

## Article

# Poor Employment Conditions and Immigrant Health in Europe

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**Abstract:** Building on the extant literature and utilizing data from the EU-SILC and the EU-LFS surveys conducted between 2009 and 2023, we empirically investigate the impact of poor employment conditions—associated with insecure or precarious employment—on third-country nationals’ (TCNs’) self-perceived health status (SPH). The role of employment conditions in health is examined by employing indicators of temporary, part-time, and self-employment. Driven by theory and empirical analysis, we also investigate the effects of additional variables, including long-term unemployment. Finally, to probe differences across countries, we examine how the effects of employment conditions on TCNs’ health vary across institutional settings, namely across different types of welfare state. Descriptive statistics and regression analyses of panel data reveal that employment conditions affect immigrants’ SPH and surface significant differences across countries. The estimated country-specific effects point to statistical average differences between Germany and two groups of countries: one showing higher effects (i.e., Austria, Belgium, Denmark, Finland, and France) and another with lower effects (i.e., Greece, Ireland, Italy, and Spain). The welfare model adopted by different countries is a qualitative significant predictor of TCNs’ SPH. We conclude with a discussion of the implications of these findings for future research, but also policy initiatives to improve TCNs’ employment conditions and, consequently, their health and overall well-being.



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**Keywords:** third-country nationals; immigrants; self-perceived health; employment conditions; long-term unemployment; self-employed without employees

## 1. Introduction

Rights and regulations that affect the lives of immigrants in the European Union (EU) differ depending on their origin. Immigrants who are nationals of another EU member state are typically afforded the same rights as the native-born population, including access to the local labor market, as well as health and other social services.<sup>1</sup> That is not true though for immigrants from countries outside the EU, who are referred to as third-country nationals (TCNs) and who make up approximately 5% of the EU’s population (OECD/European Union 2023). TCNs experience worse labor-market-related outcomes than nationals and “mobile EU citizens” who live in places other than those in which they were born (OECD/European Union 2023).

Simultaneously, living conditions for TCNs are also more difficult. For example, they are 1.5 times more likely to be poorer than EU citizens living in an EU state other than the one in which they were born and 2.5 times more likely to be living in poverty compared

to EU country nationals (OECD/European Union 2023). Additionally, the gap between TCNs and EU nationals widened between 2010 and 2020 (OECD/European Union 2023). This reality has cascading effects on the lives of TCNs, their capacity to integrate into their countries of settlement, and also for those countries and the EU overall. For instance, while 65% of EU mobile citizens and nationals reported being in good health in 2023, only 60% of TCNs did the same. Also, 20% of TCNs reported having experienced discrimination on the grounds of their ethnicity, race, or nationality, whereas the number was half of that for EU mobile citizens (OECD/European Union 2023).

Policy and other types of interventions to eliminate the aforementioned inequalities and inequities are critical in the direction of achieving TCN social integration goals set forth in the Action Plans published by the European Commission in 2016 and 2020 (European Commission 2016, 2020). In the hope of informing the design of such interventions, in this study, we probe the understudied relationship between employment conditions of TCNs across the EU and health. In doing so, we also explore differences across EU countries of settlement. Our findings suggest that poor employment conditions are strongly predictive of bad or very bad self-reported health among TCNs. Additionally, our analysis surfaces significant differences across EU countries that differ with respect to labor and social welfare policies.

### *1.1. Immigrants and Labor Market Conditions in the European Union*

Immigrant workers in Europe, particularly third-country nationals (TCNs),<sup>2</sup> may be constrained to accept the so-called 3D jobs (dirty, dangerous, and demanding) in the secondary labor market. These jobs, frequently avoided by the native-born workforce, are insecure, pay the least, and are characterized by poor working conditions, including irregular working hours and significant exposure to various risks that can affect their health. Immigrants frequently find themselves in temporary or part-time employment, experience spells of extended unemployment, may need to hold multiple jobs simultaneously, and are afforded minimal social benefits and legal protections, which exacerbates their sense of uncertainty (Alon 2023; Botyriute 2023; Kalleberg and Vallas 2018; Kreshpaj et al. 2020; Mai 2018).

Working under non-standard or atypical employment contracts constitutes what Broughton et al. (2016, p. 10) refer to as precarious employment.<sup>3</sup> In fact, atypical working arrangements are frequently used to define poor employment conditions and precarious employment.<sup>4</sup> Numerous studies have documented that job insecurity and temporary employment have adverse effects on workers' physical and mental health (Bhattacharya and Ray 2021). Herold et al. (2024) underscore that migrants face disadvantages in employment conditions in contrast to natives, as they are mainly employed in low-skilled jobs and receive lower pay. They also face greater risks to their health while on the job. Nonetheless, a careful review of the literature surfaces conflicting findings regarding the effects of poor employment conditions: inconsistencies that can be attributed mainly due to differences in the conceptualization of key terms.

In recent decades, in addition to the expansion of non-traditional job types, other changes in work schedules, opportunities for career advancement, and employee–employer relationships have become non-standardized (Howard 2016; Scott-Marshall and Tompa 2011). These changes have necessitated a new understanding of the aspects of jobs that contribute to poor health and are strongly associated with a shift in focus from work quality to employment quality and conditions (Ahonen et al. 2018; Peckham et al. 2017; Peckham et al. 2019). This shift is reflected in related policy initiatives, the scholarly literature, and international organizations' efforts to measure job quality and employment conditions (see OECD/European Union 2017; UNECE 2015).

Over the past few decades, there has been significant policy interest in the EU in improving job quality,<sup>5</sup> which, in turn, has driven research interest in differentiating between high-quality and low-quality jobs. Scholars agree that there is a conceptual difference between the quality of *employment* (referring to the contractual and interpersonal aspects of the employer–employee relationship) and the quality of *work* (i.e., the nature of tasks and the work environment), even though they cannot agree on a measure of *job quality* that takes into account both of the aforementioned dimensions (Alon 2023; Julià et al. 2017; McNamara et al. 2021; Peckham et al. 2019; Steffgen et al. 2020; UNECE 2015).

