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# The characteristics and regional distribution of older workers in Portugal

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## ABSTRACT

Population ageing is a common trend in most developed countries with many important economic, social and political consequences. In Portugal, this trend has been particularly strong. The ageing index was 34% in 1970, it is about 129% in 2011, according to the provisory results of the last Census and most recent demographic projections, is expected to be over 240% in 2030. One of the main issues associated with ageing is its effect on the composition of the labour force. The main purpose of this paper is to study the changes in the age structure of the Portuguese labour force between 1989 and 2009. First of all, the size and relative weight of older workers are quantified, both as a group (people with more than 54 years old), by age sub-groups (55-59; 60-64; 65 +) and gender. Then, particular attention is given to the regional distribution of these workers, both at the Nuts II (7 regions) and Nuts III (30 regions) levels. The sectoral distribution is also measured, at national and regional levels. Finally, a comparative analysis is made between younger and olderer workers, considering the education levels, establishments' size, labour compensation and part-time versus full time work regime. The main data used are *Quadros de Pessoal*, from Ministry of Solidarity and Social Security covering people working in the private business sector (around 3,3 million workers, in 2009) and excluding liberal professionals.

**Keywords:** *Older workers; Private business sector; Portuguese regions*

## 1. INTRODUCTION

Population ageing has many consequences, some of which affect the workforce and the labour market. Although population ageing is a nationwide phenomenon, it does not affect all parts of Portugal equally. The consequent change in the age composition of the workforce has implications in terms of productivity, of labour costs and of the suitability of management strategies. It is important to acknowledge regional differences in order to adapt policies and the management of firms accordingly.

There are significant and persistent differences in the regional composition of the workforce in Portugal, related to its dimension, age composition, education level, industry specialization and remuneration. In this study, we analyze these differences, trying to grasp the most noticeable changes between 1989, 1999 and 2009.

Although the Portuguese population has been growing each year (except from 2010 to 2011), according to Eurostat data, the rise has been concentrated in some regions, like Lisboa or Algarve. This is a consequence of the natural balance, as well as of migration flows [1]. Despite the paucity of studies related to the ageing of the Portuguese population with a regional perspective, a few aspects of regional disparity in Portugal have been given attention: development indexes [2], productivity and per capita income [3], health care [4], cohesion [5], ageing and job creation [6]. In our study, we will focus on the composition of the workforce.

Although the definition of an older worker starting at a particular age is arbitrary, we identify older workers with those 55 and older, which is in accordance with other studies (e.g. [7] and [15]).

Population ageing, together with a trend to stop working later in life, will give this group of workers a greater weight. Differing age profiles across regions and across occupational sectors provide us with information about potential future labour force needs.

While pension reforms are directed at increasing labour supply of older workers, it is necessary to involve the demand side, in order to promote active ageing [8, 9, 10]. The level of qualifications and skills is a characteristic that affects the retention of workers in the labour market. Even if they do not want to retire, they are particularly at risk of unemployment. And older workers exhibit lower levels of education, on average. We analyse the evolution in the profile of the education level of older workers, in Portugal, comparing it to that of younger workers.

Flexible work is a potential way of extending the working lives of older workers [11]. In our study, we look at rates of part time work of Portuguese workers.

We use *Quadros de Pessoal*, a large database collected on an annual basis about the Portuguese firms and its workers, provided by the Ministry of Solidarity and Social Security. It covers people working in the private business sector (around 3,3 million workers, in 2009), excluding liberal professionals.

## **2. THE MAIN DIFFERENCES BETWEEN YOUNGER AND OLDER WORKERS**

In this section, an analysis is made of the main differences between younger and older workers in Portugal, its evolution in time (1989, 1999 and 2009) and by gender, as well as by sector and several other dimensions: education level, part time/full time regimes, establishment size and average labour compensation.

### **Age structure and dynamics of older and younger male and female workers**

The older workers (55 or more years old) registered in *Quadros de Pessoal – 2009 (QdP)* represent 10,57% of the total Portuguese Labour Force, or 330.538 in 3.128.126 (see Table 2.1). Among this age group, 6,62% are male and 3,95% female, and this gender bias is more pronounced than among younger workers (48,9 % male versus 40,57% female). The proportion of older workers diminishes significantly with age, as expected: 6,32% are in the sub-group 55-59 years old; 3,21% in 60-64, and interestingly and sometimes forgotten, 1,21% (or 32.586) above the legal (normal) retirement age of 65.

The ageing of the Portuguese labour force is a recent phenomenon, in relative terms. As a matter of fact, in Table 1 it is shown that the weight of older workers has slightly decayed from 8,81% in 1989 to 8,22% in 1999 (corresponding to an absolute increase of 19.976 workers and a growth rate of only 10,45% in the entire decade).

On the other hand, there was a strong augmentation of older workers between 1999 and 2009, both in absolute (119.9379; 56, 54%) and relative terms (2,35%) (see Table 2.2). This last trend was mainly explained by the significant increase in female older workers (61.405 in absolute numbers, corresponding to a 98,94% growth and a 1,53% reinforcement in the relative weight in all Portuguese workers). By sub-groups of older workers, the analysis points also to a slight increase in the first two, and even an absolute decay in the oldest older group (-284 workers) between 1989 and 1999, and a significant increase in the next decade for all sub-groups.

**Table 2.1: Age Structure of Portuguese Labour Force - 1989; 1999; 2009**

	1989		1999		2009	
	Fre.	%	Fre.	%	Fre.	%
<b>Younger Workers: &lt; 55</b>	1.978.647	91,19	2.357.297	91,78	2.797.588	89,43
<b>Males</b>	1.246.060	57,43	1.345.377	52,38	1.528.392	48,86
<b>Females</b>	732.587	33,76	1.011.920	39,40	1.269.196	40,57
<b>Older Workers: 55 +</b>	191.183	8,81	211.159	8,22	330.538	10,57
<b>Males</b>	150.680	6,94	149.035	5,80	207.009	6,62
<b>Females</b>	40.503	1,87	62.124	2,42	123.529	3,95
<b>55 - 59</b>	107.058	4,93	119.397	4,65	197.693	6,32
<b>60 - 64</b>	60.051	2,77	67.972	2,65	100.259	3,21
<b>65 +</b>	24.074	1,11	23.790	0,93	32.586	1,04
<b>Total</b>	2.169.830	100,00	2.568.456	100,00	3.128.126	100,00

**Table 2.2: Changes in Age Structure of Portuguese Labour Force**

	1989/1999			1999/2009		
	Δ Fre.	Δ Fre. %	Δ Rel %	Δ Fre.	Δ Fre. %	Δ Rel %
<b>Younger Workers: &lt; 55</b>	378.650	19,14	0,59	440.291	18,68	-2,35
<b>Males</b>	99.317	7,97	-5,05	183.015	13,60	-3,52
<b>Females</b>	279.333	38,13	5,64	257.276	25,42	1,18
<b>Older Workers: 55 +</b>	19.976	10,45	-0,59	119.379	56,54	2,35
<b>Males</b>	-1.645	-1,09	-1,14	57.974	38,90	0,82
<b>Females</b>	21.621	53,38	0,55	61.405	98,84	1,53
<b>55 - 59</b>	12.339	11,53	-0,29	78.296	65,58	1,67
<b>60 - 64</b>	7.921	13,19	-0,12	32.287	47,50	0,56
<b>65 +</b>	-284	-1,18	-0,18	8.796	36,97	0,12
<b>Total</b>	398.626	18,37	0,00	559.670	21,79	0,00

**Analysis by sector**

The analysis of the distribution of older workers by sector in Portugal shows that, in 2009 (Table 2.3), they are concentrated in services, the most labour intensive sectors: 25,8% in Other Services; 18,4% in Trade; 12,2% in Construction; 8,1% in Restaurants and Hotels; 7,3% in Transport Services. The large sector outside services is Fabricated Metal Products, Machinery and Equipment (with 5,2% of all older workers), followed by Food, Beverages and Tobacco (4%), Agriculture (3,7%), Textiles (3,6%), Wood and cork (2,4%) and Non-metallic Mineral Products (1,8%).

In 1999 and 1989 (Tables 2.4 and 2.5) the first sector employing older workers was Trade, with 21,2% and 18,6%, respectively and the second Other Services, showing already a significant growth (from 11,5% in 1989 to 16,4% ten years later). Construction ranked third in all the years covered by our analysis (9,6% in 1989 and 10,9% in 1999). Transport, storage and

communications has lost a position (from 4<sup>th</sup> to 5<sup>th</sup>) to Restaurants and hotels, mainly by the strong growth of this last sector, from 4,2% in 1989 to 6,7% in 1999 and the already mentioned 8,1% in 2009.

