

Online Additional Material:  
 Can Compulsory Military Service Raise Civilian Wages?  
 Evidence from the Peacetime Draft in Portugal

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TABLE A.1: TYPES OF LEAVE AND THEIR CODING DURING THE PERIOD UNDER ANALYSIS

Type of Leave	Worker Reported (1)	QP Coding of		Coding of "on Leave"	Notes
		Wage	Hours		
Sickness	yes	missing, if leave longer than 3 days	missing, if leave longer than 3 days	=1	Wage paid (approx. 65% of normal wage) by the social security, after 3 days of sickness. Estimated overall rate of sickness absenteeism in Portugal: 8% (EFILWC, 1997, p. 18).
Maternity	yes	missing	missing	=1	Maternity leave started in Portugal in 1976, when it lasted for 90 days. Currently, it lasts for 120 days.
Strike	yes	missing	missing	=1	Average of 0.016% work days lost per year during 1986-1996 (own computations based on Portugal, INE (1986-1996) and Pordata (1986-1996)).
Holiday	yes	reported	reported	=0	
Military	yes	missing	missing	=1	

Note: (1) Instructions to fill out the questionnaire during the 1980s and 1990s stated that everyone engaged in the firm during the reference period should be listed, including: "the owner of the firm, if performing a function in the firm; unpaid and paid family members, if working in the firm more than one third of the normal duration of work; piece-rate workers; workers on short-term leave and those doing their military service" (Portugal, MT, Decree-Law 380/80, instructions on filling out column 2 of the Quadros de Pessoal form) [own translation]. Elsewhere in the instructions form, examples of short term leave are provided: sickness, maternity, holiday, strike.

TABLE A2.A: ESTIMATED WAGE EFFECTS OF CONSCRIPTION AT VARIOUS AGES FROM ALTERNATIVE MODELS (POOLED EDUCATION GROUPS)

Year	Modal Age	OLS Model with No Control for Wage at Age 20/21				OLS Model Including Control for Wage at Age 20/21				Differenced Model: Wage Minus Wage at Age 20/21				Quasi-Differenced Model: Wage Minus 2.62 x Wage at Age 20/21			
		Conscription Effect		Conscription Std.	Effect	Conscription Effect		Conscription Std.	Effect	Conscription Effect		Conscription Std.	Effect	Conscription Effect		Conscription Std.	Effect
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	
1991	24	-1.4	(1.1)	-1.8	(1.0)	-2.1	(1.1)	-3.1	(2.0)								
1992	25	1.7	(1.2)	1.4	(1.1)	1.0	(1.2)	0.0	(2.1)								
1993	26	1.5	(1.3)	1.4	(1.2)	1.3	(1.3)	1.1	(2.3)								
1994	27	1.2	(1.4)	1.1	(1.3)	0.9	(1.4)	0.5	(2.4)								
1995	28	1.8	(1.3)	1.5	(1.2)	1.1	(1.3)	0.0	(2.3)								
1996	29	2.6	(1.4)	2.2	(1.4)	1.7	(1.5)	0.3	(2.5)								
1997	30	0.6	(1.3)	0.6	(1.3)	0.6	(1.4)	0.6	(2.4)								
1998	31	1.4	(1.3)	1.0	(1.2)	0.5	(1.4)	-0.8	(2.4)								
1999	32	0.9	(1.3)	0.6	(1.2)	0.1	(1.3)	-1.1	(2.3)								
2000	33	1.2	(1.3)	1.2	(1.3)	1.0	(1.4)	0.7	(2.3)								
2002	35	0.8	(1.4)	0.9	(1.4)	0.9	(1.5)	1.0	(2.4)								
2003	36	2.2	(1.4)	2.3	(1.4)	2.4	(1.5)	2.8	(2.5)								
2004	37	0.4	(1.4)	0.6	(1.4)	0.9	(1.5)	1.7	(2.5)								
2005	38	2.2	(1.4)	2.1	(1.4)	2.0	(1.5)	1.6	(2.4)								
2006	39	3.0	(1.5)	2.8	(1.4)	2.6	(1.5)	1.8	(2.4)								
2007	40	3.7	(1.5)	3.5	(1.4)	3.1	(1.5)	2.2	(2.4)								
2008	41	2.5	(1.4)	2.4	(1.4)	2.2	(1.5)	1.8	(2.5)								
2009	42	1.7	(1.5)	1.8	(1.5)	2.1	(1.6)	2.7	(2.5)								
Pooled 1991-2000		1.1	(0.9)	0.9	(0.8)	0.6	(0.9)										
Pooled 2002-2009		2.1	(1.2)	2.1	(1.2)	2.0	(1.3)	-0.2	(2.0)								

