

# INCOME INEQUALITY AMONG STUDENTS IN EUROPEAN HIGHER EDUCATION <sup>1</sup>

EUROSTUDENT INTELLIGENCE BRIEF 1/2019

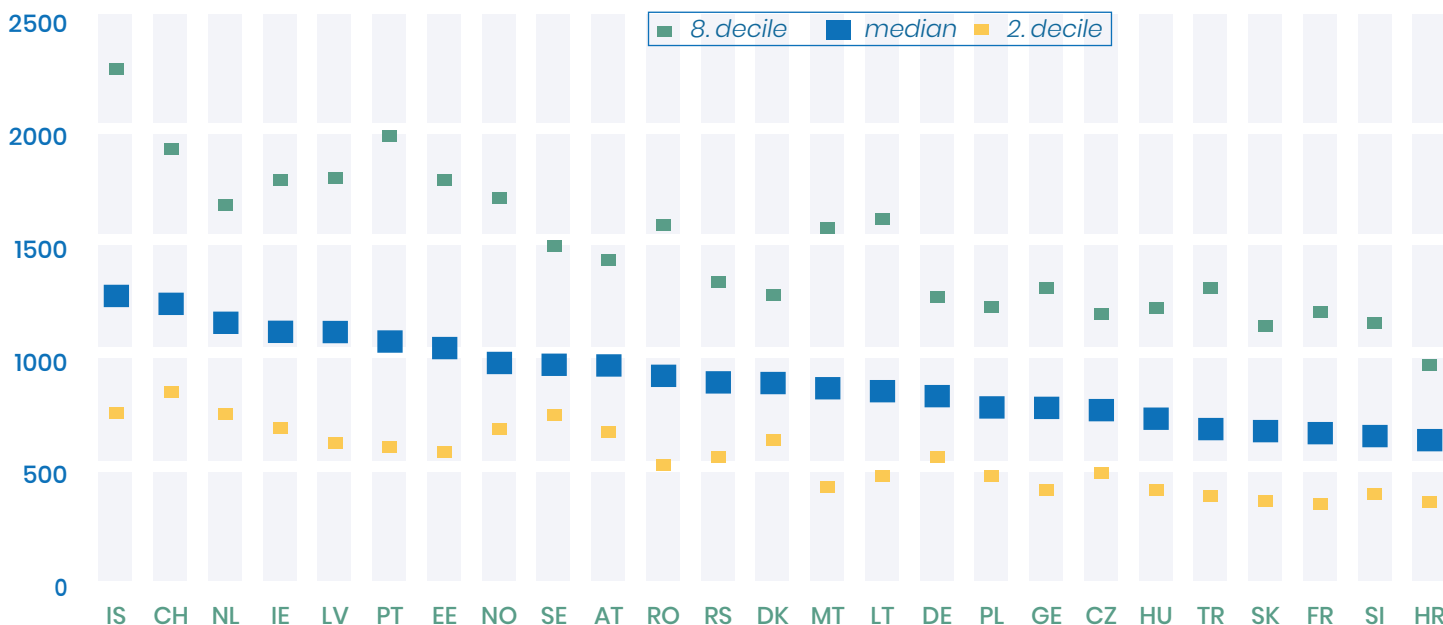
## OVERVIEW

- Taken as a whole, the degree of income inequality among students, as measured by the Gini coefficient, appears moderate across EUROSTUDENT countries.
- In cross-country comparison, income inequality is, however, relatively high in Portugal, Turkey, France, and Lithuania and relatively low in Denmark and the Netherlands.
- When comparing income inequality between students and the total population, it appears that in half of EUROSTUDENT countries the financial heterogeneity among students is larger than among the total population.
- In seven countries (Turkey, Estonia, Latvia, Sweden, Serbia, Denmark, and the Netherlands), the opposite is true: income inequality among the student population is lower than among the general population.
- In five countries (Romania, Poland, Croatia, Germany, and Austria), there is no difference in income inequality between students and the total population.

## DIFFERENCES IN STUDENT INCOME ACROSS EUROSTUDENT COUNTRIES

Students' material well-being depends on their provision of financial resources. If the level of student income per country is considered, there are remarkable differences **between** the EUROSTUDENT countries, even when using Purchasing Power Standard (PPS) <sup>2</sup> as common currency (Fig. 1).