**Table 2.3: Structure of Sectors by Age Groups – 2009**

	Younger W.		Older W.		55-59		60-64		65 +		Total	
	Fre.	%	Fre.	%	Fre.	%	Fre.	%	Fre.	%	Fre.	%
A - Agriculture	51.317	1,85	12.021	3,68	6.329	3,24	3.974	4,00	1.718	5,33	63.338	2,04
B - Mining	10.217	0,37	1.803	0,55	1.097	0,56	549	0,55	157	0,49	12.020	0,39
C1 - Food, beverages, tob.	88.956	3,21	13.113	4,01	7.919	4,05	3.996	4,03	1.198	3,71	102.069	3,29
C2 - Textiles	163.590	5,90	11.668	3,57	8.316	4,26	2.738	2,76	614	1,90	175.258	5,65
C3 - Wood, cork	56.105	2,02	7.672	2,35	4.875	2,50	2.217	2,23	580	1,80	63.777	2,06
C4 - Paper, publishing	37.662	1,36	4.436	1,36	2.846	1,46	1.227	1,24	363	1,13	42.098	1,36
C5 - Chemichals	36.975	1,33	4.909	1,50	3.200	1,64	1.347	1,36	362	1,12	41.884	1,35
C6 - Non-metallic Mineral Prod.	40.244	1,45	5.828	1,78	3.720	1,90	1.718	1,73	390	1,21	46.072	1,49
C7 - Base Metals	7.782	0,28	1.315	0,40	880	0,45	357	0,36	78	0,24	9.097	0,29
C8 - Fab. Metal Prod., Mach., Eq.	143.717	5,18	17.011	5,21	10.672	5,46	4.981	5,02	1.358	4,21	160.728	5,18
C9 - Other manufacturing ind.	5.510	0,20	540	0,17	369	0,19	150	0,15	21	0,07	6.050	0,20
D - Electricity, gas, w ater	19.617	0,71	3.127	0,96	2.293	1,17	685	0,69	149	0,46	22.744	0,73
E - Construction	328.153	11,83	39.779	12,17	24.347	12,47	11.873	11,96	3.559	11,03	367.932	11,87
F - Trade, repair of motor vehicles	565.038	20,37	60.025	18,37	33.821	17,32	19.165	19,31	7.039	21,82	625.063	20,16
G - Restaurants and hotels	209.097	7,54	26.386	8,07	15.721	8,05	8.330	8,39	2.335	7,24	235.483	7,59
H - Transport, storage, comunicat.	182.905	6,59	23.856	7,30	14.882	7,62	7.103	7,16	1.871	5,80	206.761	6,67
I - Financial services	84.216	3,04	8.896	2,72	6.003	3,07	2.281	2,30	612	1,90	93.112	3,00
J - Other services	742.688	26,78	84.430	25,83	48.005	24,58	26.568	26,77	9.857	30,55	827.118	26,68
<b>Total</b>	<b>2.773.789</b>	<b>100,0</b>	<b>326.815</b>	<b>100,0</b>	<b>195.295</b>	<b>100,0</b>	<b>99.259</b>	<b>100,0</b>	<b>32.261</b>	<b>100,0</b>	<b>3.100.604</b>	<b>100,0</b>

**Table 2.4: Structure of Sectors by Age Groups – 1999**

	Younger W.		Older W.		55-59		60-64		65 +		Total by sector	
	Fre.	%	Fre.	%	Fre.	%	Fre.	%	Fre.	%	Fre.	%
A - Agriculture	41.125	1,75	10.058	4,77	4.245	3,57	4.062	5,98	1.751	7,36	51.183	1,99
B - Mining	13.042	0,55	1.678	0,80	818	0,69	678	1,00	182	0,77	14.720	0,57
C1 - Food, beverages, tob.	81.781	3,47	9.659	4,58	5.367	4,51	3.167	4,66	1.125	4,73	91.440	3,56
C2 - Textiles	283.082	12,02	12.282	5,83	7.628	6,41	3.692	5,44	962	4,04	295.364	11,51
C3 - Wood, cork	40.196	1,71	4.668	2,22	2.437	2,05	1.721	2,53	510	2,14	44.864	1,75
C4 - Paper, publishing	43.061	1,83	4.185	1,99	2.535	2,13	1.206	1,78	444	1,87	47.246	1,84
C5 - Chemichals	38.251	1,62	4.118	1,95	2.553	2,14	1.204	1,77	361	1,52	42.369	1,65
C6 - Non-metallic Mineral Prod.	61.939	2,63	6.349	3,01	3.646	3,06	2.118	3,12	585	2,46	68.288	2,66
C7 - Base Metals	9.217	0,39	1.094	0,52	711	0,60	325	0,48	58	0,24	10.311	0,40
C8 - Fab. Metal Prod., Mach., Eq.	189.591	8,05	13.283	6,30	8.409	7,06	3.703	5,45	1.171	4,92	202.874	7,91
C9 - Other manufacturing ind.	47.909	2,03	3.877	1,84	2.115	1,78	1.382	2,03	380	1,60	51.786	2,02
D - Electricity, gas, w ater	16.280	0,69	971	0,46	723	0,61	203	0,30	45	0,19	17.251	0,67
E - Construction	247.678	10,52	22.956	10,89	12.190	10,24	8.386	12,35	2.380	10,01	270.634	10,55
F - Trade, repair of motor vehicles	485.810	20,63	44.652	21,19	23.499	19,74	14.952	22,02	6.201	26,07	530.462	20,67
G - Restaurants and hotels	160.217	6,80	14.006	6,65	8.042	6,76	4.580	6,74	1.384	5,82	174.223	6,79
H - Transport, storage, comunicat.	135.385	5,75	16.033	7,61	11.043	9,28	4.116	6,06	874	3,67	151.418	5,90
I - Financial services	80.442	3,42	6.279	2,98	4.740	3,98	1.288	1,90	251	1,06	86.721	3,38
J - Other services	380.063	16,14	34.582	16,41	18.332	15,40	11.129	16,39	5.121	21,53	414.645	16,16
<b>Total</b>	<b>2.355.069</b>	<b>100,0</b>	<b>210.730</b>	<b>100,0</b>	<b>119.033</b>	<b>100,0</b>	<b>67.912</b>	<b>100,0</b>	<b>23.785</b>	<b>100,0</b>	<b>2.565.799</b>	<b>100,0</b>

**Table 2.5: Structure of Sectors by Age Groups – 1989**

	Younger W.		Older W.		55-59		60-64		65 +		Total	
	Fre.	%	Fre.	%	Fre.	%	Fre.	%	Fre.	%	Fre.	%
A - Agriculture	44.599	2,25	11.418	5,97	5.685	5,31	4.278	7,12	1.455	6,04	56.017	2,58
B - Mining	14.122	0,71	1.878	0,98	1.045	0,98	654	1,09	179	0,74	16.000	0,74
C1 - Food, beverages, tob.	92.337	4,67	11.394	5,96	6.162	5,76	3.773	6,28	1.459	6,06	103.731	4,78
C2 - Textiles	346.438	17,51	15.566	8,14	9.206	8,60	4.827	8,04	1.533	6,37	362.004	16,68
C3 - Wood, cork	79.093	4,00	6.873	3,59	3.902	3,64	2.324	3,87	647	2,69	85.966	3,96
C4 - Paper, publishing	45.286	2,29	4.464	2,33	2.583	2,41	1.295	2,16	586	2,43	49.750	2,29
C5 - Chemicals	59.531	3,01	6.553	3,43	4.005	3,74	1.948	3,24	600	2,49	66.084	3,05
C6 - Non-metallic Mineral Prod.	60.693	3,07	5.794	3,03	3.471	3,24	1.824	3,04	499	2,07	66.487	3,06
C7 - Base Metals	19.489	0,98	2.024	1,06	1.284	1,20	609	1,01	131	0,54	21.513	0,99
C8 - Fab. Metal Prod., Mach., Eq.	180.158	9,11	13.573	7,10	8.380	7,83	3.944	6,57	1.249	5,19	193.731	8,93
C9 - Other manufacturing ind.	10.703	0,54	934	0,49	502	0,47	293	0,49	139	0,58	11.637	0,54
D - Electricity, gas, water	22.213	1,12	3.840	2,01	2.347	2,19	1.309	2,18	184	0,76	26.053	1,20
E - Construction	171.557	8,67	18.386	9,62	10.593	9,89	6.073	10,11	1.720	7,14	189.943	8,75
F - Trade, repair of motor vehicles	314.952	15,92	35.470	18,55	17.855	16,68	11.060	18,42	6.555	27,23	350.422	16,15
G - Restaurants and hotels	101.776	5,14	7.956	4,16	4.352	4,07	2.504	4,17	1.100	4,57	109.732	5,06
H - Transport, storage, comunicat.	132.451	6,69	17.448	9,13	10.946	10,22	5.157	8,59	1.345	5,59	149.899	6,91
I - Financial services	76.340	3,86	5.584	2,92	3.813	3,56	1.462	2,43	309	1,28	81.924	3,78
J - Other services	206.852	10,45	22.019	11,52	10.923	10,20	6.714	11,18	4.382	18,20	228.871	10,55
<b>Total</b>	<b>1.978.647</b>	<b>100,0</b>	<b>191.183</b>	<b>100,0</b>	<b>107.058</b>	<b>100,0</b>	<b>60.051</b>	<b>100,0</b>	<b>24.074</b>	<b>100,0</b>	<b>2.169.830</b>	<b>100,0</b>

It is important to notice that the relatively small percentage of older workers in Agriculture is explained by the absence in this Database (*QdP*) of independent farmers. In fact, this sector has by far the most aged labour force of all, around 20% in all the years covered (see Table 2.6). The second sector according to this criterion is Mining (15% in 2009; 11,4% in 1999 and 11,8% in 1988), followed by Basic Metal products (14,46%) and Electricity, gas and water (13,8%). This last sector has had a strange ageing process, with a percentage of older workers of only 5,6% in 1999, below the national average (8,2%), and 14,7% in 1989, clearly above the average for that year (8,8%). Closing the top five “aged” sectors in 2009 is Food, beverages and tobacco with 12,9%, slightly above the previous levels around 11% in 1999 and 1989.

On the other hand, the “younger” sector in Portugal, since 1989, is Textiles, starting with only 4,3% of the labour force with 55 years old and above, 4,2% in 1999 and 6,7% in 2009. As it is well known, this sector has been the most representative of a global trend of de-industrialization in Portugal [12], particularly after the beginning of Economic and Monetary Union, in 1999, starting with 362 thousands of workers in 1989 (16,7%), 295,3 in 1999 (11,5%) and 175,2 in 2009 (5,6%). The other side of this coin is the strong growth of services, particularly Other Services (Rental, Business, Health and Education), Trade (by far the largest individual sector in Portugal, with 20% of *QdP* labour force), Restaurants and Hotels, Transport and Financial Services, as well as the Construction sector. All these sectors have today the largest number of older workers in absolute terms, as expected, but its relative ageing is close to the national average (slightly above in three of them – Transport, Restaurants and Hotels and Construction and below the average in the others).

By sub-groups, it is worth mentioning the strong weight of the two oldest older (60 and above) in Agriculture, and its almost insignificant weight in Textiles, just to mention the two extreme cases.

