Profile of young NEETs in Portugal

1. YOUNG PEOPLE NEITHER IN EMPLOYMENT NOR IN EDUCATION OR TRAINING (NEET)

The share of young people neither in employment nor in education or training (NEETs) in Portugal peaked at 16.4 per cent of the youth population in 2013 (compared to 11.9 per cent in 2008).[2] The steep increase of youth unemployment in the years of the recent economic crisis have also led to higher rates of young people neither in employment nor in education or training (NEET).[3] The NEET rate increased from 11.9 per cent in 2008 to 16.4 per cent in 2013. This sharp increase was mostly driven by the growth of the share of youth unemployment in the NEET group (from 6.9 per cent in 2008 to 11.1 per cent in 2013), while the share of inactive (non-student) youth remained stable throughout the period (around five per cent). The decline of the NEET rate recorded between 2013 and 2015 (from 16.4 to 13.2 per cent) was due to a decrease in the share of unemployed youth in the NEET count (from 11. 1 per cent to 8.6 per cent), but also to demographic factors and the participation of young people in the programmes of the Youth Guarantee (YG). The latter programmes involved approximately 40 per cent of the total NEET population during the biennium 2014-2015.

In 2015, there were approximately 272,000 young NEETs in Portugal (10 per cent of whom had a migrant background). Around 198,000 were unemployed and 74,000 were inactive (non-students). Figure 1 below shows that in 2015 young people in the 15-24-age bracket mostly represented young NEETs, with a predominance of young women, and of young people that had attained with upper-secondary education. During the same year, young NEETs were mostly concentrated in the Northern region (37.4 per cent of the total), in the Lisbon Metropolitan Area (21.6 per cent) and in Central region (20.8 per cent).

In the period 2013-15, the composition of the NEET group by age, gender and labour market status changed slightly. The decrease in the NEET rates was slower for young women and for inactive individuals. For the group 25 to 29, there was a decline of inactivity among women but an increase among men. The NEET rate decline was more pronounced in the Lisbon Metropolitan Area, in Alentejo, and in the autonomous regions of Azores and Madeira.

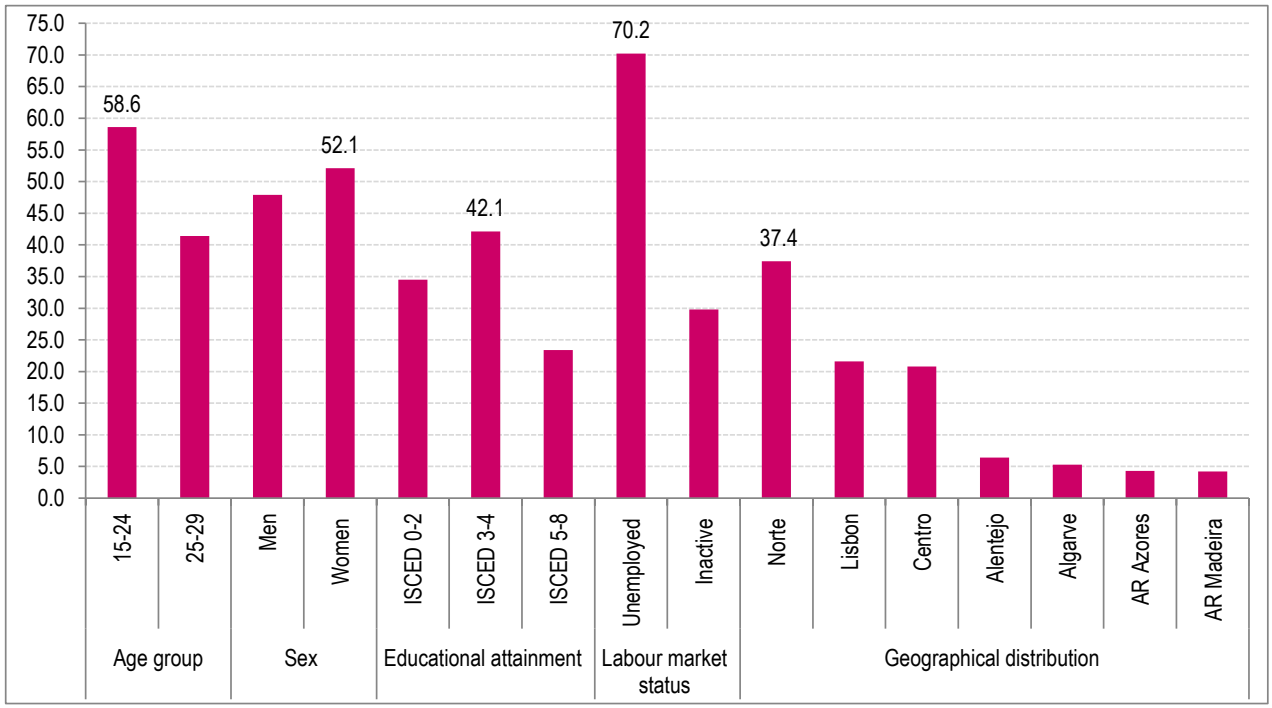
---

[1]The statistical profile and analysis was conducted by Valli' Corbanese and Gianni Rosas (ILO) with the contribution of Maria da Paz Campos Lima and Gianluigi Nico. The support of the National Statistical Institute of Portugal that made available the microdata is acknowledged with many thanks. This publication has received financial support from the European Union Programme for Employment and Social Innovation ("EaSI") 2014-2020. The information contained in this publication does not necessarily reflect the official position of the European Commission.

[2]If not otherwise stated and for the purposes of this strategy, young people are defined as those between the ages of 15 and 29.

[3]The NEET category encompasses diverse groups of young people with different endowments, experience and needs. It combines young people who have an attachment to the labour market (i.e. unemployed youth) with those who are completely detached (i.e. not available and not searching for work because they are discouraged, or because they are looking after children or relatives and those who are temporarily sick or long-term disabled).

FIGURE 1. KEY CHARACTERISTICS OF YOUNG NEETS IN PORTUGAL, 2015 (% WITHIN CATEGORY)



Source: ILO calculations based on the microdata of the 2015 Labour Force Survey of Portugal.

The Portuguese NEET population (15-29) was divided into seven sub-groups: (i) short-term unemployed (youth looking for work for up to one year); (ii) long-term unemployed (i.e. youth looking for a job for over one year); (iii) re-entrants (youth awaiting recall to work or education or training); (iv) inactive youth due to illness; (v) those inactive due to care or family responsibilities; (vi) discouraged young workers (i.e. those who stopped searching for a job because they think no job is available, or think their skills are inadequate or do not know how to search for a job); and (vii) other inactive youth.