Notes: Estimated coefficients times 100 (with standard errors in parentheses) from models fit separately by age to wages of conscripts and non-conscripts. All models include dummies for education as of age 20 or 21. Models in columns 3-4 include wage measured at age 20 or 21. Models in columns 5-6 use as dependent variable wage at indicated age, minus wage at age 20/21. Models in columns 7-8 use as dependent variable wage at indicated age minus 2.62 times wage at age 20/21. Pooled estimates use sample of available person-year observations, and include year dummies. Standard errors for pooled models are clustered by person. Source: Portugal, MTSS (1986-2009).

TABLE A2.B: ESTIMATED WAGE EFFECTS OF CONSCRIPTION AT VARIOUS AGES FROM ALTERNATIVE MODELS FOR LOW-EDUCATION MEN

Year	Modal Age	OLS Model with No Control for Wage at Age 20/21				OLS Model Including Control for Wage at Age 20/21				Differenced Model: Wage Minus Wage at Age 20/21				Quasi-Differenced Model: Wage Minus 2.62 x Wage at Age 20/21			
		Conscription Effect		Std. Error	Conscription Effect	Std. Error	Conscription Effect	Std. Error	Conscription Effect	Std. Error	Conscription Effect	Std. Error	Conscription Effect	Std. Error	Conscription Effect	Std. Error	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)		
1991	24	-1.4	(1.5)	-1.7	(1.4)	-1.9	(1.5)	-2.8	(2.8)								
1992	25	-0.8	(1.5)	-1.0	(1.5)	-1.4	(1.6)	-2.3	(3.0)								
1993	26	0.1	(1.8)	0.7	(1.7)	1.0	(1.8)	2.0	(3.1)								
1994	27	0.9	(1.9)	0.9	(1.8)	0.9	(1.9)	0.7	(3.3)								
1995	28	1.0	(1.7)	1.1	(1.6)	1.2	(1.8)	1.6	(3.2)								
1996	29	3.1	(2.0)	2.8	(1.9)	2.7	(2.1)	2.0	(3.4)								
1997	30	-0.7	(1.8)	-0.6	(1.7)	-0.5	(1.9)	-0.1	(3.2)								
1998	31	0.5	(1.7)	0.7	(1.6)	1.2	(1.8)	2.4	(3.2)								
1999	32	2.0	(1.7)	2.1	(1.6)	2.3	(1.8)	2.8	(3.2)								
2000	33	1.7	(1.7)	1.9	(1.6)	2.1	(1.8)	2.6	(3.1)								
2002	35	2.9	(1.8)	3.1	(1.8)	3.4	(1.9)	4.1	(3.3)								
2003	36	4.2	(1.9)	4.6	(1.8)	5.5	(2.0)	7.5	(3.4)								
2004	37	2.3	(1.8)	2.6	(1.8)	3.3	(2.0)	5.0	(3.4)								
2005	38	3.6	(1.9)	3.6	(1.8)	3.6	(2.0)	3.5	(3.4)								
2006	39	4.1	(1.8)	3.9	(1.8)	3.4	(2.0)	2.4	(3.4)								
2007	40	5.0	(1.9)	4.9	(1.8)	4.8	(2.0)	4.4	(3.4)								
2008	41	5.5	(1.8)	5.4	(1.8)	5.2	(2.0)	4.7	(3.4)								
2009	42	4.8	(1.8)	4.8	(1.8)	4.9	(2.0)	5.0	(3.5)								
Pooled 1991-2000		0.6	(1.2)	0.6	(1.1)	0.7	(1.3)	0.8	(2.7)								
Pooled 2002-2009		4.1	(1.7)	4.1	(1.6)	4.3	(1.8)	4.5	(3.2)								