**Table 2.6: Structure of Age Groups by Sector (values in %)**

	1989					1999					2009				
	Y. W.	O. W.	55-59	60-64	65+	Y. W.	O. W.	55-59	60-64	65+	Y. W.	O. W.	55-59	60-64	65+
A - Agriculture	79,62	20,38	10,15	7,64	2,60	80,35	19,65	8,29	7,94	3,42	81,02	18,98	9,99	6,27	2,71
B - Mining	88,26	11,74	6,53	4,09	1,12	88,60	11,40	5,56	4,61	1,24	85,00	15,00	9,13	4,57	1,31
C1 - Food, beverages, tob.	89,02	10,98	5,94	3,64	1,41	89,44	10,56	5,87	3,46	1,23	87,15	12,85	7,76	3,91	1,17
C2 - Textiles	95,70	4,30	2,54	1,33	0,42	95,84	4,16	2,58	1,25	0,33	93,34	6,66	4,75	1,56	0,35
C3 - Wood, cork	92,00	8,00	4,54	2,70	0,75	89,60	10,40	5,43	3,84	1,14	87,97	12,03	7,64	3,48	0,91
C4 - Paper, publishing	91,03	8,97	5,19	2,60	1,18	91,14	8,86	5,37	2,55	0,94	89,46	10,54	6,76	2,91	0,86
C5 - Chemicals	90,08	9,92	6,06	2,95	0,91	90,28	9,72	6,03	2,84	0,85	88,28	11,72	7,64	3,22	0,86
C6 - Non-metallic Mineral Prod.	91,29	8,71	5,22	2,74	0,75	90,70	9,30	5,34	3,10	0,86	87,35	12,65	8,07	3,73	0,85
C7 - Base Metals	90,59	9,41	5,97	2,83	0,61	89,39	10,61	6,90	3,15	0,56	85,54	14,46	9,67	3,92	0,86
C8 - Fab. Metal Prod., Mach., Eq.	92,99	7,01	4,33	2,04	0,64	93,45	6,55	4,14	1,83	0,58	89,42	10,58	6,64	3,10	0,84
C9 - Other manufacturing ind.	91,97	8,03	4,31	2,52	1,19	92,51	7,49	4,08	2,67	0,73	91,07	8,93	6,10	2,48	0,35
D - Electricity, gas, w ater	85,26	14,74	9,01	5,02	0,71	94,37	5,63	4,19	1,18	0,26	86,25	13,75	10,08	3,01	0,66
E - Construction	90,32	9,68	5,58	3,20	0,91	91,52	8,48	4,50	3,10	0,88	89,19	10,81	6,62	3,23	0,97
F - Trade, repair of motor vehicles	89,88	10,12	5,10	3,16	1,87	91,58	8,42	4,43	2,82	1,17	90,40	9,60	5,41	3,07	1,13
G - Restaurants and hotels	92,75	7,25	3,97	2,28	1,00	91,96	8,04	4,62	2,63	0,79	88,79	11,21	6,68	3,54	0,99
H - Transport, storage, comunicat.	88,36	11,64	7,30	3,44	0,90	89,41	10,59	7,29	2,72	0,58	88,46	11,54	7,20	3,44	0,90
I - Financial services	93,18	6,82	4,65	1,78	0,38	92,76	7,24	5,47	1,49	0,29	90,45	9,55	6,45	2,45	0,66
J - Other services	90,38	9,62	4,77	2,93	1,91	91,66	8,34	4,42	2,68	1,24	89,79	10,21	5,80	3,21	1,19
<b>Total</b>	<b>91,19</b>	<b>8,81</b>	<b>4,93</b>	<b>2,77</b>	<b>1,11</b>	<b>91,78</b>	<b>8,22</b>	<b>4,65</b>	<b>2,65</b>	<b>0,93</b>	<b>89,46</b>	<b>10,54</b>	<b>6,30</b>	<b>3,20</b>	<b>1,04</b>

### Education levels

One of the main structural problems of the Portuguese economy, and society at large, is the low education level of the labour force [13], and the results obtained in this paper confirm this stylized fact. Generally speaking, almost two thirds of all the workers registered in *QdP* – 2009 have at most a Basic education (Level I), around one quarter a Secondary or a Bachelor degree (Level II) and only 12,5% (Level III) a Licentiate degree or more (0,76% a MSc Degree, 0,2% PhDs). These numbers represent, however, a significant improvement from extremely low levels two decades before (89%; 8,4%; 2,5% for Levels I, II and III, respectively) and a reasonable progress from the numbers of a decade ago (76%, 19%, 5%) (see Table 2.7).

This general progress in education levels in Portugal is consistent, and in fact explains, the persistence of a large divide between younger and older workers, as far as educational attainment concerns. For older workers the percentage with at most a basic degree is in 2009 82%, not very far from the national average in 1989. On the other hand, Level I represents for younger workers today “only” 60,6%. The differences between these age groups are also significant for Level II (25% versus 11%) and Level III (13,5% versus 6,5%), and they are expected to persist for some years in the future.

An interesting fact worth mentioning is that the oldest older workers tend to be relatively more educated, confirming that one of the factors sustaining an active ageing is to have a better education. For example, in 2009 the percentage of 65 years old and above with a MSc degree are above the other aged sub-groups, and those with a PhD are even above the younger group.

**Table 2.7: Education level of younger and older workers in Portugal – 2009; 1999; 1989**

2009												
	Younger W.		Older W.		55-59		60-64		65 +		Total	
	Fre	%	Fre	%	Fre.	%	Fre.	%	Fre.	%	Fre.	%
< Basic	26.411	0,94	9.796	2,96	4.992	2,53	3.261	3,25	1.543	4,74	36.207	1,16
Basic	1.658.240	59,27	262.471	79,41	157.698	79,77	80.523	80,31	24.250	74,42	1.920.711	61,40
Secondary	644.524	23,04	29.361	8,88	18.586	9,40	8.000	7,98	2.775	8,52	673.885	21,54
Pos-Secondary	11.622	0,42	965	0,29	510	0,26	289	0,29	166	0,51	12.587	0,40
Bachelor	60.639	2,17	5.354	1,62	3.037	1,54	1.612	1,61	705	2,16	65.993	2,11
Licentiate	348.345	12,45	19.021	5,75	10.843	5,48	5.574	5,56	2.604	7,99	367.366	11,74
MSc	22.390	0,80	1.526	0,46	866	0,44	458	0,46	202	0,62	23.916	0,76
PhD	5.341	0,19	793	0,24	386	0,20	231	0,23	176	0,54	6.134	0,20
Unknow n	20.076	0,72	1.251	0,38	775	0,39	311	0,31	165	0,51	21.327	0,68
Total	2.797.588	100,0	330.538	100,0	197.693	100,0	100.259	100,0	32.586	100,0	3.128.126	100,0
1999												
	Younger W.		Older W.		55-59		60-64		65 +		Total	
	Fre	%	Fre	%	Fre.	%	Fre.	%	Fre.	%	Fre.	%
< Basic	34.272	1,51	17.437	8,49	6.839	5,88	8.122	12,24	2.476	10,85	51.709	2,09
Basic - 1st	770.585	33,95	127.112	61,88	73.092	62,87	41.167	62,06	12.853	56,32	897.697	36,27
Basic - 2nd	538.125	23,71	19.070	9,28	11.689	10,05	5.486	8,27	1.895	8,30	557.195	22,51
Basic - 3rd	381.413	16,81	20.896	10,17	12.812	11,02	5.596	8,44	2.488	10,90	402.309	16,26
Secondary	407.641	17,96	11.089	5,40	6.660	5,73	2.963	4,47	1.466	6,42	418.730	16,92
Bachelor	25.511	1,12	1.293	0,63	714	0,61	394	0,59	185	0,81	26.804	1,08
Licentiate	60.076	2,65	4.217	2,05	2.214	1,90	1.178	1,78	825	3,61	64.293	2,60
Unknow n	51.876	2,29	4.303	2,09	2.236	1,92	1.433	2,16	634	2,78	56.179	2,27
Total	2.269.499	100,0	205.417	100,0	116.256	100,0	66.339	100,0	22.822	100,0	2.474.916	100,0
1989												
	Younger W.		Older W.		55-59		60-64		65 +		Total	
	Fre	%	Fre	%	Fre.	%	Fre.	%	Fre.	%	Fre.	%
< Basic	89.781	4,54	40.268	21,06	22.059	20,60	14.335	23,87	3.874	16,09	130.049	5,99
Basic - 1st	990.085	50,04	98.028	51,27	57.075	53,31	29.717	49,49	11.236	46,67	1.088.113	50,15
Basic - 2nd	344.211	17,40	11.554	6,04	6.574	6,14	3.429	5,71	1.551	6,44	355.765	16,40
Basic - 3rd	255.397	12,91	18.079	9,46	9.905	9,25	5.329	8,87	2.845	11,82	273.476	12,60
Secondary	144.250	7,29	5.670	2,97	2.843	2,66	1.704	2,84	1.123	4,66	149.920	6,91
Bachelor	14.857	0,75	1.370	0,72	701	0,65	430	0,72	239	0,99	16.227	0,75
Licentiate	46.709	2,36	6.180	3,23	2.662	2,49	1.898	3,16	1.620	6,73	52.889	2,44
Unknow n	93.357	4,72	10.034	5,25	5.239	4,89	3.209	5,34	1.586	6,59	103.391	4,76
Total	1.978.647	100,0	191.183	100,0	107.058	100,0	60.051	100,0	24.074	100,0	2.169.830	100,0

### Working time regime

The labour market in Portugal is considered relatively rigid [14], and this assessment is confirmed by the small proportion of workers that use a part time regime: 5,74% in 2009 (see Table 2.8). Although there is a larger proportion of part time older workers (7,3% versus 5,6%), this difference is very small, and only assumes a significant value for the oldest older (14,7%) This is one of the most potential ways of promoting active aging, if appropriate measures are taken. Unfortunately, there are no numbers for this variable in *QdP* of 1999 and 1989.