**Figure 1. Distribution of student income by income decile – based on total monthly income (including transfers in kind) (in Purchasing Power Standard)**



**Data source:** EUROSTUDENT VI, G.10. **No data:** AL, FI, IT.

**EUROSTUDENT question(s):** 3.3 What is the average monthly amount at your disposal from the following sources during the current lecture period?, 3.4 What are your average expenses for the following items during the current lecture period?

**Interpretation aid:** The 2nd decile states that the 'poorest' 20% of the student body receive an income which does not exceed a certain amount of PPS; the same holds – with the necessary changes – for the other cut-off points (median and 8th decile). Large differences between the 2nd and 8th decile indicate a quite unbalanced income distribution. In turn, if this difference is rather small, income is more evenly distributed among students.

**Note(s):** Transfers in kind are expenses of parents / partner / employer or others in favour of the students.

**Deviations from EUROSTUDENT standard target group:** AL, DE, IE, IT, LV, RS.

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<sup>2</sup> Purchasing Power Standard (PPS) is an artificial currency used to eliminate the influence of exchange rates and differing price levels between countries, which can distort the international comparison of monetary values. As a result, the use of PPS as common currency leads to less pronounced income differences between countries than by using the Euro.

- The monthly median income<sup>3</sup> of students in Iceland, Switzerland, and the Netherlands is larger than 1,100 PPS.
- In contrast, students' median income is below 700 PPS per month in Turkey, Slovakia, France, Slovenia, and Croatia.

The position of countries, sorted in descending order by the median income, seems to be, among other things, related to the wealth of countries. The GDP per capita of Iceland, Switzerland, the Netherlands, and Ireland is above the EU-28 average and these countries show the highest median income of students. Contrastingly, the GDP per capita is below the international average in Slovakia, Slovenia, and Croatia, where the student income is rather

low. Furthermore, the elimination of price level differences makes an impact and can place countries in an unexpected position (e.g. if the data in Figure 1 had been displayed in Euro, Latvia and France would be in positions 12 and 13, but by using PPS – and thereby eliminating price level differences between the countries – Latvia moves to position 5, while France changes to position 23, as shown above).

### ARE THERE LARGE DIFFERENCES IN THE INCOME DISTRIBUTION OF STUDENTS WITHIN THE EUROSTUDENT COUNTRIES?

There is also variance when looking at the income differences **within** countries. In order to view the distribution of income levels of students within a country, every student's income can be ranked between the lowest and the highest levels and then assigned to a decile. The first decile, for instance, contains 10 % of students with the lowest income and the tenth decile contains 10 % of students with the highest income. Above, the differences in income levels between three income level groups are highlighted for each country (Fig. 1). These income groups are the lowest 20 % of the income receivers (2nd decile), the median income receivers, and the highest 20 % of the income receivers (8th decile). The extent of income differences comes to light, when measuring the relative deviation of the 2nd and 8th decile from the median income level:

- In Portugal, Malta, Lithuania, Turkey, and France, the relative difference between the 2nd and 8th decile is comparatively high, when the aggregated relative difference from the median income level is observed (i.e. the percentage difference of the 2nd decile from the median plus the percentage difference of the

8th decile from the median). In Turkey, for instance, those 20 % of students who belong to the top income group (i.e. those who are beyond the 8th decile) have at least 95 % **more** income than students with the median income. Those 20 % of students who are in the lowest income groups shown here (up to 2nd decile) have at least 45 % **less** than the median income. In the other above mentioned countries, these differences are pronounced as well: Portugal (+87 % vs. -45 %), Malta (+85 % vs. -52 %), Lithuania (+93 % vs. -46 %), and France (+85 % vs. -49 %). This indicates a somewhat unbalanced income distribution among students in these countries.

- In the Netherlands, Sweden, Austria, and Denmark, the relative difference between the 2nd and 8th decile is rather low. In Denmark, the 20 % top income receivers of students have at least 45 % **more** income compared to the median; the 'poorest' 20 % of students have at least 29 % **less** than the median income. That means, in these countries, the total monthly income is comparatively evenly distributed among students (Hauschildt et al., 2018).

