

# SOCIO-EMOTIONAL SKILLS AND LABOUR MARKET OUTCOMES: NEW EVIDENCE USING THE CANADIAN LONGITUDINAL PIAAC STUDY

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# Overview of presentation

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- Focus on the main findings of a study that examines the relationship between socio-emotional skills and:
  - employment,
  - earnings, and
  - workplace activities
- Discuss the longitudinal PIAAC data in Canada
- Provide contextual insight into current research and policy on socio-emotional skills

# Increased policy focus on socio-emotional skills

- Development and implementation of new PIAAC survey questions
- OECD's 2021 publication "*Beyond Academic Learning: First Results from the Survey of Social and Emotional Skills*"
- In Canada: the development of a new skills framework at the national level that includes social emotional skills (i.e., adaptability and creativity)



# Measurement of socio-emotional skills

	Openness	Conscientiousness	Extraversion	Agreeableness	Emotional stability
Trait definition	“cognitive flexibility, sensitivity to aesthetics, depth of feeling, and preference for novelty” (Sutin, 2017, p. 83).	“the propensity to be self-controlled, responsible to others, hardworking, orderly, and rule abiding” (Jackson & Roberts, 2017, p. 134).	“tendencies to experience and exhibit positive affect, assertive behavior, decisive thinking, and desires for social attention” (Wilt & Revelle, 2017, p. 58).	“the motivation to maintain positive relations with others” (Graziano & Tobin, 2017, p. 106).	“tendencies toward [positive] affect... and individual responses to threat, frustration, or loss” (Tackett & Lehey, 2017, p. 40).
Skill-based definition	Promotes curiosity, creativity, and tolerance.	Promotes high achievement, responsibility, and task performance.	Promotes assertiveness, leadership, and sociability.	Promotes trust, cooperation, empathy, and collaboration.	Promotes emotional regulation, stress resistance, and optimism.

**Note:** BFI skill-based definitions are adapted from Kankaraš and Suarez-Alvarez (2019).

## Research questions

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1. How are socio-emotional skills **related to employment status and earnings** both before and after controlling for a range of individual characteristics, educational attainment, and cognitive skills?
2. Does the association between socio-emotional skills and these labour market outcomes **differ by gender, age, and immigration background**?
3. Do socio-emotional skills matter more or less **among high, mid, and low earnings individuals**?
4. How are socio-emotional skills related to the probability of **engaging in various constructive workplace activities**, again both before and after controlling for individual characteristics and educational attainment?

# The Longitudinal and International Study of Adults (LISA) Data

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## *Overview*

- A longitudinal household survey that includes a sub-sample of PIAAC respondents
- Sponsored by Employment and Social Development Canada, administered by Statistics Canada
- Biannual: Wave 1 – 2012 to Wave 4 – 2020 (not yet released)

## *Data availability*

- Canadian Research Data Centre Network (CRDCN)

## *Target population*

- Based on the 2011 short-form Census and National Household Survey
- Households residing in provinces
- Excludes institutionalized individuals and those on First Nations reserves