**Table 2.8: Working time regime of younger and older workers in Portugal - 2009**

	Younger Workers		Older Workers		55-59		60-64		65 +		Total	
	Fre	%	Fre	%	Fre.	%	Fre.	%	Fre.	%	Fre.	%
Full time	2.475.282	94,44	258.056	92,66	161.345	93,99	75.884	92,05	20.827	85,34	2.733.338	94,26
Part time	145.853	5,56	20.443	7,34	10.308	6,01	6.557	7,95	3.578	14,66	166.296	5,74
Total	2.621.135	100,00	278.499	100,00	171.653	100,00	82.441	100,00	24.405	100,00	2.899.634	100,00



## Establishments' size

The Portuguese economy is ever since populated mainly by small and very small firms, and so it is not a surprise that almost two thirds of all workers belong to micro (0-9 workers) and small (10-49) establishments. 22% work in medium size establishments (50-249 workers) and only 14,4% in large ones (250+). These numbers are for 2009 (Table 2.9), and in this year the proportion of older workers in micro-establishments is bigger (38,4%) than that of younger ones (32,1%), and smaller in all the other size classes. This tendency is reinforced with age sub-groups, being significant the proportion of workers 60-64 and 65+ in micro units (41% and 45,6%, respectively). For example, only 8% of workers aged 65+ are in large companies (2.605 in 32.586).

**Table 2.9: Younger and older workers, by establishments size - 2009**

	Younger Workers		Older Workers		55-59		60-64		65 +		Total	
	Fre	%	Fre	%	Fre.	%	Fre.	%	Fre.	%	Fre.	%
Micro	897.392	32,08	126.767	38,35	70.787	35,81	41.155	41,05	14.825	45,49	1.024.159	32,74
Small	865.775	30,95	98.779	29,88	58.892	29,79	29.724	29,65	10.163	31,19	964.554	30,83
Medium	624.584	22,33	65.490	19,81	41.767	21,13	18.730	18,68	4.993	15,32	690.074	22,06
Large	409.837	14,65	39.502	11,95	26.247	13,28	10.650	10,62	2.605	7,99	449.339	14,36
Total	2.797.588	100,00	330.538	100,00	197.693	100,00	100.259	100,00	32.586	100,00	3.128.126	100,00

An interesting empirical fact related to the average size evolution of the Portuguese firms is that in 1989 and 1999 the proportion of workers in micro establishments is smaller than in 2009 (20,2% and 29,8%). This trend is associated with the strong tertiarization (and de-industrialization) of the Portuguese economy, previously mentioned, and it is a matter of serious concern affecting both younger and older workers. As a matter of fact, two decades ago more than 20% of workers were in large establishments, significantly more than today, almost the double in the older workers case.

## Average labour compensation.

Considering the 3.128.126 workers registered in *Quadros de Pessoal*, the average monthly remuneration in Portugal was €929,4 in 2009, €624,6 in 1999 and 259,2 in 1989, all in current prices (see Table 2.10). We calculate the labour remunerations summing the base salary, subsidies, bonuses and overtime pay.

**Table 2.10: Average Monthly Remuneration by Age Group**

	Younger Workers		Older Workers		Total	
	Value	%	Value	%	Value	%
<b>1989</b>	258,765	99,82	264,132	101,89	259,238	100,00
<b>1999</b>	624,193	99,93	629,310	100,75	624,613	100,00
<b>2009</b>	927,877	99,83	942,435	101,40	929,415	100,00

The average labour compensation of older workers in 2009 is €942,4, slightly higher (1,6%) than the €927,9 of the younger workers, meaning that the tenure effect is more important than the education effect, on average. The hourly average payment of older workers is much higher (16,5%, €7,7 versus €6,6) as older people work less on average (see Table 2.11). These relative wage advantages of older workers were also a fact in 1989 and 1999.

**Table 2.11: Average Hourly Remuneration by Age Group**

	Younger Workers		Older Workers		Total	
	Value	%	Value	%	Value	%
<b>1989</b>	1,752	98,11	2,134	119,53	1,786	100,00
<b>1999</b>	4,512	5,40	5,404	117,86	4,585	100,00
<b>2009</b>	6,631	98,28	7,728	114,54	6,747	100,00

### 3. THE REGIONAL DIFFERENCES IN THE WORKFORCE

#### 3.1. Norte Region

The Norte region is the one with more workers: 34,19% of all workers are there, in 2009. In 2009, it has still one of the youngest age structure of labour force, only after the islands: the older workers account for 9% of all workers, whereas the Portuguese average is 10,6%. However, 20 years before, it had the youngest age structure of all (Table 3.1). Tâmega, the NUTS III region with the youngest labour force structure is here. Of the NUTS III regions that belong to the Norte region, only Alto Trás-os-Montes has a slightly older age structure than the Portuguese average.

The rise in the level of education – although with a very low starting point - is quite visible in this region through the two decades considered: the proportion of workers with basic education at most has changed from 92,8% to 82,8% and then to 69,4% (Table 3.2). The proportion of workers with high education went from 1,57% to 3,7% and then to 10,53%. The education level of workers is significantly below the level of the Lisbon region. The Tâmega NUTSIII region, in particular, is the Portuguese region with the lowest levels of education: it has the smallest proportion of workers with Level III education and the largest proportion of workers with Level I education. In the Norte region, the NUTSIII region with the highest levels of education is Grande Porto. This is the sole Nuts III region in the Norte region that has better education levels than the national average.

The average education levels of the younger workers – 67,81% present Level I education, in 2009 - is considerably higher than that of the older workers – 85,18 have Level I education in 2009 (Table 3.2). In 1989, the situation was completely different: 92,68% of the younger workers had Level I education, comparing with 94,21% for older workers. Conversely, the percentage of workers with Level III education was slightly higher for older workers – 2,54% - than for younger workers – 1,5% - in 1989. The numbers were very similar for both groups in 1999: 3,45% against 3,72%, and finally in 2009 the difference was clearly favoring the younger workers: 5,47% for older workers compared with 11,04% for younger workers.

The sectors where the proportion of older workers in Norte region is above the national average in 2009, are Textiles, Wood and Cork, Paper and Publishing, Base Metal Industries, Metal Products, Machinery and Equipments, and Construction. In 1989, the labour force employed in Construction was younger than the national average, but that changed. Conversely, Electricity, Gas and Water was older in relative terms, and became younger.

Although part time work is not very expressive in Portugal, in 2009, Grande Porto exhibits the second highest proportion of workers in this regime, only after Grande Lisboa (Table 3.4).

The Norte region has the lowest wage levels, whatever the year of observation (Table 3.5). Alto Trás-os-Montes and Tâmega are the two NUTS III regions belonging to the Norte region with the lowest average labour compensations. In 2009, there were only two other NUTS III regions with lower remunerations in Portugal. Tâmega had the lowest average labour compensations in

Portugal in 1989 and in 1999 – respectively, 60% and 65% of the national average of hourly remunerations, 63% of the monthly remunerations in both years, – but Alto Trás-os-Montes had the 3<sup>rd</sup> highest average labour compensations of the Norte region – 85,27% of the national average monthly remunerations, in 1989. In 1999, the remunerations of Alto Trás-os-Montes had already decreased a lot, in relative terms.

### **3.2. Algarve Region**

Algarve is the smallest NUTSII region in continental Portugal. It has the second oldest labour force – 12,2% of its workers are 55 or older, whereas the Portuguese average is 10,57%, in 2009 (Table 3.1). This is due mainly to the larger proportions of workers above 60 years old and not so much to the proportion of workers between 55 and 60 years old. The relative position of the region in terms of the age composition of its labour force remained almost the same throughout the period under analysis, except that in 1989 Madeira had an even older labour force.

In 1989, the level of education of the Algarve labour force was the second highest in Portugal, after Lisboa, due particularly to the education of the younger workers. However, that changed. Specifically, the proportion of workers with higher education grew much more in other regions like Norte and Centro, than in Algarve (Table 3.2).

Hotels and Restaurants is undoubtedly the most important industry in this region (Table 3.3). More than 20% of Algarve older workers are employed there, and the proportion of older workers (compared to younger workers) in this industry went from 8,4% in 1989, to 9,7% in 1999, and to 13,5% in 2009. Trade and Construction represent two industries that employ large proportions of Algarve older workers: 17,26% and 15,72%, respectively, in 2009 (Table 3.3). In Algarve, in 1989, the proportion of workers in Construction that was 55+ was 12,74%, and in Trade was 8,92%. That was not much different in 2009: 13,10% and 9,42%. The group of Other Services has also some importance in Algarve, due to the inclusion of Real Estate and Rental, here. In 2009, the only NUTS III region with more workers in the Real Estate and Rental industry is Grande Lisboa. In 1989, Grande Porto had many more workers in this industry: 15,6% compared to 5,6% of Algarve. If one focuses only on older workers, Grande Porto still has more workers than Algarve in this activity area, in 2009, although only slightly more.

Only 5% of older workers in Algarve work part time, which is about the same as the value for younger workers (Table 3.4).

The average remuneration in Algarve is 88,92% of the Portuguese average, and the situation is worsened for older workers: their average remuneration is 80,49% of the Portuguese level (Table 3.5). The situation seems a bit improved when hourly remunerations are considered: they are 90,5% of the Portuguese average for total workers and 81,42% for older workers, respectively, but in truth, now older workers in this NUTS II region appear as the worst paid in Portugal. Of course, if it is seen as a NUTS III region, there are many other regions that exhibit lower hourly remunerations of their older workers.

### **Centro Region**

This is the third largest NUTS II region in terms of workers (Table 3.1). In 2009, the only NUTS III regions belonging to Centro that have a labour force younger than the Portuguese average are Dão Lafões and Pinhal Litoral. In 1989, there were 7 NUTS III regions that had younger than the national average labour forces.

The sectors that have a larger representation of older workers in Centro than the national average are: Non-metallic Mineral Products, Metal Products, Machinery and Equipments, Base Metal Industries, Chemicals, Trade, Agriculture and Mining, in 2009 (Table 3.3). More than half of the workers in the production of Non-metallic Mineral Products in Portugal are located in Centro. This is true for both younger and older workers. 32% of older workers in Portugal and 29% of all workers that are in Base Metal industries are in Centro. 31 and 32 percent of older and of total workers in Mining are here.

