An analysis of employment status in the Greek labor market

Author:

Dimakopoulos Andreas

Supervisor: Nikolaos Giannakopoulos

University of Patras
Department of Economics

Master of Science
"Applied Economics and Data Analysis"

Abstract

This paper examines which characteristics affect the possibility of a person to be employed, unemployed or inactive. The data suggests that women are less likely to be employed compared to men and those with children over 12 work less. However, people with a university degree are more likely to be employed and work more compared to those without a degree.

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Introduction

In this study,we will be looking at the impact of age, gender, nationality, and university education on the likelihood of being employed, unemployed, or inactive and the hours worked. By analyzing this data, we hope to gain a better understanding of the factors that contribute to employment outcomes and to identify any potential disparities or trends. By examining these variables, we can better understand the challenges and opportunities that individuals face in the job market, and potentially develop strategies to improve employment outcomes for all individuals.

Data

The data we use in this paper were obtained from the European Social Survey in 2021-2022 for several European Countries. For the purpose of this research we are going to use data for Greece containing information about the employment status of people (empstatus) and how many hours per week they work,with overtime excluded, (hours), how many of the sample are female (female), how many are married (married), how many are foreign(foreign), how many have a university degree(university), how many people use the internet every day (internetuse_high), how many children people have that are over 12 years old (childo12), how many attend church regularly(religattend) and the region of residence.

Table 1: Frequency Table of Employment Status

	Freq.	Percent
Employed	984	79.48
Unemployed	112	9.05
Inactive	142	11.47
Total	1,238	100.00

Source: European Social Survey (2021-2022)

Table 2: Frequency Table of hours worked, overtime excluded

	Freq.	Percent
0	554	44.61
1-29	43	3.46
No basic contract	645	51.93
Total	1,242	100.00

Source: European Social Survey (2021-2022)

Table 3: Frequency Table

	Yes	No	% of Yes	% of No	Observations
Female	636	606	51.21	48.79	1,242
Married	80	1,162	6.44	93.56	1,242
Foreign	40	1,202	3.22	96.78	1,242
University	496	746	39.94	60.06	1,242
High Internet Use	1,161	81	93.48	6.52	1,242
Religion Attending	403	839	32.45	67.55	1,242

Source: European Social Survey (2021-2022)

Table 4: Number of children over 12 years old

	Freq.	Percent
0	899	72.38
1	163	13.12
2	151	12.16
3	24	1.93
4	5	0.40
Total	1,242	100.00

Source: European Social Survey (2021-2022)

Empirical Model

The Empirical Models that was used to estimate the probability of which factors affect people's employment status and hours worked are the following:

$$E_i = b_0 + b_1^k X_i^k + u_i$$

i=1,...,1,238.

k=1,...,8.

$$h_i = b_0 + b_1^k X_i^k + u_i$$

i=1,...,1,242.

k=1,...,8.

where E is employment status, h is the hours worked per week with overtime excluded, X^k is the matrix of the dependent variables containing the person's age,gender,marital status,country of birth, education, religion attendance, internet access,children over 12 and region of residence and u_i the disturbance term.

Empirical Results

Based on the regression models we created and executed, female are 11% less likely to be employed, 6.1% more likely to be unemployed and 5.6% to be inactive in the labor market. Next, those who have children over 12 years old tend to work less, those who have a university degree are more likely to work and with more hours and not be unemployed or inactive

Table 5: Logit Probability Regression Model of Employment Status

Variables	Employed	Unemployed	Inactive
Age	.001	-.000	-.000
	(.000)	(.000)	(.000)
Female	-.118***	.061***	.056***
	(.016)	(.011)	(.012)
Married	.013	-.000	-.012
	(.025)	(.020)	(.010)
Foreign	.015	-.009	-.006
	(.026)	(-.021)	(.009)
University	.020	-.011	-.009
	(.013)	(.009)	(.007)
Children over 12	.005	-.008	.003
	(.008)	(.007)	(.003)
Region	Yes	Yes	Yes
Internet Access	Yes	Yes	Yes
Pseudo R-squared		.309	
Observations		1,238	

Source: European Social Survey (2021-2022), Robust standard errors in parentheses
(*** p<0.01, ** p<0.05, * p<0.1)

Table 6: Probit Probability Regression Model of Hours worked with overtime excluded

Variables	0 hours	1-29 hours	No basic Contract
Age	.000	.000	-.000
	(.002)	(.000)	(.002)
Female	.046	.000	-.046
	(.030)	(.000)	(-.030)
Married	.033	.000	-.032
	(.063)	(.000)	(.063)
Foreign	-.069	-.001	.070
	(-.082)	(.002)	(.085)
University	-.124***	-.001**	.125***
	(.031)	(.000)	(.031)
Children over 12	-.038*	-.000	-.038*
	(.021)	(.000)	(.021)
Region	Yes	Yes	Yes
Internet Access	Yes	Yes	Yes
Pseudo R-squared		.111	
Observations		1,242	

Source: European Social Survey (2021-2022), Robust standard errors in parentheses
(*** p<0.01, ** p<0.05, * p<0.1)

Table 7: Logit Probability Regression Model of Hours worked with overtime excluded

Variables	0 hours	1-29 hours	No basic Contract
Age	.000	.000	-.000
	(.002)	(.000)	(.002)
Female	.047	.000	-.048
	(.031)	(.000)	(-.032)
Married	.037	.000	-.038
	(.067)	(.000)	(.067)
Foreign	-.072	-.002	.073
	(-.087)	(.003)	(.090)
University	-.124***	-.002**	.125***
	(.031)	(.000)	(.032)
Children over 12	-.039*	-.000	-.040*
	(.021)	(.000)	(.022)
Region	Yes	Yes	Yes
Internet Access	Yes	Yes	Yes
Pseudo R-squared		.111	
Observations		1,242	

Source: European Social Survey (2021-2022), Robust standard errors in parentheses
(*** p<0.01, ** p<0.05, * p<0.1)

Conclusion

In conclusion, the data suggests that female are less likely to be employed compared to men. This is particularly true for women with children over the age of 12, who tend to work less than women without children or men with children. On the other hand, people with a university degree are more likely to be employed and work more compared to those without a degree. These findings suggest that education and family status may play a role in employment patterns for women.