# LISA Sample: Respondent types

## PIAAC respondents

- Aged 16 to 65 in 2012
- PIAAC background questionnaire & skill assessments

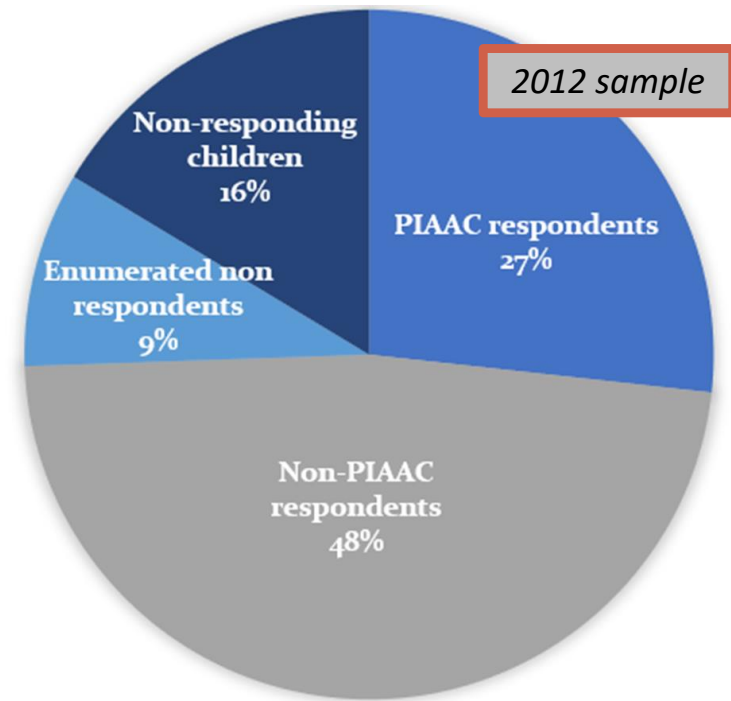
## Non-PIAAC respondents

- Age 15+
- Shorter questionnaire, no skill assessment

## Enumerated non-respondents and non-responding children

- Not interviewed

**Both PIAAC and non-PIAAC respondents answered the BFI in 2014**



# Analysis approach

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## Four different model specifications:

- 1) the BFI domains only (the “baseline” model);
- 2) + individual characteristics;
- 3) + education level (the “full specification LISA model”); and
- 4) + education level and numeracy skill level (the “full specification PIAAC-LISA model”)

Models 1-3 estimated separately by gender, age group, and immigration background

Regression approaches: linear probability modelling, ordinary least squares (OLS), and quantile regression analysis



