

# *Parenthood, number of children & expectations about old-age welfare*

Article for submission

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# Introduction



## A question to consider?

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- Aim: explore association between having children and expected old-age welfare
- ESS data for 31 European countries used to model respondents worry for old-age wellbeing
- Regional groupings and numerous control variables allow for varying analyses
- Question: What is the link between old-age worry and the number of children? Does the old-age social security motivation for childbirth still prevail and if so, in what manner?



### Research Hypothesis

1. Hypothesis: Having children is associated with positive expectation towards old-age welfare?
2. Hypothesis: Higher number of children improves expectations towards old-age welfare?
3. Hypothesis: Lower-income regions [countries] see children being associated with improved expectations towards old-age welfare more than higher-income regions [countries]

## Literature Review 1/2

## Fertility Decision-Making

**Hypothesis:** Fertility events reflected decision-making even in pre-transition societies.

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- Knodel (1978) argues that active family limitation was largely absent – contemporary research shows this might not be the case (wages, linked-lives, implicit/explicit decision)
- Fertility decisions can be explained by analysing the decision-making to have children!

### Summary of key decision-making elements today

- Foundational factors: job prospects and educational level of the prospective parents, prevailing social norms and even relationship stability
- Sociocultural aspects: value orientations concerning desired self-realisation, religion and family norms.
- Socioeconomic aspects: the direct and indirect costs of rearing children
- Intrinsic benefits of children: today parents ascribe the rewards of children to be primarily psychological, whilst their costs in turn are financial (Fawcett, 1988).



## Literature Review 2/2

## Social-Security & Old-age Welfare

Net value of children = economic (benefits – costs) + non-economic (emotional, self-realisation)

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### Fertility and intrinsic value of children

- Agrarian societies had a positive fertility-income relation as economic benefits were positive
- In non-complex economies, with low human capital investment requirements, the utility benefit of additional household members was high, especially in the vacuum of wider social-security setups
- **But today:** formalized social security setups and high human capital investments into children

### **Some research on pensions and fertility!**

- Cigno and Rosati (1992) find that both pension systems and capital market development had a negative effect on fertility.
- Boldrin, De nardi and Jones (2005) estimated the effect of social security schemas on fertility decisions and found that 50% of the fertility drop in the USA and Europe from the 1960s and onwards is explained by the growth in national public pension systems.
  - The authors argue that up to 80% of the differences between the American and European fertility is explained by diverging pension schemes.

## *Data & Approach*

Using ESS data, we can setup various models to look closer into whether there today still is an association between fertility and old-age expectations!