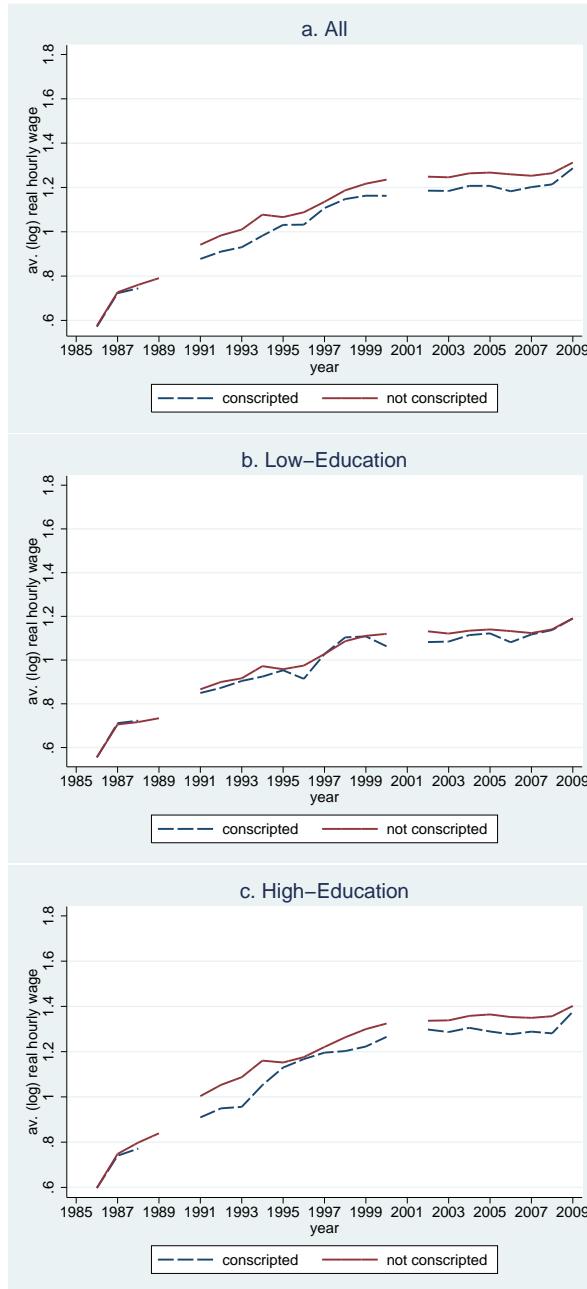
Notes: Estimated coefficients times 100 (with standard errors in parentheses) from models fit separately by age to wages of conscripts and non-conscripts. All models include dummies for education as of age 20 or 21. Models in columns 3-4 include wage measured at age 20 or 21. Models in columns 5-6 use as dependent variable wage at indicated age, minus wage at age 20/21. Models in columns 7-8 use as dependent variable wage at indicated age minus 2.62 times wage at age 20/21. Pooled estimates use sample of available person-year observations, and include year dummies. Standard errors for pooled models are clustered by person. Source: Portugal, MTSS (1986-2009).