# FINDINGS

# Employment status

Openness

Conscientiousness

Extraversion

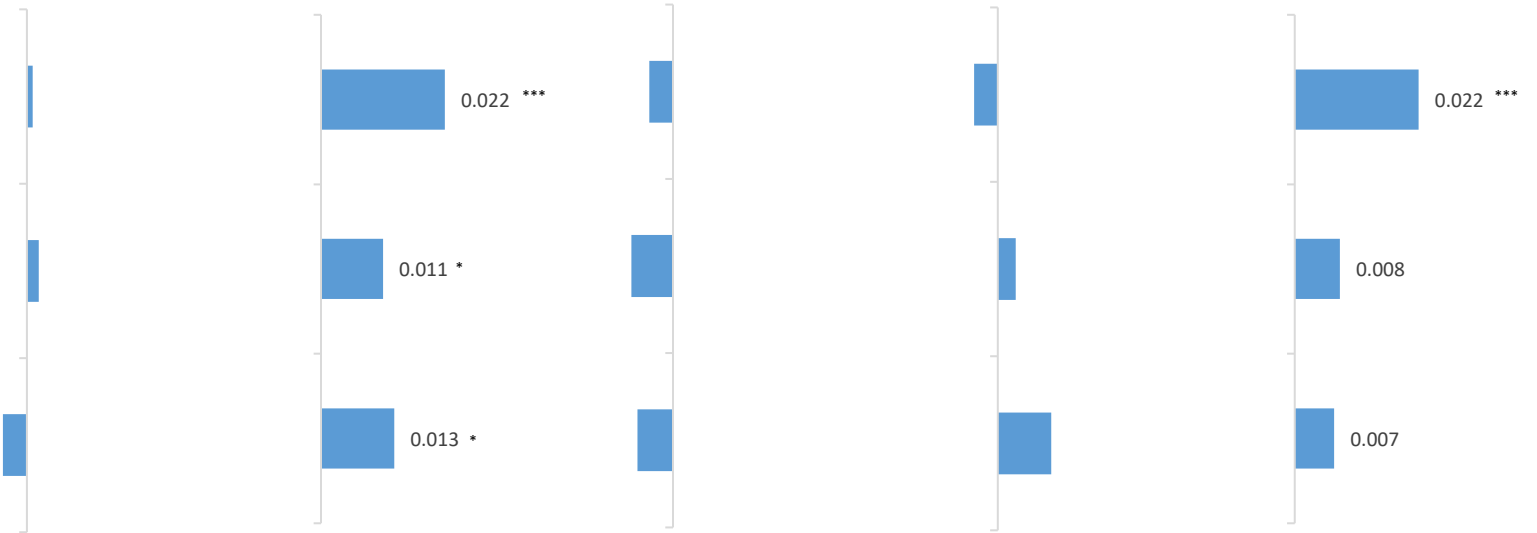
Agreeableness

Emotional Stability

Model 1

Model 2

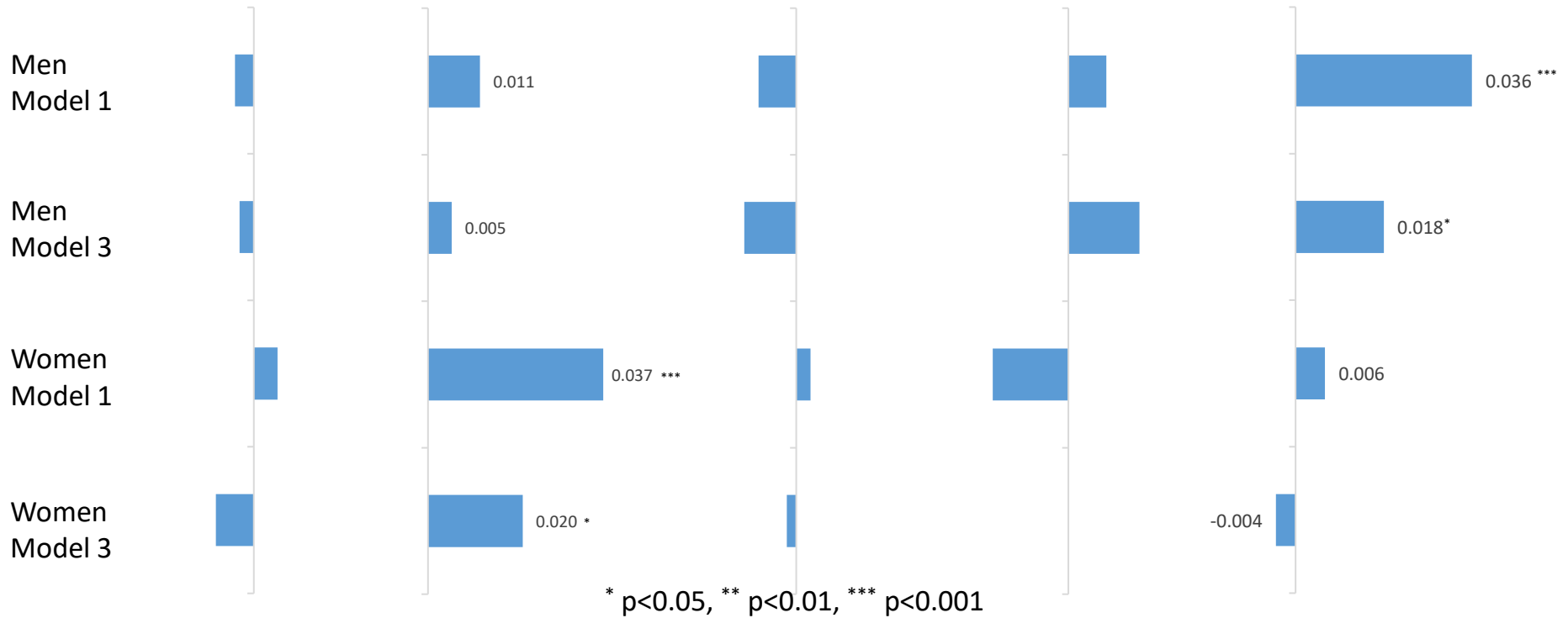
Model 3



