

# Gender differences in job loss among older workers following the outbreak of COVID-19

Petra Međimurec

Dario Mustač

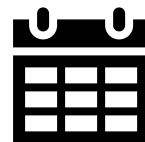
Ivan Čipin

Department of Demography, Faculty of Economics & Business, University of Zagreb

---



7th SHARE User Conference

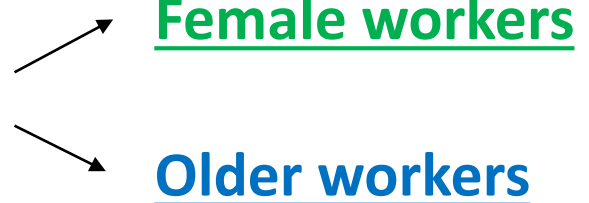


5-7 October 2022



Bled, Slovenia

# BACKGROUND

- Strong labour market shock following the outbreak of COVID-19
- Emergence of short-run employment inequalities 
  - Female workers
  - Older workers
- Importance of life course factors, employment histories in particular
- Country differences in (gender-specific) job loss

# RESEARCH QUESTIONS

- 1) Were women more likely than men to experience job loss following the outbreak of COVID-19 and, if so, how do gender differences in COVID-19-related job loss come about?

To what extent do employment histories and job characteristics explain the effect of gender on job loss due to COVID-19?

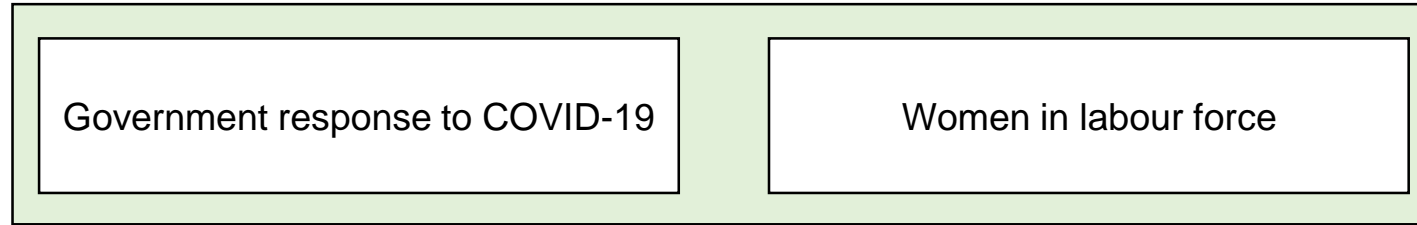
---

- 2) What role does country context play for gender differences in job loss following the outbreak of COVID-19?

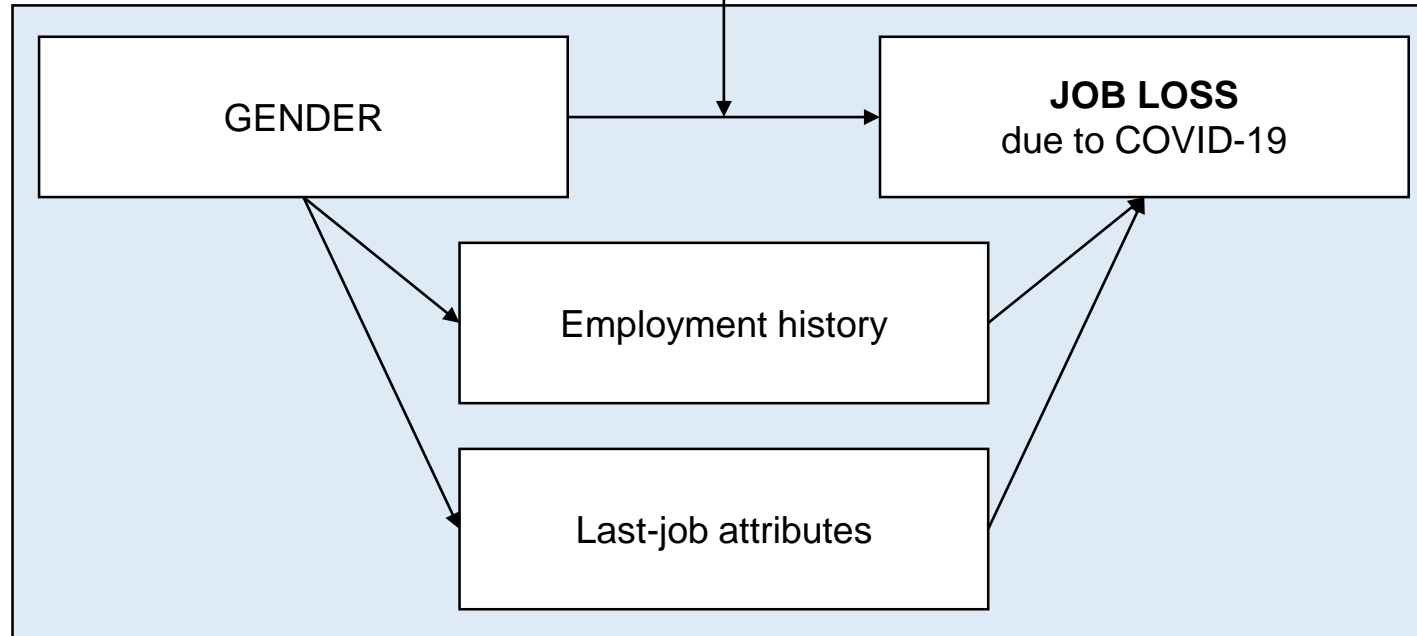
Is the effect of gender on job loss following the outbreak of COVID-19 in some way related to a country's response to COVID-19 and the percentage share of women in a country's labour force?