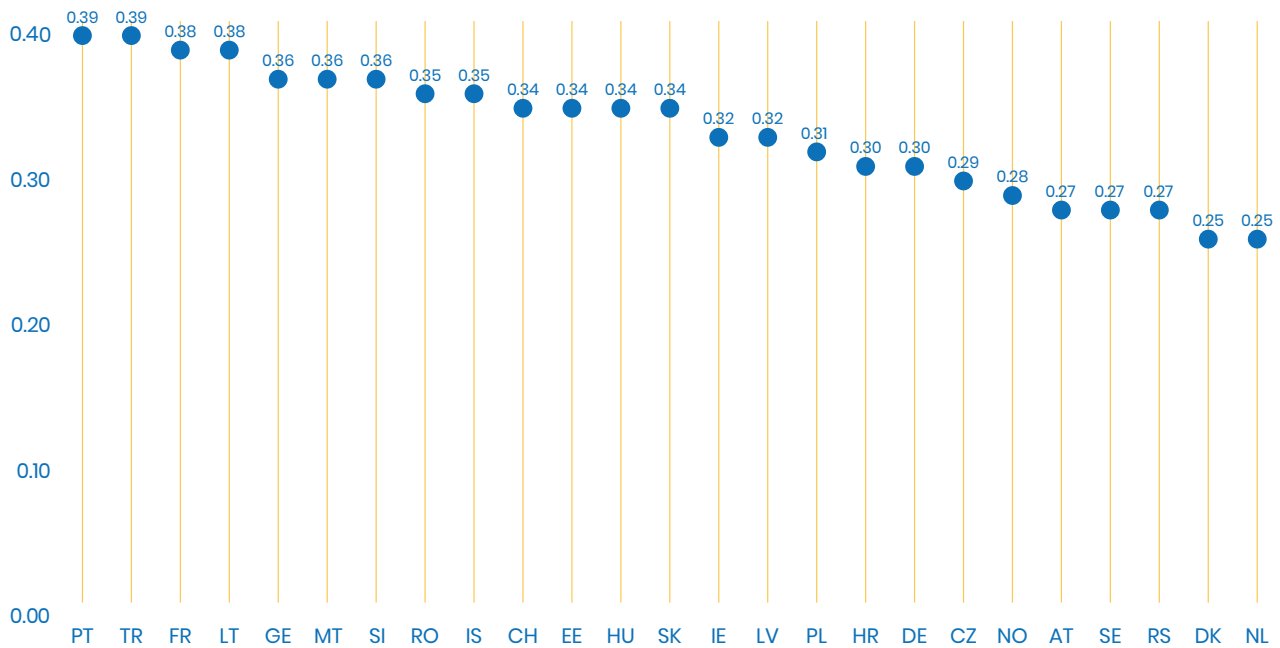
### WHAT IS THE DEGREE OF INCOME CONCENTRATION AMONG THE STUDENT POPULATIONS?

The financial heterogeneity of the student body can also be viewed by looking at the Gini coefficient. It is a measure that describes the relative concentration of income using a single value. The Gini coefficient takes the whole income distribution of the student population into account (not only three income levels as with the previous analysis), providing information on how (un)equal incomes are distributed within the student population. The Gini coefficient can take on values between 0 and 1. If there were no concentration of income at all (i.e. each student

had the same amount of income), the value would be 0. In case of maximum concentration (i.e. only one student receiving all income and all others receiving no income), the Gini coefficient would be equal to 1. This means that the higher the concentration of income, the higher the value of the Gini coefficient. Overall, the degree of income concentration among students in the EUROSTUDENT countries, as measured by the Gini coefficient, can be regarded as moderate (Fig. 2).

<sup>3</sup> Median income: Half of the students have less income than the median income, while the other half has more.

**Figure 2. Concentration of student income – based on total monthly income (including transfers in kind)**



**Data source:** EUROSTUDENT VI, G.10. **No data:** AL, FI, IT.

**EUROSTUDENT question(s):** 3.3 What is the average monthly amount at your disposal from the following sources during the current lecture period?, 3.4 What are your average expenses for the following items during the current lecture period?

**Note:** Transfers in kind are expenses of parents / partner / employer or others in favour of the students.

**Deviations from EUROSTUDENT standard target group:** AL, DE, IE, IT, LV, RS.

The value of the Gini coefficient in the EUROSTUDENT countries varies between 0.39 and 0.25, meaning that the level of income concentration is not very high and also the spread of values across countries is rather small.

