



On Post-Retirement Employment Across Sectors in Lithuania

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TO WORK OR NOT TO WORK?



TO WORK OR NOT TO WORK?

NEED

to avoid poverty risk

to secure sufficient income

to increase future benefits



Source: Cahill et al. (2006), Zaccagni et al. (2024)

TO WORK OR NOT TO WORK?

NEED

avoid poverty risk

secure sufficient income

increase future benefits



WANT

get life satisfaction

enhance social engagement

stay useful

avoid the stress of
an abrupt retirement

Source: Cahill et al. (2006), Zaccagni et al. (2024)

Source: Cahill et al. (2006), Maestas & Zissimopoulos (2010), Aliaj et al. (2016), Komp et al. (2010), Sarfati (2008)



The problem and research object

To identify pushing and pulling factors of working longer

Continued working during the six months following the receipt of their first old-age pension:

EU: 13%

LT: 44%



Research object:

Post-retirement employment in Lithuania and factors determining different employment outcomes in old age.

The problem:

There are **pushing** and **pulling** factors of working longer.

To identify which factors **LIMIT** and which **ENCOURAGE** people to stay in the labor market longer,

so as to take measures **to remove the limiting factors** and **maintain the motivating ones** of employment in Lithuania.

Source: <https://ec.europa.eu/eurostat/web/products-eurostat-news/w/ddn-20241209-1>

Theoretical significance and scientific novelty of the research: greater focus on the role of economic sectors

Stronger attention to sector-specific economic influences

- People who worked in the public sector tended to work longer in retirement than those who worked in the private sector (Zitikytė, 2019).
- Workers in manufacturing, construction, transport, and agriculture are the least likely to remain in the labor market. Conversely, employees in public administration, education, and health sectors are more inclined to work into old age (Navickė & Straševičiūtė, 2023).
- The lowest desire to continue working was among individuals in agriculture (66.8%), manufacturing (67.1%), and education (69.5%), whereas those in finance (78.5%), wholesale and retail trade (71.9%), and health services (71.4%) most frequently expressed a wish to remain employed (Vilkoitytė & Skučienė, 2020).

Unique data – whole population

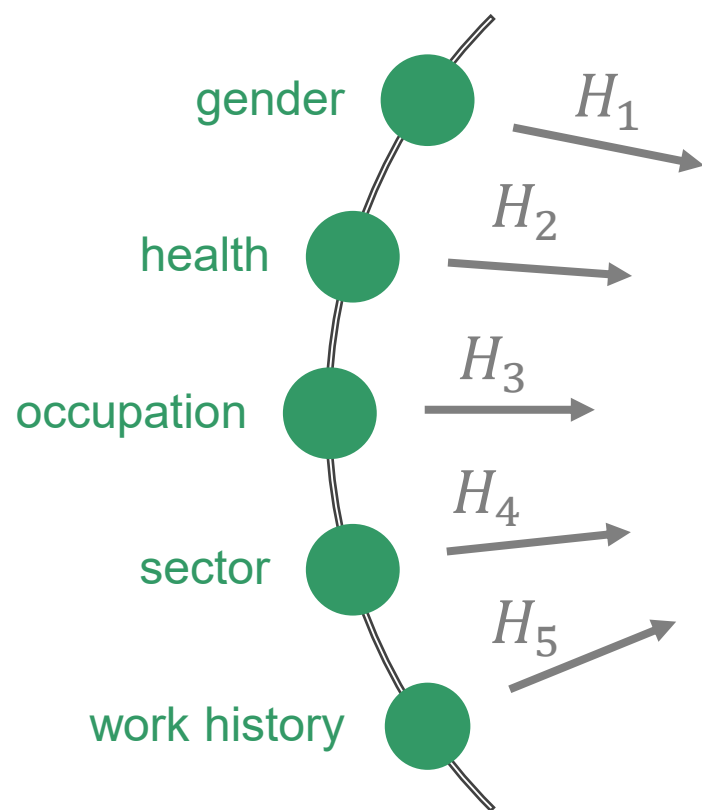
- This paper examines how employment in various economic sectors influences post-retirement labor participation. Using unique administrative data from Lithuania, it investigates sector-specific employment patterns.