The education levels of workers in Centro are lower than the Portuguese average (Table 3.2) This is true for the older workers and the younger workers as well. Baixo Mondego, the Nuts III region where Coimbra is located, is the exception. Nevertheless, the education levels of workers, especially of younger workers, has risen significantly, since 1989. For example, the proportion of younger workers with higher education in Baixo Vouga was 1,53% in 1989, and 12,10% in 2009. In Dão Lafões, it was 1,14% in 1989 and 12,19% in 2009. Such improvement is not seen the same way for older workers.

In Centro, the proportion of older workers working part time is slightly above the percentage of younger workers working part time, although both under the already low national average (Table 3.4). Baixo Mondego is the Nuts III region where the use of part time schedules is above the national level, particularly for the older workers. In Beira Interior Sul, that is true only for the younger workers.

Centro is the region where older workers are paid less. Based on monthly remunerations, younger workers earn more, on average, than older workers, but the opposite happens when we hourly remunerations are used (Table 3.6). If we consider hourly remuneration, then Centro's older workers are still not as badly paid as Algarve's older workers. When all workers are taken together, Centro is the second region with the lowest hourly remuneration. The lowest average remunerations in Portugal are seen in Pinhal Interior Sul: they account for only 69,5% of the Portuguese average, for younger workers, and 61,28% of the Portuguese average, for older workers. This was totally different in 1989: younger workers here earned 81,28% of the Portuguese average, and older workers earned 94,92%! In 1999, the situation was already approaching that of 2009. Using hourly remunerations, the workers in Pinhal Interior Norte are the worst paid, because of younger workers (Table 3.5).

## **Lisboa Region**

Lisboa is the second region in the number of workers, only after Norte (see Table 3.1). It is by far the region with more older workers, whatever the year we look at, of the three we consider. In 2009, 34,37% of older workers in Portuguese firms, and 39,31% of the workers 65+ work in the Lisboa region.

Lisboa NUTS II region has only two NUTS III regions, and they are very different. The dimension of the workforce in Grande Lisboa is almost five times that of Península de Setúbal. Although both have larger proportions of older workers than the national average, Península de Setúbal is older. In 1989, it was the other way round.

It is clearly in Lisboa region that workers are more educated (Table 3.2). That is true both for younger and for older workers. But it is Grande Lisboa that makes the big difference: here, 21,35% of younger workers and 10,83% of older works are highly educated. In Península de Setúbal, the percentages are 11,45 and 5,32. The proportion of workers with basic education or less is 45,96% for younger workers and 74,23% for older workers, in Grande Lisboa, whereas they are 57,94% and 82,55% in Península de Setúbal. These differentials between both NUTS III regions were already visible in 1989. Like in the rest of the country, education levels rose substantially since then.

The industries that provide more jobs for older workers in Lisboa region are Financial Services, Other Manufacture Industries, Transport Services, Other Services (that include Real Estate and Renting). Some industries reduced the proportion of older workers, since 1989: Construction, Metal Products, Machinery and Equipment, Base Metal Industries, Non Metallic Minerals, Chemicals, Wood and Cork, and Mining (Table 3.3).

Lisboa is the region where there are more workers in part time regime: 7,59% of the younger workers and 10,16% of older workers (Table 3.4). This is particularly so in Grande Lisboa, because in Península de Setúbal the proportion of part time workers is lower, especially for older workers.

Lisboa region is where workers earn higher remunerations, on average, in Portugal (Table 3.5). This is similar for older and younger workers, but older workers earn, on average, slightly higher monthly remunerations than the younger. The inverse was true in 1989 and in 1999. In terms of hourly remunerations, the older workers earn substantially more in all the periods (Table 3.6). If we take only the Península de Setúbal region, remunerations are lower, and older workers earn less, on average, than younger workers. The difference in remunerations between the two NUTS III regions has grown considerably, since 1989.

### **Alentejo Region**

Alentejo is the region with the largest proportion of older workers (Table 3.1). All NUTS III regions, in Alentejo, have more than 12,5% of older workers, when the Portuguese average is 10,57%, and the youngest regions have less than 8%. The NUTS III region with more older workers in Portugal – 14,38% - is Alentejo Litoral, followed by Alto Alentejo – 13,63% - and by Alentejo Central – 13,26%. Except in Alentejo Litoral, the proportion of older workers was even higher in these regions, in 1989.

Between 36% and 39% of older workers working in Agriculture have been in Alentejo. Mining and Food, Beverages and Tobacco are the other main industries (Table 3.3).

The education level of older workers is the lowest in Portugal (Table 3.2): only 3,78% have a level III education and 88,41% have a level I education.

95,9% of younger workers and 94% of older workers work full time, in Alentejo (Table 3.4).

Although the hourly remunerations of workers in Alentejo are below the national average, the older workers are more penalized in comparison to those of their age in the other regions (Table 3.5). However, this difference used to be larger and diminished since 1989.

### **Açores Region**

Açores is the smallest and youngest NUTS II region in Portugal, in what workers are concerned (Table 3.1). Together with Tâmega, in the Norte region, it is also the youngest NUTS III region: in 2009, only 7,12% are older workers, compared to the national average of 10,57%. 2,64 is the percentage of workers 60+. In 1989, there was a larger proportion of workers 60+ - 4,24% -, but in 1999, that had already diminished - 2,86%.

The average education level of the workforce is the lowest of the NUTS II regions (Table 3.2). This is particularly noticeable in the younger workers segment: 71,16% of younger workers have Level I education – compared to 60,64% for Portugal – and 8,98% have Level III education, compared to 13,54% for Portugal.

The proportion of older workers in the region that work part time is 8,49%, higher than the Portuguese level, and the percentage of younger workers is 5,54%, similar to the Portuguese average (Table 3.4).

Most older workers work in Trade, in Construction and in Transports and Communications (Table 3.3). The important position of the Manufacture of Food Products, Beverages and Tobacco in 1989, has considerably receded. It passed from the employment of 20,49% of the Açores older workers to 14,47% in 1999, and to 8,83 in 2009. This accompanied the reduction of total workers in this industry, in Açores.

Despite under the Portuguese average, Açores is the third NUTS II region where workers earn more, although not in hourly terms (Table 3.5). In 2009, older workers receive higher monthly remunerations than younger workers, which did not happen in 1989 or in 1999. Older workers earned always more per hour than younger workers, during the period under analysis.

### **Madeira Region**

Madeira is the second smallest NUTS II region in Portugal, and the second youngest, in what workers are concerned (Table 3.1). The proportion of younger workers increased in Madeira, since 1989: it was 89,37% and it is 91,18%, in 2009. It is the NUTS III region with the sixth higher proportion of younger workers.

The average education level of the workers in Madeira is under the national average (Table 3.2). However, the education level of older workers is one of the highest in Portugal. It is still under the national average, because this value is much influenced by the numbers of the regions with the three largest cities.

The proportions of workers in part time is under the national average, for younger and older workers (Table 3.4).

The most important industries are Hotels and Restaurants and Trade (Table 3.3). The workforce of Hotels and Restaurants, in particular, aged considerably since 1989. Then, it occupied 12,75% of older workers and 18,37% of total workers. In 2009, it employs 19,01% of older workers and 17,6% of total workers.

Average remunerations in Madeira are some of the highest in Portugal: as a NUTS II region, its remunerations are only behind Lisboa region (Table 3.5); as a NUTS III region, its remunerations are only behind Grande Lisboa, Alentejo Litoral and Grande Porto. In 1989, the main differences were that the average monthly remunerations in Madeira were lower than those in Península de Setúbal and in Algarve, and higher than those in Grande Porto. In 1999, the average monthly remuneration in Grande Porto had already caught Madeira's. During the whole period, older workers have earned more than younger workers, both in monthly and hourly terms.

**Table 3.1: Age Structure of Workers by Nuts II**

2009	Younger Workers		Older Workers		55-59		60-64		65 +		Nuts Total	
	Fre.	%	Fre.	%	Fre.	%	Fre.	%	Fre.	%	Fre.	%
Norte	973.003	90,99	96.375	9,01	61.565	5,76	27.324	2,56	7.486	0,70	1.069.378	100
Algarve	126.644	87,80	17.593	12,20	9.531	6,61	5.934	4,11	2.128	1,48	144.237	100
Centro	555.268	88,99	68.676	11,01	41.417	6,64	20.919	3,35	6.340	1,02	623.944	100
Lisboa	866.736	88,41	113.616	11,59	65.249	6,66	35.558	3,63	12.809	1,31	980.352	100
Alentejo	157.139	86,88	23.731	13,12	13.326	7,37	7.578	4,19	2.827	1,56	180.870	100
Açores	54.038	92,88	4.145	7,12	2.608	4,48	1.139	1,96	398	0,68	58.183	100
Madeira	62.683	91,18	6.064	8,82	3.734	5,43	1.739	2,53	591	0,86	68.747	100
Estrangeiro	2.077	86,00	338	14,00	263	10,89	68	2,82	7	0,29	2.415	100
<b>Total by Age Group</b>	<b>2.797.588</b>	<b>89,43</b>	<b>330.538</b>	<b>10,57</b>	<b>197.693</b>	<b>6,32</b>	<b>100.259</b>	<b>3,21</b>	<b>32.586</b>	<b>1,04</b>	<b>3.128.126</b>	<b>100</b>
1999	Younger Workers		Older Workers		55-59		60-64		65 +		Nuts Total	
	Fre.	%	Fre.	%	Fre.	%	Fre.	%	Fre.	%	Fre.	%
Norte	877.864	93,77	58.362	6,23	33.879	3,62	18.697	2,00	5.786	0,62	936.226	100
Algarve	81.830	89,72	9.381	10,28	5.108	5,60	3.156	3,46	1.117	1,22	91.211	100
Centro	470.766	91,78	42.172	8,22	23.742	4,63	13.885	2,71	4.545	0,89	512.938	100
Lisboa	712.148	90,17	77.622	9,83	44.804	5,67	23.802	3,01	9.016	1,14	789.770	100
Alentejo	128.028	87,93	17.582	12,07	8.561	5,88	6.512	4,47	2.509	1,72	145.610	100
Açores	37.856	93,77	2.516	6,23	1.363	3,38	761	1,88	392	0,97	40.372	100
Madeira	47.960	93,22	3.490	6,78	1.914	3,72	1.151	2,24	425	0,83	51.450	100
Estrangeiro	845	96,13	34	3,87	26	2,96	8	0,91	0	0,00	879	100
<b>Total by Age Group</b>	<b>2.357.297</b>	<b>91,78</b>	<b>211.159</b>	<b>8,22</b>	<b>119.397</b>	<b>4,64</b>	<b>67.972</b>	<b>2,64</b>	<b>23.790</b>	<b>0,93</b>	<b>2.568.456</b>	<b>100</b>
1989	Younger Workers		Older Workers		55-59		60-64		65 +		Nuts Total	
	Fre.	%	Fre.	%	Fre.	%	Fre.	%	Fre.	%	Fre.	%
Norte	766.314	93,29	55.093	6,71	31.208	3,80	17.366	2,11	6.519	0,79	821.407	100
Algarve	59.031	89,46	6.954	10,54	3.664	5,55	2.326	3,53	964	1,46	65.985	100
Centro	360.843	91,64	32.934	8,36	19.030	4,83	10.039	2,55	3.865	0,98	393.777	100
Lisboa	628.890	89,77	71.647	10,23	40.325	5,76	21.831	3,12	9.491	1,35	700.537	100
Alentejo	100.992	84,91	17.946	15,09	9.507	7,99	6.344	5,33	2.095	1,76	118.938	100
Açores	29.947	91,58	2.752	8,42	1.366	4,18	865	2,65	521	1,59	32.699	100
Madeira	31.777	89,37	3.781	10,63	1.914	5,38	1.257	3,54	610	1,72	35.558	100
Estrangeiro	853	91,82	76	8,18	44	4,74	23	2,48	9	0,97	929	100
<b>Total by Age Group</b>	<b>1.978.647</b>	<b>91,19</b>	<b>191.183</b>	<b>8,81</b>	<b>107.058</b>	<b>4,93</b>	<b>60.051</b>	<b>2,77</b>	<b>24.074</b>	<b>1,11</b>	<b>2.169.830</b>	<b>100</b>