# CONCEPTUAL FRAMEWORK

## MACRO-LEVEL



## MICRO-LEVEL



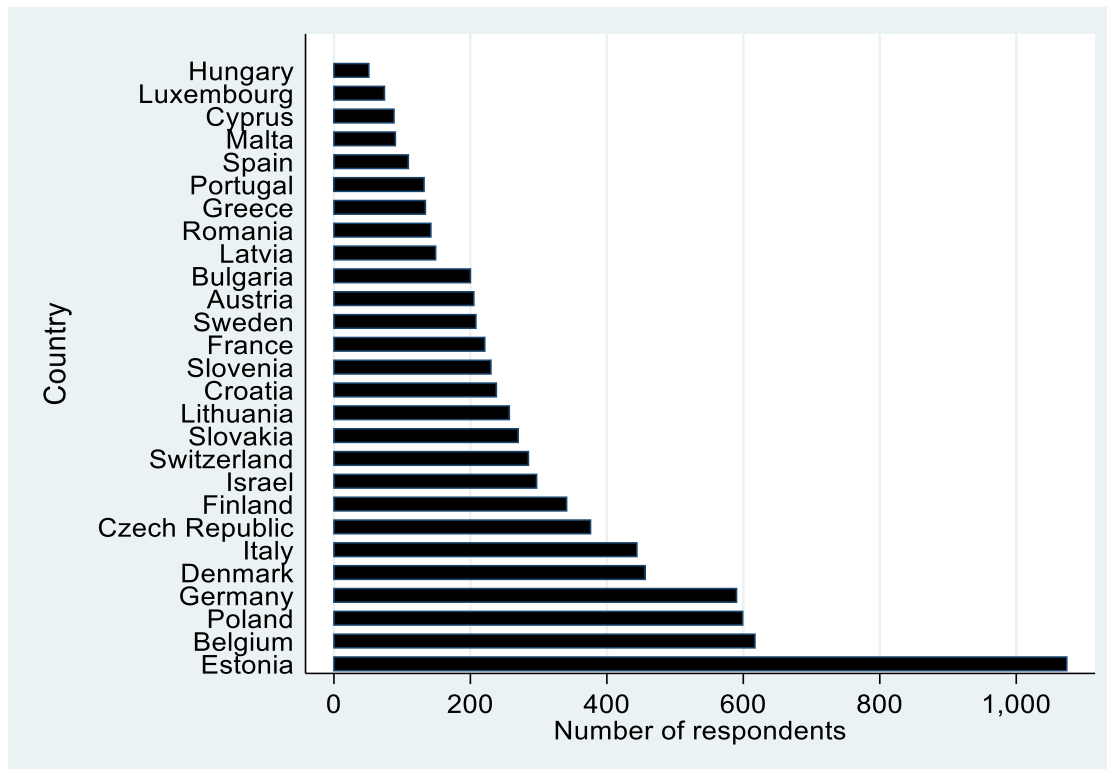
# DATA AND METHODS

1/2

## SAMPLE

N = **7,877** respondents who reported to have been working when COVID-19 broke out (SCS1) + data availability in SHARE Wave 7 & JEP database

Data from **27** countries:



## VARIABLES

### Individual level

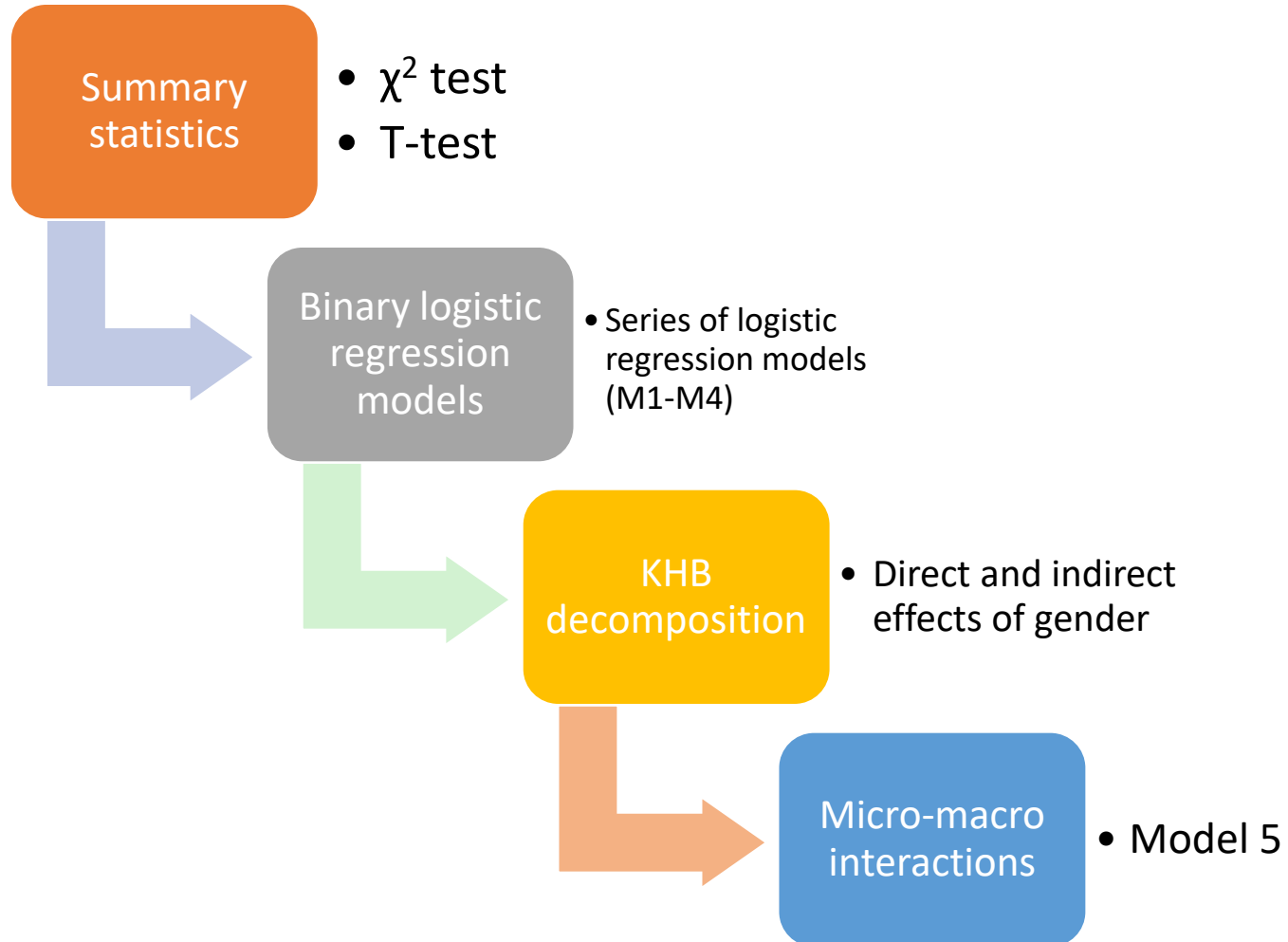
- job loss (dependent variable)
- gender (main independent variable)
- Employment history (years in employment, percentage share in part-time jobs, number of jobs, average occupational status & number of years unemployed)
- Respondents' working status (employment in 2017, job industry in 2017, job title in 2017 & working hours in 2017)
- Set of control variables

### Country level

- Length of stringent epidemic control measures
- Percentage share of women in total labour force