Examples of low-quality jobs are “dead-end jobs” and “low pay/low productivity jobs.” Individuals who are self-employed or work from home (as is the case for many working in the platform economy), hold multiple jobs, and are employed under temporary, seasonal, part-time, on-call, day hire, casual, or short-term contracts; all may be considered as working in lower quality and in fact precarious jobs. That said, even workers with standard employment contracts that expose them to organizational changes like outsourcing, privatization, downsizing, or restructuring may also be treated as doing precarious work (Jain and Hassard 2014).

The primary focus of this paper is on poor employment quality. According to Julià et al. (2017, pp. 391–92), “*employment quality can... be conceived as a set of arrangements surrounding the work task itself. As such, employment quality refers to the employment conditions—i.e., mutual agreements between employees and their employer about the organization of employment in terms of contract, rewards, working hours, etc.*” We assume that, across the quality spectrum, jobs that resemble standard employment are at the higher end, whereas jobs that deviate from that “standard” place workers in poorer employment conditions.<sup>6</sup> By extension, in cases of precarious employment, the mutual agreements between employers and employees that Julià et al. (2017) refer to are either absent or such that they disadvantage employees.

Empirical findings indicate that TCNs in the EU have more difficulties accessing the labor market. What is more, TCNs are typically heavily dependent on their initial employer in the country of entry because it is through that employer that they usually secure a work permit and the right to reside in the country. This high dependency puts TCNs at a higher risk of exploitation, which is a significant concern in related research (Cremers 2024).<sup>7</sup> Based on Eurostat<sup>8</sup> data, once they have begun working, TCNs are more likely to work part-time and/or temporarily, and to be overqualified for the positions they take in their country of settlement. Being employed in such conditions, TCNs are often excluded, or covered only partially, by social security (Cremers 2024). In great part due to these circumstances, TCNs are also more likely than other workers to be exposed to the risk of poverty, and also to the risk of in-work poverty (Balourdos and Petraki 2019; Corbanese and Rosas 2020).

## 1.2. Immigrants in the EU and Health Outcomes

European Union policy documents and research reports frequently refer to health as a human right. However, that right is not ensured for all immigrants, and particularly for TCNs (Keygnaert et al. 2014; Lebaro et al. 2020). At the time of resettlement, the general health status of immigrants might be better than that of the native-born population, something that the literature has referred to as the “immigrant health paradox” or the “healthy migrant effect” (Mackenbach et al. 2005; Mladovsky 2007; Neuman 2014). Depending on policies and practices in the country of reception, though, immigrants may experience discrimination (González-Gil et al. 2013), a decline in their socioeconomic position, inequities in access to healthcare and related social services (OECD/European Union 2023; Trivedi and Ayanian 2006; Dourgnon et al. 2023; Weber et al. 2018), and attendant effects on health, including higher incidence of suffering from high blood pressure, diabetes, and mental health problems (Ingleby 2012; Janssens et al. 2005; Keygnaert et al. 2012; Savas et al. 2024).

How employment conditions affect TCNs' health is understudied. [Herold et al. \(2024\)](#) suggest that the relationship between the employment conditions in which immigrants work and health would benefit from the deployment of large-scale surveys that explicitly measure precarious work or poor employment conditions. Limited data availability and definitional ambiguities, however, present us with difficulties that affect the indicators created and meant to serve as proxies for employment quality. Instability, insecurity, and unpredictability have been incorrectly considered interchangeable, frequently leading to confusion in interpreting empirical findings. Part-time or temporary work arrangements, for example, have commonly and erroneously been perceived to carry similar meaning, even across national contexts with very different employment markets, welfare state models, and applicable policy and regulatory frameworks ([Kalleberg and Vallas 2018](#)). Finally, some investigators<sup>9</sup> have employed single or composite/synthetic indicators of employment conditions,<sup>10</sup> while others base their analysis on multiple indicators without attempting to create summary or aggregate measures ([Herold et al. 2024](#)).

Using data for the period 2009–2019, [Donnelly and Schoenbachler \(2021\)](#) examined how the association between part-time work and self-rated health varied across state-level institutional contexts, i.e., across states with different policies regarding employment in the United States. They found that workers (not immigrant workers per se) in part-time work, especially involuntary part-time work, have greater odds of fair/poor health compared to full-time workers. The adverse health consequences associated with part-time employment may emerge because part-time workers earn less, report more stress, and experience worse mental health compared to full-time workers. Although many scholars discuss the health-related risks associated with disadvantageous employment conditions, empirical evidence is scarce regarding their direct effects on health among immigrants, and specifically among TCNs.

Consequently, we formulated the following research question:

**RQ1:** Do poor employment conditions have an influence on TCNs' self-perceived health in European countries?

### *1.3. The Impact of the Policy Context in the Country of Settlement*

The country context is particularly important for the health of adults, especially those with limited financial resources, including many immigrants ([Montez et al. 2019](#)). Employees with an immigrant background will likely experience better health in countries with social and labor policies that provide stronger support and broader access to necessary social and health services. A number of institutional and socioeconomic factors play an important role in shaping population health ([Mazeikaite et al. 2021](#)), and several studies have reported significant variations with respect to population health and health inequalities across different regions and welfare state regimes (e.g., [Popham et al. 2013](#)). Employment conditions of immigrants in EU countries of settlement vary considerably and TCNs face greater barriers to labor market integration in some countries compared to others ([Guzi et al. 2023](#); [Spreckelsen et al. 2019](#); [Trenz and Triandafyllidou 2017](#)).

