Working Life Expectancy and Health in Europe:

Trends and Determinants

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Outline

- Motivation

- Contribution

- Data Sources & Methods

- Results

- Conclusion

Motivation – men's LEs at age 50 in 2010

Loichinger and Weber (2016)
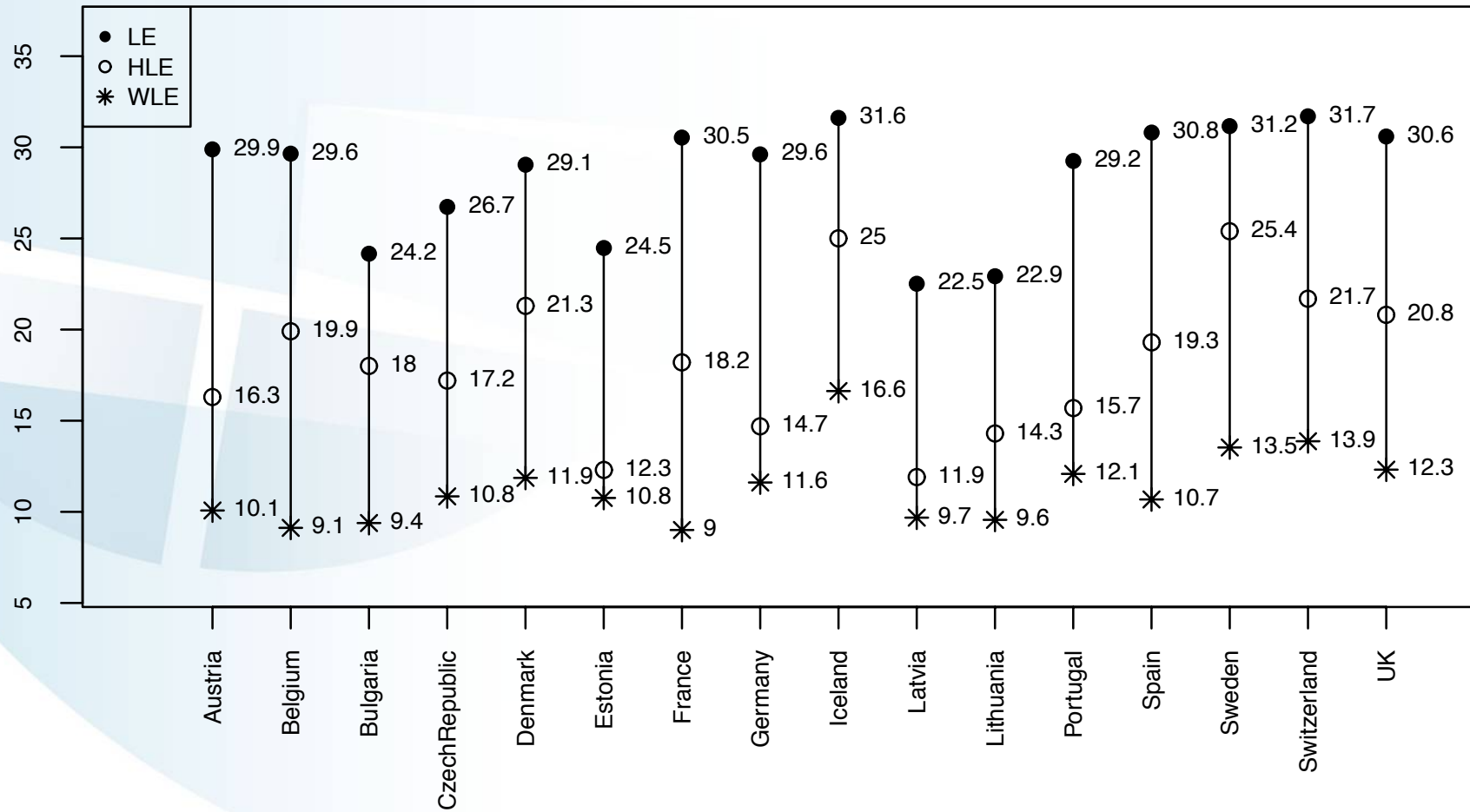
Motivation – women's LEs at age 50 in 2010