Hypotheses:

push and pull factors influencing prolonged labor market participation

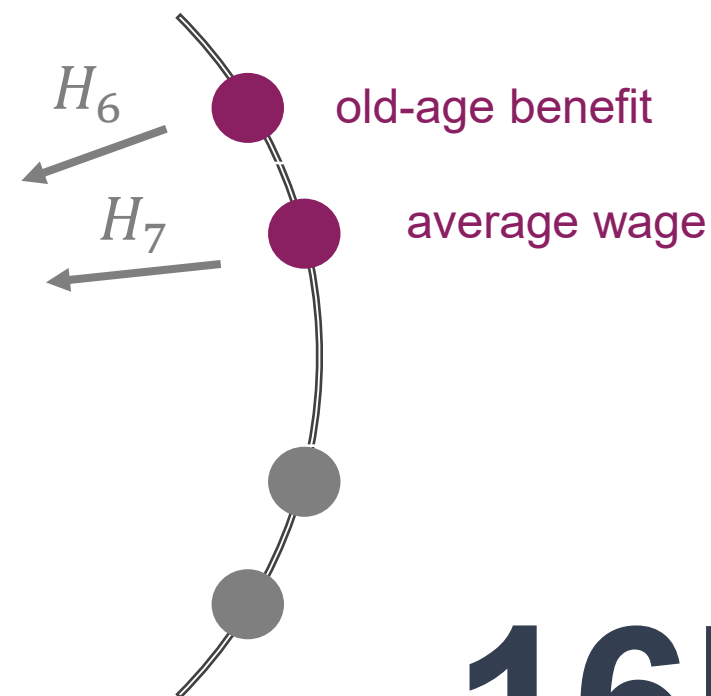
Individual factors



YOU KNOW
NOTHING...



Financial factors



16K

Methodology and research design

Logit and probit models were applied

The two standard binary outcome models, the logit, and the probit models, specify different functional forms for this probability as a function of regressors. They specify:

$$L_i = \Lambda [\beta_0 + \beta_1 gender + \beta_{21} sick_L + \beta_{22} sick_H + \beta_3 occupation + +\beta_4 sector + \beta_{51} experience + \beta_{52} experience^2 + \beta_6 pension_replacement_rate],$$

$$I_i = \Lambda [\beta_0 + \beta_1 gender + \beta_{21} sick_L + \beta_{22} sick_H + \beta_3 occupation + +\beta_4 sector + \beta_{51} experience + \beta_{52} experience^2 + \beta_6 pension_replacement_rate + \varepsilon]$$

