



19 May 2023

EMPLOYMENT STATISTICS

1<sup>st</sup> quarter of 2023

## METHODOLOGICAL NOTE ON THE LABOUR FORCE SURVEY DATA: THE CONTEXT OF THE COVID-19 PANDEMIC

Following the release of the Labour Force Survey results for the 1<sup>st</sup> quarter of 2023 and the year-on-year changes observed in some indicators, Statistics Portugal presents the following methodological note for clarification.

### Methodological framework of the Labour Force Survey

The main purpose of the Labour Force Survey is to classify the population in terms of their participation in the labour market. It is a quarterly sample survey, addressed to all persons living in the national territory.

Most of the characteristics observed in this survey report to the situation in one pre-defined week (from Monday to Sunday), known as reference week. The reference weeks are uniformly distributed throughout the quarters and years. The interviews usually take place in the week following the reference week.

The information is obtained directly, through a computer-assisted interview conducted by an interviewer, using a mixed collection mode: the initial interview is done face-to-face by an interviewer visiting the household and the other five are done by telephone if certain requirements are met.

### The context of the COVID-19 pandemic

Following the COVID-19 pandemic and the public health measures adopted by the competent authorities, Statistics Portugal suspended the face-to-face collection mode, replacing it, exclusively with telephone interviews, as it happened in other European Union countries. This suspension began in the first fortnight of March 2020 and lasted until the end of the 2<sup>nd</sup> quarter of 2022 data collection and did not affect the levels of accuracy of the Labour Force Survey results in a significant way, as Statistics Portugal has been informing.

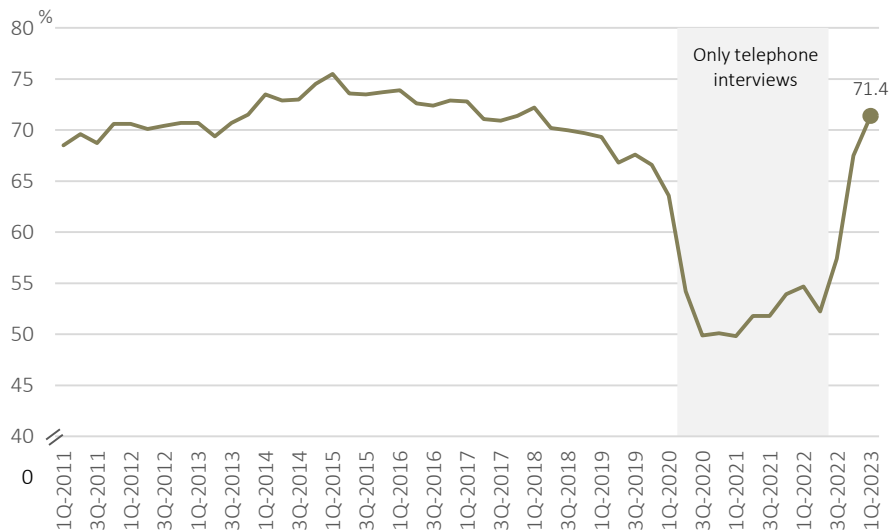
Statistics Portugal clarifies that the results published have an underlying response rate corresponding to the ratio between the number of households with interviews and the number of households selected for the sample. In the case of the Labour Force Survey and in the context of the COVID-19 pandemic, this response rate may be influenced by the data collection method used, especially in the first interview, which is why the response rate decreased in the quarters in which face-to-face collection was suspended.

It should also be noted that, due to the entry into force of the Integrated European Social Statistics Framework in the European Union, in January 2021, a gradual increase of the sample was introduced between the 1<sup>st</sup> quarter of 2021 and the 2<sup>nd</sup> quarter of 2022, corresponding to an increment of one-third of the initial sample size, which made it possible to meet the new precision requirements introduced with the new legislation and compensate the response rate decline during this



period. Currently, the Labour Force Survey sample includes 30,096 households, and information is obtained on all persons residing in the household.

**Figure 1. Response rates in the Labour Force Survey**



Source: Statistics Portugal, Labour Force Survey.