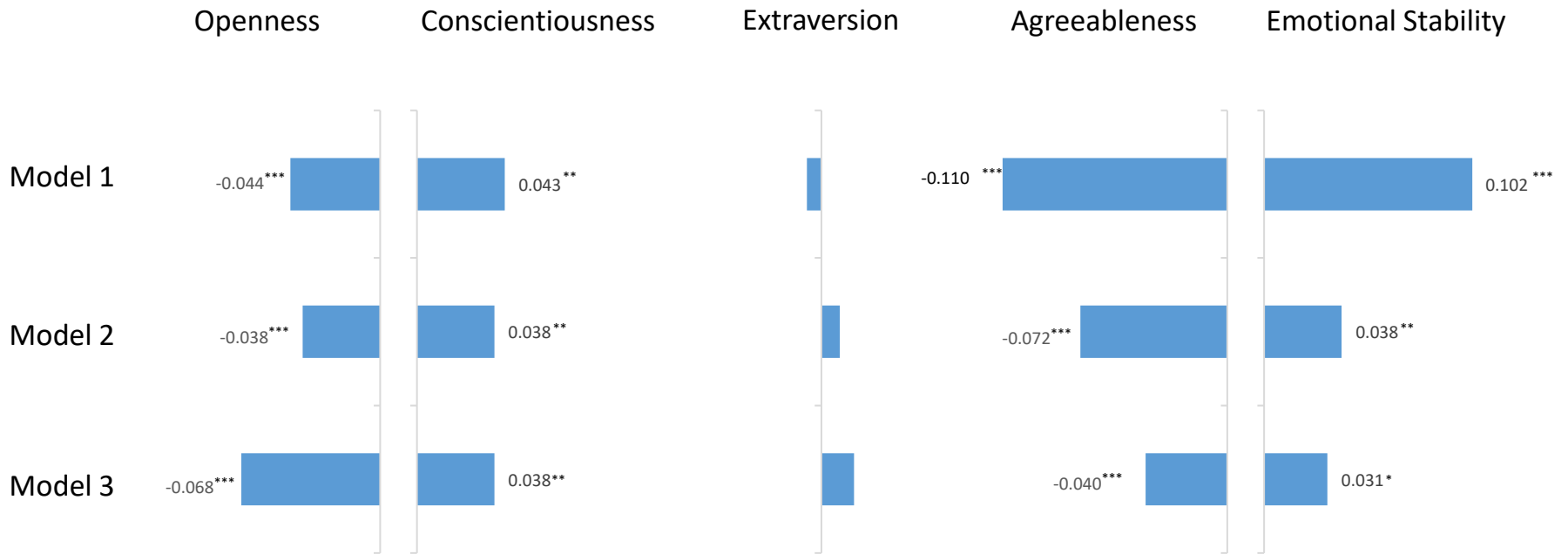
\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

# Employment status for men/women

Openness      Conscientiousness      Extraversion      Agreeableness      Emotional Stability

