

Submissions Abstract Book - All Papers (Included Submissions)

0240

Graduates in Graduate Jobs? A Comparison Between Younger and Older Graduates From Higher Education in Portugal

Francesca Sgobbi¹

¹*University of Brescia (DIMI), Brescia, Italy*

Research Domain: Employability, enterprise and graduate careers (EE)

Abstract: Graduates from tertiary education transformed the Portuguese labour markets in the recent decades. Private sector employees holding a higher education (HE) certificate ramped up from 8.5% in 2002 to 19.8% in 2017. However, in the same period the wage of HE graduates aged 24-28 plunged from 39% to 35% compared to graduates aged 54-58. Based on Quadros de Pessal, an annual survey on Portuguese employers and employees, this paper explores what factors justify the declining returns to education for younger HE graduates. Besides taking into consideration employment quality, including employment and contractual conditions, the analysis accounts for work quality. A match with the US O*Net classification of occupations allows capturing the nature of tasks performed by older and younger graduates, thus measuring the graduateness of occupations. The results show that change in the occupation graduateness of younger HE graduates is a positive and significant determinant of change in relative wages.

Paper: Graduates from tertiary education have been transforming the Portuguese labour markets. Private sector employees holding a higher education (HE) certificate ramped up from 8.5% in 2002 to 19.8% in 2017 (Figure 1). However, in the same period the hourly gross wage of HE graduates aged 24-28 plunged from 39% to 35% compared to graduates aged 54-58 (Figure 2). Those figures frustrate public investment in education systems and the hopes of younger citizens who leverage on higher education to carry out their life project. A better understanding of which mechanisms drive the return to HE in the early stages of the career may therefore improve the effectiveness of public and private investment in HE.

Various drivers have been pointed out to explain changes in the relative rewards of younger and older employees. The stronger negative slope of the curve in Figure 2 at the beginning of the new millennium and during the more recent Great Recession confirms that, also in the case of HE graduates, younger employees are more vulnerable to the negative stages of economic cycles (Irwin and Nilsen, 2018). However, the literature stresses other sources of differentiation between the wage of older and younger HE graduates. Younger employees are increasingly segregated into more precarious segments of the labour market characterised by fixed term and part-time contracts (Orfao *et al.*, 2021). In the EU, hence in Portugal, the Bologna process altered the proportion of graduates who enter the labour market after short-duration or long-duration tertiary studies (Stiwne and Alves, 2010) and, consequently, the overall returns to HE. An expansion of the supply of HE skills faster than growth in demand may induce new entrants in the labour market to accept lower-paying

occupations for which they are overqualified (Blundell *et al.*, 2016). According to this perspective, the jobs undertaken by younger graduates include tasks that fail to meet the skills and competences acquired at university, defined as “graduateness” (Okay-Somerville and Scholarios, 2013).

Based on Quadros de Pessal, an annual survey on Portuguese employers and employees (Cardoso and Portela, 2009), this paper explores what factors justify the observed changes in the returns to education for younger HE graduates compared to older ones. Besides taking into consideration employment quality, including employment and contractual conditions, the analysis accounts for work quality. A match with the US O*Net classification of occupations (Hardy *et al.*, 2018) allowed characterising the nature of the tasks performed by HE graduates based on Dublin descriptors (Bologna Working Group, 2005) and subsequently measuring the graduateness of their occupations by means of a confirmatory factor analysis.

The empirical analysis focused on the universe of younger HE graduates aged 24-28 and older HE graduates aged 54-58 employed in Portuguese private firms (agricultural sector excluded) between 2002 and 2017. The timeline was split in four periods to capture the economic slowdown that followed the end of the “Dot-com Bubble” (2002-2005), the early effects of the Bologna process (2006-2009), the economic slowdown due to the Great Recession (2010-2013) and the following partial recovery of the Portuguese economy (2014-2017). For each period dependent and independent variables were calculated for 240 industry-region-gender-education cells: 10 industries, six regions, two gender, and two education levels (short- and long-duration HE certificates).