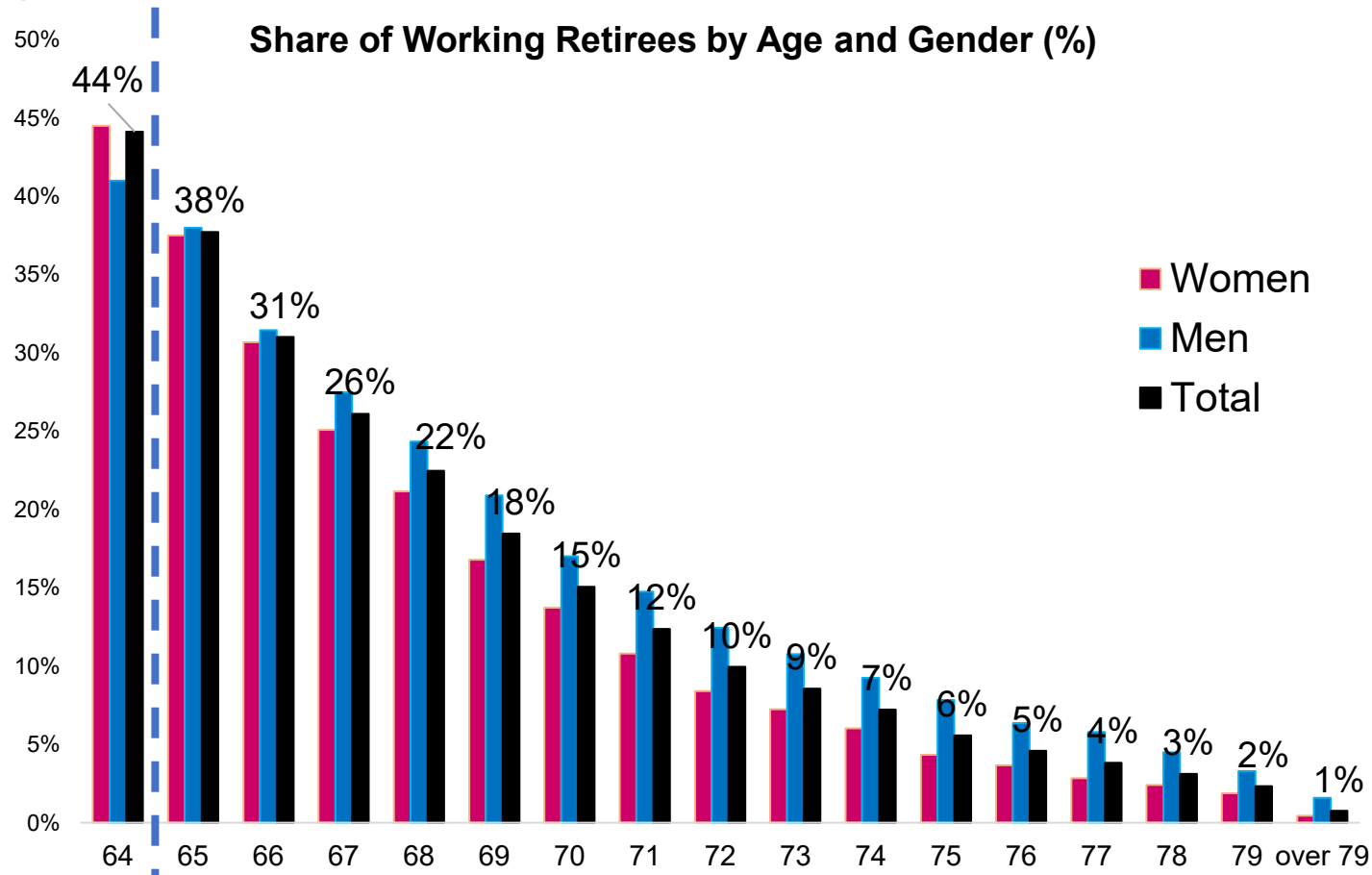
I HOPE THIS
WILL HELP ...



Results (1) Men and women are similarly disposed to work at the beginning of retirement



H_1 : Men are more likely to do bridge jobs than women.



- ✓ Men were 0.6 percentage points less likely to engage in post-retirement employment compared to women.
- ✓ Although older men typically exhibit higher participation rates at advanced retirement ages, women in Lithuania appear more inclined to remain or re-enter the workforce upon becoming pension beneficiaries.
- ✓ Later, their employment begins to decline and stays below that of men.

Results (2) Lower morbidity is associated with a higher likelihood of continued employment after retirement



H₅: The longer a person has an acquired retirement record, the more likely the person is to remain in the labor market during retirement.



- ✓ A higher accumulation of pensionable service was associated with a 1.2 to 2.0 percentage point increase in the probability of working during retirement.
- ✓ These findings are consistent with those reported by Zitikytė (2021), who examined similar patterns among pensioners in an earlier cohort.



H₂: Good health will be positively related to participation in bridge employment.



- ✓ The results indicate that lower morbidity ($sick_L$) is associated with a higher likelihood of continued employment after retirement, whereas higher morbidity ($sick_H$) significantly reduces the probability of working beyond retirement age.
- ✓ Individuals with higher levels of morbidity were between 6.0 and 9.5 percentage points more likely to be out of the labor force during retirement.

Results (3) Individuals in higher-level occupations are more likely to remain in the workforce than others



H₃: Higher-skilled workers, including managers and professionals, are more likely to extend their careers and work longer than unskilled workers.