TABLE 1: YOUNG NEETS SUB-GROUPS BY AGE, SEX AND EDUCATIONAL ATTAINMENT, 2015

	15-24	25-29	Men	Women	ISCED 0-2	ISCED 3-4	ISCED 5-8
Short-term unemployed	71.5	28.5	53.2	46.8	25.0	47.9	27.1
Long-term unemployed	63.4	36.6	53.5	46.5	42.1	39.4	18.5
Re-entrants	67.9	32.1	67.9	32.1	35.7	42.9	21.4
Illness and disability	49.3	50.7	57.3	42.7	77.3	21.3	1.3
Family responsibilities	46.6	53.4	13.8	86.2	62.1	22.4	15.5
Discouraged workers	64.8	35.2	54.9	45.1	63.4	33.8	2.8
Other inactive	61.3	38.7	50.7	49.3	30.7	45.3	24.0

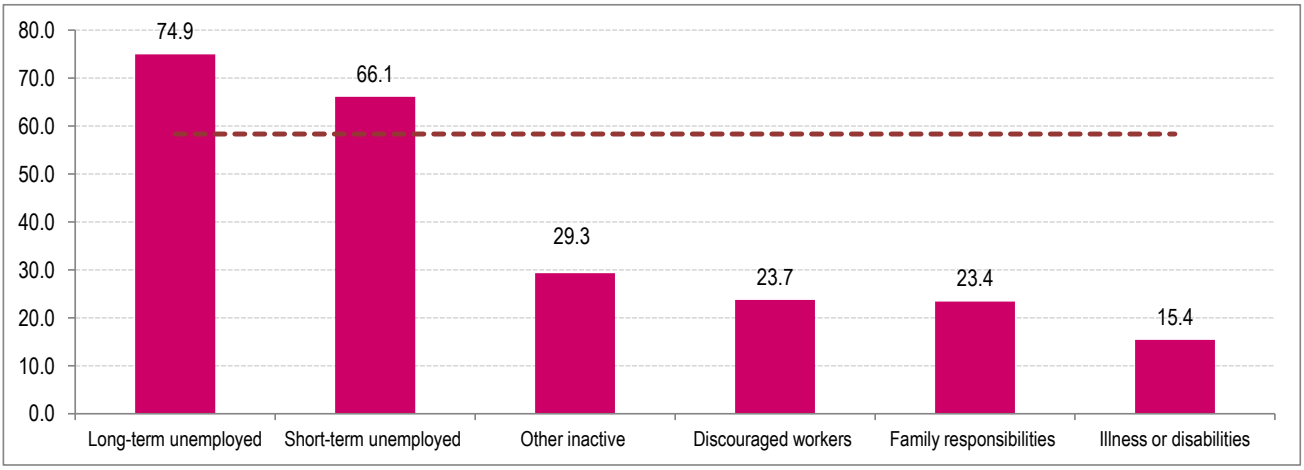
Source: ILO calculations based on the microdata of the 2015 Labour Force Survey of Portugal.

The data in Table 1 highlight a number of areas of concern: (i) the high share of young people in the age group 15-24 who are long-term unemployed (63.4 per cent of all long-term unemployed) and discouraged workers (64.8 per cent of all discouraged); (ii) the high proportion of young adults (25-29) who are long-term unemployed (and among these 39 per cent has no prior work experience); (iii) the low educational attainment level that prevails among young people living with disabilities, those with family responsibilities and discouraged workers; and iv) the high share of youth that − despite having a prior work experience period ranging from one to three years – are unable to escape long term unemployment.

Low educational attainment appears to be both a key determinant of unemployment, inactivity and discouragement, as well as a barrier to re-integration, especially in geographical areas where labour demand lags behind and employers can chose among a large pool of better-qualified young workers with shorter unemployment spells and prior work experience (and 56 per cent of short-term unemployed have prior work experience).

Approximately 57 per cent of all young NEETs are registered with the Public Employment Service (PES), with the highest share found among long-term (74.9 per cent) and short-term unemployed (66.5 per cent) and the lowest among young persons with disabilities (14.5 per cent). The fact that 25 per cent of long-term unemployed are not registered with the PES is a matter of concern, as this group is one of the most exposed to the risk of poverty and social exclusion. On the positive side, some inactive individuals (and especially discouraged workers) are registered with the PES despite their low job search activity.

FIGURE 2: YOUNG NEETS SUB-GROUPS BY REGISTRATION WITH THE PES, 2015 (% WITHIN THE SUB-GROUP)



Source: ILO calculations based on the microdata of the 2015 Labour Force Survey of Portugal.

The geographical distribution of the various NEET sub-groups shows some similarities among Norte, Centro, the Lisbon metropolitan area and Alentejo. These regions have the highest shares of unemployed youth (and especially short-term unemployed) and the lower share of inactive youth. Norte and Alentejo, however, differ from the other two regions insofar as they also comprise the highest shares of long-term unemployed among young NEETs (30.6 per cent and 28.4 per cent, respectively). Conversely, the share of inactive youth is above that of unemployed youth in Algarve. This latter region – together with the regions of Azores and Madeira with a high

share of discouraged youth. Algarve, the Lisbon metropolitan area and Madeira share a relatively high proportion of young people inactive due to family responsibilities (Table 2).

TABLE 2: GEOGRAPHICAL DISTRIBUTION OF YOUNG NEETS SUB-GROUPS, 2015 (% IN SUB-GROUP BY REGION)

	Norte	Algarve	Centro	Lisbon	Alentejo	AR Azores	AR Madeira
Short-term unemployed	40.4	28.3	46.5	49.4	54.6	28.8	28.3
Long-term unemployed	30.6	20.4	25.0	25.2	28.4	28.2	25.9
Re-entrants	3.0	3.8	1.4	1.0	3.9	2.4	5.8
Illness and disability	9.3	10.0	6.0	5.6	5.1	6.5	10.0
Family responsibilities	5.9	11.7	3.4	9.1	1.8	7.9	8.6
Discouraged workers	3.1	11.4	5.4	3.9	1.3	18.3	15.3
Other inactive	7.8	14.5	12.4	5.8	4.8	7.9	6.0
TOTAL	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
% of NEETs	**37.4**	**5.3**	**21.1**	**21.6**	**6.5**	**4.3**	**3.8**

Source: ILO calculations based on the microdata of the 2015 Labour Force Survey of Portugal.

The analysis of the dynamics across different labour market statuses of young NEETs (derived by the microdata of the SILC survey) shows that over one third of young NEETs (32.6 per cent) experienced a shift of their labour market status within the reference year. The most common trajectory is from employment to unemployment, and especially for young women (with nearly 57 per cent of all women who changed their status moving from employment to unemployment); and from inactivity to unemployment (especially for men). The shift from employment to inactivity is less common, with young men more likely to experience this change compared to young women.

TABLE 3: GEOGRAPHICAL DISTRIBUTION OF YOUNG NEETS SUB-GROUPS, 2015 (% OF NEETS IN EACH PROFILE)

	Men	Women	Total
Employed-Unemployed	54.5	59.6	56.8
Employed-Inactive	7.1	6.2	6.7
Inactive-Unemployed	38.4	34.3	36.5

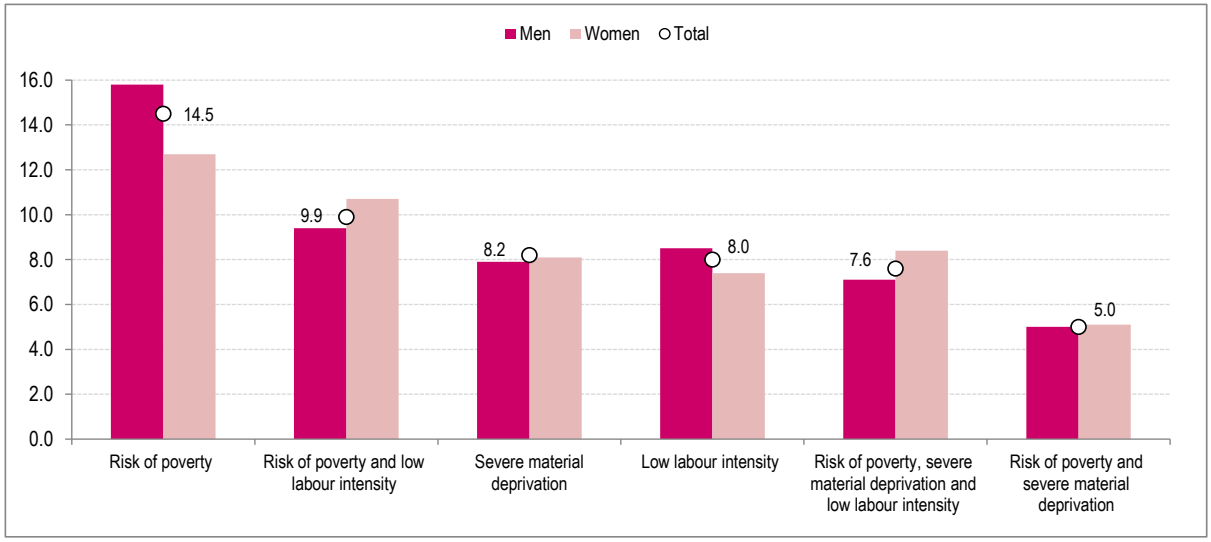
Source: ILO calculations based on the microdata of the 2015 Survey on Income and Living Conditions of Portugal.