In this context, the transition to an exclusively telephone collection mode in the Labour Force Survey during the COVID-19 pandemic may have contributed to some disturbances in the results. It should be noted, however, and once again, that the data disseminated within the scope of this statistical operation meet the required levels of reliability, in accordance with the quality assessment criteria defined for the Labour Force Survey indicators, namely:

- compliance with the precision requirements laid down in the European regulation on quarterly estimates of the ratio of employed population to total population and of the ratio of unemployed population to total population by NUTS II region;
- verification of acceptable levels of coefficients of variation for the estimates published;
- analysis of consistency with other sources, such as the results of the quarterly National Accounts and the monthly data from Social Security on employment and from the Institute of Employment and Professional Training on registered unemployment<sup>1</sup>;

with the results of the evolutions observed being also in line with those obtained in other countries.

With the resuming of the mixed collection mode from the 3<sup>rd</sup> quarter of 2022 onwards, by reintroducing face-to-face interviews, a gradual reversion to the levels observed pre-pandemic is taking place, which may imply that, throughout the year of 2023, as observed at the end of 2022, year-on-year variations different from those expected may occur. Note that these variations are being followed by a substantial increase in response rates.

<sup>1</sup> For more detailed information consult the Labour Force Survey [methodological document](#) (only in Portuguese) available at Statistics Portugal website.



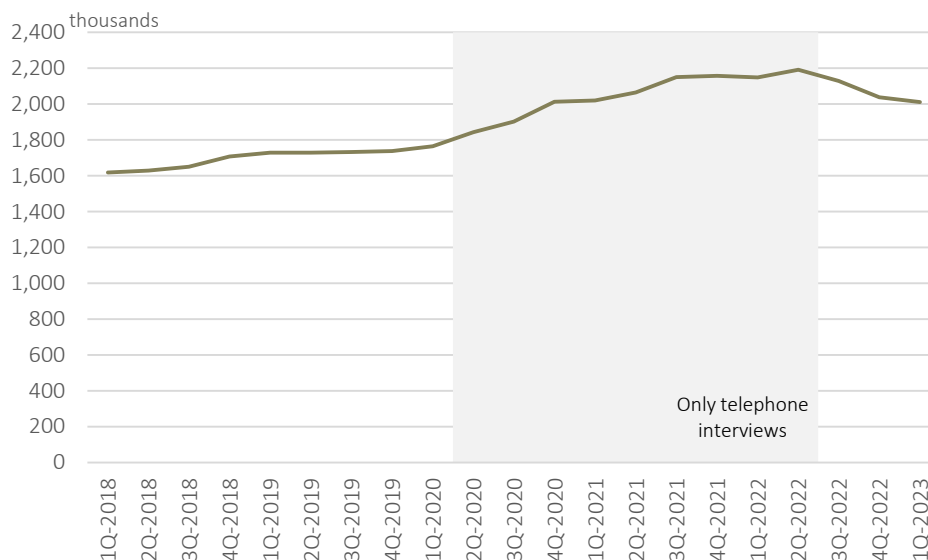
## Evolution of the population aged 16 to 89 years old with tertiary education

Next, a set of charts and tables with results on the evolution of the population aged 16 to 89 with tertiary education, where negative year-on-year changes were observed since the 3<sup>rd</sup> quarter of 2022. In particular, there is a decrease in the total population and in the employed population in this age group since the 3<sup>rd</sup> quarter of 2022, as well as in the corresponding inactive population since the 4<sup>th</sup> quarter of 2022, showing a trend towards pre-pandemic levels (Figures 2, 3 and 5). However, the same cannot be said for the unemployed population aged 16 to 89 with tertiary education, which shows recurrent oscillations throughout the data series (Figure 4).

The indicator regarding tertiary educational attainment rate<sup>2</sup> (which corresponds to the share of people aged 30 to 34 with tertiary education) also shows a decrease since the 3<sup>rd</sup> quarter of 2022 (Figure 6), consistent with the approximation to the values observed before the COVID-19 pandemic. It should also be noted that, contrary to what was observed for 2011, when comparing the results (for the year 2021) of this indicator based on the Labour Force Survey and on the 2021 Census, a trend towards an overestimation of the Labour Force Survey results is observed.