**Table 3.2 Education levels by Region NUTS II**

2009	Younger Workers				Older Workers				Total Workers			
	Level I (%)	Level II (%)	Level III (%)	Total (%)	Level I (%)	Level II (%)	Level III (%)	Total (%)	Level I (%)	Level II (%)	Level III (%)	Total (%)
Norte	67,81	21,15	11,04	100	85,18	9,35	5,47	100	69,38	20,09	10,53	100
Algarve	62,24	28,01	9,75	100	84,63	11,16	4,22	100	65,00	25,93	9,07	100
Centro	64,65	24,12	11,23	100	88,08	8,01	3,91	100	67,24	22,34	10,42	100
Lisboa	47,94	32,34	19,72	100	75,66	14,46	9,88	100	51,17	30,26	18,58	100
Alentejo	65,03	25,34	9,62	100	88,41	7,81	3,78	100	68,11	23,03	8,85	100
Açores	71,16	19,86	8,98	100	84,42	9,86	5,72	100	72,11	19,14	8,75	100
Madeira	65,06	25,80	9,14	100	83,77	10,67	5,56	100	66,71	24,47	8,82	100
Total	60,64	25,82	13,54	100	82,68	10,84	6,48	100	62,98	24,23	12,79	100
1999	Younger Workers				Older Workers				Total Workers			
	Level I (%)	Level II (%)	Level III (%)	Total (%)	Level I (%)	Level II (%)	Level III (%)	Total (%)	Level I (%)	Level II (%)	Level III (%)	Total (%)
Norte	82,28	14,00	3,72	100	91,01	5,54	3,45	100	82,83	13,47	3,70	100
Algarve	74,67	21,93	3,40	100	92,08	5,38	2,53	100	76,48	20,21	3,31	100
Centro	79,22	16,31	4,48	100	92,67	4,07	3,26	100	80,33	15,29	4,38	100
Lisboa	64,77	27,79	7,45	100	85,97	8,27	5,77	100	66,90	25,82	7,28	100
Alentejo	78,39	17,40	4,21	100	94,10	2,99	2,92	100	80,31	15,64	4,05	100
Açores	80,38	15,64	3,98	100	89,34	6,09	4,58	100	80,94	15,05	4,02	100
Madeira	80,07	18,58	1,35	100	91,86	6,47	1,67	100	80,87	17,76	1,37	100
Total	75,98	19,09	4,93	100	89,82	6,03	4,15	100	77,13	18,00	4,87	100
1989	Younger Workers				Older Workers				Total Workers			
	Level I (%)	Level II (%)	Level III (%)	Total (%)	Level I (%)	Level II (%)	Level III (%)	Total (%)	Level I (%)	Level II (%)	Level III (%)	Total (%)
Norte	92,68	5,82	1,50	100	94,21	3,25	2,54	100	92,78	5,65	1,57	100
Algarve	87,63	10,74	1,63	100	95,68	2,80	1,52	100	88,48	9,90	1,62	100
Centro	92,22	6,40	1,38	100	95,29	2,55	2,16	100	92,48	6,07	1,45	100
Lisboa	82,47	12,87	4,65	100	88,80	5,69	5,51	100	83,12	12,14	4,74	100
Alentejo	91,69	6,92	1,39	100	97,26	1,54	1,20	100	92,53	6,11	1,36	100
Açores	89,99	8,68	1,32	100	48,65	50,05	1,30	100	90,23	8,35	1,42	100
Madeira	90,33	8,16	1,50	100	56,28	42,59	1,12	100	90,83	7,63	1,54	100
Total	89,09	8,44	2,47	100	90,35	6,33	3,32	100	89,40	8,04	2,56	100

**Table 3.3 Working time regime of y. and o. workers in Portugal: NUTS II - 2009**

	Younger Workers			Older Workers			Total Workers		
	Full Time (%)	Part Time (%)	Total (%)	Full Time (%)	Part Time (%)	Total (%)	Full Time (%)	Part Time (%)	Total (%)
Norte	95,80	4,92	100	93,73	6,27	100	94,97	5,03	100
Algarve	94,91	5,09	100	94,97	5,03	100	94,91	5,09	100
Centro	95,82	4,18	100	94,80	5,20	100	95,72	4,28	100
Lisboa	92,41	7,59	100	89,84	10,16	100	92,14	7,86	100
Alentejo	95,90	4,10	100	94,00	6,00	100	95,66	4,34	100
Açores	94,46	5,54	100	91,51	8,49	100	94,26	5,74	100
Madeira	95,80	4,20	100	94,12	5,88	100	95,66	4,34	100
Total	94,43	5,57	100	92,65	7,35	100	94,26	5,74	100



**Table 3.4: Industries' Older Workers by region**

2009	Norte	Centro	Lisboa	Alentejo	Algarve	Madeira	Açores	Total by sector
	%	%	%	%	%	%	%	%
A - Agriculture	2,71	4,05	1,06	18,90	4,57	0,93	5,07	3,68
B - Mining	0,59	0,83	0,11	1,71	0,64	0,48	0,29	0,55
C1 - Food, beverages, tob.	3,92	5,52	2,64	6,80	2,24	5,22	8,84	4,01
C2 - Textiles	9,04	3,28	0,55	0,48	0,17	0,99	0,24	3,57
C3 - Wood, cork	4,27	3,27	0,65	1,75	0,84	1,12	0,89	2,35
C4 - Paper, publishing	1,51	1,46	1,55	0,52	0,47	0,55	0,80	1,36
C5 -Chemichals	1,56	2,05	1,42	1,60	0,24	0,23	0,07	1,50
C6 - Non metallic Mineral Prod.	1,24	4,44	0,90	1,29	1,31	0,51	1,38	1,78
C7 - Base Metal s	0,71	0,62	0,19	0,03	0,00	0,02	0,00	0,40
C8 – Fab. metal prod. mach., eq.	7,20	6,94	3,66	4,29	1,19	1,19	1,06	5,21
C9 - Other manuf. Ind.	0,07	0,09	0,25	0,16	0,52	0,15	0,02	0,17
D - Electricity, gas, water	1,00	0,95	0,82	0,88	1,16	2,26	1,50	0,96
E-Construction	13,64	12,71	10,10	9,86	15,76	13,84	13,99	12,17
F – Trade, repair motor vehic.	18,53	19,77	17,78	16,75	17,31	19,56	20,95	18,37
G - Restaurants hotels	5,18	5,64	9,35	5,82	24,76	19,05	6,91	8,07
H -Transport, storage, comunic.	5,82	6,22	9,96	4,32	4,61	10,41	11,33	7,30
I - Financial services	2,29	1,57	4,17	1,96	1,08	2,33	4,62	2,72
J - Other services	20,74	20,59	34,87	22,87	23,13	21,16	22,02	25,83
<b>Total</b>	100	100	100	100	100	100	100	100

**Table 3.4: Industries' Older Workers by Region (cont.)**

1999	Norte	Centro	Lisboa	Alentejo	Algarve	Madeira	Açores	Total by sector
	%	%	%	%	%	%	%	%
A - Agriculture	1,65	4,42	1,45	29,95	7,11	0,92	6,52	4,77
B - Mining	0,71	0,89	0,27	3,15	1,00	0,60	0,44	0,80
C1 - Food, beverages, tob.	4,55	5,61	3,05	7,70	4,29	4,70	14,47	4,58
C2 - Textiles	14,73	5,61	1,30	1,01	0,16	3,64	0,60	5,83
C3 - Wood, cork	3,18	3,75	0,81	1,92	1,84	1,46	1,91	2,22
C4 - Paper, publishing	2,20	2,02	2,37	0,51	0,79	0,97	0,76	1,99
C5 -Chemichals	1,99	2,37	2,31	0,78	0,29	0,20	0,08	1,95
C6 - Non metallic Mineral Prod.	1,81	7,95	1,70	2,14	1,95	1,15	1,19	3,01
C7 - Base Metal s	1,08	0,51	0,31	0,06	0,00	0,03	0,00	0,52
C8 – Fab. metal prod. mach., eq.	7,98	8,51	5,23	4,21	1,77	2,01	0,99	6,30
C9 - Other manuf. Ind.	4,20	1,84	0,74	0,29	0,19	0,37	0,28	1,84
D - Electricity, gas, water	0,37	0,25	0,62	0,23	0,23	2,26	1,07	0,46
E-Construction	10,76	11,41	10,80	9,07	11,99	15,02	10,50	10,89
F – Trade, repair motor vehic.	20,24	20,93	22,87	16,92	19,92	23,47	27,59	21,19
G - Restaurants hotels	4,06	4,69	7,38	4,74	24,91	19,20	4,69	6,65
H -Transport, storage, comunic.	6,23	6,32	10,13	4,31	5,72	9,06	11,53	7,61
I - Financial services	2,57	1,83	4,53	1,45	1,40	2,15	1,71	2,98
J - Other services	11,69	11,11	24,14	11,57	16,43	12,78	15,67	16,41
<b>Total</b>	100	100	100	100	100	100	100	100