Occupation	Share of working retirees, %
Managers	70.4%
Professionals:	
specialists	69.0%
technicians, junior professionals	60.9%
clerks	63.7%
Workers:	
service workers	61.5%
machine operators and assemblers	56.4%
skilled workers and craftsmen	52.1%
skilled agricultural, forestry and fishery workers	41.2%
Unskilled workers	56.1%
Total	60.8%

- ✓ The models indicated that managers were 3.6 percentage points more likely to work in retirement compared to professionals and workers.
- ✓ The interaction between gender and occupational category revealed distinct patterns: male managers and professionals were more likely to remain employed after retirement compared to their female counterparts, whereas male skilled and unskilled workers were less likely to do so.



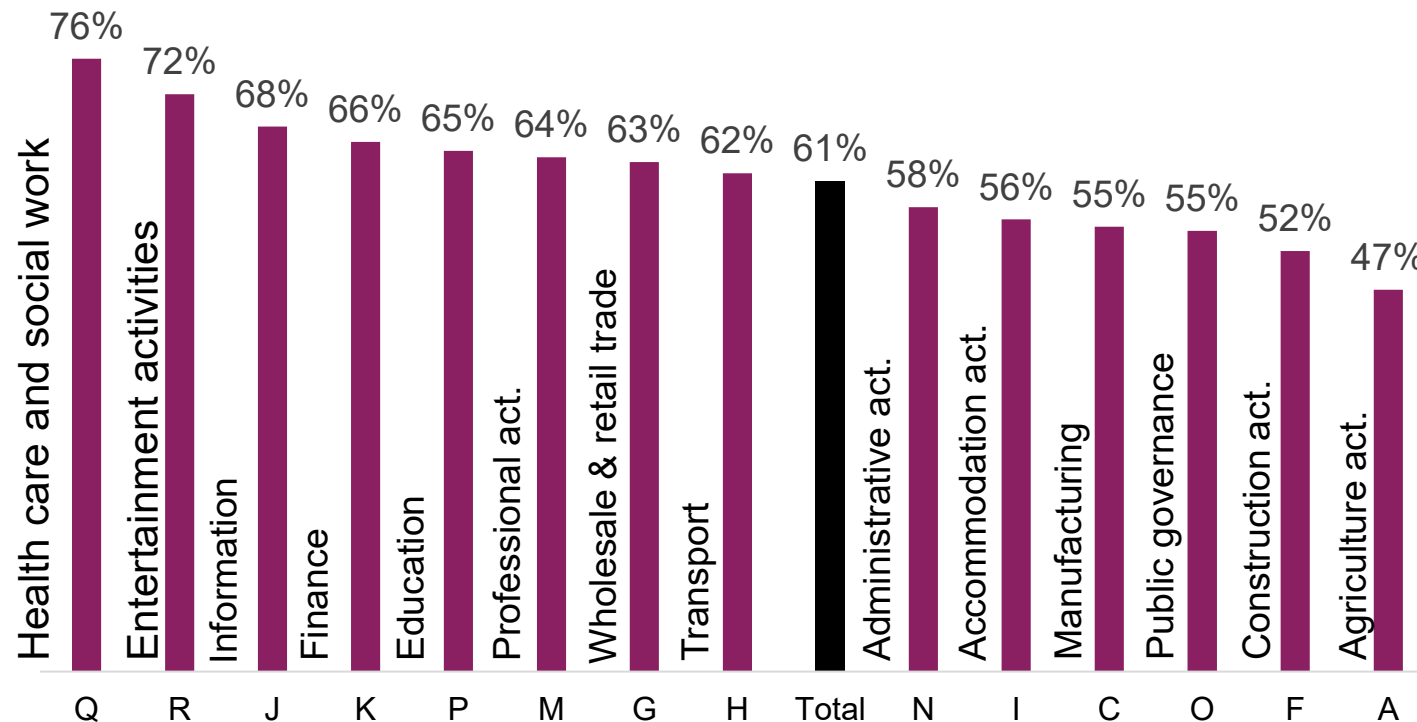
Results (4) Those working in manufacturing and industry have a more limited view of work opportunities in retirement



H₄: Individuals employed in the information and communications, finance, education, and public administration sectors are more likely to continue working during retirement than those employed in the industry, construction, and agriculture sectors.