Loichinger and Weber (2016)
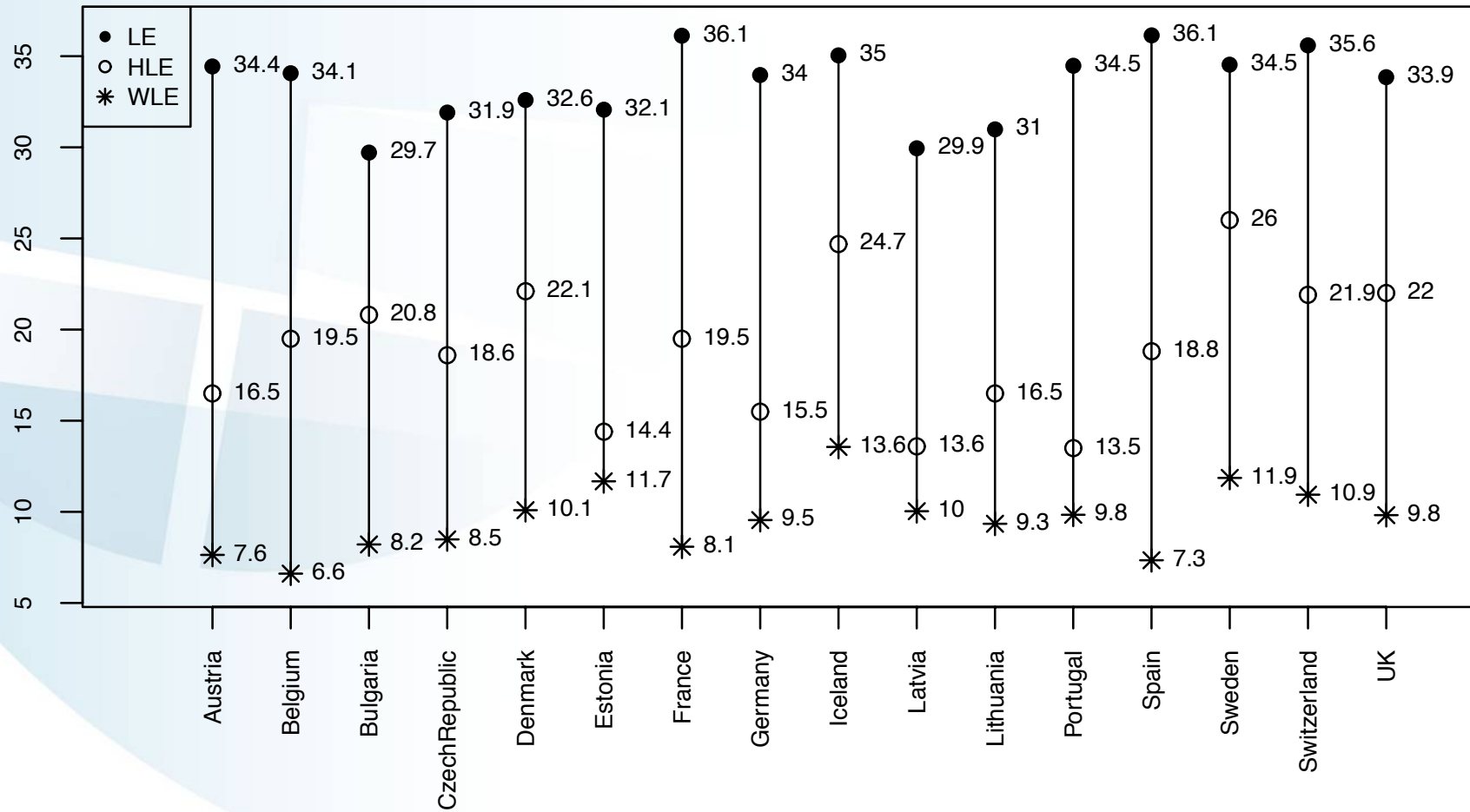
Motivation – health and WLE

- variation in working life expectancy (WLE) across Europe and between men/women

- small relationship between economic activity and health (correlation of 0.36 (women) and 0.46 (men))

-> Other health measures higher correlated with economic activity?