# DATA AND METHODS

## ESTIMATION APPROACH

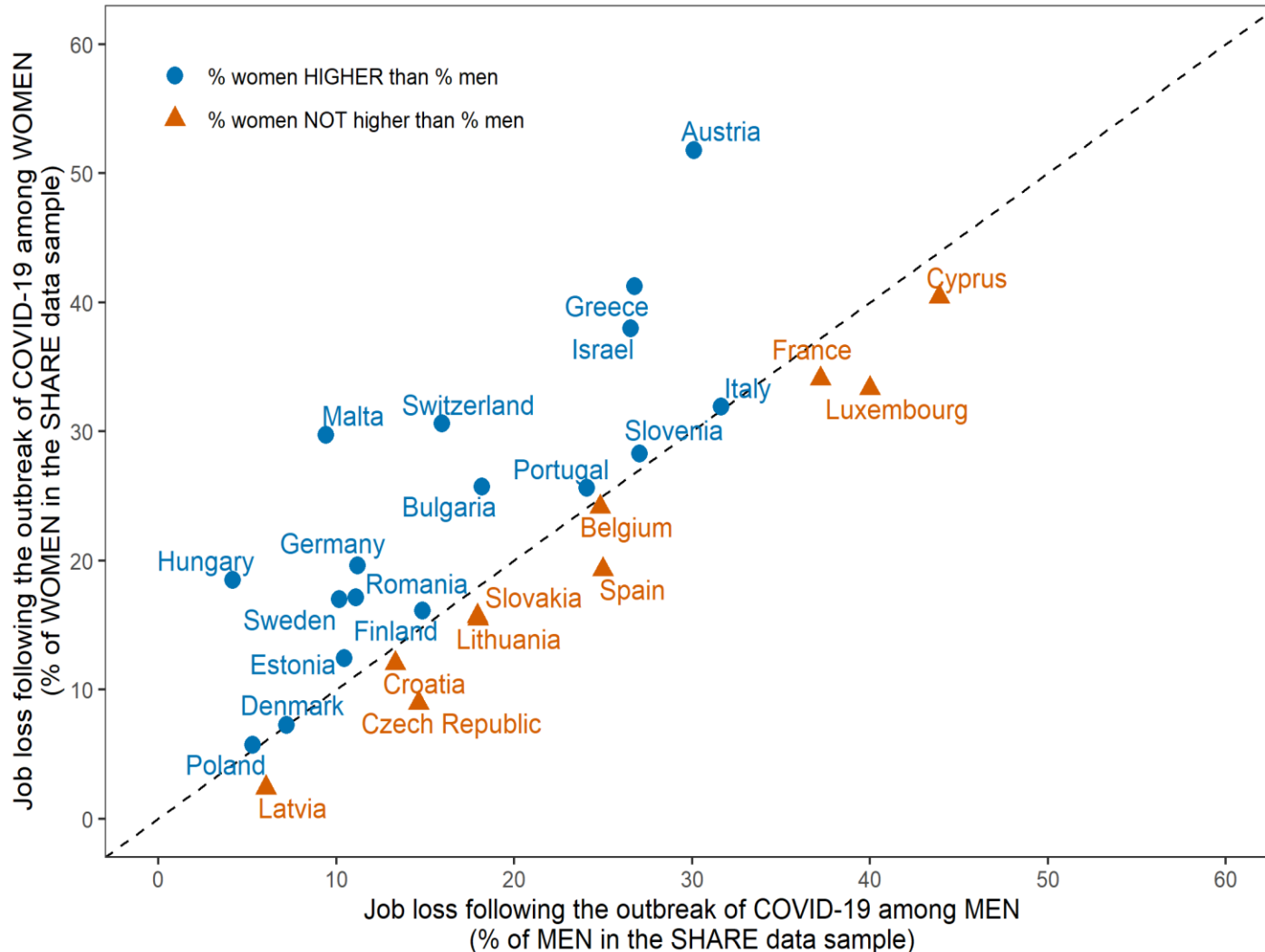


# RESULTS

## DESCRIPTIVE FINDINGS

1/4

Gender differences in job loss following the outbreak of COVID-19



In **17** of the surveyed countries

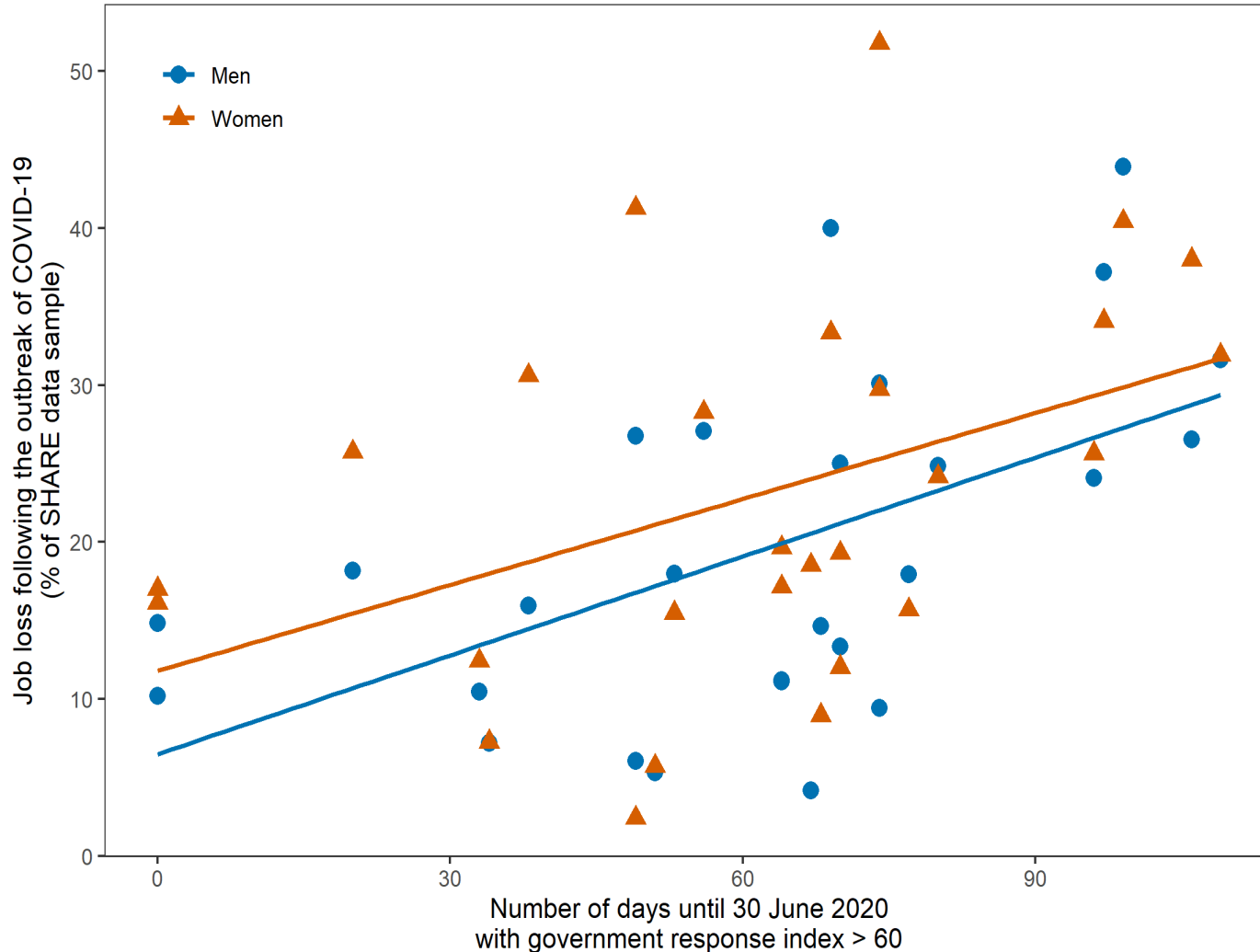
the percentage of **WOMEN** who experienced job loss is **HIGHER** than the corresponding percentage for **MEN**

# RESULTS

## DESCRIPTIVE FINDINGS

2/4

*The relationship between country differences in gender-specific job loss following the outbreak of COVID-19 and the overall government response index*



The gap between the trend lines **DIMINISHES** with the number of days under strict epidemic control measures;

This points to possible **WEAKENING** of gender differences in COVID-19-related job loss in countries with **LONGER PERIODS OF STRICT EPIDEMIC CONTROL MEASURES**