Although there may be other factors behind the developments observed in these indicators, related with the dynamics of the labour market itself and which the Labour Force Survey is not able, however, to capture, it is considered that these year-on-year changes may be the result, in part, of the reintroduction of the face-to-face data collection mode and the reversion to pre-pandemic levels. Finally, it is important to note that the survey quality criteria were maintained throughout the entire period and that the results of the Labour Force Survey do not allow to draw direct conclusions on the relation between the evolution of labour market indicators and migratory flows (emigration and immigration).

Figure 2. Population aged 16 to 89 years old with tertiary education

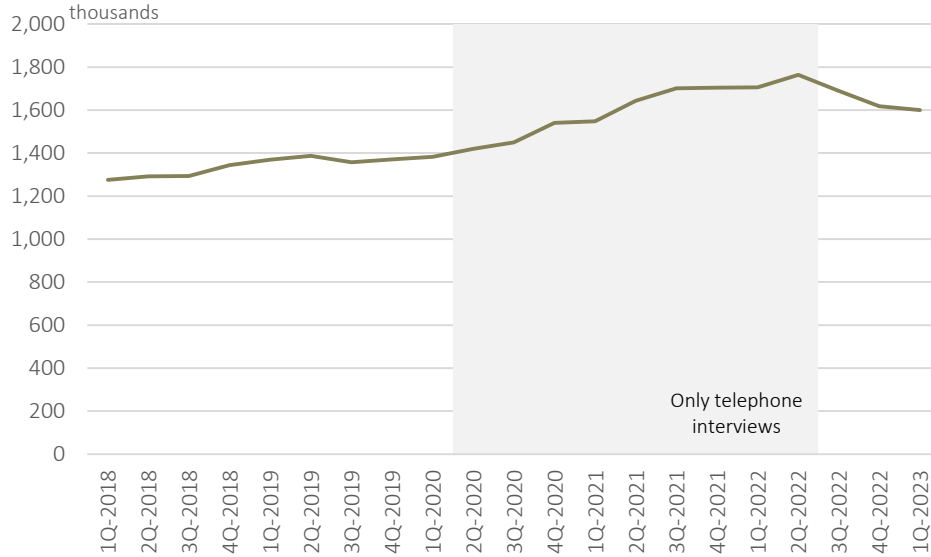


Source: Statistics Portugal, Labour Force Survey.

<sup>2</sup> This indicator was one of those monitored under the Europe 2020 Strategy and a target of at least 40% was set to be achieved in that year. The monitoring of this indicator continues under the Portugal 2030 Strategy, with a target now set of at least 50% by the year 2030.

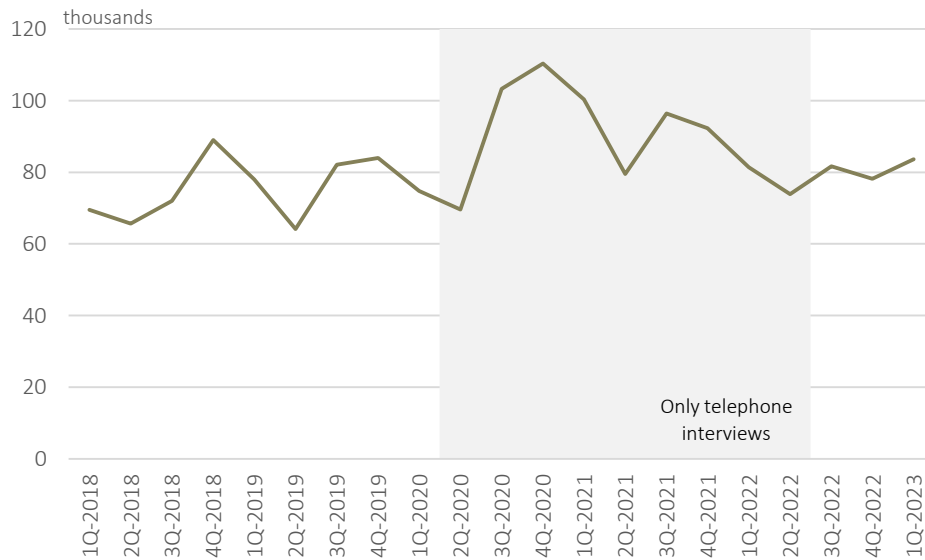


Figure 3. Employed population aged 16 to 89 years old with tertiary education



Source: Statistics Portugal, Labour Force Survey.