Young adults (25-29) are more likely to shift from employment to unemployment (75 per cent of all young adults experiencing a shift in status), while youth in the age group 15-24 are equally likely to move from employment to unemployment as from inactivity to unemployment (47.4 per cent and 46.5 per cent, respectively).

Young NEETs living in densely populated areas are more likely to experience labour market shifts (and especially from employment to unemployment and from inactivity to unemployment), while the shift from employment to inactivity prevails in intermediary density areas.[3] Young NEETs with a low level of education (ISCED 0-2) are more likely to shift from employment to unemployment and from employment to inactivity than youth with secondary and tertiary education. The shift from inactivity to unemployment, conversely, is more frequent for young NEETs with upper secondary education.

In Portugal, being NEETs is a predictor of poverty and social exclusion: over 37 per cent of all young NEETs have an income below the poverty line and 23.3 per cent face severe material deprivation. In addition, there are relatively high shares of young NEETs who face multiple risks. Approximately 10 per cent of the total NEET population experience poverty combined with low labour intensity and another 7.6 per cent are at risk of poverty, severe material deprivation and low labour intensity (Figure 3), with young women more likely to be exposed to multiple risk factors compared to men.

FIGURE 3: YOUNG NEETS BY TYPE OF RISK, 2015 (IN % OF TOTAL NEETS)



Source: ILO calculations based on the microdata of the 2015 Labour Force Survey of Portugal.

The group that is most at risk of poverty and social exclusion is, however, that young adult men with low educational attainment, living in highly populated areas and with no prior work experience.

[3] Densely populated areas are those with a density of at least 1 500 inhabitants per k^2 and a minimum population of 50,000; intermediate density areas have density of at least 300 inhabitants per k^2 and a minimum population of 5,000 and thinly-populated areas are those where more than 50 % of the population lives in rural grid cells outside urban

clusters. See Eurostat, *EU statistics on income and living conditions (EU-SILC) methodology – concepts and contents*.

2. GEOGRAPHICAL DISTRIBUTION OF UNEMPLOYED YOUTH (15-29) IN PORTUGAL

Young people in the age group 15-24 represent over two third of the total number of young unemployed (61.8 per cent), with young men encompassing 51.1 per cent of the total. The regional distribution by age and sex shows that in Centro and Alentejo young women are more likely than young men to be unemployed (in both age-groups), while in Madeira young women 15-24 are more likely to be unemployed compared to men in the same age group (see Table 4).

TABLE 4: GEOGRAPHICAL DISTRIBUTION OF YOUNG UNEMPLOYED BY SEX AND AGE-GROUP, 2015 (% TOTAL)

Region (NUTS II)	15-24		25-29	
	Men	Women	Men	Women
Norte	33.6	32.8	17.2	16.4
Algarve	28.1	18.5	29.4	24.1
Centro	24.7	35.7	17.2	22.4
Lisbon	40.2	20.2	19.5	20.1
Alentejo	27.5	31.1	19.8	21.6
AR Azores	35.5	24.5	20.8	19.2
AR Madeira	23.9	30.8	28.9	16.3

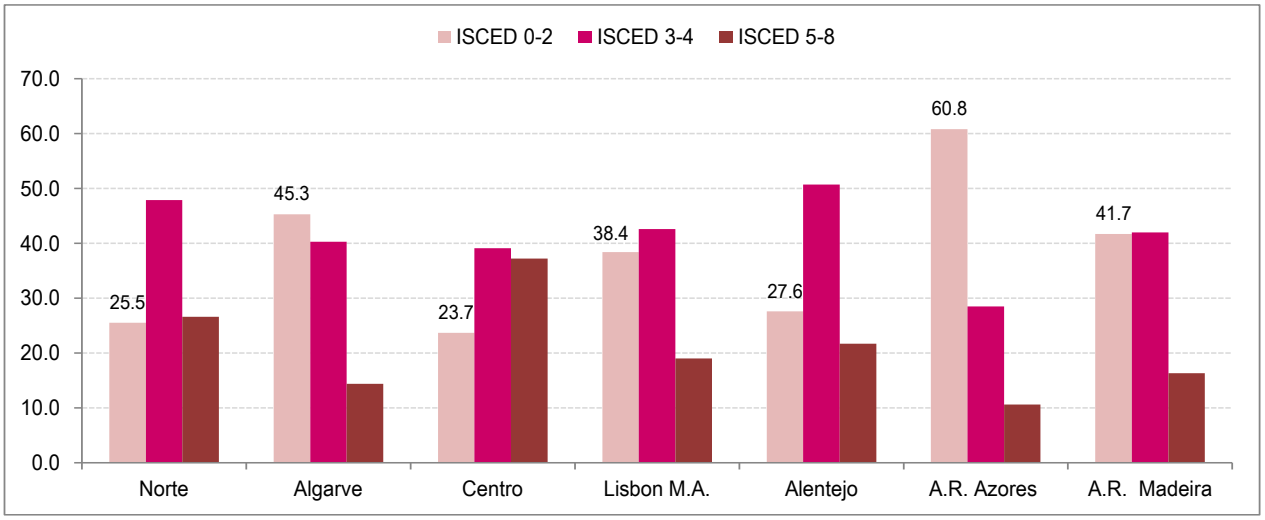
Source: ILO calculations based on the microdata of the 2015 Labour Force Survey of Portugal.

Over 70 per cent of young unemployed are registered with the PES, but young adults are less likely to be registered with an employment office compared to youth 15-24 (29 per cent and 41 per cent, respectively). The regions showing the highest registration rates are Madeira (77.4 per cent of all young unemployed), Centro (73.9 per cent) and Norte (73.3 per cent), while the lowest is recorded in Algarve and the metropolitan area of Lisbon where just 59 per cent and 61.7 per cent of all young unemployed are registered with an employment office.

In 2015, nearly 44 per cent of all young unemployed in 2015 had achieved upper secondary educational attainment, 30.7 per cent had lower secondary education or less, and about a quarter (25.4 per cent) had university level education (Figure 4).

Young men are more likely than young women to have low skills, since 37.7 per cent of all unemployed men and 23.4 per cent for young women had lower secondary education or less. Young women with university-level education represent over one third of all unemployed women (33.3 per cent), while among young men only 17.8 per cent had tertiary educational attainment. In Azores and Algarve, the share of young unemployed with a low level of skills is well above the national average, while in the other regions most young unemployed have upper secondary education. Centro is the only region where there are clear signal that higher education does not pay in the labour market, as university educated youth face the same difficulties as those with upper secondary education.