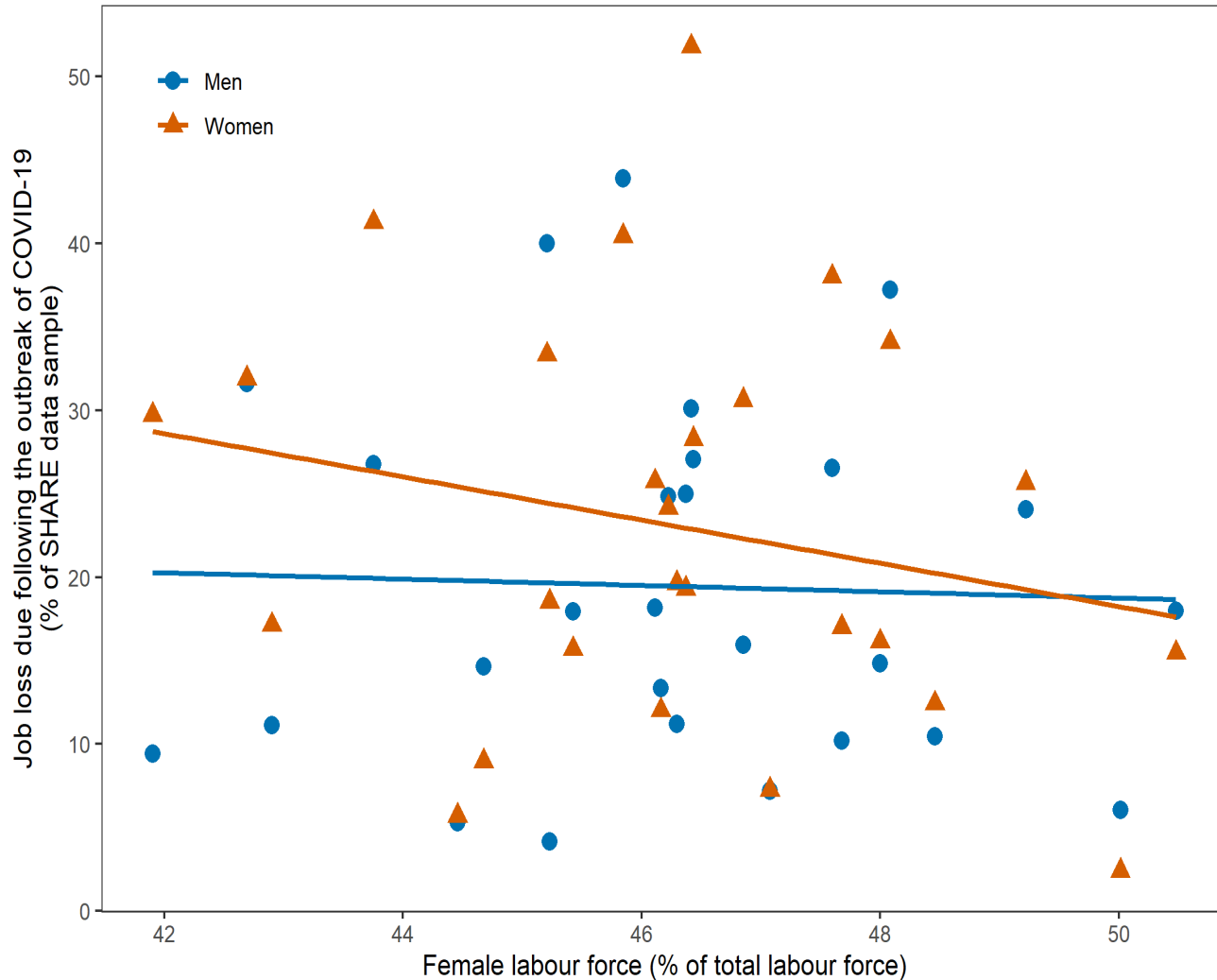


# RESULTS

## DESCRIPTIVE FINDINGS

3/4

*The relationship between country differences in gender-specific job loss following the outbreak of COVID-19 and the percentage of women in total labour force*



In countries where women hold **HIGHER** percentages of jobs, gender differences in COVID-19-related job loss appear to be **SMALLER**

# RESULTS

## DESCRIPTIVE FINDINGS

Job loss	X	gender	$\chi^2 = 8.11$	p = 0.004
----------	---	--------	-----------------	-----------

### CONTROL VARIABLES

SRH before outbreak	X	gender	$\chi^2 = 1.23$	p = <b>0.875</b>
changes in hlth.	X	gender	$\chi^2 = 26.88$	p = 0.000
edu. Attainment	X	gender	$\chi^2 = 41.76$	p = 0.000

### EMPLOYMENT HISTORY VARIABLES

yrs. employed	X	gender	t = 18.09	p = 0.000
part time work	X	gender	t = -20.01	p = 0.000
number of jobs	X	gender	t = 3.15	p = 0.002
mean ISEI	X	gender	t = 4.13	p = 0.000
yrs. unemployed	X	gender	t = -6.92	p = 0.000

### LAST-JOB ATTRIBUTES VARIABLES

employ. in 2017	X	gender	$\chi^2 = 1.64$	p = <b>0.200</b>
job industry in 2017	X	gender	$\chi^2 = 1156.69$	p = 0.000
job title in 2017	X	gender	$\chi^2 = 259.21$	p = 0.000
working hours in 2017	X	gender	$\chi^2 = 340.78$	p = 0.000