- Nevertheless, a comparatively 'high' degree of income concentration can be found in Portugal, Turkey, France, and Lithuania. In these countries, the Gini coefficient is at least 0.38. This indicates that the income inequality between students is – compared to other countries – rather large within these countries.
- The income concentration among students tends to be rather low in Denmark and the Netherlands; there, the Gini coefficient is 0.25.

What is behind different levels of **income concentration among students**? No literature, which investigates the reasons for the income inequality between students in-depth, as measured by the Gini coefficient, appears to exist. On the one hand, income inequality may reflect different **availability of sources of revenue**: Further analyses of

#### **ARE THERE DIFFERENCES IN THE INCOME CONCENTRATION FOR STUDENTS AND THE TOTAL POPULATION?**

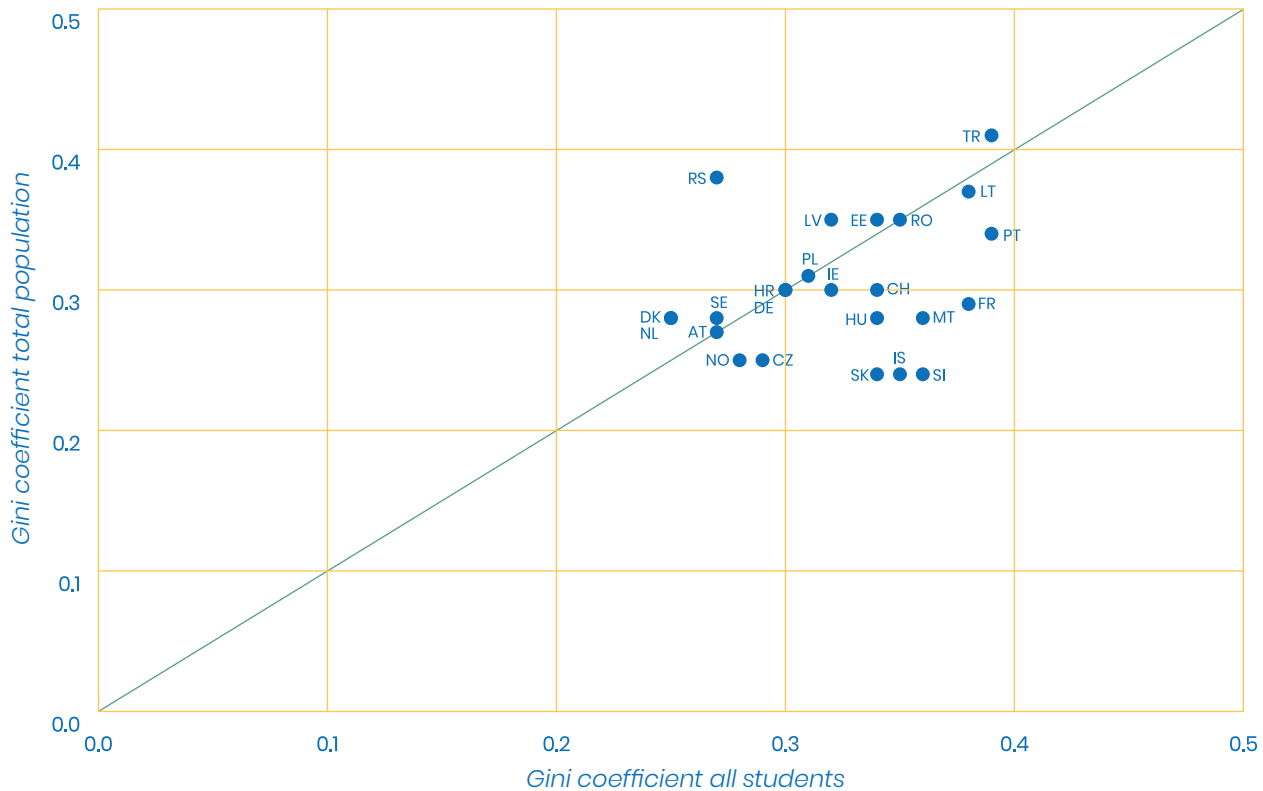
Comparing the Gini coefficient of the student population and the total population allows insights into whether the income of these two groups is similarly distributed (Fig. 3). However, due to some methodological differences in data collection (see note below Fig. 3), the comparison of the two groups has to be treated with care.