TABLE A2.C: ESTIMATED WAGE EFFECTS OF CONSCRIPTION AT VARIOUS AGES FROM ALTERNATIVE MODELS FOR HIGH-EDUCATION MEN

Year	Modal Age	OLS Model with No Control for Wage at Age 20/21				OLS Model Including Control for Wage at Age 20/21				Differenced Model: Wage Minus Wage at Age 20/21				Quasi-Differenced Model: Wage Minus 2.62 x Wage at Age 20/21			
		Conscription		Std.	Error	Conscription		Std.	Error	Conscription		Std.	Error	Conscription		Std.	Error
		Effect	(1)	(2)	(3)	Effect	(4)	(5)	(6)	Effect	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1991	24	-1.4	(1.6)	-1.8	(1.4)	-2.2	(1.5)	-3.4	(2.9)								
1992	25	3.7	(1.8)	3.4	(1.7)	3.0	(1.8)	1.8	(3.2)								
1993	26	2.3	(1.9)	2.0	(1.8)	1.6	(2.0)	0.3	(3.4)								
1994	27	1.5	(1.9)	1.2	(2.0)	1.0	(2.1)	0.2	(3.5)								
1995	28	2.5	(1.9)	1.8	(1.8)	1.0	(1.9)	-1.5	(3.4)								
1996	29	2.2	(2.0)	1.6	(1.9)	1.0	(2.1)	-1.1	(3.5)								
1997	30	1.7	(2.0)	1.6	(1.9)	1.5	(2.0)	1.2	(3.5)								
1998	31	2.0	(1.9)	1.1	(1.9)	0.0	(2.0)	-3.3	(3.4)								
1999	32	-0.1	(1.9)	-0.7	(1.8)	-1.6	(2.0)	-4.1	(3.4)								
2000	33	0.9	(1.9)	0.6	(1.9)	0.3	(2.0)	-0.7	(3.4)								
2002	35	-0.8	(2.1)	-1.0	(2.0)	-1.1	(2.2)	-1.5	(3.5)								
2003	36	0.5	(2.1)	0.3	(2.0)	0.0	(2.2)	-0.9	(3.7)								
2004	37	-1.0	(2.2)	-1.0	(2.1)	-1.0	(2.3)	-0.9	(3.6)								
2005	38	1.1	(2.1)	1.0	(2.1)	0.8	(2.2)	0.2	(3.5)								
2006	39	2.2	(2.2)	2.0	(2.1)	1.9	(2.2)	1.4	(3.5)								
2007	40	2.7	(2.2)	2.3	(2.1)	1.8	(2.2)	0.5	(3.5)								
2008	41	0.2	(2.2)	0.1	(2.1)	-0.1	(2.3)	-0.4	(3.6)								
2009	42	-0.6	(2.3)	-0.4	(2.2)	0.0	(2.3)	1.0	(3.6)								
Pooled 1991-2000		1.5	(1.3)	1.0	(1.2)	0.5	(1.4)	-1.1	(2.8)								
Pooled 2002-2009		0.5	(1.8)	0.4	(1.7)	0.3	(1.9)	-0.1	(3.1)								

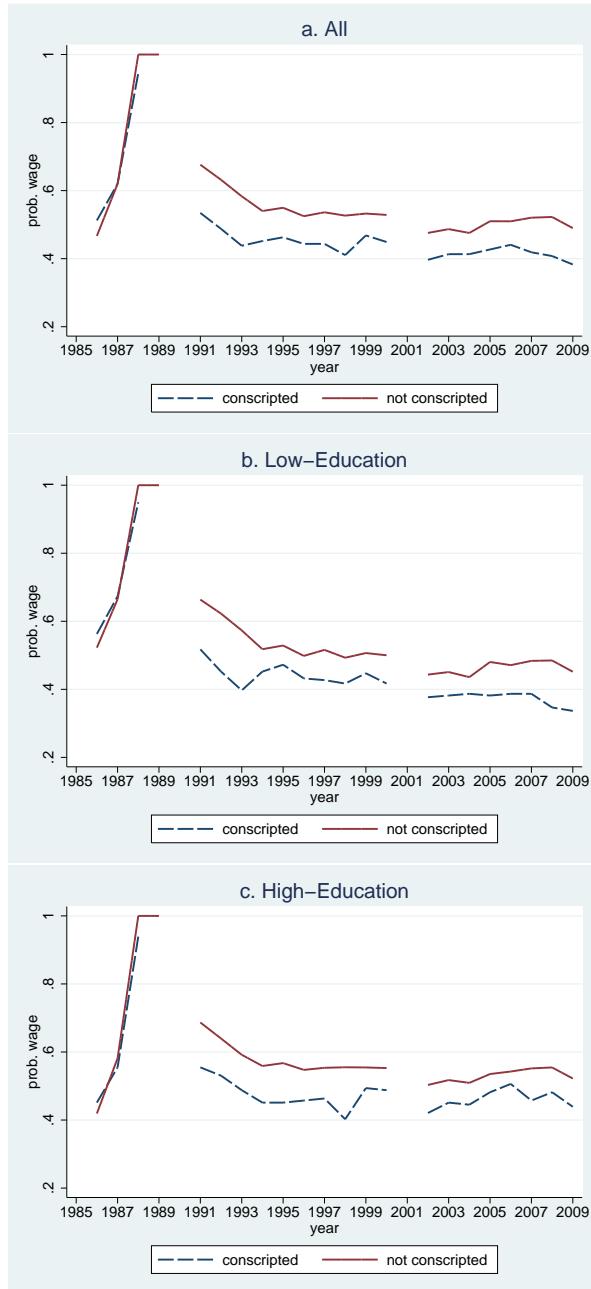
Notes: Estimated coefficients times 100 (with standard errors in parentheses) from models fit separately by age to wages of conscripts and non-conscripts. All models include dummies for education as of age 20 or 21. Models in columns 3-4 include wage measured at age 20 or 21. Models in columns 5-6 use as dependent variable wage at indicated age, minus wage at age 20/21. Models in columns 7-8 use as dependent variable wage at indicated age minus 2.62 times wage at age 20/21. Pooled estimates use sample of available person-year observations, and include year dummies. Standard errors for pooled models are clustered by person. Source: Portugal, MTSS (1986-2009).

