of old-age, early retirement and invalidity pensions
  - ▶ Changes in employment associated with the take-up of pension
  - ▶ Pathways of transition to retirement
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# EDI 2012

## Changes in retirement patterns 2000–2011 (work in progress)

Employment rates 12 month before and after taking up old age pension in normal pension age



# Prospects of linking social security register data and SHARE data

- ▶ SHARE wave 4 Estonian sample size: 6900 individuals (4600 households)
- ▶ Testing validity of SHARE data, e.g.
  - Current employment situation
  - Year of retirement
  - Income source from public pension
  - Typical payment
  - Future entitlements
  - Employment/self-employment earnings
  - Participation in mutual pension funds

# Prospects of linking social security register data and SHARE data

- ▶ Linking individual pension and contribution histories from register data to SHARE sample
  - ▶ Linking pension data with SHARE health and family composition data
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