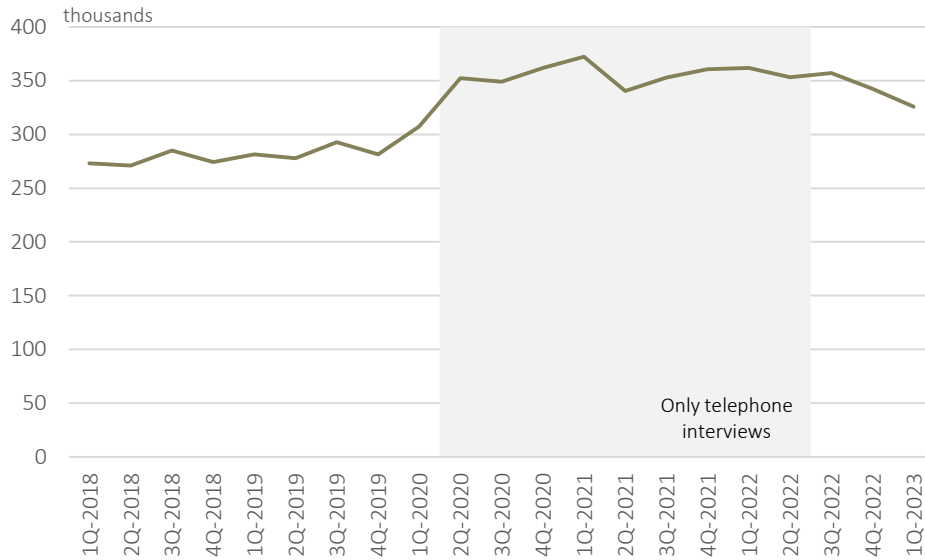
Figure 4. Unemployed population aged 16 to 89 years old with tertiary education



Source: Statistics Portugal, Labour Force Survey.

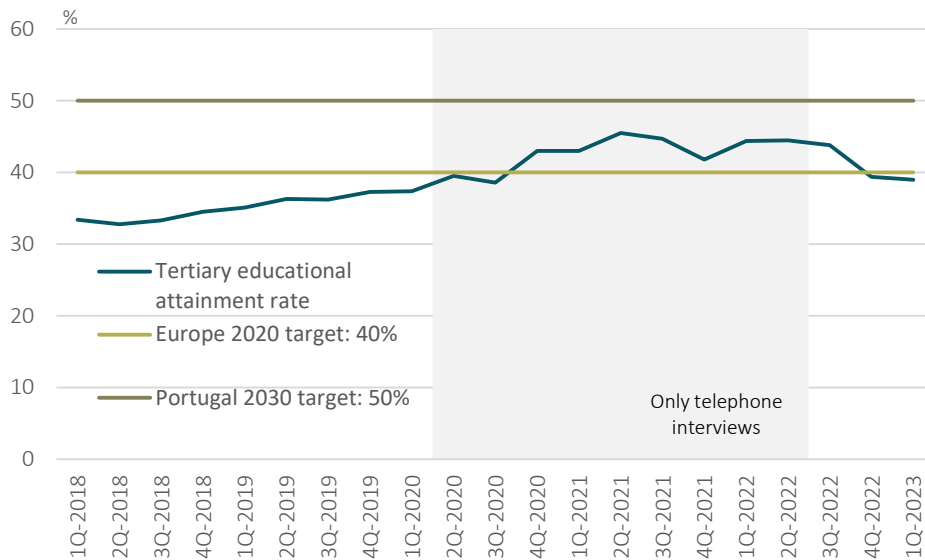


Figure 5. Inactive population aged 16 to 89 years old with tertiary education



Source: Statistics Portugal, Labour Force Survey.