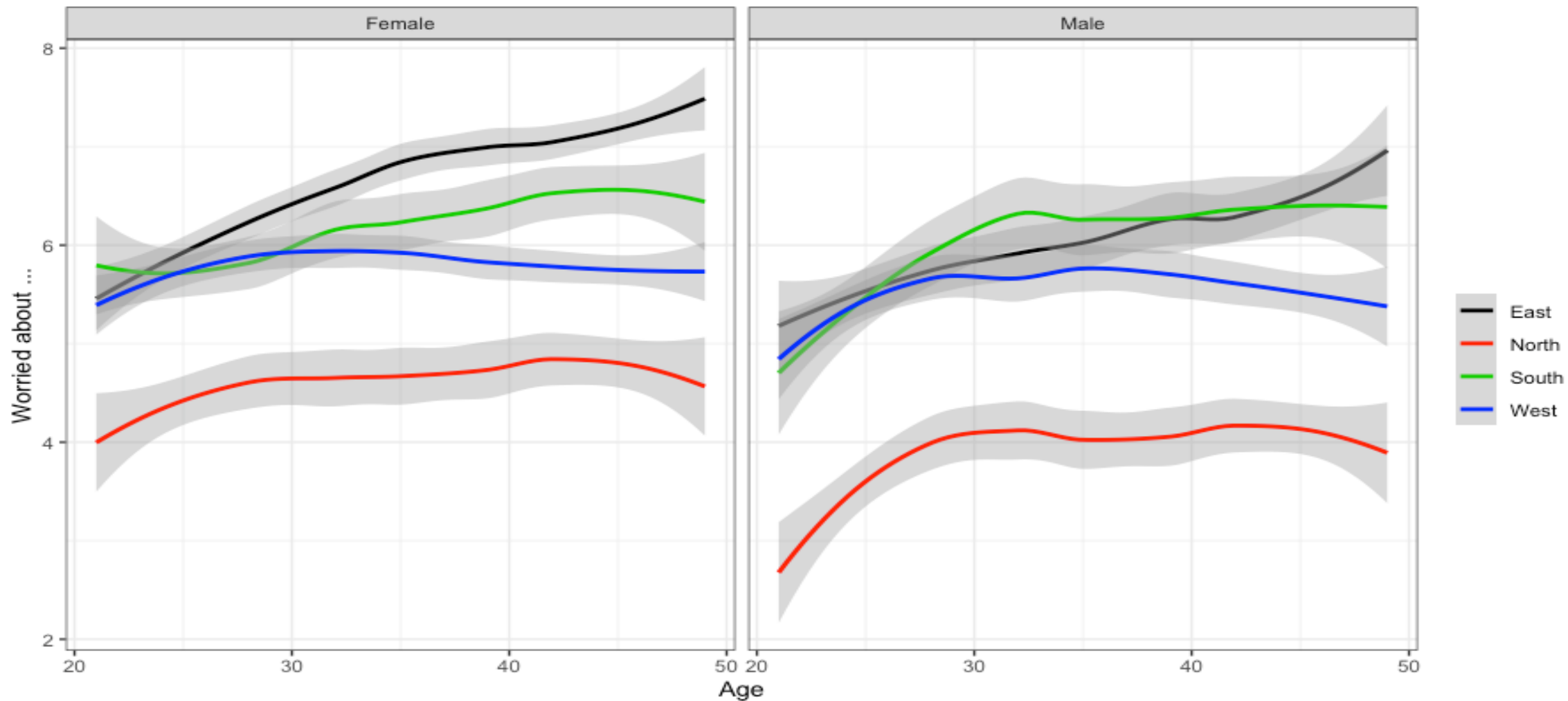
The dependant variable in these models is the question “*how worried are you that income in old age will not be adequate to cover later years*” (wrinco),

We group the countries from the data into 4 regions: North, East, West and South and apply relevant filters on the data

Let us look at some descriptive results of the variable “wrinco”

