



International Statistical Conference  
Prague, Czech Republic / 14-15 September 2009

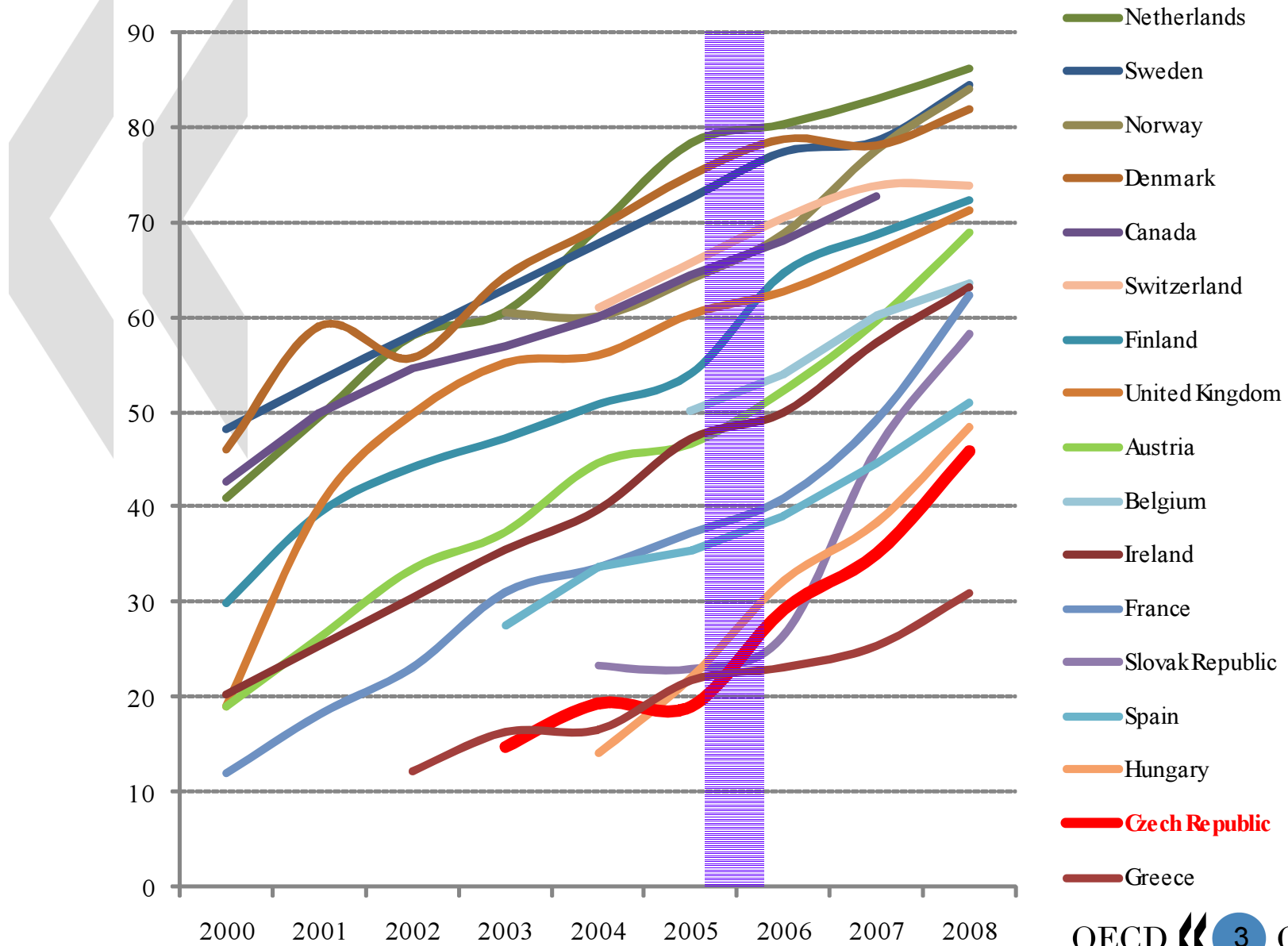
# The determinants of ICT expenditures by Households: A Micro Data Analysis