Share of working retirees, %



- ✓ Employment in both the information and communication sector and the finance and insurance sector was associated with higher employment in old age;
- ✓ The probability of working in retirement is
 - ↓ 3.5-5.6 pp in manufacturing,
 - ↓ 4.6-7.4 pp in construction,
 - ↓ 8.2-13.0 pp in agriculture.
- ✓ In contrast, the probability is
 - ↑ 8.7-13.5 pp in health care & social work,
 - ↑ 5.8-9.0 pp in arts and crafts,
 - ↑ 0.6-1.0 pp higher in education.



Results (5) Incentive to continue working is stronger among individuals with higher incomes



H₆: The higher the salary, the greater the likelihood that a person will work in retirement.



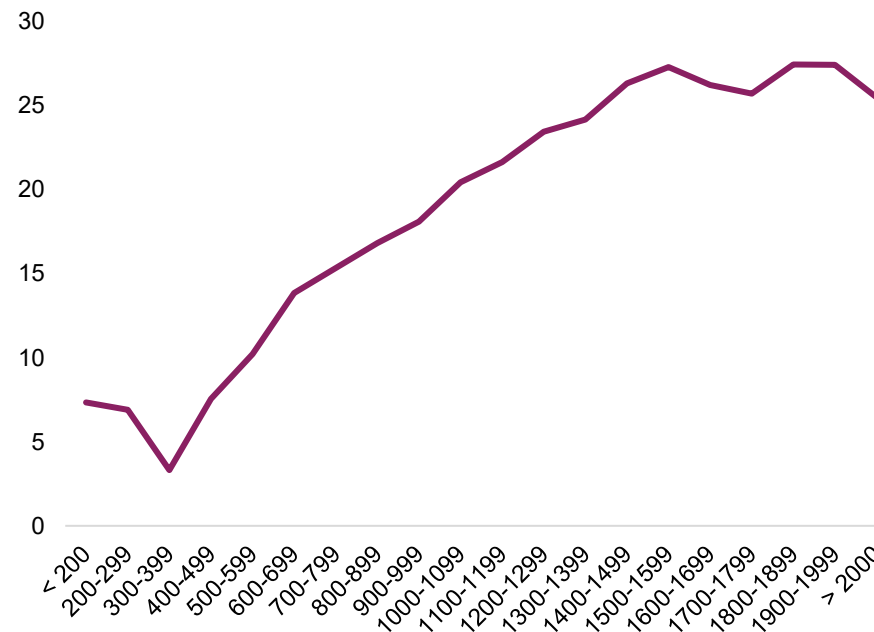
H₇: The higher the old-age pension, the more likely a person is to work in old age.



Characteristics of Working and Non-Working Retirees

	Working	Non-working	Change in working vs. non-working, %
Average wage prior to retirement, Eur	1 553	1 218	+27.5
Average wage beyond retirement, Eur	1 802	-	-
Amount of average pension, Eur	572	537	+6.5
Average experience, years	40	38	+5.2

Share of working retirees by old-age pension amount, %



✓ Those with a lower pension replacement rate were 6.5-10 percentage points more likely to work after reaching retirement age.

✓ Cahill et al. (2006) and Lindemann and Unt (2016) identified a U-shaped relationship between post-retirement employment and income.





TO WORK OR NOT TO WORK?

WE WORK IF WE CAN!

Thank you very much!
Kristina Zitikytė



Results

Marginal Effects of the Models

	LPM	Logit	Probit
intercept	-0.080	-0.385	-0.258
managers × gender	0.138	0.151	0.094
sick _H	-0.095	-0.090	-0.060
sector _{manufacturing}	-0.056	-0.054	-0.035
sector _{construction}	-0.074	-0.070	-0.046
sector _{agriculture}	-0.130	-0.123	-0.082
sector _{health}	0.122	0.135	0.087
sector _{entertainment}	0.085	0.090	0.058
sector _{education}	0.010	0.009	0.006
experience	0.020	0.018	0.012
experience ²	-0.0002	-0.0002	-0.0001
replacement _L	0.097	0.100	0.065



Share of Working Retirees by Economic Activity (%)