FIGURE A.1: AGE PROFILES OF HOURLY WAGES, COHORT 1967, FEMALES



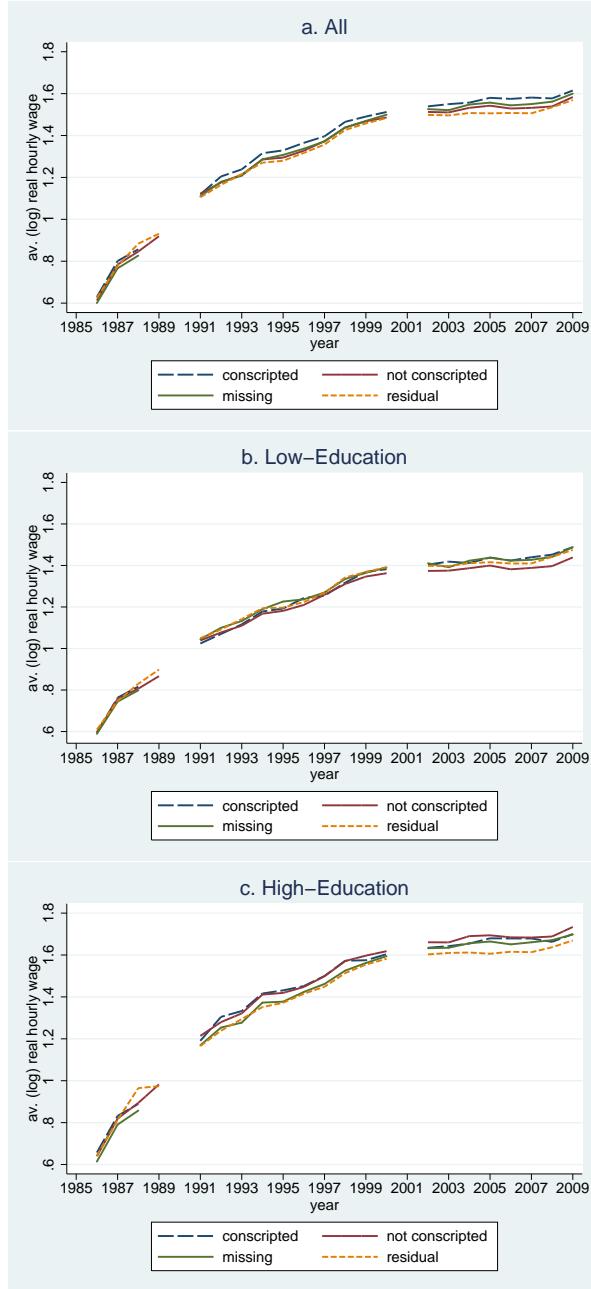
Note: 'Conscripted' is an individual working full-time in 1987 or 1988 and reported on leave during the years military enlistment is due; 'non-conscripted' is an individual observed working full-time during the years military enlistment is due. For the cohort born 1967, military enlistment was due the year the individual turned 21 and it lasted for 24 months. Source: Computations based on Portugal, MTSS (1986-2009).