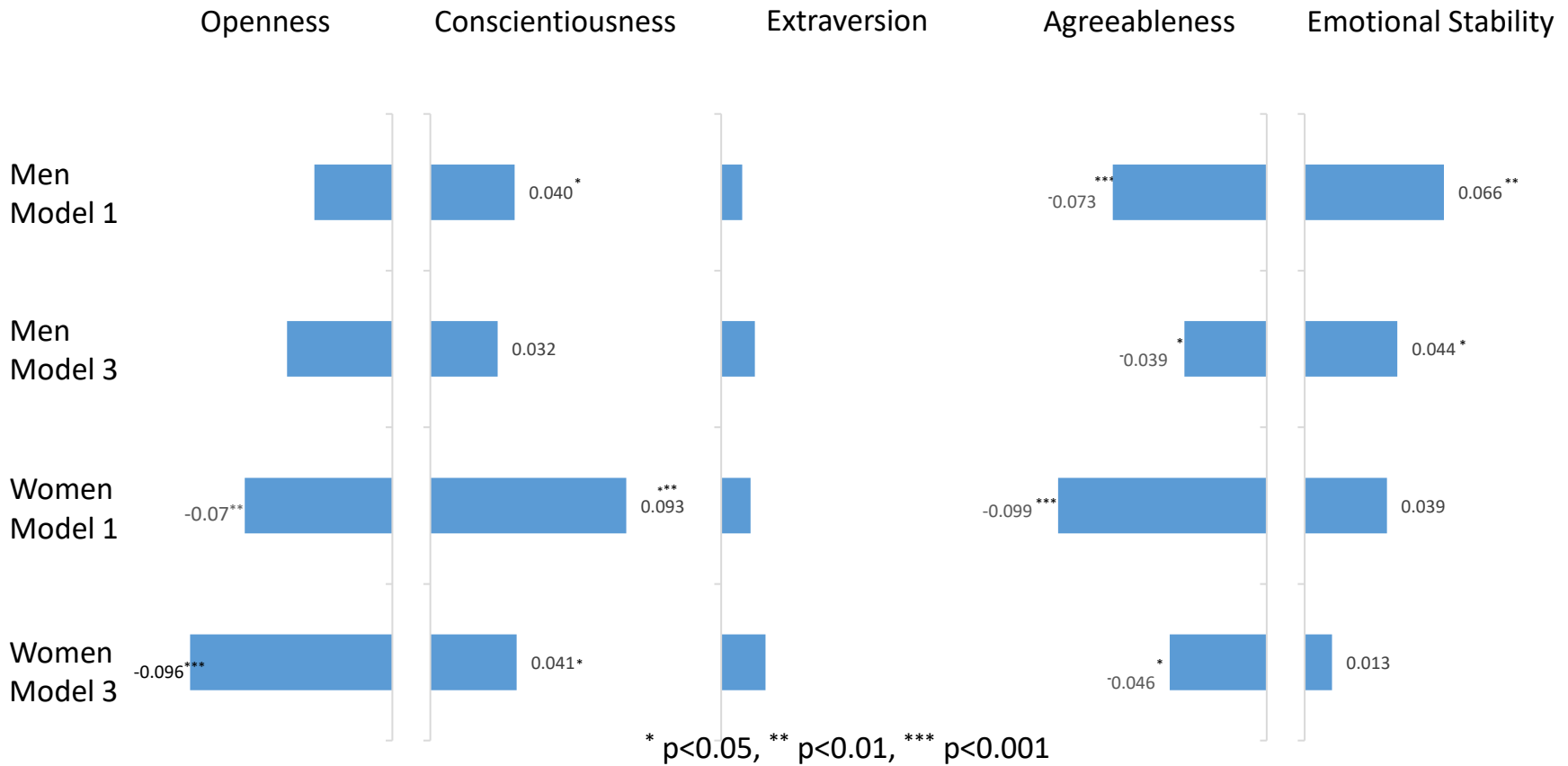


# Log earnings

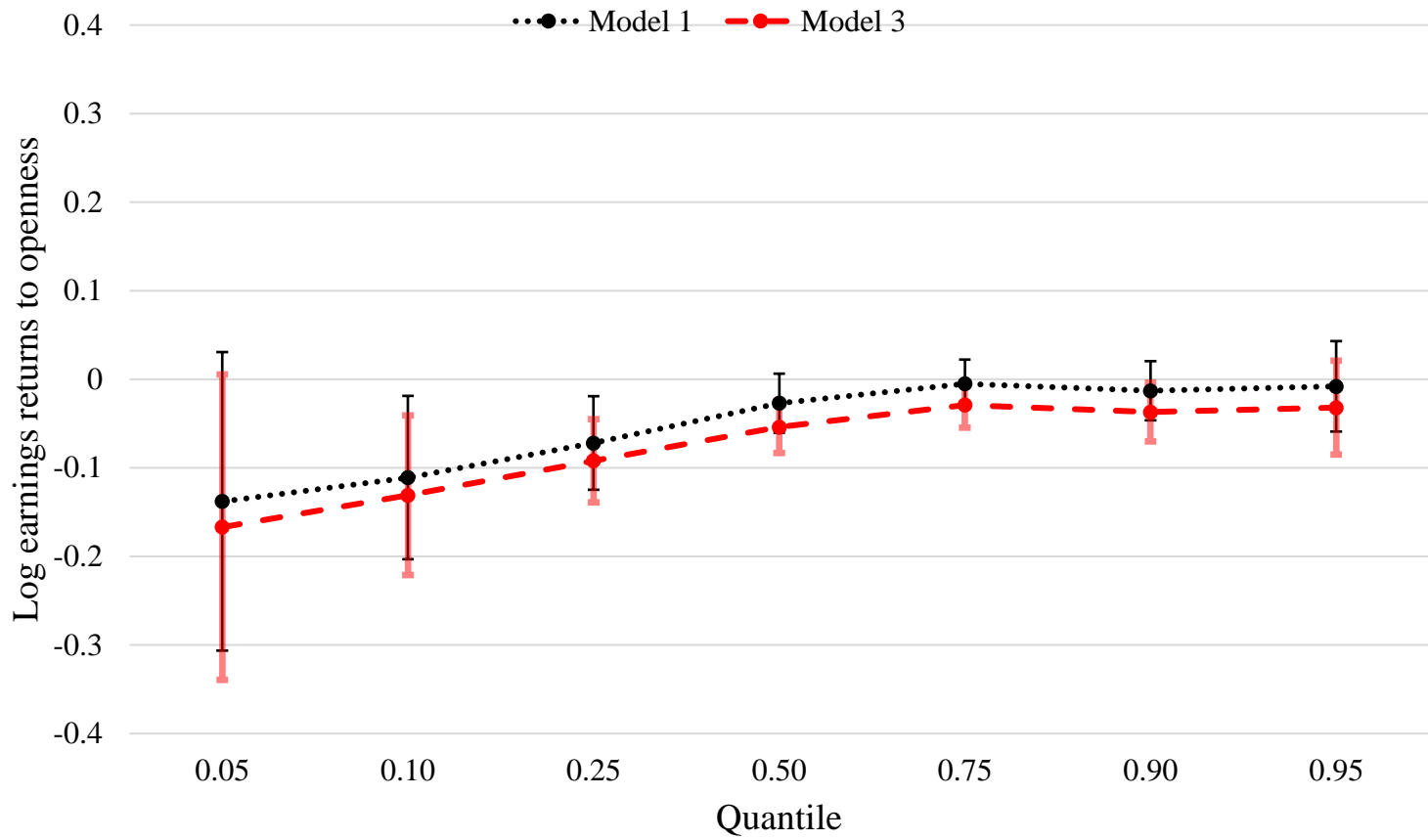