Although it is frequently assumed that sufficient protections are available to prevent unfavorable or poor employment conditions (including unemployment or long-term unemployment) negatively influencing TCNs' health across EU states, we problematize this assumption and investigate whether specific features of welfare regimes across EU countries (and clusters of countries) are associated with health disparities for TCNs. We follow the typology used by the [World Bank Group \(2015\)](#) to classify the countries included in this study.<sup>11</sup>

According to the WBG, the social protection system of a country is categorized based on its level of social protection spending<sup>12</sup> overall, and the coverage offered by its social

assistance system.<sup>13</sup> According to these criteria, we distinguish between four types of welfare states in Europe: (a) truncated welfare states, referring to countries with social assistance policies that offer low coverage to the poorest population quintile, despite high levels of social spending,<sup>14</sup> (b) large balanced welfare states with high social protection spending and high levels of social assistance coverage of the poorest quintile,<sup>15</sup> (c) small balanced welfare states with low social protection spending but high social assistance coverage,<sup>16</sup> and (d) limited welfare states with low social protection spending and low social assistance coverage. In the countries included in this last category,<sup>17</sup> the public sector offers minimal protection against various shocks to the poorest segments of the population.

Against this backdrop, we also pursued an answer to the following research question:

**RQ2:** Does living and working in different welfare state contexts weaken or amplify the association between poor employment conditions and health for TCNs?

## 2. Method

### 2.1. Data Sources

Our analysis makes use of two European datasets to investigate the effect of TCNs' employment conditions on immigrant health across a range of European societies: the EU labor force survey (EU-LFS) and the European Union Statistics on Income and Living Conditions (EU-SILC) survey. The first is the largest European household sample survey providing quarterly and annual results. The data pertain to the resident population aged 15 and above across EU member states, and several neighboring countries including Norway and Switzerland.<sup>18</sup> EU-LFS provides population estimates for the main labor market, including estimates regarding employment (e.g., type of contracts), unemployment, inactivity, number of hours worked, types of occupation, economic activity, and other labor-related variables. The dataset also contains important sociodemographic characteristics information. The breadth of data concerning the employment of TCNs is relatively narrow. The survey comprises variables pertaining to employment, unemployment, and the number of immigrants who are working full-time, part-time, or on a temporary basis, as well as those who are self-employed.

Similarly, the EU-SILC survey is an important EU resource and a critical source of data to compile statistics regarding income, social inclusion, and living conditions. Here, we draw particularly on data that are comparable across countries regarding income, poverty, social exclusion, housing, labor, education, and health. The survey's target population comprises private households, while observation units are households and all household members at the time of survey.<sup>19</sup> Both surveys (EU-LFS and EU-SILC) do not provide detailed information concerning migrants. Thus, no data are available regarding immigrants' legal status nor about whether their work is undeclared. Such data are generally not collected in EU surveys ([European Labour Authority—European Platform Tackling Undeclared Work 2023](#)).

All European statistics are produced by Eurostat in partnership with National Statistical Institutes and other national authorities in the EU member states using common definitions and methodologies. This partnership is known as the European Statistical System (ESS). It also includes the statistical authorities of Iceland, Liechtenstein, Norway, and Switzerland. For this study, we rely on Eurostat panel data collected in 17 European Union countries and one associated country (Norway) over a period of 15 years (2009–2023).<sup>20</sup> The countries included are Austria, Belgium, Cyprus, Czechia, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Malta, the Netherlands, Norway, Portugal, Slovenia, Spain, and Sweden.<sup>21</sup> It is a balanced panel as it includes data for all observation units (countries) for every single year:  $n = N \times T = 18 \text{ countries} \times 15 \text{ years} = 270 \text{ observations}$ .<sup>22</sup>

Given the nature of the data, we employ panel data regression analysis, also known as longitudinal or cross-sectional time-series data analysis. It is a powerful statistical method for examining how dependent variables (in this case, TCN health) are related to independent variables of interest over time and considering variations across individual units (counties, in our case). Below, we describe our independent and dependent variables further.

## 2.2. Dependent and Independent Variables

Our main aim was to examine the relationship between the self-perceived health of TCNs and poor employment conditions. For this purpose, as the key dependent variable, we used a survey item, in which participants were asked about how they would rate their overall health using one of the following options: very good, good, fair, bad, or very bad. This is a standard item recommended by the World Health Organization and used in the European Health Interview Survey (EHIS), as well as the EU Statistics on Income and Living Conditions (EU-SILC) survey. The item is meant to reflect a person's general evaluation of their health rather than capture their present state of health, which may be temporary (See [Eurostat 2024a](#)). In our analysis here, we focus particularly on TCNs aged 20–64<sup>23</sup> who responded to this question about their health. We sought to better understand the role of employment conditions in TCNs' evaluations of their health, particularly in those cases where participants' answers were "bad" or "very bad."<sup>24</sup>

Based on the theoretical and empirical findings discussed earlier and following [Peckham et al. \(2019\)](#), [Julià et al. \(2017\)](#), and [UNECE \(2015\)](#), we distinguish between the notions of *employment*, *work*, and *jobs*. Employment refers to the contractual relationship between the employer and employee. Work refers to what the worker does, and work quality concerns the nature of tasks, as well as the physical and social environment in which the work occurs. The notion of a job encompasses both work and employment. Applying these definitions, the central focus of this article is the employment conditions of TCNs. Among other advantages of this approach, there is greater availability of employment data. Relating work to employment, [Barbier \(2011\)](#) calls temporary employment, self-employment, and part-time employment "three classic indicators" of the mainstream approach to precarious work (see [Srakar et al. 2020](#)).

We approach employment conditions as a multifaceted concept in line with the broader framework described by [UNECE \(2015\)](#)<sup>25</sup> and others, such as the European Foundation for the Improvement of Living and Working Conditions (Eurofound), the International Labor Organization (ILO), and the Organization for Economic Cooperation and Development (OECD). [UNECE \(2015\)](#) assesses the quality of employment on seven dimensions.<sup>26</sup> Among them is the dimension of *security of employment* (i.e., employment stability), referring to how likely individuals are to keep their job, and *social protection*, which captures the level of support individuals receive from the government or other sources in the event of losing their job for an array of possible reasons. UNECE operationalizes this dimension using a variety of indicators that reflect, among other things, the percentage of fixed-term contracts in a labor market, and the number of individuals in temporary and precarious employment. The population of those in precarious employment includes casual, short-term, and seasonal workers, but also self-employed individuals ([UNECE 2015](#)).