FIGURE 4: YOUNG UNEMPLOYED BY EDUCATIONAL ATTAINMENT LEVEL, 2015 (%)



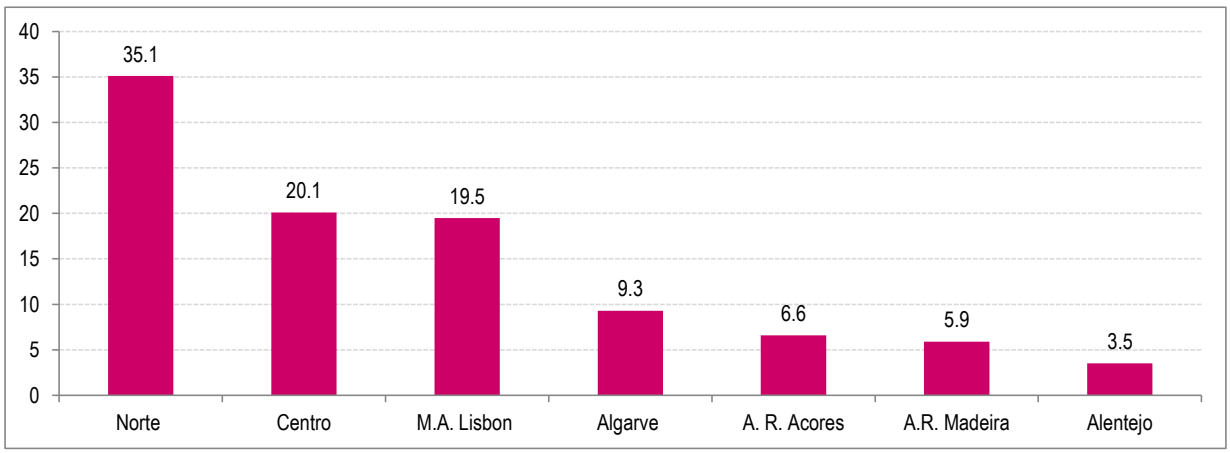
Source: ILO calculations based on the microdata of the 2015 Labour Force Survey of Portugal.

Over 56 per cent of all unemployed had prior work experience − with young men slightly more likely than young women to have had some work experience (51.2 per cent and 48.8 per cent, respectively). Norte and Centro show a relatively large share of young unemployed with no previous work experience (50.2 per cent and 45.3 per cent, respectively).

3. GEOGRAPHICAL DISTRIBUTION OF INACTIVE YOUNG PEOPLE

In 2015, there were approximately 74 thousand young people (15-29) neither looking for a job nor attending education and training, representing 4.7 per cent of the total youth population. The highest concentration of inactive youth in 2015 was in Norte (35.1 per cent of total inactive youth) in Centro 20.1 per cent) and the metropolitan area of Lisbon (19.5 per cent), while the lowest share of inactive youth was recorded in Alentejo (just 3.5 per cent of all inactive youth).

FIGURE 5: REGIONAL DISTRIBUTION OF INACTIVE YOUTH, 2015 (% OVER TOTAL)



Source: ILO calculations based on the microdata of the 2015 Labour Force Survey of Portugal.

Over 58 per cent of all inactive youth are young women, and especially in the age group 25-29, (they represent 30.7 per cent of all inactive youth).

TABLE 5: GEOGRAPHICAL DISTRIBUTION OF YOUNG UNEMPLOYED BY SEX AND AGE-GROUP, 2015 (% TOTAL)

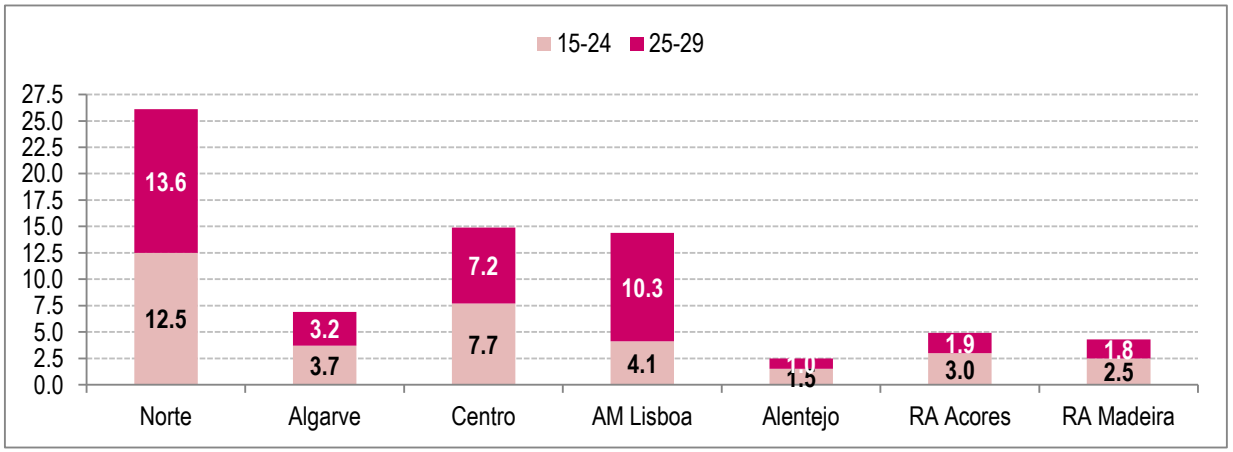
Region (NUTS II)	15-24		25-29	
	Men	Women	Men	Women
Norte	15.6	32.3	22.8	29.3
Algarve	27.8	26.4	15.4	30.4
Centro	15.2	36.1	23.7	25.0
Lisbon	16.4	12.2	23.2	48.2
Alentejo	56.2	5.0	21.2	17.5
AR Azores	25.9	34.3	14.7	25.1
AR Madeira	28.9	28.6	27.1	15.4

Source: ILO calculations based on the microdata of the 2015 Labour Force Survey of Portugal.

The geographical distribution of inactive youth by age group and sex, however, show diverging patterns (Table 5). In Norte, young women 15-24 represents well over a third of all inactive youth, while in Alentejo men in the younger cohort represent well over half of all inactive youth. In the metropolitan area of Lisbon, women in the age group 25-29 are more likely to inactive not only compared to men, but also compared to younger women. In Madeira, inactive men in the age group 25-29 represents nearly one third of all inactive youth in the Region, while in Azores younger women are more likely to be inactive compared to men generally and older women.

Over half (52.8 per cent) of inactive youth is in the age group 25-29. The highest concentration of inactive young adults is found in the Lisbon metropolitan area where 71.4 per cent of all inactive youth are in the cohort 25-29 (and especially young women), over twice the number of younger (15-24) inactive individuals. In the other regions the age distribution is more even (Figure 6), even in Norte where there is the highest number of inactive youth (over 26,000 youth).