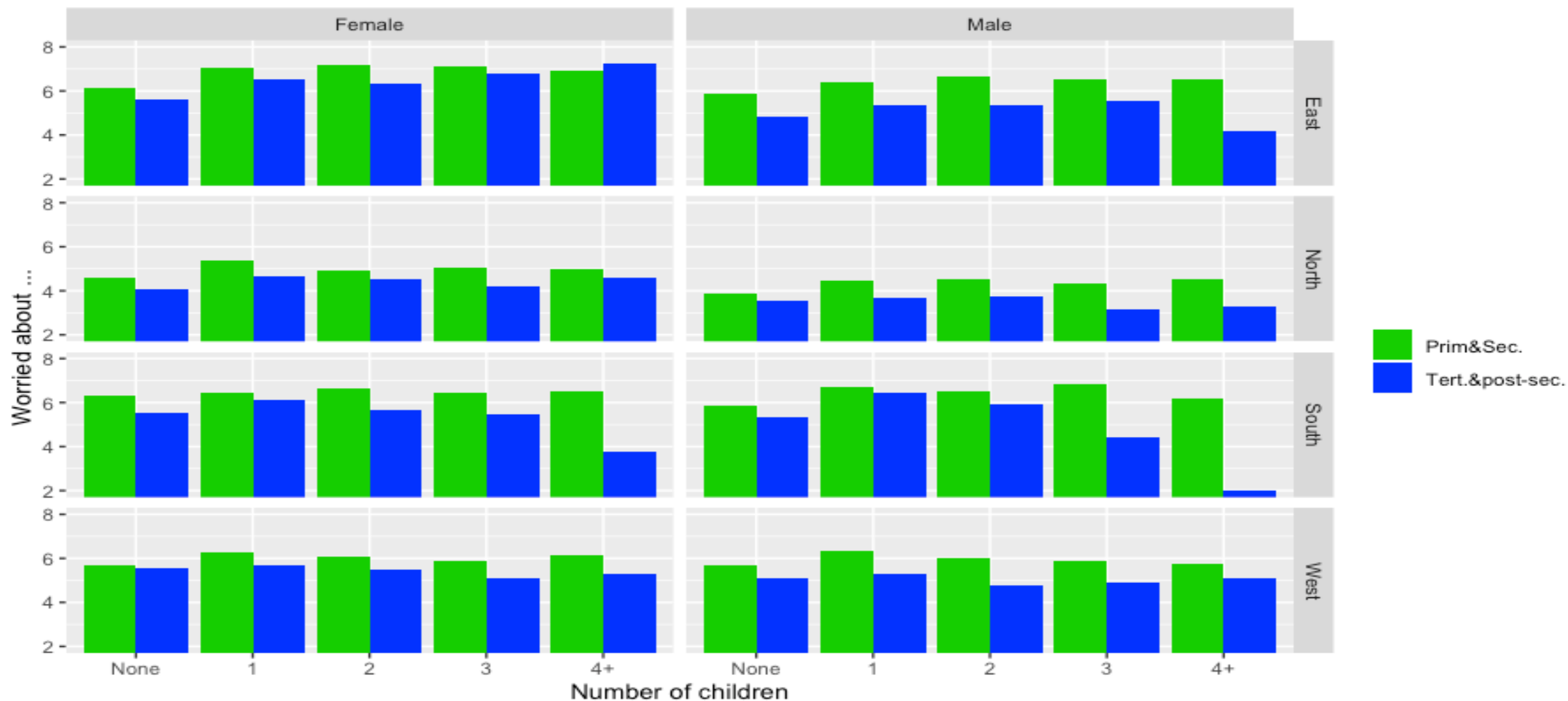
# Descriptive statistics

# Mean value of the dependent variable



# Descriptive statistics

# Mean value of the dependent variable

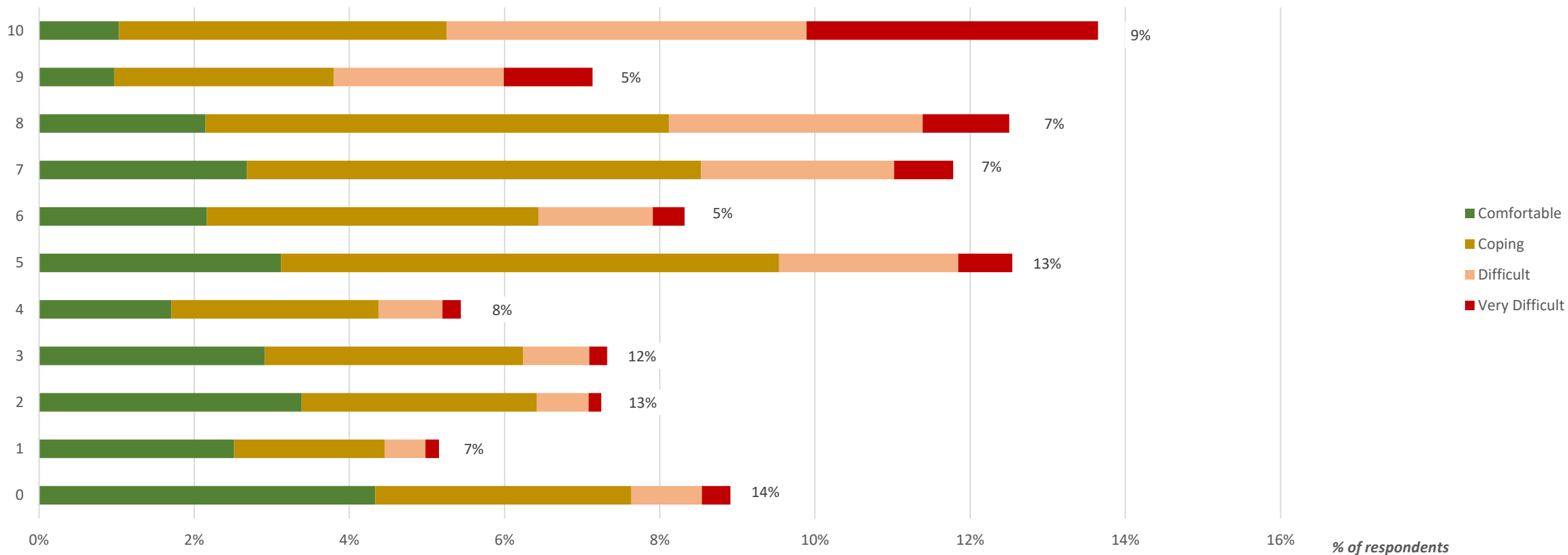


# Descriptive statistics

# Mean value of the dependent variable

Figure 3. Old-age worry and household income sufficiency

wrinco



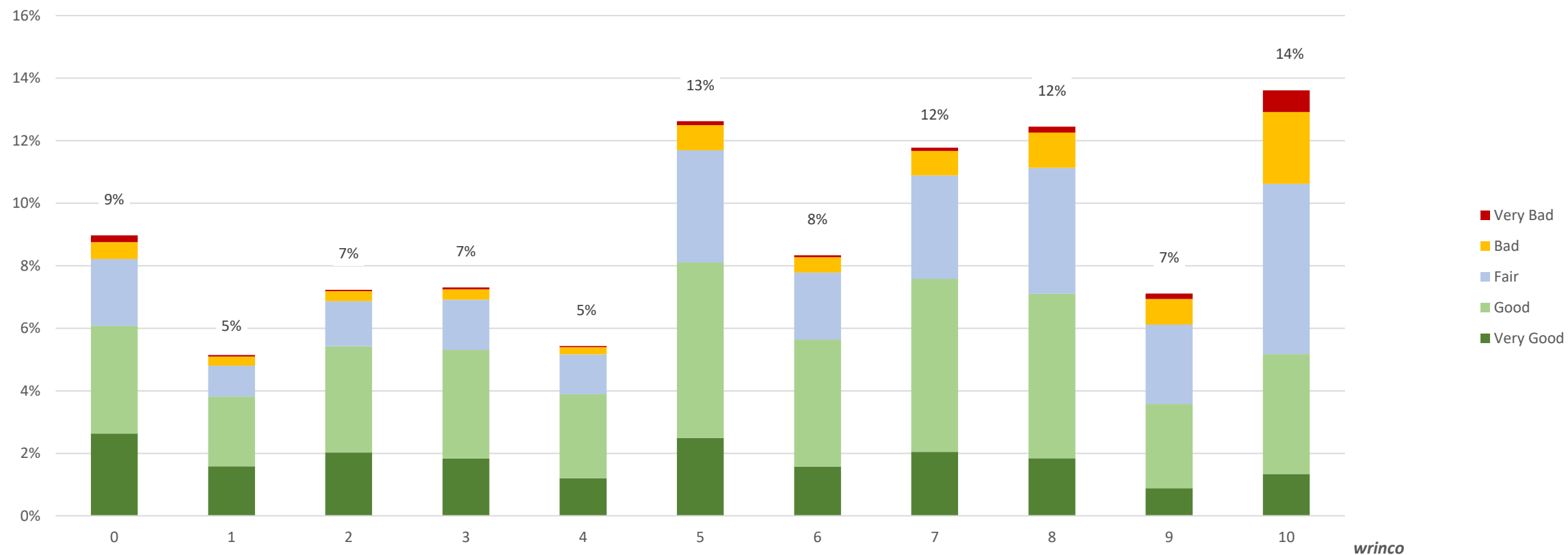