\* p<0.05, \*\* p<0.01, \*\*\* p<0.001

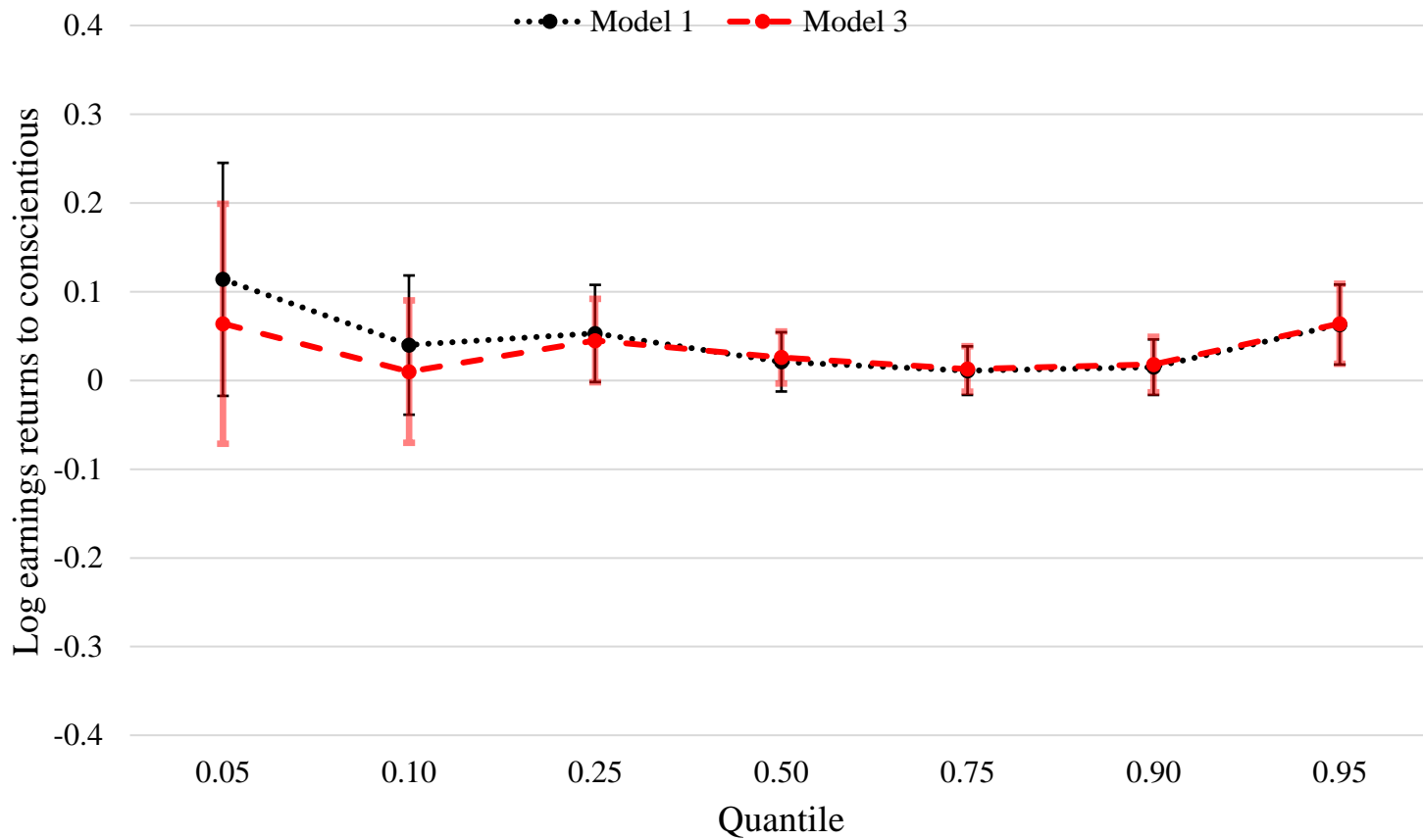
# Log earnings for