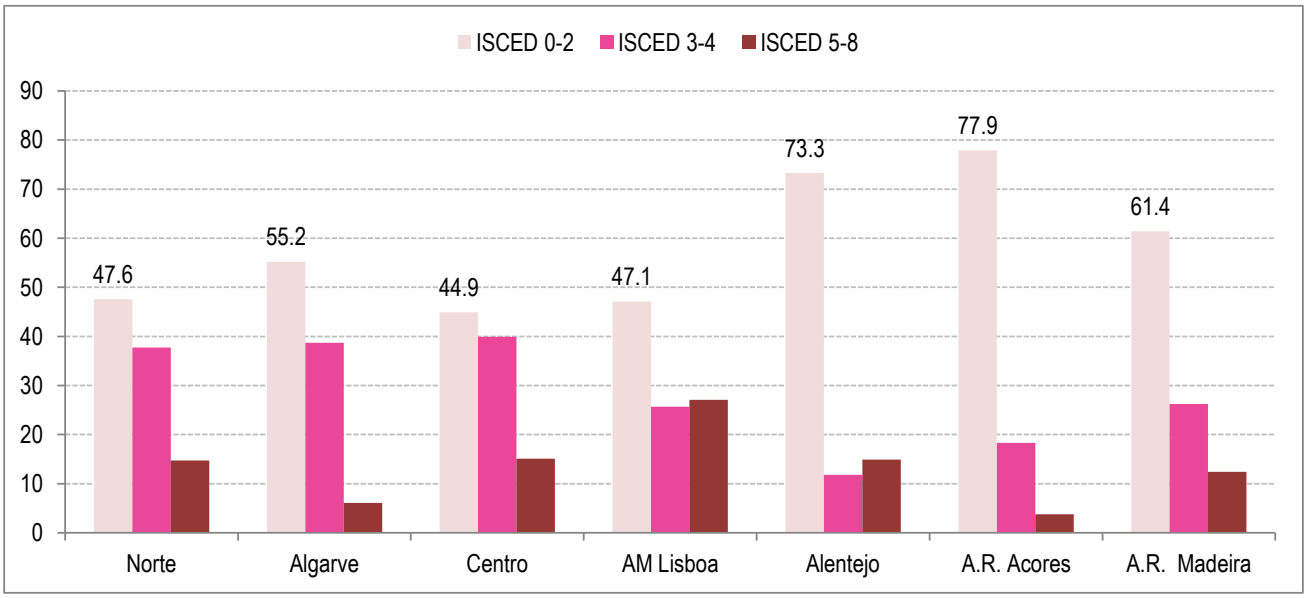
FIGURE 6: REGIONAL DISTRIBUTION OF INACTIVE YOUTH BY AGE GROUP, 2015 (THOUSANDS)



Source: ILO calculations based on the microdata of the 2015 Labour Force Survey of Portugal.

Over half of all inactive youth (51.4 per cent) had attained lower secondary education or less, while having a tertiary educational attainment appear to protect young people against inactivity (at least to an extent). The relationship between low educational attainment and inactivity is particularly strong in the autonomous communities of Azores and Madeira where approximately three quarters of inactive youth had low skills and in Alentejo where over 61 per cent of all inactive youth had lower secondary education or less.

FIGURE 7: REGIONAL DISTRIBUTION OF INACTIVE YOUTH BY EDUCATIONAL ATTAINMENT LEVEL, 2015 (%)



Source: ILO calculations based on the microdata of the 2015 Labour Force Survey of Portugal.

The geographical distribution of inactive youth by reason of inactivity (Table 6) show that all regions need to address the integration barriers faced by youth living with a disability (they represent 26.8 per cent of all inactive youth and over 35 per cent of all inactive youth in Norte) and those with care of family responsibilities (20 per cent of all inactive youth, but well over a third of all inactive youth in Lisbon) as well as tackle the factors leading to discouragement (belief no job is available, inadequacy of skills gained or lack of job navigation skills), which affects 19 per cent of all inactive youth in Portugal, but it is particularly acute in Azores, Madeira and Algarve). For young people whose inactivity is determined by other (unspecified) reasons – especially in Centro and Norte where this group represents over 44 per cent and 29 per cent of the total inactive population, respectively – it will be necessary to determine whether there are common factors at play.

TABLE 6: GEOGRAPHICAL DISTRIBUTION BY CATEGORIES OF INACTIVE YOUTH, 2015 (% OF INACTIVE YOUTH IN EACH REGION)

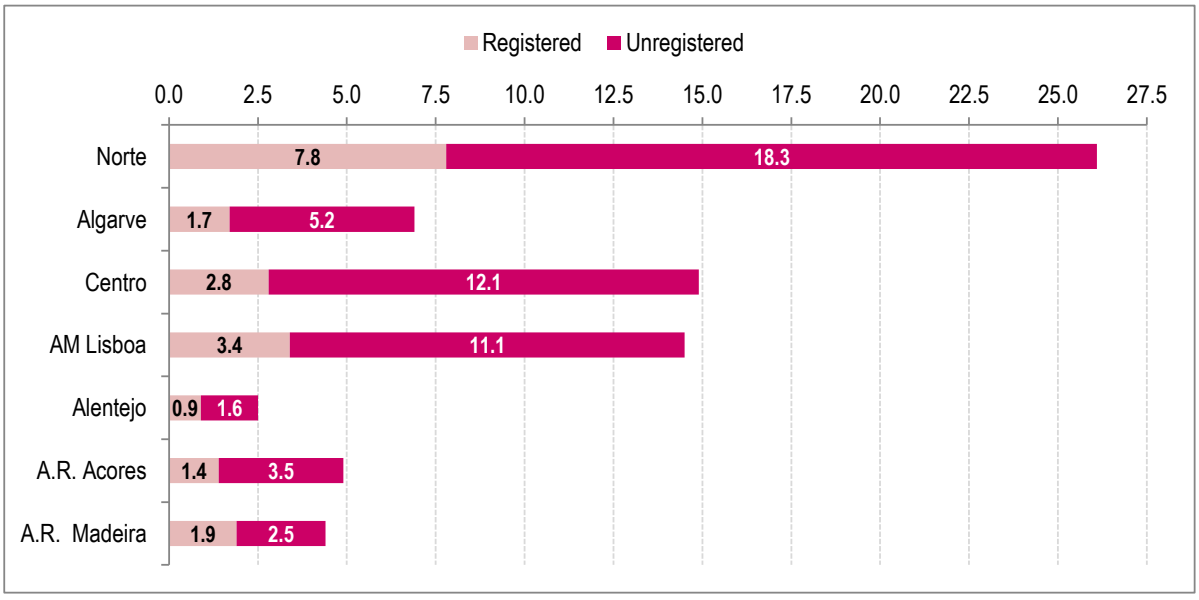
Categories	Norte	Algarve	Centro	Lisbon	Alentejo	AR Azores	AR Madeira	Total
Re-entrants	5.4	7.7	2.8	1.5	12.3	2.5	10.5	4.7
Illness and disability	35.2	20.0	21.5	23.9	34.2	15.9	22.9	26.8
Family responsibilities	18.5	21.9	12.1	33.7	12.3	19.2	17.8	20.0
Discouraged workers	11.5	22.9	19.3	16.5	15.7	44.5	40.8	19.1
Other inactive	29.4	27.5	44.2	24.5	25.5	17.9	8.0	29.3
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: ILO calculations based on the microdata of the 2015 Labour Force Survey of Portugal.

Interestingly, over half of inactive youth has prior work experience (54.9 per cent). As the shift from employment to inactivity involves just 4.5 per cent of the NEET population, this indicates that most inactive youth experience a shift from employment to unemployment and then to inactivity. This phenomenon is more pronounced in Algarve and the metropolitan area of Lisbon, where 68.5 per cent and 66.6 per cent of inactive youth has prior experience. In Alentejo, conversely, the overwhelming majority of inactive youth never had a job, even occasionally (73 per cent).

Nearly 27 per cent of all inactive youth are actually registered with the PES (irrespective of their low job search activity and/or availability to take up work). This leaves approximately 54,000 inactive youth "off the radar", concentrated in the age group 25-29 and in the regions of Norte, Centro, Lisbon, Algarve and the autonomous community of Azores.