# Descriptive statistics

# Mean value of the dependent variable

Figure 4. Old-age worry and health

% of respondents



wrinco

# Regression Model 1/2

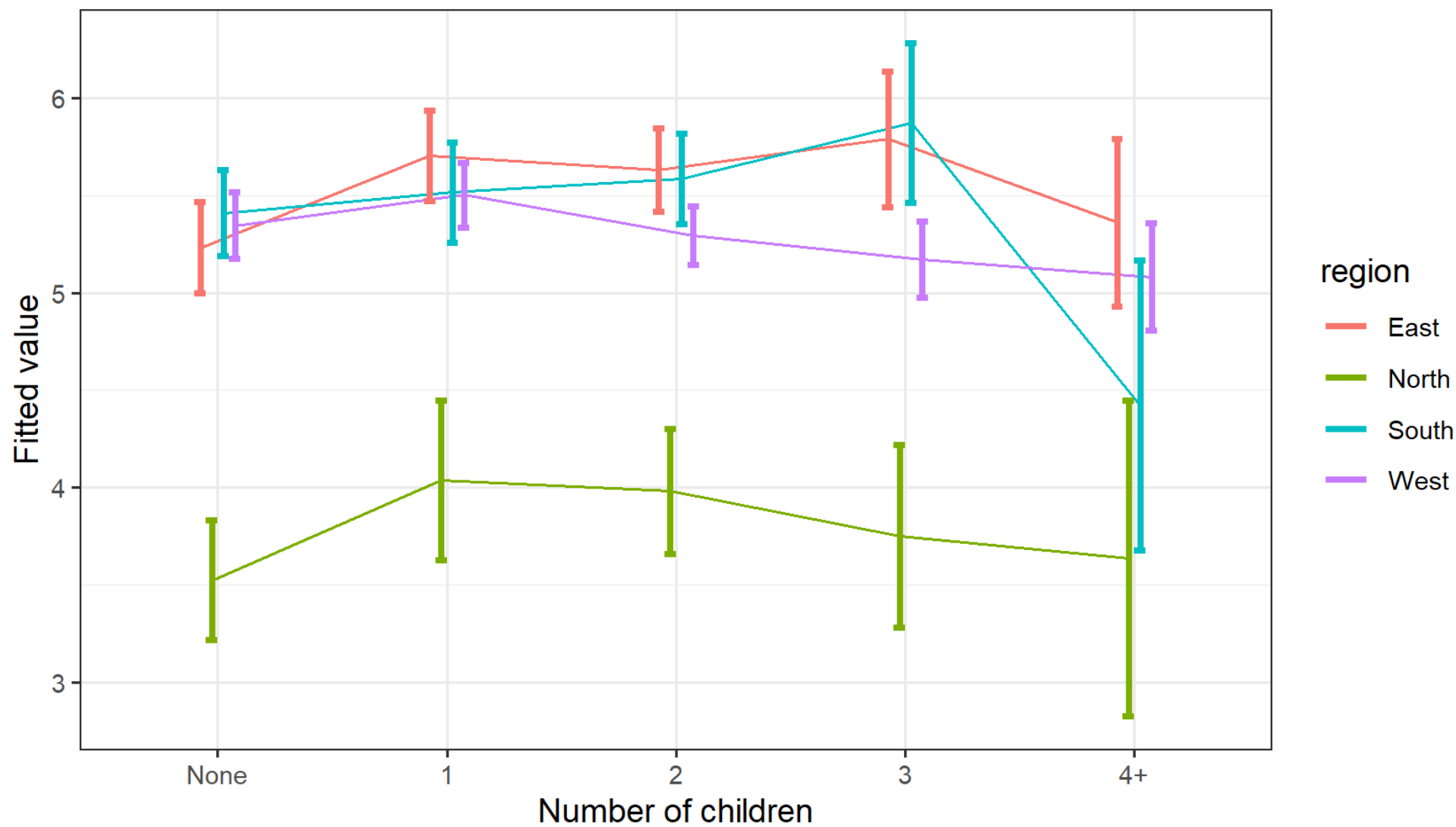
	All	East	West	South	North
Children (ref = 0)					
1	0.170*** (0.063)	0.178 (0.138)	0.095 (0.093)	0.306 (0.188)	0.354** (0.153)
2	0.042 (0.065)	0.016 (0.145)	-0.085 (0.095)	0.365* (0.200)	0.223 (0.151)
3	-0.035 (0.085)	-0.045 (0.188)	-0.202 (0.124)	0.779*** (0.274)	-0.017 (0.191)
4+	-0.286** (0.114)	-0.678*** (0.220)	-0.268 (0.168)	-0.51 (0.439)	-0.174 (0.276)
Male	-0.287*** (0.040)	-0.513*** (0.078)	-0.275*** (0.060)	0.057 (0.112)	-0.679*** (0.096)
Age	0.134*** (0.024)	0.056 (0.046)	0.164*** (0.037)	0.037 (0.069)	0.217*** (0.060)
Age squared	-0.002*** (0.000)	-0.0004 (0.001)	-0.002*** (0.001)	-0.0005 (0.001)	-0.003*** (0.001)
Never married	0.002 (0.059)	-0.295** (0.146)	-0.04 (0.084)	0.094 (0.191)	0.242* (0.124)
Tert. & post-sec. education	-0.358*** (0.044)	-0.331*** (0.094)	-0.378*** (0.065)	-0.326*** (0.123)	-0.321*** (0.102)
Without partner	-0.096* (0.052)	-0.030 (0.117)	-0.109 (0.076)	0.110 (0.162)	-0.213* (0.119)