**Table 3.4: Industries' Older Workers by Region (cont.)**

1989	Norte	Centro	Lisboa	Alentejo	Algarve	Madeira	Açores	Total by sector
	%	%	%	%	%	%	%	%
A - Agriculture	1,27	5,43	1,44	38,86	9,53	1,53	7,38	5,97
B - Mining	0,62	1,09	0,45	4,06	1,16	0,66	0,22	0,97
C1 - Food, beverages, tob.	5,81	6,93	4,32	8,25	6,50	8,36	20,49	5,96
C2 - Textiles	19,62	8,28	2,05	0,91	0,13	9,79	0,55	8,15
C3 - Wood, cork	5,42	5,46	1,78	2,74	2,93	1,64	2,18	3,60
C4 - Paper, publishing	2,32	3,59	2,52	0,49	0,50	1,22	1,20	2,34
C5 - Chemichals	3,09	2,95	4,92	1,44	0,59	0,63	1,24	3,43
C6 - Non metallic Mineral Prod.	1,52	7,92	2,45	1,78	2,80	1,16	1,38	3,03
C7 - Base Metal s	1,46	1,35	1,06	0,11	0,03	0,00	0,00	1,06
C8 - Fab. metal prod. mach., eq.	8,33	8,87	7,60	2,33	1,70	1,40	1,05	7,10
C9 - Other manuf. Ind.	1,13	0,19	0,33	0,02	0,09	0,00	0,18	0,49
D - Electricity, gas, water	2,69	2,39	1,58	1,18	1,25	2,38	1,82	2,01
E-Construction	8,34	8,35	10,94	6,94	16,90	13,49	8,21	9,60
F - Trade, repair motor vehic.	17,70	16,06	21,40	13,31	16,74	24,01	23,07	18,56
G - Restaurants hotels	2,39	2,58	4,70	2,52	20,22	12,75	2,98	4,16
H -Transp. storage, comunic.	7,75	8,81	11,16	6,12	7,82	7,11	13,37	9,13
I - Financial services	2,34	1,92	4,35	1,44	1,91	1,88	2,83	2,92
J - Other services	8,19	7,83	16,96	7,51	9,19	11,95	11,85	11,52
<b>Total</b>	100	100	100	100	100	100	100	100

**Note:** The observations with no information about the industry were removed.

**Table 3.5: Regional relative position of labour remunerations of age groups, NUTS II and NUTS III**

	1989			1999		
	Younger Workers	Older Workers	Total by Nuts III	Younger Workers	Older Workers	Total by Nuts III
	%	%	%	%	%	%
<b>NORTE</b>	<b>82,46</b> <b>(84,85)</b>	<b>92,94</b> <b>(89,01)</b>	<b>82,93</b> <b>(85,10)</b>	<b>83,96</b> <b>(83,91)</b>	<b>90,67</b> <b>(86,44)</b>	<b>84,13</b> <b>(84,05)</b>
Minho Lima	80,59	87,70	80,98	76,47	82,35	76,50
Cávado	69,79	83,68	69,90	74,80	80,29	74,56
Ave	70,98	77,92	70,76	72,18	80,77	72,17
Grande Porto	97,45	104,39	98,05	101,20	106,01	101,53
Tâmega	60,58	69,51	60,47	65,55	63,17	64,92
Entre Douro e Vouga	70,60	69,24	70,06	79,11	76,27	78,70
Douro	86,84	88,33	87,04	77,27	75,47	77,07
Alto Trás-os-Montes	84,84	85,89	85,04	75,89	72,73	75,51
<b>ALGARVE/ Algarve</b>	<b>105,37</b> <b>(103,70)</b>	<b>85,26</b> <b>(90,99)</b>	<b>103,23</b> <b>(102,38)</b>	<b>94,16</b> <b>(93,95)</b>	<b>79,89</b> <b>(81,66)</b>	<b>92,81</b> <b>(92,69)</b>
<b>CENTRO</b>	<b>85,62</b> <b>(88,53)</b>	<b>85,01</b> <b>(87,96)</b>	<b>85,47</b> <b>(88,48)</b>	<b>85,35</b> <b>(85,63)</b>	<b>81,63</b> <b>(81,41)</b>	<b>84,99</b> <b>(85,28)</b>
Baixo Vouga	87,74	87,69	87,52	87,64	84,72	87,30
Baixo Mondego	95,37	93,22	95,33	94,52	90,56	94,18
Pinhal Litoral	87,61	83,44	86,87	92,69	92,62	92,60
Pinhal Interior Norte	72,86	74,19	72,59	71,50	66,14	70,89
Dão Lafões	75,88	78,44	75,85	79,51	72,31	78,78
Pinhal Interior Sul	83,21	98,07	84,84	74,14	63,36	73,12
Serra da Estrela	74,77	79,27	74,85	70,13	86,32	71,65
Beira Interior Norte	85,29	82,28	84,93	75,43	75,22	75,32
Beira Interior Sul	86,60	73,43	85,26	78,93	71,01	78,26
Cova da Beira	70,92	75,84	71,13	73,43	75,26	73,47
Oeste	85,41	81,22	84,89	84,91	76,75	84,14
Médio Tejo	89,22	88,09	89,65	85,92	81,78	85,72
<b>LISBOA</b>	<b>130,80</b> <b>(125,90)</b>	<b>122,39</b> <b>(121,20)</b>	<b>130,17</b> <b>(125,45)</b>	<b>132,21</b> <b>(132,11)</b>	<b>124,99</b> <b>(125,57)</b>	<b>131,79</b> <b>(131,68)</b>
Grande Lisboa	135,55	127,03	134,95	137,75	131,03	137,42
Península de Setúbal	106,26	95,46	105,17	104,10	90,96	102,88
<b>ALENTEJO</b>	<b>89,96</b> <b>(91,64)</b>	<b>68,72</b> <b>(77,44)</b>	<b>87,34</b> <b>(89,58)</b>	<b>90,85</b> <b>(90,35)</b>	<b>73,29</b> <b>(78,36)</b>	<b>89,04</b> <b>(88,92)</b>
Alentejo Litoral	111,57	81,37	107,79	106,23	80,67	103,41
Alto Alentejo	86,08	66,37	83,63	85,40	71,03	83,00
Alentejo Central	90,25	66,27	86,93	85,51	69,82	83,88
Baixo Alentejo	86,49	61,75	83,03	90,34	66,06	87,53
Lezíria do Tejo	84,95	72,52	83,76	92,34	78,27	91,01
<b>AÇORES/ Açores</b>	<b>109,14</b> <b>(101,87)</b>	<b>95,08</b> <b>(83,67)</b>	<b>107,63</b> <b>(100,30)</b>	<b>86,89</b> <b>(91,43)</b>	<b>87,21</b> <b>(86,54)</b>	<b>86,58</b> <b>(91,11)</b>
<b>MADEIRA/ Madeira</b>	<b>94,35</b> <b>(100,42)</b>	<b>86,46</b> <b>(99,25)</b>	<b>93,71</b> <b>(100,33)</b>	<b>94,75</b> <b>(100,03)</b>	<b>97,78</b> <b>(104,66)</b>	<b>94,73</b> <b>(100,34)</b>
Estrangeiro	121,60	145,35	123,76	163,58	183,42	163,10
<b>Total by Age Group</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

**Table 3.5: Regional relative position of labour remunerations of age groups, NUTS II and NUTS III (cont.)**

	2009		
	Younger Workers	Older Workers	Total by Nuts III
	%	%	%
<b>NORTE</b>	<b>86,76</b> <b>(85,78)</b>	<b>89,43</b> <b>(88,33)</b>	<b>86,82</b> <b>(85,99)</b>
Minho Lima	82,96	78,21	82,22
Cávado	83,12	80,54	82,50
Ave	76,88	82,96	76,99
Grande Porto	100,38	104,46	100,83
Tâmega	72,03	68,36	71,32
Entre Douro e Vouga	82,93	83,06	82,89
Douro	81,14	72,74	80,10
Alto Trás-os-Montes	76,33	68,03	75,33
<b>ALGARVE/ Algarve</b>	<b>91,69</b> <b>(90,09)</b>	<b>81,42</b> <b>(80,49)</b>	<b>90,50</b> <b>(88,92)</b>
<b>CENTRO</b>	<b>88,60</b> <b>(88,51)</b>	<b>81,92</b> <b>(80,18)</b>	<b>87,82</b> <b>(87,59)</b>
Baixo Vouga	90,52	84,79	89,83
Baixo Mondego	95,37	92,87	95,12
Pinhal Litoral	96,39	85,48	95,06
Pinhal Interior Norte	74,07	65,03	72,98
Dão Lafões	87,63	72,84	85,85
Pinhal Interior Sul	74,48	63,06	73,08
Serra da Estrela	74,66	92,41	77,45
Beira Interior Norte	77,81	77,51	77,82
Beira Interior Sul	78,71	74,74	78,38
Cova da Beira	75,54	72,29	75,24
Oeste	86,84	82,62	86,43
Médio Tejo	89,13	81,25	88,26
<b>LISBOA</b>	<b>125,38</b> <b>(126,85)</b>	<b>124,42</b> <b>(127,16)</b>	<b>125,46</b> <b>(126,90)</b>
Grande Lisboa	130,01	130,09	130,22
Península de Setúbal	101,19	95,50	100,65
<b>ALENTEJO</b>	<b>90,12</b> <b>(90,05)</b>	<b>84,50</b> <b>(84,95)</b>	<b>89,65</b> <b>(89,40)</b>
Alentejo Litoral	100,25	101,46	101,07
Alto Alentejo	84,41	78,39	83,89
Alentejo Central	87,63	89,83	88,35
Baixo Alentejo	91,55	74,99	89,46
Lezíria do Tejo	89,37	79,93	88,30
<b>AÇORES/ Açores</b>	<b>88,60</b> <b>(90,89)</b>	<b>101,04</b> <b>(99,74)</b>	<b>89,12</b> <b>(90,74)</b>
<b>MADEIRA/ Madeira</b>	<b>97,00</b> <b>(98,27)</b>	<b>102,19</b> <b>(102,66)</b>	<b>97,25</b> <b>(98,64)</b>
Estrangeiro	224,41	254,10	230,42
<b>Total by Age Group</b>	<b>100</b>	<b>100</b>	<b>100</b>

**Note:** The values express the proportions of hourly remunerations, except those that are in brackets, that express the proportions of monthly remunerations.