Contribution (I)

- Correlation between WLE and 3 additional dimensions of health related to work capacity

  – Physical health

  – Cognitive health

  – Mental health

(Shephard 2000; Magee 2002; Harvey 2009; Schmidt 2004; Spitz 2006; Ritchie and Tuokko 2010; Salthouse 2010)

Contribution (II)

- Analysis of relationship between our indicators and macro-level factors

  – Factors related to working life-expectancy

  – Factors related to physical, cognitive, and mental life-expectancy

(Van Oyen et al. 2010; Jagger et al. 2011; Fouweather et al. 2015; Pongiglione, De Stavola and Ploubidis 2015)

Data sources

- ## Life tables
  by single years of age and sex (Eurostat)

- ## Prevalence rates
  Labor force participation by single years of age and sex (EU-LFS) (Eurostat)

  physical, cognitive, and mental health prevalences by single years of age and sex (SHARE)

Austria, Belgium, Denmark, France, Germany, Italy, Netherlands, Spain, Sweden, Switzerland

Data sources (cont.)

- Inflation rate (OECD)
- Internet users/100 people (World Bank)
- National net income (OECD)
- Social protection benefits (Eurostat)

- Mean years of schooling (WIC)
- Smoking, obesity prevalence (SHARE)
- Unemployment rate (Eurostat)

# Methods

- Sullivan Method
  - Working life-expectancy   (WLE)

  - Cognitive life-expectancy   (CLE)
    episodic memory (word recall)
  - Physical life-expectancy   (PLE)
    hand grip strength
  - Mental life-expectancy   (MLE)
    EURO-D score – risk of clinical depression