The value of the Gini coefficient for the income concentration for the total population varies from 0.41 to 0.24 (Fig. 3).

EUROSTUDENT data indicate that contributions from family/partner are positively correlated with the Gini coefficient, meaning that students' parents with high socio-economic status, who support their children extensively, would tend to increase income concentration among students. In contrast, national public student support is negatively correlated with the Gini coefficient, which means that overall the state levels out socio-economic disparities between students and reduces income concentration. On the other hand, students' **needs** may influence to what extent they (have to) make use of different available income sources, such as employment: Young single students living with parents and studying full-time will have different income requirements – and less or no need for employment – than older students with children, living with their family in an unsubsidised private flat, and studying alongside regular employment. The latter group would rather tend to increase income concentration among students. In this sense the students' individual living, working and study situations may comprise different factors that influence the degree of income concentration.

- It is comparatively high in Turkey, Serbia, and Lithuania, with values of at least 0.37.
- The lowest degree of income concentration for the total population can be found in Iceland, Slovakia, and Slovenia, with a value of 0.24 in each country.

**Figure 3. Concentration of income of students and the total population measured by the Gini coefficient**



**Data source:** Gini coefficient all students: EUROSTUDENT VI, G.10; Gini coefficient total population: Eurostat (2017), in the respective EUROSTUDENT survey year or closest to this. **No data:** EUROSTUDENT VI: AL, FI, IT; Eurostat: AL, GE.

**EUROSTUDENT question(s):** 3.3 What is the average monthly amount at your disposal from the following sources during the current lecture period?, 3.4 What are your average expenses for the following items during the current lecture period?

**Interpretation aid:** The value of the Gini coefficient for students is measured on the horizontal axis, while that for the total population is measured on the vertical axis. Data points that are positioned below the diagonal imply that in the respective country the income concentration among students is higher than among the total population. For data points above the diagonal the opposite is true. If a country's position coincides with the diagonal, the income concentration is the same among students and the general population.

**Note:** It should be noted that the Gini coefficient for student income is based on individual income, while the Gini coefficient for the total population is based on 'equalised' household income. This limits the comparability between the two groups to some extent.

**Deviations from EUROSTUDENT standard target group:** AL, DE, IE, IT, LV, RS.

Research has identified various influential factors for income concentration **among the general population** (Dabla-Norris et al., 2015) that do not necessarily apply to the same extent to the student population: **technological change**, for instance, can increase income inequality as it may disproportionately raise the demand for capital and skilled labour over low-skilled and unskilled labour by eliminating many jobs through automation or upgrading the skill level required to attain or keep those jobs. A country's participation in **global trade** may also increase income concentration, if trade openness raises the skill premium.<sup>4</sup> Increased **financial flows**, particularly foreign direct investment (FDI) and portfolio flows have been shown to increase income concentration in market economies, e.g. due to the concentration of foreign assets and liabilities in relatively higher skill- and technology-intensive sectors, which pushes up the demand for and wages of higher skilled workers. Further influential factors are the strength of **labour market institutions** (e.g. trade unions), **redistributive government policies**, and the **stock of human capital** (Dabla-Norris et al., 2015).

When comparing the income concentration of the student population with that for the total population, the spread of income concentration across countries is higher among the latter group (total population: 0.41 to 0.24, student population: 0.39 to 0.25).

- Within-country comparisons reveal that in 12 out of 24 countries with available data, the income concentration is higher among students than among the total population. The difference in income concentration between students and the total population is rather high in Iceland, Slovakia, and Slovenia, with at least 0.10 points. In contrast, the difference between the Gini coefficient for students and the total population is quite small in Lithuania, Ireland, and Norway, with no more than 0.03 points.
- There are seven countries where the income concentration among students is lower than among the total population. This holds for Turkey, Estonia, Latvia, Sweden, Serbia, Denmark, and the Netherlands. In most of these countries the difference between the two groups is comparatively small (between 0.01 and 0.03 points); only in Serbia is the difference rather high at 0.11 points.
- In five countries, namely Romania, Poland, Croatia, Germany, and Austria, the value of the Gini coefficient is the same for both the student population and the general population.