Pierre Montagnier, OECD

# OUTLINE

- Research questions
- Methodology
- Data
- Results
- Conclusion and next steps

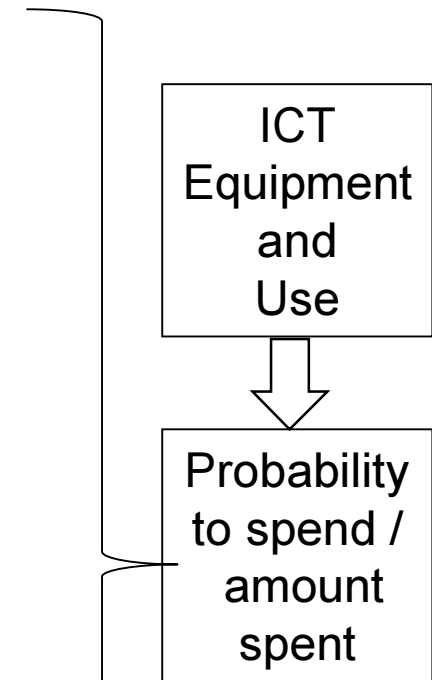
# Household access to the Internet in selected OECD countries, 2000-2006



Source: Based on OECD, Key ICT indicators

# Research questions

- Life-cycle stage:  
married with children > married without children
- Age:  
+ relationship with *AGE* / - relationship with  $(AGE)^2$
- Income:  
+ relationship with *INCOME*
- Education attainment:  
High level > low level
- Density of population:  
Highly densely - Urban > Low densely - Rural
- Gender:  
HH male reference person > HH female reference person



# Methodology

- Probability to spend / Amount spent  
*PROBIT / OLS -> Heckman*
- Dependent variable: *ICT expenditures*
- Independent variables: *Income, life-cycle stage, education level, geographical location, gender*

# DATA

- Sources

- European countries: Eurostat database, Czech Statistical Office, Swiss Federal Statistical Office
- Canada: Survey of Household Spending (SHS)

- Definitions

- ICT expenditures

Based on UN COICOP and split in 2 x 2 dimensions:

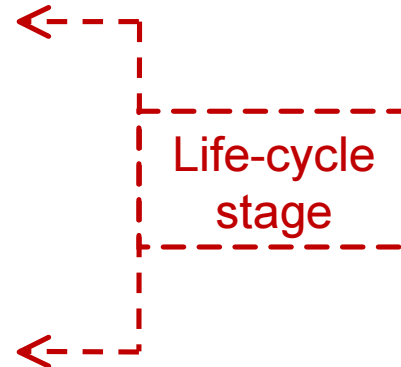
Information Technology / Communication

Goods / Services

- Independent variables
- Dependent variables

# Independent variables

- **Income:**  
positive relationship with *INCOME*
- **Education attainment:**  
High level > low level
- **Density of population:**  
Highly densely - Urban > Low densely - Rural
- **Children:**  
With children > Without children
- **Age:**  
Negative relationship with *AGE*
- **Couple:**  
HH living in couple > other HH
- **Gender:**  
HH male reference person > HH female reference person



# Dependent variables

Whether the household spends or not / Log (amount spent)

## ICT expenditures:

- *IT goods*
- *IT services*
- **Communication goods**
- **Communication services**

# Results (1)

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# Conclusion and next steps

- Some determinants of ICT household's expenditures significant and similar effects (income, children). Other determinants have less similar effects across countries.
- Different effects between IT goods and communication services:
  - ICT do not have a uniform pattern of consumption
  - May be worthwhile revisiting the existing ICT expenditures in consumption surveys.
- Issues limiting the scope of the analysis
- Complete the current version by looking at:
  - New countries (US, Poland, ...)
  - Effects on the relative share of ICT expenditures
  - Effects on hardware and software (US, Canada)
  - Effects of computer equipment and mobile equipment



# Thank you for your attention

*Contacts:*

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