Based on this conceptual framework,<sup>27</sup> we have selected proxy indicators for poor employment conditions available in the large-scale European surveys, EU-LFS and EU-SILC (described earlier). Subsequently, we employed a panel data regression model to analyze these data and examine the relationships between employment quality indicators and immigrants' (TCNs') self-perceived health across 18 countries.<sup>28</sup>

Specifically, we relied on the following EU-LFS variables: (a) temporary employment (labeled “temporary”),<sup>29</sup> (b) part-time employment (“part-time”),<sup>30</sup> and (c) being self-employed without employees.<sup>31</sup> We also included rates of long-term unemployment in our analyses as a control variable.<sup>32</sup> Existing research has identified unemployment as an important social determinant of health inequalities (Puig-Barrachina et al. 2011).<sup>33</sup> All the variables we used reflect percentages (%) among TCNs aged 20–64.<sup>34</sup>

Concerning part-time employment, there are conflicting views on whether it reflects poor employment conditions. Broughton et al. (2016)<sup>35</sup> found that, in Europe, part-time employees with “unlimited contracts” may not be much different from full-time employees. Indeed, risk indicators for part-time work include low pay, low job security, lack of career progression, lack of training, and even poor general health (Bambra et al. 2014). With respect to immigrants, in particular, Corbanese and Rosas (2020) showed that, in Europe, they tend to experience poorer labor market outcomes compared to native-born populations and are more likely to be employed part-time; that is true especially in Greece, Italy, and Spain.

A potential alternative to using the cruder measures of part-time employment available via Eurostat would be to consider “involuntary part-time” employment rates that capture the number of individuals who work part time but would like to have a full-time job if they could find such a position. Unfortunately, this was not an option for our study, because Eurostat does not provide relevant data, especially for TCNs. Still, we chose to examine the impact of part-time employment on health because, in certain countries (e.g., Cyprus, Greece, Italy, Portugal, and Spain), involuntary part-time employment is very high among the general population for both males and females (around 50% for 2023).<sup>36</sup> What is more, previous studies show that this type of employment may have detrimental effects on the health and well-being of workers (e.g., Flodgren and Bidonde 2019; Helgadóttir et al. 2019; Merino-Llorente and Sommariba-Arechavala 2020). Given evidence that TCNs represent a group with limited employment options who run a high risk of in-work poverty and social exclusion (Balourdos and Petraki 2021), we expected that part-time employment would be a significant predictor for TCNs’ bad or very bad health.

Overall, and despite some constraints inherent in the Eurostat datasets we have relied on, the selection of variables was driven by extant research. Additionally, these are variables that the European Union (EU) employs systematically to assess the social integration of migrants and are known as “Zaragoza indicators.” These indicators help monitor and analyze migrants’ social integration into EU countries of settlement with respect to employment, education, social inclusion, health, and active citizenship (see Huddleston et al. 2013).<sup>37</sup>

All participants included in the EU-LFS survey were asked to self-declare their employment conditions or labor status. To analyze participation in the labor market by nationality, the survey classifies respondents in broad groups: (a) national citizens, (b) non-national EU citizens, and (c) non-EU citizens, i.e., TCNs. Other aggregated data concerning, for example, the median age of TCNs are provided by Eurostat, but for a limited period of time. Concerning labor market indicators, Eurostat states that, due to the sampling strategy of the EU-LFS, some data have low reliability. Some are also not published at all due to very low reliability or confidentiality reasons. Thus, no data are available at the EU level regarding, for example, specific categories of immigrants, such as those working and being paid in cash, or those without formal contracts.<sup>38</sup> For the purposes of our study, it is noteworthy that Eurostat’s precarious employment indicator (i.e., percentage of workers whose contract has a maximum duration of three months) cannot be used, because there are insufficient data pertaining to TCNs.

Finally, to examine differences across European countries, we focus on differences among them with respect to the type of welfare state regime they represent, following the

WBG's typology (discussed earlier). A categorical three-level variable was constructed, with values corresponding to three different welfare state types (1 = large balanced, 2 = truncated, and 3 = limited).<sup>39</sup>

### 2.3. Analysis

All datasets were analyzed using the econometric software Stata 18.5. Several statistical models were examined, compared, and contrasted to identify the one that best fit the data.

## 3. Findings and Interpretation

Through the analysis of panel data from 18 European countries, we researched the deleterious effects of poor employment conditions by focusing on TCNs. We first empirically evaluated the relationship of three types of employment conditions (temporary, part-time, self-employed without employees) and health among TCNs. Second, assuming there are different welfare state regimes, we investigated whether the associations between employment conditions and health hold across countries, and whether the strength of these relationships varies across clusters of states with similar welfare policy frameworks.

### 3.1. Descriptive Results

Employing descriptive statistics, we first discuss the characteristics of TCNs and EU nationals that are most relevant to our study's aims, but also similarities and differences, overall and over time, across the 18 European countries we have included (17 EU Member States, plus Norway).

In 2023, almost 6.1% of the total EU population of all ages were third-country nationals (TCNs). More than one-quarter of all TCNs reside in Germany and over 15% in Spain, France, and Italy. TCNs account for a comparatively high proportion of the population (over 9%) in numerous European countries, such as Austria, Cyprus, Germany, and Spain, while in Ireland, it is somewhat lower (7.8%). The percentage of TCNs in Czechia, Denmark, France, Greece, and Italy is around 6%, and it fluctuates at lower levels in the remaining countries (see Figure 1; also: [Eurostat 2024b](#)).<sup>40</sup> Figure 2 shows that, at the EU level, in 2023, the share of nationals aged 20–64 who lived in their own country and who reported being in bad or very bad health was lower (5.8%) than that among TCNs (6.1%).<sup>41</sup> A comparison of 2009 and 2015 reveals interesting differences: for nationals, the percentage for 2009 and 2015 is slightly over 6%. For TCNs, that figure was lower in 2009 (5.9%) and highest in 2015 (6.9%).