Figure 6. Tertiary educational attainment rate



Source: Statistics Portugal, Labour Force Survey.



Table 1. Population aged 16 to 89 years old with tertiary education

Portugal	1Q-2018	2Q-2018	3Q-2018	4Q-2018	1Q-2019	2Q-2019	3Q-2019	4Q-2019	1Q-2020	2Q-2020	3Q-2020	4Q-2020	1Q-2021	2Q-2021	3Q-2021	4Q-2021	1Q-2022	2Q-2022	3Q-2022	4Q-2022	1Q-2023
Thousands																					
<b>Total population</b>	<b>1,618.9</b>	<b>1,629.8</b>	<b>1,650.7</b>	<b>1,707.5</b>	<b>1,729.5</b>	<b>1,730.0</b>	<b>1,733.2</b>	<b>1,737.7</b>	<b>1,765.3</b>	<b>1,842.7</b>	<b>1,902.3</b>	<b>2,013.6</b>	<b>2,021.0</b>	<b>2,064.2</b>	<b>2,151.3</b>	<b>2,157.3</b>	<b>2,149.0</b>	<b>2,191.0</b>	<b>2,129.4</b>	<b>2,038.8</b>	<b>2,010.6</b>
Active population	1,345.7	1,358.7	1,365.7	1,433.0	1,448.0	1,451.9	1,440.3	1,456.0	1,457.9	1,490.3	1,553.2	1,651.7	1,648.7	1,723.6	1,798.2	1,796.4	1,787.2	1,837.7	1,772.2	1,696.1	1,684.8
Employed population	1,276.1	1,293.0	1,293.6	1,344.0	1,369.9	1,387.7	1,358.1	1,372.0	1,383.1	1,420.7	1,449.9	1,541.4	1,548.4	1,644.1	1,701.8	1,704.2	1,705.8	1,763.7	1,690.5	1,617.8	1,601.2
Unemployed population	69.5	65.7	72.0	89.0	78.0	64.2	82.1	84.0	74.8	69.6	103.3	110.4	100.3	79.5	96.4	92.3	81.4	73.9	81.7	78.2	83.6
Inactive population	273.2	271.0	285.0	274.4	281.6	278.1	292.9	281.7	307.4	352.4	349.1	361.9	372.3	340.5	353.1	360.9	361.9	353.4	357.2	342.7	325.8
Year-on-year rate of change (%)																					
<b>Total population</b>	<b>1.8</b>	<b>2.4</b>	<b>2.8</b>	<b>5.7</b>	<b>6.8</b>	<b>6.1</b>	<b>5.0</b>	<b>1.8</b>	<b>2.1</b>	<b>6.5</b>	<b>9.8</b>	<b>15.9</b>	<b>14.5</b>	<b>12.0</b>	<b>13.1</b>	<b>7.1</b>	<b>6.3</b>	<b>6.1</b>	<b>-1.0</b>	<b>-5.5</b>	<b>-6.4</b>
Active population	2.7	3.9	4.2	7.7	7.6	6.9	5.5	1.6	0.7	2.6	7.8	13.4	13.1	15.7	15.8	8.8	8.4	6.6	-1.4	-5.6	-5.7
Employed population	4.6	6.0	5.6	7.3	7.4	7.3	5.0	2.1	1.0	2.4	6.8	12.3	12.0	15.7	17.4	10.6	10.2	7.3	-0.7	-5.1	-6.1
Unemployed population	-22.5	-24.4	-15.8	14.1	12.2	-2.3	14.0	-5.7	-4.1	8.4	25.7	31.4	34.1	14.2	-6.6	-16.4	-18.8	-7.0	-15.3	-15.2	2.7
Inactive population	-2.3	-4.8	-3.3	-3.5	3.1	2.6	2.8	2.7	9.2	26.7	19.2	28.5	21.1	-3.4	1.1	-0.3	-2.8	3.8	1.1	-5.0	-10.0
Year-on-year change (thousands)																					
<b>Total population</b>	<b>29.0</b>	<b>37.7</b>	<b>44.8</b>	<b>92.4</b>	<b>110.6</b>	<b>100.2</b>	<b>82.5</b>	<b>30.2</b>	<b>35.8</b>	<b>112.7</b>	<b>169.1</b>	<b>275.9</b>	<b>255.7</b>	<b>221.5</b>	<b>249.0</b>	<b>143.7</b>	<b>128.0</b>	<b>126.8</b>	<b>-21.9</b>	<b>-118.5</b>	<b>-138.4</b>
Active population	35.5	51.5	54.7	102.3	102.3	93.2	74.6	23.0	9.9	38.4	112.9	195.7	190.8	233.3	245.0	144.7	138.5	114.1	-26.0	-100.3	-102.4
Employed population	55.6	72.7	68.1	91.3	93.8	94.7	64.5	28.0	13.2	33.0	91.8	169.4	165.3	223.4	251.9	162.8	157.4	119.6	-11.3	-86.4	-104.6
Unemployed population	-20.2	-21.2	-13.5	11.0	8.5	-1.5	10.1	-5.0	-3.2	5.4	21.2	26.4	25.5	9.9	-6.9	-18.1	-18.9	-5.6	-14.7	-14.1	2.2
Inactive population	-6.5	-13.8	-9.9	-10.0	8.4	7.1	7.9	7.3	25.8	74.3	56.2	80.2	64.9	-11.9	4.0	-1.0	-10.4	12.9	4.1	-18.2	-36.1