FIGURE 8: INACTIVE YOUTH REGISTERED WITH THE PES BY REGION. 2015 (THOUSANDS)



Source: ILO calculations based on the microdata of the 2015 Labour Force Survey of Portugal.

4. PROFILING THE RISK OF INACTIVITY AMONG YOUNG PEOPLE IN PORTUGAL

A probit regression was used to estimate – on the basis of the microdata of the Labour Force Survey −the probability of young people of being inactive according to individual characteristics (age, sex, level of education and region) and reason of inactivity.

The results (Table 7) show that the probability of being inactive decreases the higher the level of education. Young people with upper secondary and tertiary education are respectively 7 per cent and 10 per cent less likely to be inactive compared to young people who had attained only lower secondary education. Upper secondary and tertiary educational attainment, in particular, decreases the probability of being inactive due to disability and other reasons, while tertiary education decreases the probability of inactivity due to discouragement (by 16 per cent). Age has no statistically significant relationship to inactivity, except for young persons with a disability, whose probability of being inactive increases with age.

Generally, young women have only a slightly higher probability to be inactive compared to men, except for inactivity due to family responsibilities and disability. Living in Algarve increases the probability of young people to be inactive (by nearly 10 per cent) and especially due to disability (by approximately 16 per cent). In Centro young people have a higher probability to be inactive for other reasons (15 per cent), while in the Lisbon Metropolitan Area the probability is higher for disability (by 16.2 per cent).

In all regions the probability of inactivity is higher for young people with at most lower secondary education attainment, irrespective of sex and age group.[1] Similarly, all regions show a rather high probability of being inactive due to disability and especially at lower levels of education. This is to say that tertiary education protects young persons with disability from becoming inactive in all regions. Conversely, having a tertiary education degree does not protect young women (and especially those aged 25-29) from being inactive due to family responsibilities. This is particularly relevant in Norte, Algarve, Centro and the Lisbon Metropolitan area.

Discouragement is negatively correlated with age, gender and level of education in all regions. This means that young men 15-24, with lower and upper secondary education have higher probabilities of being discouraged (and especially in Algarve). In Centro, young people are higher probabilities of being inactive due to other reasons and this phenomenon is particularly strong for young people with tertiary educational attainment (irrespective of sex and age).

[1] Annex 1 summarizes the results of the probit regression by region and individual characteristics.

TABLE 7. ESTIMATED PROBABILITY OF INACTIVITY BY INDIVIDUAL CHARACTERISTICS AND REGION

VARIABLES	(1) LM status (inactive==1 in the LF==0)	(2) Inactivity due to family/care responsibilities	(3) Inactivity due to illness or diability	(4) Inactivity due to discouragement	(5) Inactivity due to awaiting recall to work	(6) Inactivity due to other reasons
Educational attainment, ISCED = 2, Secondary education	-0.077***	-0.053	-0.200***	0.045	0.045	0.153***
	(0.013)	(0.045)	(0.051)	(0.056)	(0.032)	(0.053)
Educational attainment, ISCED = 3, Tertiary education	-0.100***	-0.005	-0.325***	-0.160**	0.029	0.367***
	(0.014)	(0.068)	(0.044)	(0.063)	(0.048)	(0.093)
Sex = 1, Female	0.035***	0.235***	-0.118**	-0.069	-0.019	-0.026
	(0.011)	(0.041)	(0.047)	(0.048)	(0.027)	(0.046)
age group = 1, young people 25-29	-0.015	0.048	0.091*	-0.066	-0.013	-0.047
	(0.010)	(0.043)	(0.048)	(0.048)	(0.027)	(0.045)
Regions, NUTS2 = 2, Algarve	0.096***	0.051	-0.166**	0.099	-0.007	0.009
	(0.024)	(0.068)	(0.078)	(0.072)	(0.046)	(0.077)
Regions, NUTS2 = 3, Centro	0.012	-0.041	-0.094	0.060	-0.046	0.149*
	(0.016)	(0.063)	(0.092)	(0.077)	(0.038)	(0.090)
Regions, NUTS2 = 4, Area Metropolitana de Lisboa	-0.009	0.125	-0.162*	0.027	-0.037	-0.046
	(0.014)	(0.084)	(0.095)	(0.083)	(0.044)	(0.085)
Regions, NUTS2 = 5, Alentejo	-0.009	0.031	-0.097	0.011	0.047	-0.017
	(0.017)	(0.106)	(0.110)	(0.091)	(0.083)	(0.112)
Regions, NUTS2 = 6, R. A. dos Azores	0.069***	0.019	-0.249***	0.257***	-0.049	-0.062
	(0.020)	(0.062)	(0.070)	(0.076)	(0.036)	(0.073)
Regions, NUTS2 = 7, R. A. da Madeira	0.063***	0.034	-0.175**	0.223***	0.020	-0.143**
	(0.021)	(0.069)	(0.080)	(0.080)	(0.052)	(0.066)
Observations	3,152	306	306	306	306	306

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

4.1. GROUPS OF YOUNG PEOPLE TARGETED BY THE OUTREACH STRATEGY

The data presented in the previous paragraphs show that a considerable share of unemployed and inactive young people do not register with the PES and therefore do not access the support that may be available to them.

The first group to be targeted by the Portuguese Outreach Strategy, therefore, comprises young unemployed not registered with the PES (approximately 59 thousand young people in the whole country), and especially long-term unemployed (roughly 17,200 young people), young unemployed in the 15-24 age-group, those with at most upper secondary educational attainment and those with no prior work experience. The main barrier faced by this group appears to be the low level of educational attainment combined with limited labour demand, as well as lack of prior work experience (especially for those in the age group 15-24). The regions that have the largest numbers of unregistered unemployed are Norte (around 20 thousand young people); the Lisbon Metropolitan Area (nearly 17 thousand) and Centro (over 10 thousand young people). In Algarve and Alentejo the group of young unregistered unemployed ranges between 3 and 4 thousand young people, while in the autonomous regions of Azores and Madeira the number of unregistered unemployed is 2,100 and 1,500, respectively (Table 8).

The second broad group to be targeted by the Strategy is that of inactive young people (due to discouragement, disability, family responsibilities and other reasons) not registered with the PES (i.e. approximately 53 thousand youth), with the exclusion of young re-entrants (as their inactivity is transitory). Discouraged youth − and especially young men and young people with less than upper secondary education – need to be targeted in all regions. For this group low educational attainment is both a factor determining discouragement and a barrier to re-integration and they need to be prioritized for assistance in areas where labour demand is weak and/or there is a large pool of short-term unemployed with better qualifications and motivation (such as Algrave and Centro). As this group of young people have a degree of attachment to the labour market, they could be targeted by adapting existing services and programmes.

Young persons with a disability − especially young men and those in the age group 25-29 − often face the additional barrier of having a low level of educational attainment. This group will be prioritized in all regions, but foremost in Algarve and the Lisbon Metropolitan Area. For this group, the Strategy needs to introduce a new sequence of services and programmes. Young women with family responsibilities – especially those in the age group 25 to 29 and with at most secondary educational attainment− also need to be targeted in all regions. In Norte, this group will include young adult women with tertiary educational attainment, as they have a higher than average probability to be inactive. Young people who are inactive for other (unspecified) reasons represent a consistent share of all inactive youth in all regions. Priority will be given to tertiary educated youth (especially those aged 15-24 in Centro and Norte; those aged 25-29 in Algarve; and young men 15-24 in the Lisbon Metropolitan area). As the reason of inactivity cannot be determined through household data, it will be necessary to collect additional information to design tailored interventions.