# RESULTS

## Logistic regression models

### Model 1

Includes gender and control variables

### Model 2

Extends Model 1 with **employment history variables**

### Model 3

Extends Model 1 with variables on **2017 employment**

### Model 4

Comprises all individual-level explanatory variables (gender + control variables + **employment history variables** + **2017 employment**)

### KHB decomposition

Decomposition of the total effect of gender on COVID-19-related job loss (based on **M2, M3 & M4**)

### Model 5

Model 4 as a starting point to add the cross-level interaction effects

	Model 1	Model 2
<b>Gender</b>		
Male	<b>Ref.</b>	<b>Ref.</b>
Female	0.262 ***	0.199 **
<b>Birth cohort</b>		
1965-69	<b>Ref.</b>	<b>Ref.</b>
1960-64	0.067	0.068
1955-59	0.199	0.208
1950-54	0.288	0.301
1945-49	0.552 **	0.573 **
<1944	0.569 *	0.596 *
<b>Health before the outbreak</b>		
Excellent	0.034	0.041
Very good	0.010	0.017
Good	<b>Ref.</b>	<b>Ref.</b>
Fair	0.190 *	0.183 *
Poor	-0.049	-0.066
<b>Change in health since the outbreak</b>		
Health improved	0.164	0.176
Health worsened	0.442 ***	0.425 ***
Health about the same	<b>Ref.</b>	<b>Ref.</b>
<b>Education ISCED1997</b>		
Low	<b>Ref.</b>	<b>Ref.</b>
Medium	-0.205 *	-0.156
High	-0.741 ***	-0.602 ***
<b>Years in employment</b>		-0.001
<b>Thereof percentage share part-time</b>		0.004 **
<b>Number of jobs</b>		0.032 *
<b>Mean ISEI over career</b>		-0.005 *
<b>Years in unemployment</b>		-0.001
Country controls	YES	YES

**Employment  
history  
variables**

	Model 3		Model 3
<b>Gender</b>		<b>Job industry in 2017</b>	
Male	Ref.	Agriculture, hunting, forestry, fishing	Ref.
Female	0.322 ***	Mining and quarrying	0.814
<b>Birth cohort</b>		Manufacturing	0.996 ***
1965-69	Ref.	Electricity, gas and water supply	0.008
1960-64	0.140	Construction	0.888 ***
1955-59	0.269 *	Wholesale and retail trade	1.267 ***
1950-54	0.229	Hotels and restaurants	2.161 ***
1945-49	0.419 *	Transport, storage and communication	1.198 ***
<1944	0.392	Financial intermediation	-0.276
<b>Health before the outbreak</b>		Real estate, renting and business activities	0.401
Excellent	0.024	Public administration and defence	0.274
Very good	0.014	Education	0.810 ***
Good	Ref.	Health and social work	0.409
Fair	0.189 *	Other community	1.075 ***
Poor	-0.070	<b>Job title in 2017</b>	
<b>Change in health since the outbreak</b>		Employee (private sector)	Ref.
Health improved	0.129	Civil servant (public sector)	-0.484 ***
Health worsened	0.459 ***	Self-employed	0.370 ***
Health about the same	Ref.	<b>Working hours in 2017</b>	
<b>Education ISCED1997</b>		Always full-time	Ref.
Low	Ref.	Always part-time	0.302 **
Medium	-0.127	Changed once from full-time to part-time	-0.134
High	-0.480 ***	Changed once from part-time to full-time	0.349
<b>Employment in 2017</b>		Changed multiple times	-0.415
No	1.073 ***	<b>Country controls</b>	YES
Yes	Ref.		