# Regression Model 2/2

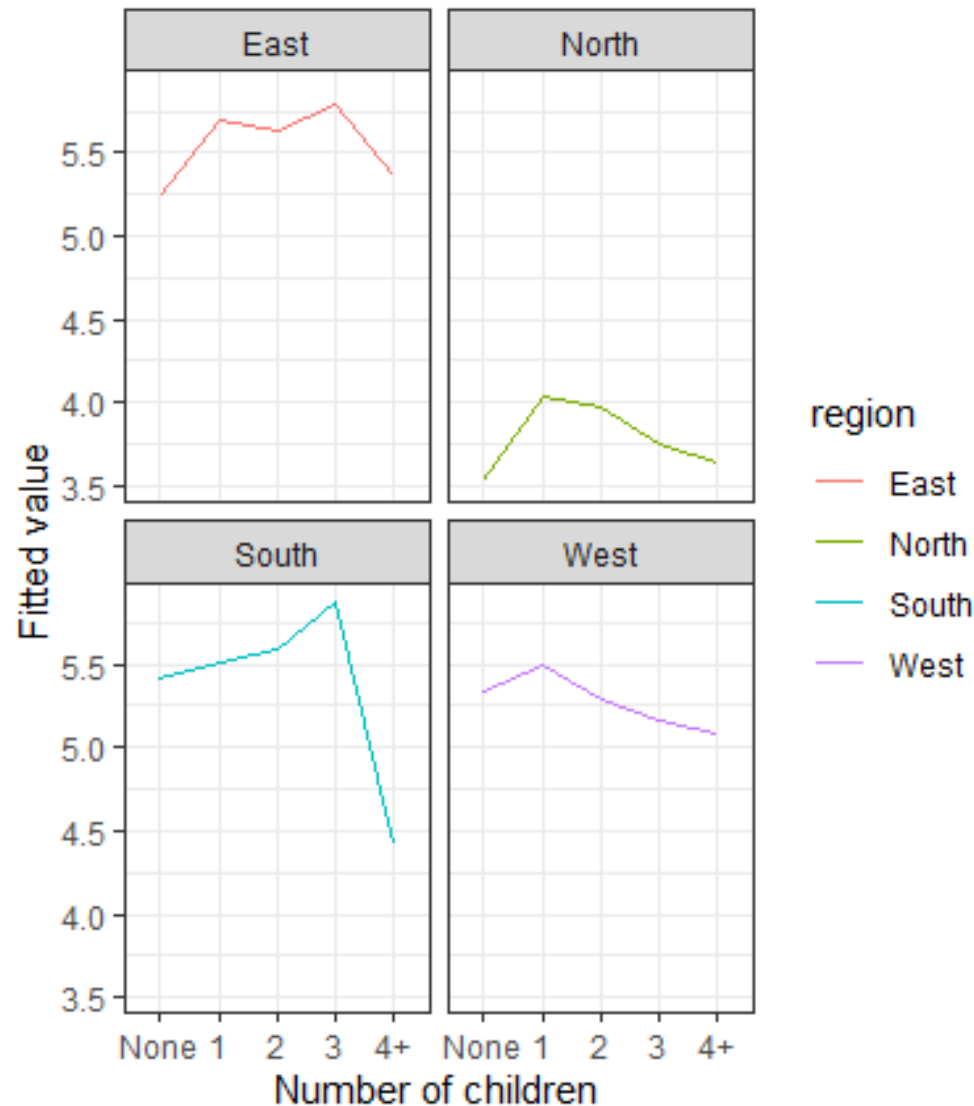
	All	East	West	South	North
Subjective HH income (ref = Comfortable)					
Coping	0.856*** (0.049)	0.919*** (0.155)	0.997*** (0.071)	0.238* (0.130)	0.980*** (0.106)
Difficult	1.426*** (0.067)	1.625*** (0.167)	1.370*** (0.102)	1.009*** (-0.186)	1.853*** (0.184)
Very difficult	2.190*** (0.109)	2.364*** (0.209)	2.266*** (0.171)	1.206*** (0.351)	2.227*** (0.362)
Unemployed past 3 months	0.315*** (0.042)	0.293*** (0.079)	0.333*** (0.066)	0.308*** (0.116)	0.551*** (0.103)
Subj. Health (ref = Very good)					
Good	0.261*** (0.049)	0.301*** (0.107)	0.223*** (0.072)	0.194 (0.150)	0.472*** (0.105)
Fair	0.656*** (0.061)	0.804*** (0.127)	0.572*** (0.092)	0.469*** (0.179)	1.083*** (0.155)
Bad	0.931*** (0.110)	0.746*** (0.201)	1.187*** (0.168)	-0.037 (0.331)	0.566* (0.316)
Very bad	1.650*** (0.267)	1.409*** (0.482)	1.801*** (0.389)	1.890* (1.007)	-0.353 (0.822)
Saving for retirement = Yes	-0.175*** (0.043)	0.064 (0.084)	-0.057 (0.067)	-0.899*** (0.115)	-0.12 (0.108)
Constant	2.680*** (0.445)	3.539*** (0.814)	2.391*** (0.670)	3.951*** (1.312)	-0.774 (1.038)
Observations	18,460	5,148	7,809	2,292	3,211
R2	0.149	0.134	0.142	0.078	0.132
Adjusted R2	0.147	0.13	0.139	0.069	0.126

Note: country dummy variables not shown. \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

# Interaction Model



## Interaction Model and quick answer to hypotheses



- 1. Hypothesis: Having children is associated with positive expectation towards old-age welfare? **NO - not compared to those who have none or 1-2 children**
- 2. Hypothesis: Higher number of children improves expectations towards old-age welfare? **YES**
- 3. Hypothesis: Lower-income regions (countries) see children being associated with improved expectations towards old-age welfare more than higher-income regions (countries) **NO - see figure on right**