TABLE 8: YOUNG PEOPLE NOT REGISTERED WITH THE PES BY LABOUR MARKET STATUS AND REGION, 2015 (LEVELS)

Category	Norte	Algarve	Centro	Lisbon	Alentejo	A.R Azores	A.R. Madeira
Unemployed (not registered), of whom	20,205	3,060	10,875	16,965	4,380	2,110	1,576
Long-term unemployed	*6,170*	*1,150*	*3,160*	*4,485*	*980*	*766*	*562*
Inactive (not registered), of whom							
Illness and disability	6,425	1,225	3,220	3,090	720	714	875
Family responsibilities	3,845	1,240	1,820	2,575	180	485	670
Discouraged youth	2,335	1,385	2,075	1,430	290	1,315	526
Other inactive	5,385	1,215	5,045	3,830	420	1,006	66
TOTAL	**38,195**	**8,125**	**23,035**	**27,895**	**5,990**	**5,630**	**3,713**

Source: ILO calculations based on the microdata of the 2015 Labour Force Survey of Portugal.

ANNEX I: ECONOMETRIC APPROACH FOR PROFILING THE RISK OF INACTIVITY AMONG YOUNG PEOPLE

The estimation strategy used to profile the risk of inactivity among young people should be based on a probit regression. The model uses the cumulative distribution function of the standard normal distribution Φ (z), where $z = \beta_0 + \beta_1 x$. The probability is estimated as:

$$P(Yi=1 \mid X=xi)=\Phi(\beta_0 + \beta_1 x) \quad [1]$$

where Yi indicates whether the i-th individual is active or inactive. We refer to $z = \beta_0 + \beta_1 x$ as the z-value or z-index of the probit model. The higher the value of the z-value, the more the event is likely to happen.

In order to estimate the likelihood to be inactive, equation 1 is further developed as in [2]

$$P(Yi=1 \mid X=xi)=\Phi(\beta_0 + \beta_1 x_{i1} + \beta_2 x_{i2} + \beta_3 x_{i3} + \beta_4 x_{i4} + \varepsilon_i) \quad [2]$$

Where Yi is a binary response variable which takes on value 1 if the i-th individual is inactive and 0 otherwise. The inactivity status of the i-th individual is further disaggregated on the basis of the main reasons for inactivity. This is to say that the binary variable in equation [2] takes into account the main categories of inactive young people, namely: 1) inactive due to family/care responsibilities; 2) inactive due to illness or disability; 3) inactive due to discouragement; 4) inactive because awaiting recall (work or education); and 5) inactive for other reasons (undetermined).

x_1 is a categorical variable which takes values from 0 to 3, depending on the educational attainment of the i-th individual. Educational attainment of each individual in the sample is organized according to the ISCED classification so that: x_{i1}=0 if the i-th individual has ISCED level 0-2; x_{i1}=1 for individual with ISCED level 3-4; and x_{i1}=2 for individuals with ISCED level 5-8.

x_{i2} is gender dummy variable equals 1 for women and 0 for men.

x_{i3} is a dummy variable used to sort youth into two mutually exclusive age categories, i.e. 15-24 and 25-29. Such variable takes value 1 if the individual is aged between 15 and 24 and 0 if the individual is aged 25-29.

Finally, x_{i4} is a categorical variable ranging from 0 to 7 and capturing regions (at NUT II level) in the country.

The estimated coefficients are reported below.

TABLE A1. PROBIT MODEL: ESTIMATED COEFFICIENTS

	1	2	3	4	5
	Care responsibilities	Illness/disability	Re-entrants	Discouraged	Other
VARIABLES	Inactivity among young people (15-29)				
Age group (15-24=1; 25-29=0)	Est. coeff	Est. coeff	Est. coeff	Est. coeff	Est. coeff
	(St. error)	(St. error)	(St. error)	(St. error)	(St. error)
Sex (female=1; male=0)	Est. coeff	Est. coeff	Est. coeff	Est. coeff	Est. coeff
	(St. error)	(St. error)	(St. error)	(St. error)	(St. error)
1.Education: ISCED 0-2	Est. coeff	Est. coeff	Est. coeff	Est. coeff	Est. coeff
	(St. error)	(St. error)	(St. error)	(St. error)	(St. error)
2.Education: ISCED 3-4	Est. coeff	Est. coeff	Est. coeff	Est. coeff	Est. coeff
	(St. error)	(St. error)	(St. error)	(St. error)	(St. error)
3.Education: ISCED 5-8	Est. coeff	Est. coeff	Est. coeff	Est. coeff	Est. coeff
	(St. error)	(St. error)	(St. error)	(St. error)	(St. error)
4.Region: name X	Est. coeff	Est. coeff	Est. coeff	Est. coeff	Est. coeff
	(St. error)	(St. error)	(St. error)	(St. error)	(St. error)
5.Region: name Y	Est. coeff	Est. coeff	Est. coeff	Est. coeff	Est. coeff
	(St. error)	(St. error)	(St. error)	(St. error)	(St. error)

Once probabilities have been estimated from the above coefficient, findings are reported in a table as the one shown below.

TABLE A2: PROBABILITY

	1	2	3	4	5
	Care responsibilities	Illness/disability	Re-entrants	Discouraged	Other
VARIABLES	Inactivity among young people (15-29)				
Age group (15-24=1; 25-29=0)	Probability	Probability	Probability	Probability	Probability
Sex (female=1; male=0)	Probability	Probability	Probability	Probability	Probability
1.Education: Less than lower secondary	Probability	Probability	Probability	Probability	Probability
2.Education: Upper secondary	Probability	Probability	Probability	Probability	Probability
3.Education: Tertiary	Probability	Probability	Probability	Probability	Probability
4.Region: name X	Probability	Probability	Probability	Probability	Probability
5.Region: name Y	Probability	Probability	Probability	Probability	Probability

ANNEX II: Regional breakdown (by characteristics) of average probability of being inactive[2]

NORTE												
Education	Primary				Secondary				Tertiary			
Sex	Male		Female		Male		Female		Male		Female	
Age group	15-24	25-29	15-24	25-29	15-24	25-29	15-24	25-29	15-24	25-29	15-24	25-29
Inactivity	10.92%	9.27%	15.44%	13.33%	4.89%	4.02%	7.46%	6.24%	3.19%	2.57%	5.04%	4.15%
Family/care responsibilities	3.49%	5.47%	24.09%	31.18%	1.97%	3.23%	17.10 %	23.04%	3.32%	5.23%	23.40%	30.39%
Illness or disability	55.04%	67.50%	38.18%	51.04%	28.44%	40.40%	15.93 %	25.13%	6.05%	11.06%	2.40%	4.94%
Discouragement	18.37%	12.80%	12.64%	8.40%	22.57%	16.17%	15.98 %	10.94%	5.05%	3.04%	2.99%	1.71%
Awaiting recall to work	6.23%	4.80%	4.32%	3.27%	13.01%	10.49%	9.61%	7.60%	10.60%	8.43%	7.68%	6.00%
Other reasons	17.67%	13.38%	4.32%	11.32%	36.02%	29.50%	32.31 %	26.11%	59.21%	52.08%	55.25%	48.05%