The dependent variable was identified in the change between the beginning and the end of each period of the hourly gross wage of younger HE graduate employees ratio the wage of older ones, by cell. The key independent variable is the corresponding change in the mean graduateness of younger employees’ jobs, by cell. Descriptive statistics for the key independent variable and other controls are provided in Table 1.

All analyses are performed using as weights full-time equivalent hours of labour supply by cell and by year. Table 2 reports the outcomes of four separate OLS regressions run for each different period. The results show that change in the occupation graduateness of younger HE graduates is a positive and significant determinant of change in relative wages. However, both the coefficient size and its significance decline in time, suggesting a progressive detachment between occupation contents and their monetary rewards.

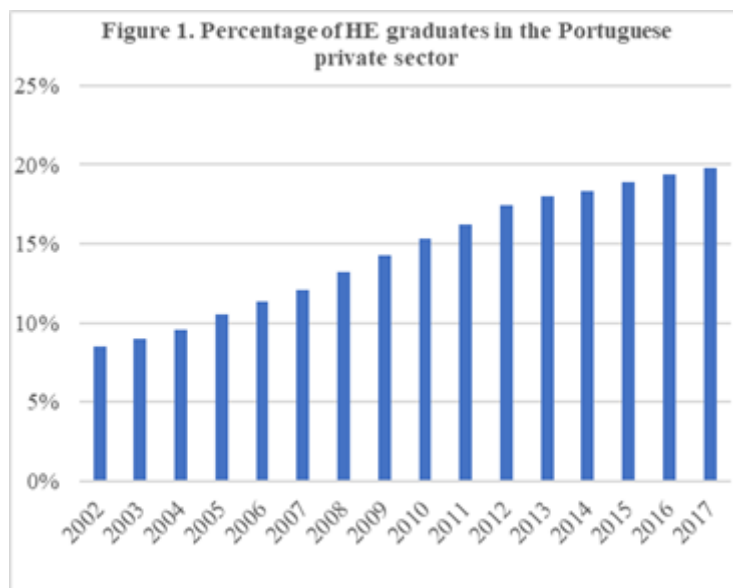
The impact of change in employment conditions (share of younger employees in part-time or fixed term contracts) is significant but unstable in time. An increase in the share of HE graduates by cell enlarges the gap between younger and older HE employees during economic slowdowns but compresses it during recovery periods. Eventually, the coefficient of variable Pct_MSc highlights the wage premium progressively recognised to the holders of long-duration HE certificates.

References:

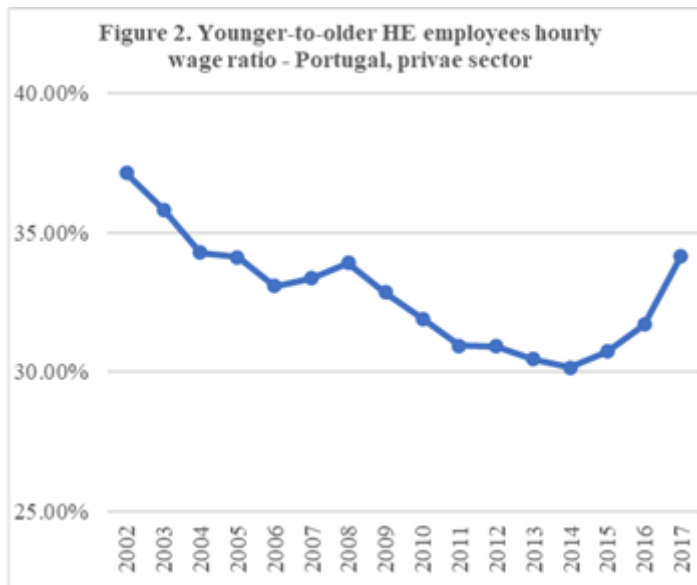
Variable	Description	t0	2002	2006	2010	2014
		t1	2005	2009	2013	2017
D_GradY	Change in graduateness of occupation for younger HE employees between t0 and t1, by cell	Mean	-0.103	-0.049	-0.108	-0.033
		Std. Dev.	0.086	0.143	0.148	0.097
D_PtimeY	Change in part time rate for younger HE employees between t0 and t1, by cell	Mean	0.025	0.000	0.016	-0.007
		Std. Dev.	0.046	0.032	0.053	0.031
D_FixTermY	Change in fixed term contract rate for younger HE employees between t0 and t1, by cell	Mean	0.125	0.025	0.109	-0.019
		Std. Dev.	0.082	0.072	0.094	0.073
HE_Growth	Change in the share of HE employment between t0 and t1, by cell	Mean	0.026	0.033	0.043	0.028
		Std. Dev.	0.025	0.036	0.034	0.017
Pct_MSc	Percent of Bologna MSc graduates in t0 by cell	Mean	0.000	0.013	0.057	0.131
		Std. Dev.	0.000	0.008	0.034	0.071