At the EU level, both in 2015 and 2023, the shares of TCNs versus EU member state nationals who reported being in bad or very bad health were slightly higher than 1. The related figures across the countries we examined varied considerably around the EU-wide statistics. The scatter plot below (Figure 3) captures these ratios by country for both 2015 and 2023.<sup>42</sup>

There are marked differences in health status between immigrants and nationals across EU countries (see: [Eurostat 2024a](#)). For example, the upper right quadrant shows EU member states—Austria, France, and Belgium—where TCNs report being in worse health than nationals both for 2015 and 2023. Moreover, in 2015, the self-perceived health of TCNs was more than two times worse than that of nationals in three member states: Finland (2.6), Austria (2.4), and Belgium (2.2). However, in 2023, the ratio in almost all countries shows moderate values (all below 1.4), indicating that the gap in certain cases became narrower.

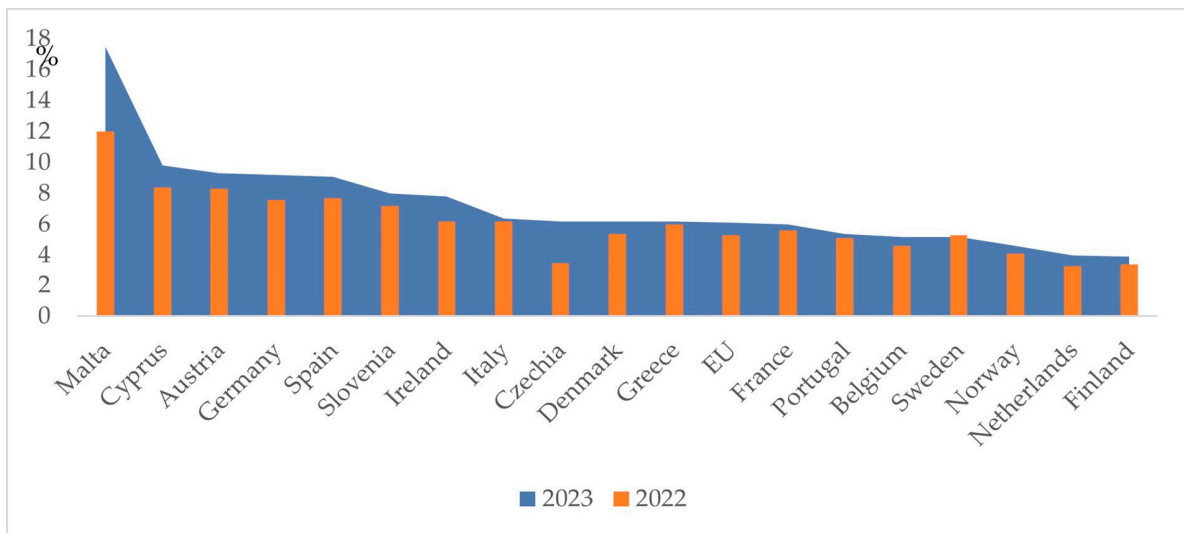


**Figure 1.** Share of third-country nationals in the total population for selected European countries and the EU, 2022–2023. (Source: Authors' elaboration with data from Eurostat's and the European Migration Network's Annual Report on Migration and Asylum for 2023 and 2024.).

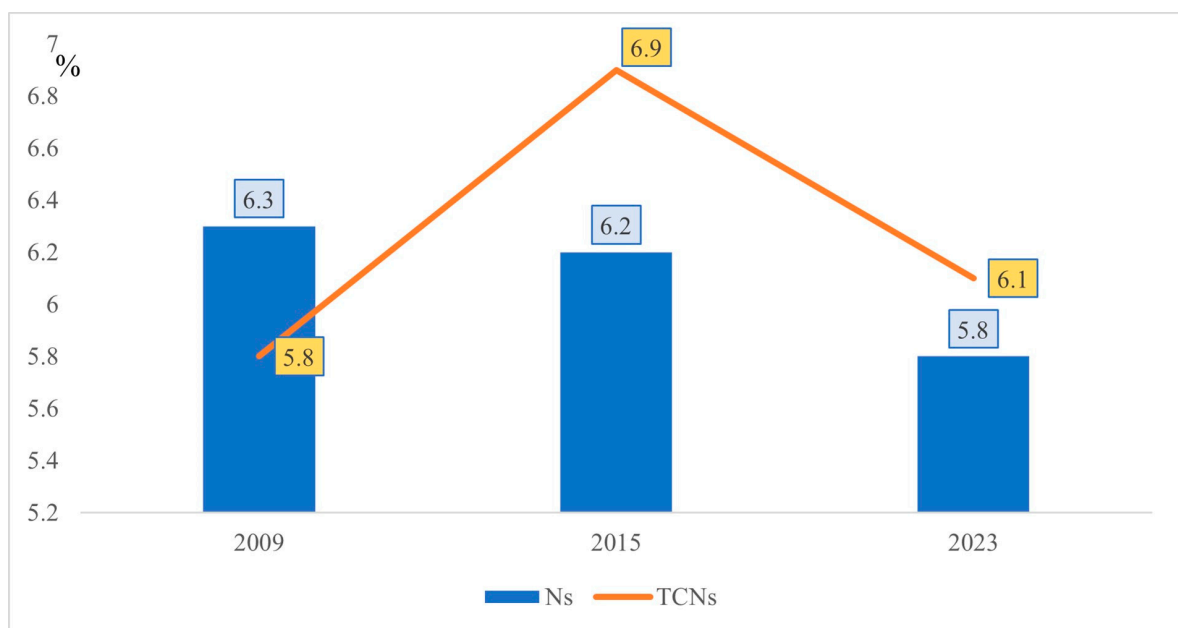


**Figure 2.** Shares of third-country nationals (TCNs) and nationals (Ns) aged 20–64 reporting being in a bad or very bad state of health across the EU-27 for the years 2009, 2015, and 2023. (Source: Authors' elaboration with data from Eurostat).