ALGARVE												
Education	Primary				Secondary				Tertiary			
Sex	Male		Female		Male		Female		Male		Female	
Age group	15-24	25-29	15-24	25-29	15-24	25-29	15-24	25-29	15-24	25-29	15-24	25-29
Inactivity	23.56%	20.78%	30.60%	27.41%	12.61%	10.78%	17.57%	15.27%	8.95%	7.54%	12.92%	11.05%
Family/care responsibilities	5.65%	8.50%	31.76%	39.68%	3.35%	5.27%	23.53%	30.55%	n.a.	8.16%	n.a.	38.82%
Illness or disability	33.67%	46.23%	19.79%	30.08%	13.17%	21.44%	6.11%	11.15%	n.a.	3.82%	n.a.	1.39%
Discouragement	30.57%	22.89%	22.65%	16.23%	35.95%	27.62%	27.36%	20.14%	n.a.	6.93%	n.a.	4.24%
Awaiting recall to work	5.55%	4.25%	3.82%	2.87%	11.83%	9.48%	8.66%	6.81%	n.a.	7.57%	n.a.	5.34%
Other reasons	18.47%	14.05%	15.90%	11.92%	37.16%	30.56%	33.41%	27.12%	n.a.	53.29%	n.a.	49.27%

[2] n.a.= probability cannot be estimated since there are no individuals with those specific characteristics.

CENTRO												
Education	Primary				Secondary				Tertiary			
Sex	Male		Female		Male		Female		Male		Female	
Age group	15-24	25-29	15-24	25-29	15-24	25-29	15-24	25-29	15-24	25-29	15-24	25-29
Inactivity	12.50%	10.68%	17.44%	15.14%	5.76%	4.76%	8.67%	7.29%	3.81%	3.10%	5.94%	4.91%
Family/care responsibilities	2.10%	3.44%	17.82%	23.90%	1.13%	1.94%	12.12%	16.94%	1.99%	3.27%	17.24%	23.21%
Illness or disability	43.37%	56.36%	27.61%	39.46%	19.39%	29.58%	9.83%	16.75%	3.26%	6.46%	1.16%	2.59%
Discouragement	25.94%	18.74%	18.95%	13.09%	30.96%	23.22%	22.99%	16.51%	8.32%	5.28%	5.19%	3.14%
Awaiting recall to work	1.98%	1.44%	1.27%	0.90%	4.97%	3.79%	3.39%	2.53%	3.84%	2.88%	2.57%	1.89%
Other reasons	31.97%	25.81%	28.45%	22.65%	54.04%	46.84%	50.02%	42.84%	75.57%	69.55%	72.29%	65.93%

ÁREA METROPOLITANA DE LISBOA												
Education	Primary				Secondary				Tertiary			
Sex	Male		Female		Male		Female		Male		Female	
Age group	15-24	25-29	15-24	25-29	15-24	25-29	15-24	25-29	15-24	25-29	15-24	25-29
Inactivity	9.62%	8.12%	13.78%	11.83%	4.20%	3.43%	6.49%	5.39%	2.70%	2.17%	4.33%	3.54%
Family/care responsibilities	9.56%	13.69%	42.20%	50.64%	6.01%	8.99%	n.a.	40.87%	9.19%	13.21%	n.a.	49.75%
Illness or disability	34.22%	46.84%	20.21%	30.61%	13.50%	21.89%	n.a.	11.44%	1.86%	3.95%	n.a.	1.45%
Discouragement	21.83%	15.56%	15.38%	10.47%	26.44%	19.37%	n.a.	13.42%	6.47%	n.a.	3.99%	2.31%
Awaiting recall to work	2.72%	2.01%	1.78%	1.29%	6.50%	5.03%	n.a.	3.43%	5.09%	3.88%	n.a.	2.60%
Other reasons	13.60%	10.04%	11.52%	8.38%	29.86%	23.90%	n.a.	20.89%	52.49%	45.29%	n.a.	41.32%

ALENTEJO												
Education	Primary				Secondary				Tertiary			
Sex	Male		Female		Male		Female		Male		Female	
Age group	15-24	25-29	15-24	25-29	15-24	25-29	15-24	25-29	15-24	25-29	15-24	25-29
Inactivity	9.67%	8.17%	13.85%	11.89%	4.23%	3.45%	6.53%	5.43%	2.72%	2.19%	4.36%	3.57%
Family/care responsibilities	4.74%	7.25%	28.77%	36.42%	2.76%	n.a.	n.a.	27.62%	4.52%	6.94%	n.a.	n.a.
Illness or disability	42.90%	55.89%	27.21%	39.00%	19.07%	n.a.	n.a.	16.45%	3.17%	n.a.	6.31%	n.a.
Discouragement	19.81%	13.77%	13.94%	9.25%	24.19%	n.a.	n.a.	11.96%	5.62%	n.a.	3.42%	n.a.
Awaiting recall to work	10.76%	8.57%	7.81%	6.10%	20.35%	n.a.	n.a.	12.80%	17.06%	14.01%	n.a.	n.a.
Other reasons	16.16%	12.13%	13.81%	10.21%	33.81%	n.a.	n.a.	24.21%	56.87%	49.69%	n.a.	n.a.

R. A. DOS AÇORES												
Education	Primary				Secondary				Tertiary			
Sex	Male		Female		Male		Female		Male		Female	
Age group	15-24	25-29	15-24	25-29	15-24	25-29	15-24	25-29	15-24	25-29	15-24	25-29
Inactivity	20.05%	17.54%	26.55%	23.58%	10.31%	8.73%	14.66%	12.63%	7.17%	5.98%	10.57%	8.97%
Family/care responsibilities	4.23%	6.53%	26.95%	34.39%	2.43%	3.93%	19.45%	25.83%	n.a.	n.a.	6.25%	33.57%
Illness or disability	21.59%	32.31%	11.24%	18.76%	6.91%	12.39%	2.80%	5.67%	n.a.	1.63%	n.a.	0.52%
Discouragement	48.64%	39.41%	39.11%	30.47%	54.55%	45.22%	44.91%	35.85%	n.a.	n.a.	15.69%	10.57%
Awaiting recall to work	1.70%	1.22%	1.07%	0.76%	4.36%	3.30%	2.94%	2.18%	n.a.	2.49%	n.a.	1.62%
Other reasons	12.29%	8.99%	10.35%	7.46%	27.73%	22.01%	24.45%	19.14%	n.a.	42.83%	n.a.	38.91%

R. A. DA MADEIRA												
Education	Primary				Secondary				Tertiary			
Sex	Male		Female		Male		Female		Male		Female	
Age group	15-24	25-29	15-24	25-29	15-24	25-29	15-24	25-29	15-24	25-29	15-24	25-29
Inactivity	19.26%	16.81%	25.62%	22.72%	9.80%	8.29%	14.02%	12.05%	6.79%	5.65%	10.06%	8.51%
Family/care responsibilities	4.85%	7.40%	29.14%	36.82%	2.83%	4.51%	21.29%	27.98%	4.63%	n.a.	n.a.	35.98%
Illness or disability	32.32%	44.76%	18.77%	28.80%	12.40%	20.38%	5.67%	10.46%	1.63%	n.a.	n.a.	1.27%
Discouragement	44.95%	35.88%	35.59%	27.30%	50.85%	41.56%	41.26%	32.44%	19.33%	n.a.	n.a.	8.97%
Awaiting recall to work	8.16%	6.39%	5.79%	4.45%	16.25%	13.30%	12.25%	9.84%	13.42%	n.a.	n.a.	7.88%
Other reasons	5.85%	4.02%	4.76%	3.22%	15.93%	11.93%	13.60%	10.04%	34.22%	n.a.	n.a.	24.56%