## Last-job attributes variables

	Model 4		Model 4
<b>Gender</b>			
Male	Ref.		
Female	0.310 ***		
<b>Birth cohort</b>			
1965-69	Ref.		
1960-64	0.109		
1955-59	0.216		
1950-54	0.133		
1945-49	0.297		
<1944	0.255		
<b>Health before the outbreak</b>			
Excellent	0.020		
Very good	0.009		
Good	Ref.		
Fair	0.189 *		
Poor	-0.082		
<b>Change in health since the outbreak</b>			
Health improved	0.144		
Health worsened	0.455 ***		
Health about the same	Ref.		
<b>Education ISCED1997</b>			
Low	Ref.		
Medium	-0.107		
High	-0.408 ***		
<b>Years in employment</b>	0.007		
<b>Thereof percentage share part-time</b>	0.005 *		
<b>Number of jobs</b>	0.002		
<b>Mean ISEI over career</b>	-0.003		
<b>Years in unemployment</b>	0.002		
		<b>Employment in 2017</b>	
		No	1.155 ***
		Yes	Ref.
		<b>Job industry in 2017</b>	
		Agriculture, hunting, forestry, fishing	Ref.
		Mining and quarrying	0.836
		Manufacturing	1.019 ***
		Electricity, gas and water supply	0.030
		Construction	0.913 ***
		Wholesale and retail trade	1.291 ***
		Hotels and restaurants	2.175 ***
		Transport, storage and communication	1.222 ***
		Financial intermediation	-0.234
		Real estate, renting and business activities	0.452
		Public administration and defence	0.304
		Education	0.846 ***
		Health and social work	0.434
		Other community	1.107 ***
		<b>Job title in 2017</b>	
		Employee (private sector)	Ref.
		Civil servant (public sector)	-0.486 ***
		Self-employed	0.370 ***
		<b>Working hours in 2017</b>	
		Always full-time	Ref.
		Always part-time	0.022
		Changed once from full-time to part-time	-0.123
		Changed once from part-time to full-time	0.354
		Changed multiple times	-0.419
		Country controls	YES

	Model 2	Model 3	Model 4
<b>Gender effect</b>			
Reduced model (coefficient of total effect)	0.248 ***	0.256 ***	0.254 ***
Full model (coefficient of direct effect)	0.199 **	0.322 ***	0.310 ***
Difference (coefficient of indirect effect)	0.049 **	-0.066 *	-0.056
Total confounding (%)	19.87	-25.92	-22.08
Components of difference (%)			
<b>Years in employment</b>	4.71		32.60
<b>Thereof percentage share part-time</b>	80.63		-86.68
<b>Number of jobs</b>	-10.70		0.49
<b>Mean ISEI over career</b>	26.34		-13.48
<b>Years in unemployment</b>	-0.98		-1.46
<b>Employment in 2017</b>			
No		-32.35	-41.24
Yes		Ref.	Ref.
<b>Job industry in 2017</b>			
Agriculture, hunting, forestry, fishing		Ref.	Ref.
Mining and quarrying		7.08	8.62
Manufacturing		116.55	141.33
Electricity, gas and water supply		0.26	1.16
Construction		107.48	130.98
Wholesale and retail trade		-27.57	-33.30
Hotels and restaurants		-34.65	-41.32
Transport, storage and communication		121.19	146.49
Financial intermediation		-0.98	-0.99
Real estate, renting and business activities		5.16	6.89
Public administration and defence		-4.06	-5.35
Education		-114.46	-141.64
Health and social work		-79.20	-99.60
Other community		-44.15	-53.87
<b>Job title in 2017</b>			
Employee (private sector)		Ref.	Ref.
Civil servant (public sector)		91.16	108.39
Self-employed		35.89	42.48
<b>Working hours in 2017</b>			
Always full-time		Ref.	Ref.
Always part-time		-50.86	-4.46
Changed once from full-time to part-time		2.11	2.30
Changed once from part-time to full-time		-4.33	-5.21
Changed multiple times		5.74	6.86

estimates of the **TOTAL** effect of gender, the **DIRECT** effect of gender and the **INDIRECT** effect of gender

percentage **CONTRIBUTIONS** of each mediator to the indirect effects of gender

# The role of country context

Model 5

Gender (main effect)	
Male	Ref.
Female	0.661 ***
Gender = Female ×	
<b>Days with government response index (GRI) &gt; 60</b>	-0.006 *
<b>Female labour force (%)</b>	-0.032

Individual-level variables (see Model 4 in Table 3)

YES

Country controls

YES

Log likelihood

-3308.6

Pseudo R-squared

0.1263

Number of observations

7877

the **LONGER** a country was under strict epidemic control measures, the **LESSER** the relationship between gender and COVID-19-related job loss

**NO EVIDENCE** of a significant cross-level interaction effect between gender and the percentage share of female labour force



# CONCLUSIONS

- The odds of COVID-19-related job loss among older workers differ by gender
- Employment histories and job characteristics of older workers take on very different roles in the relationship between gender and COVID-19-related job loss
- Current-job characteristics were relatively more important to keeping a job following the outbreak of COVID-19 than were employment developments throughout the life course
- The difference between men and women becomes less pronounced as the number of days under strict epidemic control measures increases
- Future research might consider assessing the role of a broader range of country-level indicators