men/women



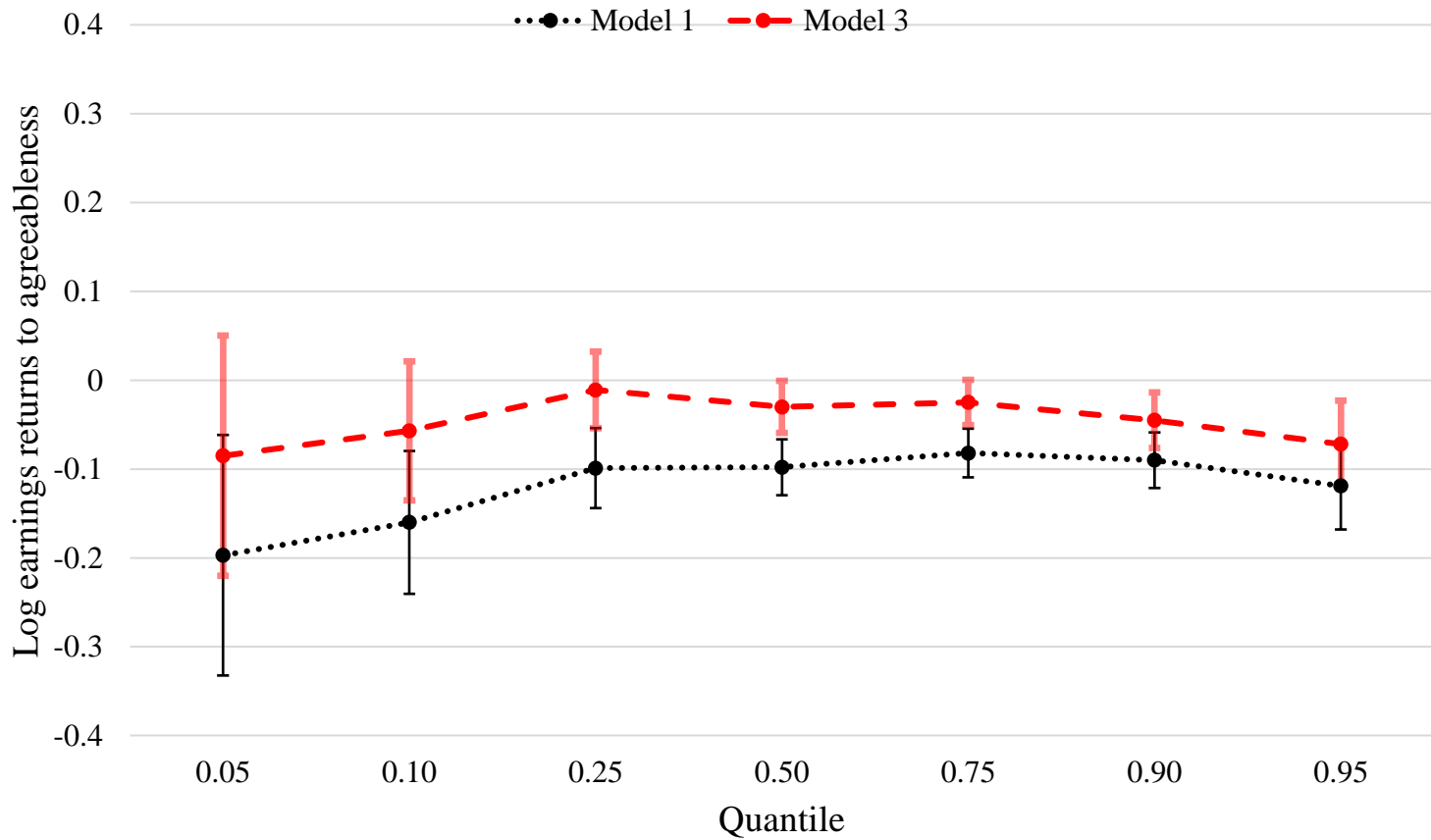
# Returns to openness across earning quantiles