- Meta-regression analysis at age 50
  - national level factors
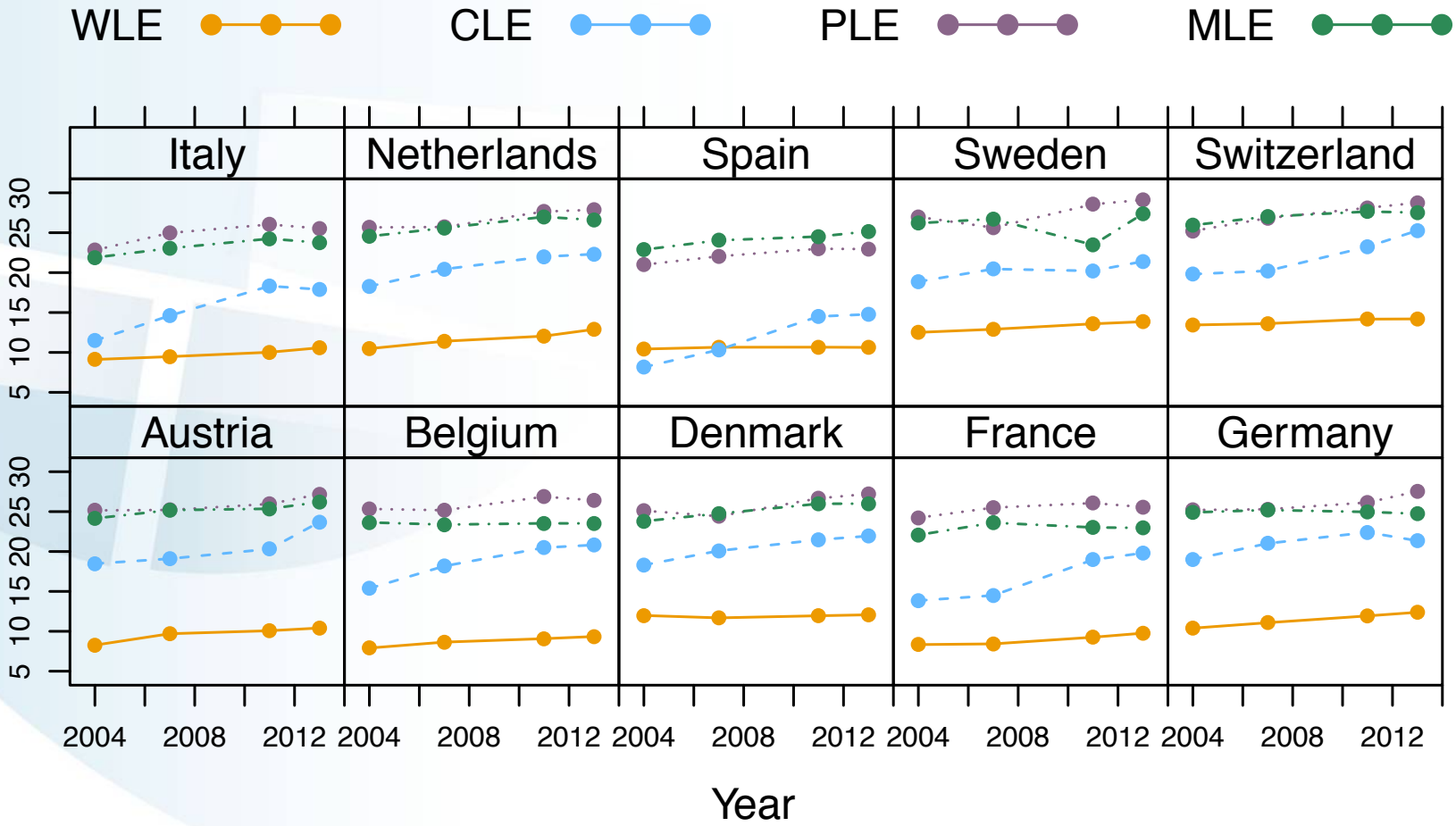
Results – correlations at age 50

Correlation between…	women	men
CLE and WLE	0.71	0.54
PLE and WLE	0.57	0.53
MLE and WLE	0.69	0.77
HLY and WLE	0.36	0.46

Note: WLE working life-expectancy; CLE cognitive life-expectancy; PLE physical life-expectancy; MLE mental life-expectancy