In Figure 4, we examine the ratio between the share of TCNs and Ns in bad or very bad self-perceived health for Greece, Italy, Portugal, and Spain for the years 2009, 2015, and 2023. Interestingly, at all three time points (2009, 2015, and 2023) in all countries with a truncated welfare state, the percentage of TCNs who reported being in very bad or bad health was very low. Although all European countries have welfare programs, there are clear cross-national differences with respect to their design and generosity. These differences are reflected in variations across countries in terms of poverty rates and, of course, unemployment rates and employment conditions, especially among TCNs; employment conditions which, to a greater or lesser extent, can be linked to health.

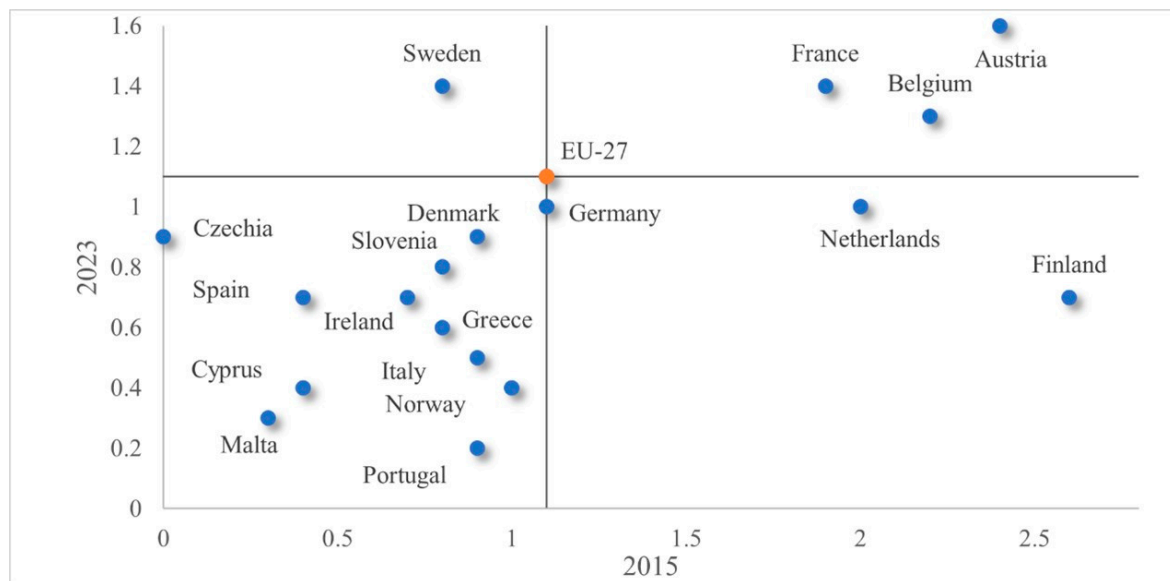


**Figure 3.** Ratio of TCNs and nationals with bad or very bad self-perceived health in 2015 and 2023. (Source: Authors' elaboration with data from Eurostat.).

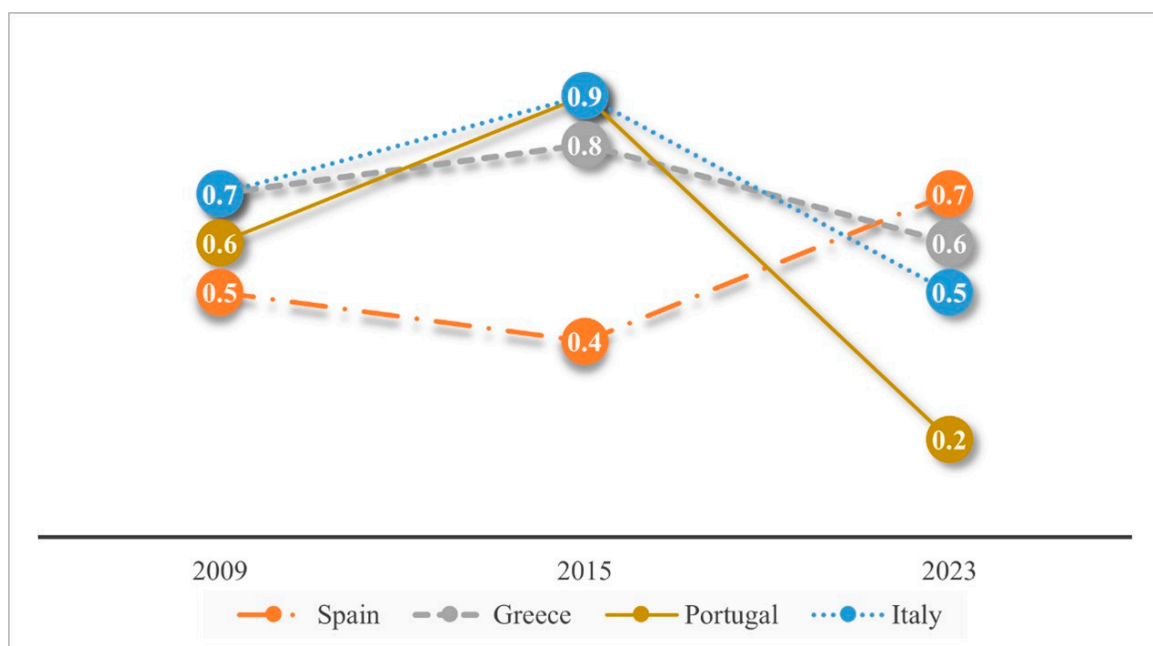


**Figure 4.** Ratio between the share of TCNs and Ns in bad or very bad state of self-perceived health for Greece, Spain, Italy, and Portugal in 2009, 2015, and 2023. (Source: Authors' elaboration with data from Eurostat.).