Source: Statistics Portugal, Labour Force Survey.

Note: All estimates for the 2011 data series (in force from the 1st quarter of 2011 to the 4th quarter of 2020) in this table have been revised in the light of the reconciliation exercise with the 2021 series, thus allowing direct comparison with the estimates of this series.



Table 2. Population aged 16 to 89 years old with tertiary education

Portugal	2018	2019	2020	2021	2022
	Thousands				
<b>Total population</b>	<b>1,651.7</b>	<b>1,732.6</b>	<b>1,881.0</b>	<b>2,098.5</b>	<b>2,127.1</b>
Active population	1,375.8	1,449.0	1,538.3	1,741.8	1,773.3
Employed population	1,301.7	1,371.9	1,448.8	1,649.6	1,694.5
Unemployed population	74.1	77.1	89.5	92.1	78.8
Inactive population	275.9	283.6	342.7	356.7	353.8

Year-on-year rate of change (%)					
<b>Total population</b>	<b>3.2</b>	<b>4.9</b>	<b>8.6</b>	<b>11.6</b>	<b>1.4</b>
Active population	4.6	5.3	6.2	13.2	1.8
Employed population	5.8	5.4	5.6	13.9	2.7
Unemployed population	-12.9	4.1	16.1	2.9	-14.4
Inactive population	-3.5	2.8	20.9	4.1	-0.8

Year-on-year change (thousands)					
<b>Total population</b>	<b>50.9</b>	<b>80.9</b>	<b>148.4</b>	<b>217.5</b>	<b>28.6</b>
Active population	61.0	73.2	89.3	203.5	31.5
Employed population	71.9	70.2	76.9	200.8	44.9
Unemployed population	-10.9	3.0	12.4	2.6	-13.3
Inactive population	-10.1	7.7	59.1	14.0	-2.9

Source: Statistics Portugal, Labour Force Survey.

**Note:** All estimates for the 2011 data series (in force from the 1st quarter of 2011 to the 4th quarter of 2020) in this table have been revised in the light of the reconciliation exercise with the 2021 series, thus allowing direct comparison with the estimates of this series.