FIGURE A.2: AGE PROFILES OF EMPLOYMENT, COHORT 1967, FEMALES



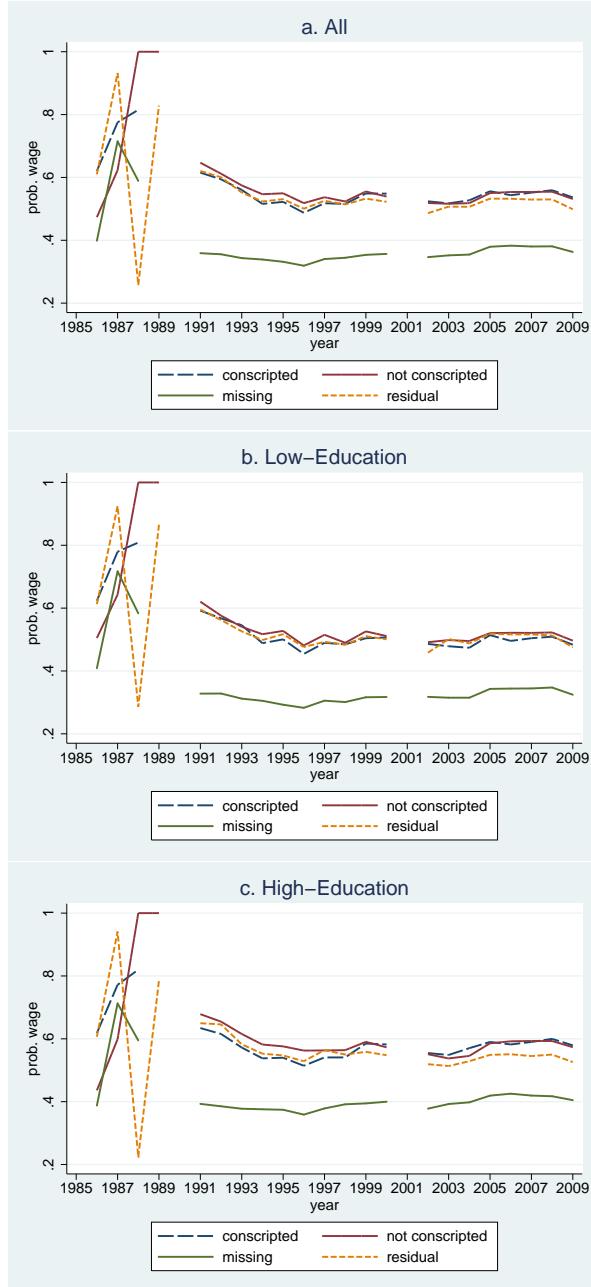
Note: 'Conscripted' is an individual working full-time in 1987 or 1988 and reported on leave during the years military enlistment is due; 'non-conscripted' is an individual observed working full-time during the years military enlistment is due. For the cohort born 1967, military enlistment was due the year the individual turned 21 and it lasted for 24 months. Source: Computations based on Portugal, MTSS (1986-2009).

FIGURE A.3: AGE PROFILES OF HOURLY WAGES, COHORT 1967, MALES EARLY LABOR MARKET ENTRANTS



Note: Conscribed men include men who were working full time in 1987, and were on leave of absence (listed on the roster of employees with missing values for wages and hours) in 1988 and 1989, plus men who were working full time in 1988 and on leave in 1989. Non-conscripted men are those who were working full time in 1988 and 1989. Missing group in column 6 are those who were working full time in 1987 or 1988 and are not present in the QP in 1989. Residual group in column 7 are all men who were working full time in 1987 or 1988 and are not included as conscripts, non-conscripts, or missing. Source: Computations based on Portugal, MTSS (1986-2009).

FIGURE A.4: AGE PROFILES OF EMPLOYMENT, COHORT 1967, MALES EARLY LABOR MARKET ENTRANTS



Note: Conscripted men include men who were working full time in 1987, and were on leave of absence (listed on the roster of employees with missing values for wages and hours) in 1988 and 1989, plus men who were working full time in 1988 and on leave in 1989. Non-conscripted men are those who were working full time in 1988 and 1989. Missing group in column 6 are those who were working full time in 1987 or 1988 and are not present in the QP in 1989. Residual group in column 7 are all men who were working full time in 1987 or 1988 and are not included as conscripts, non-conscripts, or missing. Source: Computations based on Portugal, MTSS (1986-2009).

## References

- European Foundation for the Improvement of Living and Working Conditions.** 1997. *Preventing Absenteeism at the Workplace: Research Summary.* Luxembourg: Office for Official Publications of the European Communities.
- Pordata.** 1986-1996. “Emprego.” [www.pordata.pt8](http://www.pordata.pt8) (accessed June 6, 2011).
- Portugal. Instituto Nacional de Estatística.** 1986-1996. “Greves.” [www.ine.pt](http://www.ine.pt) (accessed July 6, 2011).