Putting aside legal, cultural, and other barriers that determine the profile of the immigrant population in a country, many migrants are young, healthy, and generally have little contact with the health systems of the countries they move to; that said, some may need to access health services (Rechel et al. 2013). In January 2022, the median age<sup>43</sup> of the European population was 45.4 years and that of non-EU citizens (TCNs) was 35.2 years. TCNs in Greece were the oldest, with a median age of 39.8 years, followed by Ireland (39.2), Portugal and Slovenia (35.8 in both countries), and Italy (35.7). In contrast, Sweden had a TCN population with the lowest median age (32), followed by Norway (33), the Netherlands (33.2), Finland (33.5), and Germany (34.1).<sup>44</sup>

The data reflect a long-standing trend. For example, it was observed that, in 2006, the median age of TCNs in the EU was 27.7 years. At the time, Denmark had the youngest population of immigrants, with half of them younger than 25 and 80% younger than 35. The Netherlands and Sweden also received relatively more young immigrants than others; in 2006, 70% were younger than 35 (Herm 2008).

Migration is more common at a younger adult age and more infrequent as adults become older. Thus, in 2022, people of retirement age (older than 65) accounted for only 7.6% of the total number of TCNs in the 27 EU member states. Among the countries included in our study (i.e., 17 EU states, plus Norway), most immigrants/TCNs are currently of a younger age in comparison to the native-born population (Figure 5).<sup>45</sup> In 2022, the population of TCNs less than twenty years old in all the countries we have included here and across the entire EU by far exceeded the relative size of the elderly TCN population.<sup>46</sup> Only in France did TCNs aged 65 and over exceed 10% of the immigrant population. In the rest of the countries, it ranged between 3.4% and 9%. It is worth mentioning that, in most European countries, the elderly native-born population is over 20%, indicating an aging population.<sup>47</sup>

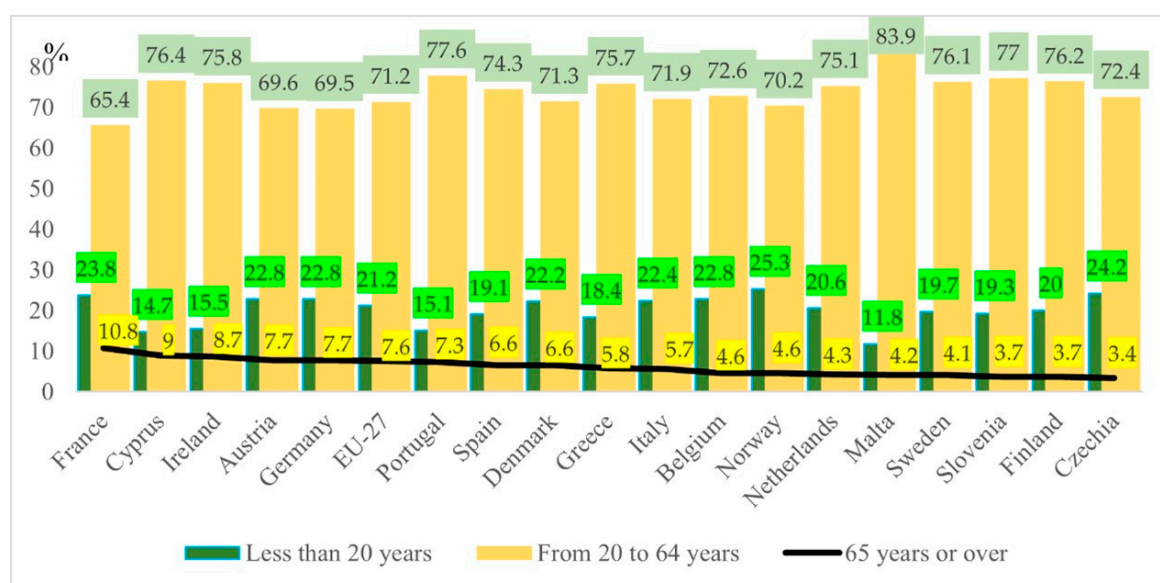


**Figure 5.** Distribution of immigrants by age group, 2022. (Source: Authors' elaboration with data from Eurostat.).

This reality is also reflected in the elderly-to-youth ratios across countries.<sup>48</sup> As shown in Figure 6, as far as the population of nationals is concerned, in all countries and the EU overall, the elderly population significantly exceeded the population of youth/children. The ratio tends to be higher in Italy (152.7), Portugal (137.9), Germany (131.2), and Greece (130.8). In contrast, the highest such ratios among TCNs in Europe are observed in Cyprus (61.2), Ireland (56.1), and Portugal (48.3). Taken together, the foregoing data suggest that the two populations—EU nationals and TCNs—have a totally different age structure, one that varies significantly across the 18 countries we examined.