Table 3. Tertiary educational attainment rate (Europe 2020 and Portugal 2030 indicator)

Portugal	1Q-2018	2Q-2018	3Q-2018	4Q-2018	1Q-2019	2Q-2019	3Q-2019	4Q-2019	1Q-2020	2Q-2020	3Q-2020	4Q-2020	1Q-2021	2Q-2021	3Q-2021	4Q-2021	1Q-2022	2Q-2022	3Q-2022	4Q-2022	1Q-2023
	Thousands																				
Tertiary educational attainment rate (%)	33.4	32.8	33.3	34.5	35.1	36.3	36.2	37.3	37.4	39.5	38.6	43.0	43.0	45.5	44.7	41.8	44.4	44.5	43.8	39.4	39.0
Population aged 30 to 34	587.0	582.6	578.1	574.0	572.9	569.3	565.5	562.3	565.2	564.9	564.5	565.3	565.6	566.3	566.8	568.1	566.6	566.8	567.1	567.9	574.6
Population aged 30 to 34 with tertiary education	196.0	190.9	192.8	198.2	201.0	206.7	204.6	209.7	211.5	223.1	217.8	243.0	242.9	257.8	253.1	237.3	251.8	252.3	248.4	223.5	224.1
Year-on-year change (thousands) and year-on-year rate of change (%)																					
Tertiary educational attainment rate (percentage points)	-0.4	-1.5	0.6	1.5	1.7	3.5	2.9	2.8	2.3	3.2	2.4	5.7	5.6	6.0	6.1	-1.2	1.4	-1.0	-0.9	-2.4	-5.4
Population aged 30 to 34 Thousands	-23.0	-21.2	-19.2	-17.1	-14.1	-13.3	-12.6	-11.7	-7.7	-4.4	-1.0	3.0	0.4	1.4	2.3	2.8	1.0	0.5	0.3	-0.2	8.0
Population aged 30 to 34 %	-3.8	-3.5	-3.2	-2.9	-2.4	-2.3	-2.2	-2.0	-1.3	-0.8	-0.2	0.5	0.1	0.3	0.4	0.5	0.2	0.1	0.1	0.0	1.4
Population aged 30 to 34 with tertiary education Thousands	-10.0	-16.4	-2.7	3.2	5.0	15.8	11.8	11.5	10.5	16.4	13.2	33.3	31.4	34.7	35.3	-5.7	8.9	-5.5	-4.7	-13.8	-27.7
Population aged 30 to 34 with tertiary education %	-4.9	-7.9	-1.4	1.7	2.6	8.3	6.1	5.8	5.2	7.9	6.5	15.9	14.9	15.6	16.2	-2.4	3.6	-2.1	-1.8	-5.8	-11.0

Source: Statistics Portugal, Labour Force Survey.

**Note:** The tertiary educational attainment rate corresponds to the share of the population aged 30 to 34 with tertiary education. This indicator was one of those monitored under the Europe 2020 Strategy and a target of at least 40% was set to be achieved in that year. The monitoring of this indicator continues under the Portugal 2030 Strategy, with a target now set of at least 50% by the year 2030.





Table 4. Tertiary educational attainment rate (Europe 2020 and Portugal 2030 indicator)

Portugal	2018	2019	2020	2021	2022	
	Thousands					
<b>Tertiary educational attainment rate (%)</b>	<b>33.5</b>	<b>36.2</b>	<b>39.6</b>	<b>43.7</b>	<b>43.0</b>	
Population aged 30 to 34	580.4	567.5	565.0	566.7	567.1	
Population aged 30 to 34 with tertiary education	194.5	205.5	223.8	247.8	244.0	
<b>Annual change (thousands) and annual rate of change (%)</b>						
<b>Tertiary educational attainment rate (percentage points)</b>	<b>0.0</b>	<b>2.7</b>	<b>3.4</b>	<b>4.1</b>	<b>-0.7</b>	
Population aged 30 to 34	Thousands	-20.1	-12.9	-2.5	1.7	0.4
	%	-3.4	-2.2	-0.4	0.3	0.1
Population aged 30 to 34 with tertiary education	Thousands	-6.4	11.0	18.3	24.0	-3.8
	%	-3.2	5.7	8.9	10.7	-1.5

Source: Statistics Portugal, Labour Force Survey.

**Note:** The tertiary educational attainment rate corresponds to the share of the population aged 30 to 34 with tertiary education. This indicator was one of those monitored under the Europe 2020 Strategy and a target of at least 40% was set to be achieved in that year. The monitoring of this indicator continues under the Portugal 2030 Strategy, with a target now set of at least 50% by the year 2030.



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# DIÁSTIAQUE

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