**Table 3.6: Comparison of labour remunerations of age groups, by Region NUTS II and NUTS III**

	1989			1999		
	Total by Nuts III	Older Workers	Total by Nuts III	Younger Workers	Older Workers	Total by Nuts III
	%	%	%	%	%	%
<b>NORTE</b>	<b>100</b>	133,95 (106,57)	<b>100</b>	<b>98,20</b> (99,76)	<b>127,03</b> (103,62)	<b>100</b>
Minho Lima	100	129,44	100	98,37	126,86	100
Cávado	100	143,09	100	98,71	126,91	100
Ave	100	131,62	100	98,41	131,90	100
Grande Porto	100	127,26	100	98,08	123,06	100
Tâmega	100	137,38	100	99,36	114,68	100
Entre Douro e Vouga	100	118,13	100	98,92	114,21	100
Douro	100	121,30	100	98,66	115,42	100
Alto Trás-os-Montes	100	120,72	100	98,89	113,51	100
<b>ALGARVE/ Algarve</b>	<b>100</b>	<b>98,73</b> (90,56)	<b>100</b>	<b>99,83</b> (101,29)	<b>101,45</b> (88,77)	<b>100</b>
<b>CENTRO</b>	<b>100</b>	<b>118,88</b> (101,29)	<b>100</b>	<b>98,82</b> (100,34)	<b>113,20</b> (96,19)	<b>100</b>
Baixo Vouga	100	119,76	100	98,79	114,38	100
Baixo Mondego	100	116,87	100	98,75	113,33	100
Pinhal Litoral	100	114,80	100	98,50	117,88	100
Pinhal Interior Norte	100	122,17	100	99,25	109,96	100
Dão Lafões	100	123,61	100	99,31	108,18	100
Pinhal Interior Sul	100	138,17	100	99,78	102,13	100
Serra da Estrela	100	126,59	100	96,32	142,00	100
Beira Interior Norte	100	115,80	100	98,54	117,70	100
Beira Interior Sul	100	102,94	100	99,25	106,95	100
Cova da Beira	100	127,44	100	98,35	120,73	100
Oeste	100	114,36	100	99,29	107,50	100
Médio Tejo	100	117,44	100	98,63	112,44	100
<b>LISBOA</b>	<b>100</b>	<b>112,39</b> (98,44)	<b>100</b>	<b>98,72</b> (100,26)	<b>111,78</b> (97,61)	<b>100</b>
Grande Lisboa	100	112,51	100	98,63	112,37	100
Península de Setúbal	100	108,49	100	99,57	104,20	100
<b>ALENTEJO</b>	<b>100</b>	<b>94,05</b> (88,08)	<b>100</b>	<b>100,41</b> (101,54)	<b>97,01</b> (88,79)	<b>100</b>
Alentejo Litoral	100	90,23	100	101,08	91,93	100
Alto Alentejo	100	94,86	100	100,05	99,66	100
Alentejo Central	100	91,12	100	100,31	98,09	100
Baixo Alentejo	100	88,89	100	101,56	88,95	100
Lezíria do Tejo	100	103,49	100	99,83	101,36	100
<b>AÇORES/ Açores</b>	<b>100</b>	<b>105,59</b> (85,00)	<b>100</b>	<b>98,76</b> (100,29)	<b>118,72</b> (95,70)	<b>100</b>
<b>MADEIRA/ Madeira</b>	<b>100</b>	<b>110,28</b> (100,79)	<b>100</b>	<b>98,42</b> (99,63)	<b>121,65</b> (105,10)	<b>100</b>
Estrangeiro	100	140,38	100	98,69	132,54	100
<b>Total by Age Group</b>	<b>100</b>	<b>119,53</b> (101,89)	<b>100</b>	<b>98,40</b> (99,93)	<b>117,85</b> (100,75)	<b>100</b>

**Table 3.7: Comparison of labour remunerations of age groups, by Region NUTS II and NUTS III (cont.)**

	2009		
	Younger Workers	Older Workers	Total by Nuts III
	%	%	%
<b>NORTE</b>	<b>98,22</b> <b>(99,59)</b>	<b>117,98</b> <b>(104,15)</b>	<b>100</b>
Minho Lima	99,16	108,96	100
Cávado	99,01	111,81	100
Ave	98,14	123,42	100
Grande Porto	97,84	118,67	100
Tâmega	99,25	109,77	100
Entre Douro e Vouga	98,33	114,77	100
Douro	99,55	104,01	100
Alto Trás-os-Montes	99,59	103,43	100
<b>ALGARVE/ Algarve</b>	<b>99,58</b> <b>(101,14)</b>	<b>103,05</b> <b>(91,78)</b>	<b>100</b>
<b>CENTRO</b>	<b>99,15</b> <b>(100,89)</b>	<b>106,84</b> <b>(92,82)</b>	<b>100</b>
Baixo Vouga	99,04	108,11	100
Baixo Mondego	98,55	111,84	100
Pinhal Litoral	99,65	102,99	100
Pinhal Interior Norte	99,75	102,07	100
Dão Lafões	100,31	97,18	100
Pinhal Interior Sul	100,16	98,84	100
Serra da Estrela	94,74	136,67	100
Beira Interior Norte	98,27	114,08	100
Beira Interior Sul	98,70	109,23	100
Cova da Beira	98,67	110,05	100
Oeste	98,76	109,49	100
Médio Tejo	99,25	105,43	100
<b>LISBOA</b>	<b>98,22</b> <b>(99,79)</b>	<b>113,58</b> <b>(101,61)</b>	<b>100</b>
Grande Lisboa	98,13	114,43	100
Península de Setúbal	98,81	108,68	100
<b>ALENTEJO</b>	<b>98,80</b> <b>(100,55)</b>	<b>107,96</b> <b>(96,35)</b>	<b>100</b>
Alentejo Litoral	97,48	114,98	100
Alto Alentejo	98,89	107,02	100
Alentejo Central	97,48	116,46	100
Baixo Alentejo	100,58	96,01	100
Lezíria do Tejo	99,47	103,68	100
<b>AÇORES/ Açores</b>	<b>97,71</b> <b>(99,19)</b>	<b>129,85</b> <b>(110,55)</b>	<b>100</b>
<b>MADEIRA/ Madeira</b>	<b>98,03</b> <b>(99,46)</b>	<b>120,35</b> <b>(105,53)</b>	<b>100</b>
Estrangeiro	95,72	126,30	100
<b>Total by Age Group</b>	<b>98,28</b> <b>(99,83)</b>	<b>114,54</b> <b>(101,40)</b>	<b>100</b>

**Note:** The values express the proportions of hourly remunerations, except those that are in brackets, that express the proportions of monthly remunerations.

#### 4. CONCLUSION

In this paper the changes in the age structure of the Portuguese labour force between 1989 and 2009 were studied in detail. First of all, the size and relative weight of older workers were quantified, both as a group (people with more than 54 years old) and by age sub-groups (55-59; 60-64; 65+). The proportion of older workers in Portugal is relatively small, compared to other developed countries, 10,57% in 2009. An important instrument for increasing the labour force participation, simultaneously stimulating active ageing, is the augmentation of the labour effort of older people, through appropriate measures and incentives. For example, it may be crucial to extend the possibility of part time arrangements that nowadays are used by a surprisingly small proportion of older workers (around 7%).

It is also important to pay a particular attention to the regional distribution of these workers, both at the Nuts II (7 regions) and Nuts III (30 regions) levels, given the significant differences among them, for example, between the “older” region of Alentejo and the younger Norte region. The strategies to deal with labour ageing should take these differences in account.

The gender and sectoral distributions are also important, both at national and regional levels. Older workers in Portugal are mainly male and, relatively speaking, work mostly in Agriculture (20,4%), Electricity, gas and water (14,7%), Mining (11,7%), Transport services (11,6%) and Food, beverages and tobacco (11%). Textiles is the sector with a smaller proportion of older workers (4,3). But in absolute terms, older workers concentrate in Service sectors, of course, given the strong terciarization (and de-industrialization) of the Portuguese in the last decade, and also in Construction, as it is well known.

It was also confirmed that on average older workers are much less educated than younger but tend to be better remunerated, both monthly and hourly. A curious exception concerning educational attainments is the relatively high proportion of the oldest older workers (65+) having a post-graduate degree (MSc and PhD), uncovering a relevant cause of staying active in work at older ages.

Finally, it is worth mention that older workers tend to be employed in establishments of small size, particularly micro (0-9 works) and small ones (10-49). But this is a general characteristic of the Portuguese economy, the small scale of most of its production units, All these, and other results, were obtained using the database called *Quadros de Pessoal*, from the Ministry of Solidarity and Social Security, covering people working in the private business sector (around 3,3 million workers, in 2009) and excluding liberal professionals. It would be very interesting to study also these workers as well as the Public Sector employees, and deepen the economic and social analysis of this important group of workers, the older ones.

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