<sup>4</sup> Skill premium measures the relative earnings from employment after completing tertiary education compared to the earnings after completing upper- and post-secondary non-tertiary education.

## POLICY IMPLICATIONS: INCOME CONCENTRATION BETWEEN NECESSITY AND UNDESIRABLE SIDE EFFECTS

With respect to the total population, some degree of income inequality may not be a problem insofar as it provides the incentives for people to excel, compete, save, and invest to move ahead in life (Dabla-Norris et al., 2015). High and sustained levels of inequality, however, can significantly undermine individuals' educational and occupational choices, generate wrong incentives (if inequality of outcomes rests on subsidies and transfers rather than on performance-related earnings, Stiglitz, 2012), negatively affect growth and its sustainability, and result in resource misallocation, eroding social cohesion as well as causing citizens to lose confidence in institutions and the future (OECD, 2015; Dabla-Norris et al., 2015).

Likewise, some degree of financial diversity within the student body is certainly unavoidable as there are groups of students with diverse needs that result in different financial requirements (e.g. students with children or with impairments who, in fact, need higher incomes than their counterparts, Hauschildt et al., 2018). However, a high degree of financial dissimilarity could also imply that students have access to different income sources which affect their studies in different ways.<sup>5</sup> In this case, students have differing study framework conditions, which could affect the duration and success of their studies. The higher the degree of financial heterogeneity, the higher could be the 'risk' of highly different study framework conditions within a student population. Analysing the key

factors contributing to financial heterogeneity of students at the national level could be an important measure to understand the different profile of students. This, in turn, would help in ensuring that financial support schemes and incentives are effectively designed and targeted.

There seem to be no studies at the national level comparing the income concentration between the student body and the general population. Differences in the Gini coefficient between the two groups are not easily interpreted as various determinants can come into play. One common influential factor is certainly public measures of redistribution that are often designed to reduce socio-economic disparities between different groups and, therefore, would tend to reduce the degree of income inequality (according to the International Monetary Fund, public transfers play a significant role in reducing income inequality, IMF, 2014). The fact that in the largest group of EUROSTUDENT countries the income inequality among students is higher than among the total population might indicate that the state undertakes more efforts to level out the incomes of other population groups, such as unemployed or pensioners than those of students. However, this can only be considered a hypothesis that needs to be tested by more in-depth analyses in this area.

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<sup>5</sup> In a simplified example: 'Wealthy' students may receive a large share of their income from their parents, whereas 'poorer' students may have to generate their income mainly by gainful employment (for empirical relevance see Avdic & Gartell, 2015; Mertens, 2013; Callender, 2008). This would have different implications for the students' time budgets.

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## ABOUT EUROSTUDENT

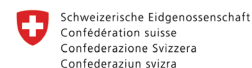
The EUROSTUDENT project collates comparable student survey data on the social dimension of European higher education, collecting data on a wide range of topics, e.g. the socio-economic background, living conditions, and temporary international mobility of students. The project strives to provide reliable and insightful cross-country comparisons. The data presented here stem from the sixth round of the EUROSTUDENT project (2016–2018). The

comparative report "[Social and Economic Conditions of Student Life in Europe](#)" (2018) provides insight into many other questions related to students' characteristics as well as other aspects of student life in Europe. Furthermore, the [EUROSTUDENT database](#) allows users to explore country data by topic area and in comparison between countries. Also visit [www.eurostudent.eu](http://www.eurostudent.eu) for more information and results.

## COUNTRY ABBREVIATIONS

|                         |              |                      |               |
|-------------------------|--------------|----------------------|---------------|
| AT = Austria            | FR = France  | LT = Lithuania       | RO = Romania  |
| CH = Switzerland        | GE = Georgia | LV = Latvia          | RS = Serbia   |
| CZ = the Czech Republic | HR = Croatia | MT = Malta           | SE = Sweden   |
| DE = Germany            | HU = Hungary | NL = the Netherlands | SI = Slovenia |
| DK = Denmark            | IE = Ireland | NO = Norway          | SK = Slovakia |
| EE = Estonia            | IS = Iceland | PL = Poland          | TR = Turkey   |
| FI = Finland            | IT = Italy   | PT = Portugal        |               |

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