Results – women's LEs at age 50
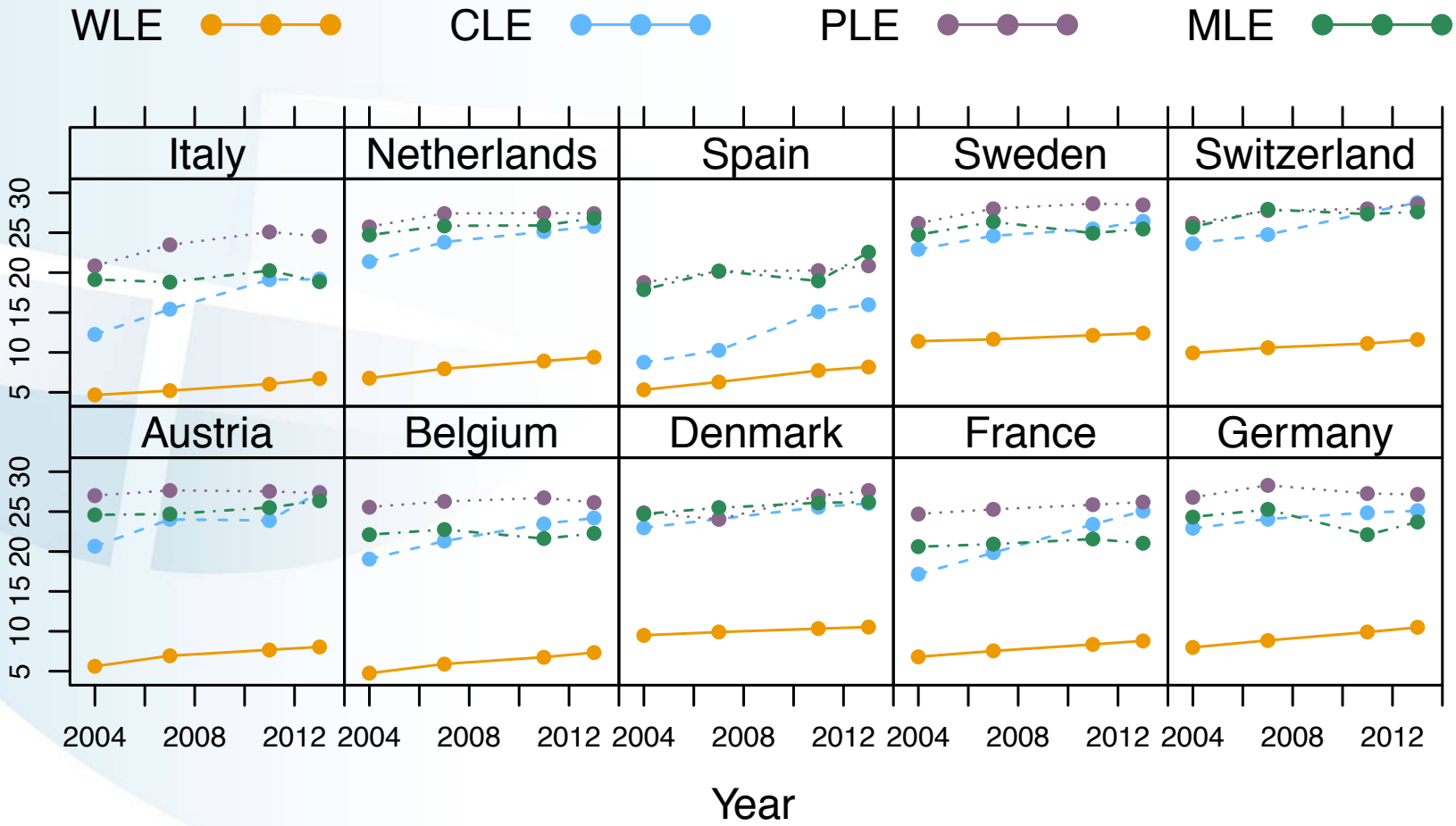
Results – men's LEs at age 50

Results – national factors (males)

	WLE	CLE	PLE	MLE
log(Social benefits)	-	+	+	-
Inflation rate	-			-
log(Nat Net Income)	+	+	+	+
Current smoker			-	
Obesity	-			-
Unemployment rate		+		+
Internet usage	+			
Years of education		+	+	+
Adj. R^2	0.55	0.91	0.82	0.59

Results – national factors (females)

	WLE	CLE	PLE	MLE
log(Social benefits)		+		
Inflation rate	-			
log(Nat Net Income)		+	+	+
Current smoker	-		-	+
Obesity				
Unemployment rate			-	
Internet usage	+			
Years of education	+	+	+	+
Adj. R^2	0.74	0.93	0.84	0.68

Summary

- Calculation of WLE, CLE, PLE and MLE for Europe at age 50
- Comparison of the four indicators across countries over time, separately for men and women
- Relationship between WLE and CLE, PLE, and MLE
- Associations between four indicators and national level factors

- Correlation for women largest between WLE and CLE
- Correlation for men largest between WLE and MLE
- WLE < CLE < MLE < PLE
- Over time, steepest observed increases in CLE, for both sexes
- National-level factors: years of education (women), social protection benefits (men)

Time for questions...

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