	2002-2005		2006-2009		2010-2013		2014-2017	
	Coef.	Robust Std. Err.	Coef.	Robust Std. Err.	Coef.	Robust Std. Err.	Coef.	Robust Std. Err.
Constant	-0.004	0.002 *	0.032	0.001 ***	-0.038	0.002 ***	0.087	0.002 ***
D_GradY	0.362	0.009 ***	0.176	0.004 ***	0.078	0.004 ***	0.076	0.007 ***
D_PtimeY	0.734	0.027 ***	-0.329	0.020 ***	-0.016	0.015	0.312	0.017 ***
D_FixTermY	-0.248	0.010 ***	-0.335	0.009 ***	0.052	0.009 ***	-0.013	0.006 **
HE_Growth	0.651	0.060 ***	-0.508	0.021 ***	1.035	0.019 ***	-0.706	0.044 ***
Pct_MSc	(omitted)		0.082	0.083	-0.028	0.018	0.184	0.014 ***
Gender	0.014	0.001 ***	0.001	0.001 *	-0.028	0.001 ***	0.016	0.001 ***
Region fixed effects	Yes		Yes		Yes		Yes	
Industry fixed effects	Yes		Yes		Yes		Yes	
Education level	Yes		Yes		Yes		Yes	
Unweighted observations	110		140		123		131	
Adjusted R-squared	0.26		0.272		0.28		0.149	

OLS regressions; dependent variable: change in younger-to-older HE employees hourly wage ratio between period start- and end-point; *** p < 0.01; ** p < 0.05; * p < 0.10



Agriculture excluded. Source: own elaboration on Quadros de Pessoal, 2002-2017



Agriculture excluded. Source: own elaboration on Quadros de Pessoal, 2002-2017

References

- Blundell, R., Green, D.A., and Wenchao, J. (2016), *The UK Wage Premium Puzzle: How did a Large Increase in University Graduates Leave the Education Premium Unchanged?*, IFS Working Paper W16/01, London: Institute for Fiscal Studies.
- Bologna Working Group (2005), *A Framework for Qualifications of the European Higher Education Area*, Bologna Working Group Report on Qualifications Frameworks (Copenhagen, Danish Ministry of Science, Technology and Innovation).
- Cardoso, A.R., and Portela, M. (2009), Micro Foundations for Wage Flexibility: Wage Insurance at the Firm Level, *Scandinavian Journal of Economics*, 111(1): 29-50.
- Hardy, W., Keister, R. and Lewandowski, P. (2018), Educational upgrading, structural change and the task composition of jobs in Europe, *Economics of Transition* 26(2): 201-231.
- Irwin, S., Nilsen, A. (2018), Understanding youth transitions in difficult times, in Irwin S., Nilsen A. (Eds.), *Transitions to Adulthood Through Recession Youth and Inequality in a European Comparative Perspective*, London and New York: Routledge: 1-16.
- Okay-Somerville and B., Scholarios, D. (2013), Shades of grey: Understanding job quality in emerging graduate occupations, *human relations*, 66(4): 555-585.
- Orfao, G., del Rey, A., Malo, M.Á. (2021), A Multidimensional Approach to Precarious Employment Among Young Workers in EU-28 Countries, *Social Indicators Research*, forthcoming.
- Stiwne, E.E., Alves, M.G. (2010), Higher education and employability of graduates: Will Bologna make a difference?, *European Educational Research Journal*, 9 (1): 32-44.