# Returns to conscientiousness across earning quantiles

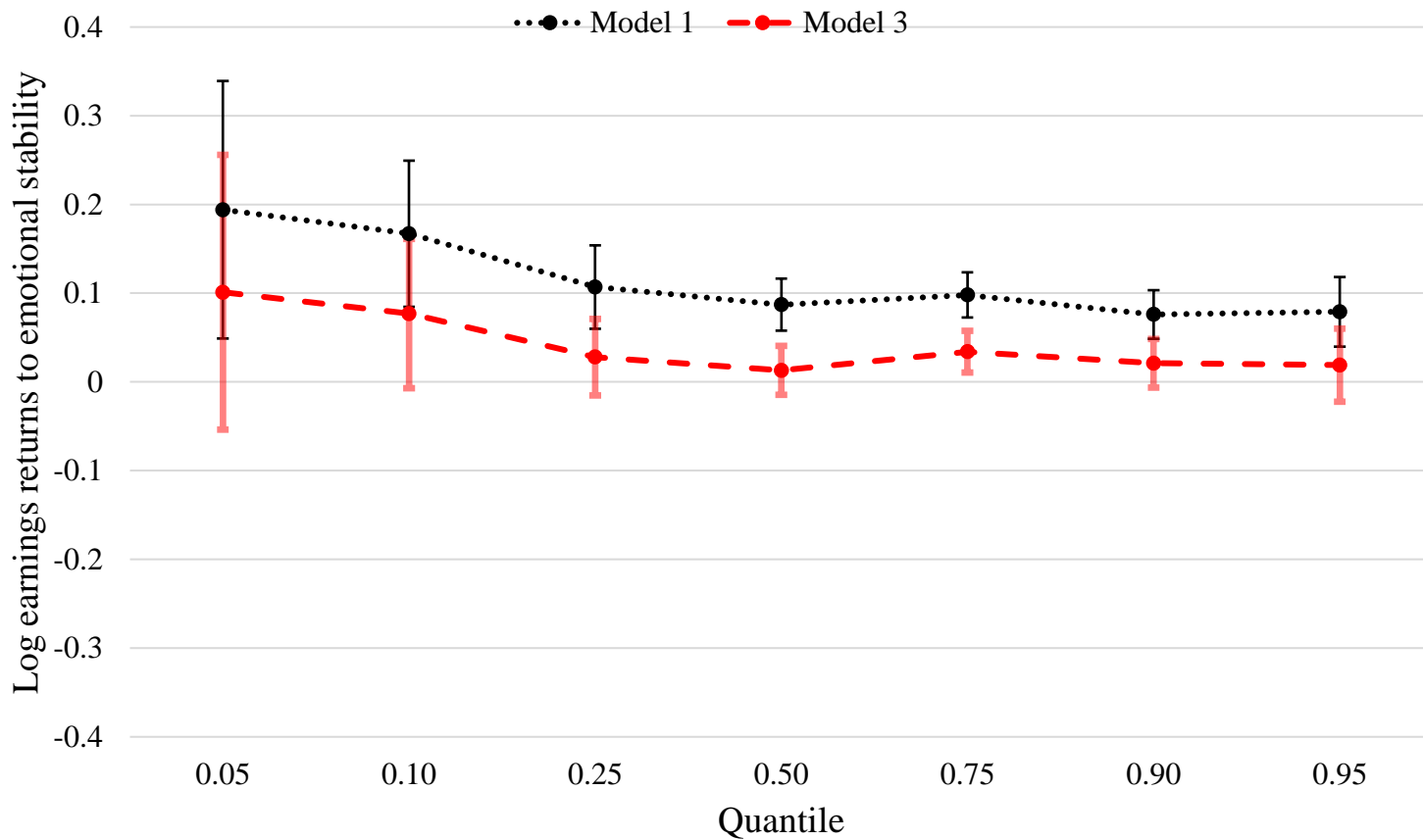


## Returns to agreeableness across earning quantiles





## Returns to emotional stability across earning quantiles



# Conclusion & overview of findings

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Openness	Conscientiousness	Extraversion	Agreeableness	Emotional stability
<ul style="list-style-type: none"> <li>Negatively related to earnings.</li> </ul>	<ul style="list-style-type: none"> <li>Positively related to employment for women but not men.</li> <li>Positively related to earnings for women but not men except with no controls,</li> </ul>		<ul style="list-style-type: none"> <li>Negatively related to earnings among all respondents.</li> </ul>	<ul style="list-style-type: none"> <li>Positively related to employment without controlling for other factors (Model 1), non-significant in Models 2 and 3.</li> <li>Positive in all models for men but not women.</li> <li>Also positively related to earnings for men but not women.</li> </ul>