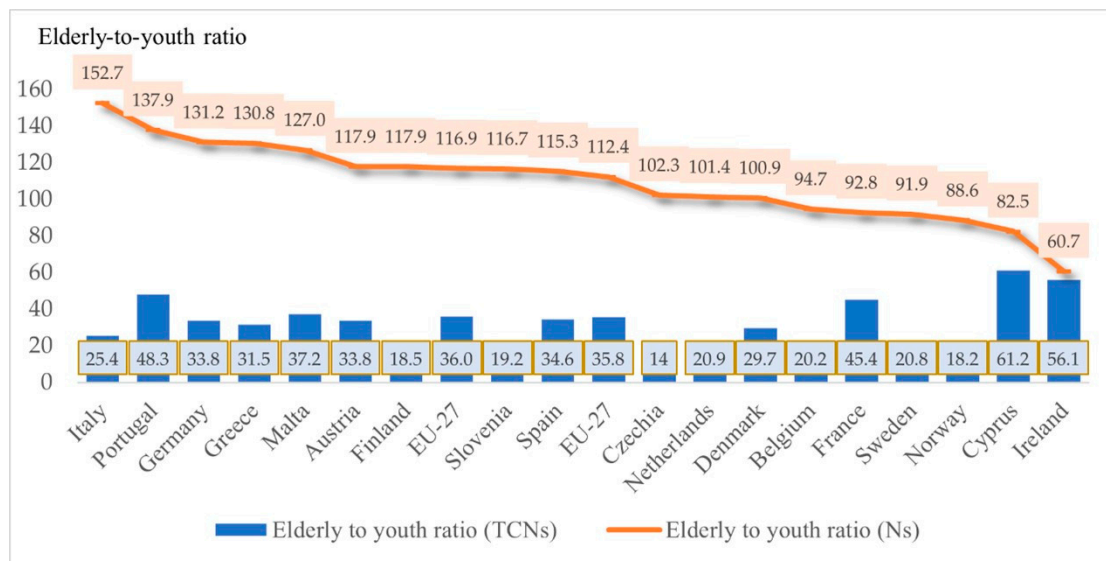


**Figure 6.** Elderly-to-youth ratio for third-country nationals (TCNs) and nationals (Ns) for selected European countries and the EU-27, 2023. (Source: Authors' elaboration with data from Eurostat.).

Table 1 displays the summary statistics of our study's data, focusing on self-perceived health status for the main population of interest here, adults aged 20–64, and the variation across countries and time (see also Figure 6). Between 2009 and 2023, almost 5.9% of European nationals perceived their health as very bad or bad. The respective value for TCNs was almost identical: 5.8%. However, there was large variation across countries. The highest values of the coefficient of variation emerged in Czechia (84.6%), Finland (67.7%), and the Netherlands (67.5%), as well as Italy (55.9%), Portugal (45.8%), and Sweden (45.4%).

Over the period we analyzed, Austria, Belgium, France, Denmark, and Norway had the largest number of TCNs who perceived their health as very bad or bad. The analysis points to a clear divide among the 18 countries that were included, with the “healthier” southern region of Europe and the rest of Europe, where TCNs reported being in worse health.<sup>49</sup> That said, numerous factors may mediate and explain these differences—e.g., the type of welfare state—and there is no simple explanation (Table 1).

Non-standard forms of employment—that is, all forms of employment that are not based on a full-time permanent contract—have increased over the past few decades, while those who are self-employed (without employees who work for them) experienced a reduction in worktime (ILO 2016). Recent data show that the share of employees in the EU with a contract of limited duration increased between 2013 and 2023 by 0.9 percentage points (pp hereafter) among TCNs, while it decreased by 1.9 pp among nationals. During the same time period, the share of part-time employment decreased in the EU, regardless of citizenship: notably larger decreases were observed among TCNs (down 5.6 pp) than nationals (down 1.0 pp). In Figure 7, we can see that there is a negative correlation between temporary and part-time employment. That is, the percentage of TCNs in temporary employment decreased as part-time employment increased. That said, this relationship was weak and depended on country-specific opportunities and the institutional context. Also, the unemployment rate among persons aged 20–64 living in the EU in 2023 was 5.4% for nationals and 6.9% for TCNs. Among EU member states, the highest rate was 23.4% in Sweden; that is, 20.4 pp above the rate in Czechia (3.0%), where the lowest rate was observed (Eurostat 2024b).

**Table 1.** Summary statistics (mean values, 2009–2023) of the share of TCNs with very bad or bad perceived health, aged 20–64, by country.

| Dependent Variable: Self-Perceived Bad/Very Bad Health Among TCNs |      |         |         |       |                          |          |
|-------------------------------------------------------------------|------|---------|---------|-------|--------------------------|----------|
| Country                                                           | Mean | Minimum | Maximum | Range | Coefficient of Variation | Skewness |
| Austria                                                           | 11.4 | 6.9     | 14.8    | 7.9   | 21.4                     | −0.4     |
| Belgium                                                           | 10.1 | 7.2     | 14.9    | 7.7   | 24.7                     | 0.8      |
| Cyprus                                                            | 1.5  | 0.7     | 2.5     | 1.8   | 35.9                     | 0.6      |
| Czechia                                                           | 2.7  | 0       | 8.1     | 8.1   | 84.6                     | 1.0      |
| Denmark                                                           | 9.9  | 4.8     | 14.6    | 9.8   | 28.8                     | 0.1      |
| Finland                                                           | 4.0  | 1.1     | 10.4    | 9.3   | 67.7                     | 1.0      |
| France                                                            | 9.9  | 7.4     | 13.1    | 5.7   | 15.8                     | 0.3      |
| Germany                                                           | 7.1  | 4.3     | 12.5    | 8.2   | 30.0                     | 1.2      |
| Greece                                                            | 2.7  | 1.5     | 4       | 2.5   | 31.0                     | 0.1      |
| Ireland                                                           | 2.5  | 0.8     | 4.5     | 3.7   | 42.3                     | 0.1      |
| Italy                                                             | 3.1  | 0.7     | 5.6     | 4.9   | 55.9                     | 0.0      |
| Malta                                                             | 1.2  | 0.2     | 3.6     | 3.4   | 69.3                     | 1.6      |
| Netherlands                                                       | 6.2  | 0       | 13.1    | 13.1  | 67.5                     | 0.0      |
| Norway                                                            | 7.5  | 3.5     | 13.9    | 10.4  | 36.7                     | 0.8      |
| Portugal                                                          | 4.7  | 1.5     | 9.3     | 7.8   | 45.8                     | 0.2      |
| Slovenia                                                          | 7.3  | 3.7     | 11.6    | 7.9   | 30.4                     | −0.1     |
| Spain                                                             | 2.7  | 1.5     | 4       | 2.5   | 31.0                     | 0.1      |
| Sweden                                                            | 6.8  | 2       | 11.6    | 9.6   | 45.4                     | −0.1     |
| Total                                                             | 5.9  | 0       | 14.9    | 14.9  | 64.7                     | 0.5      |

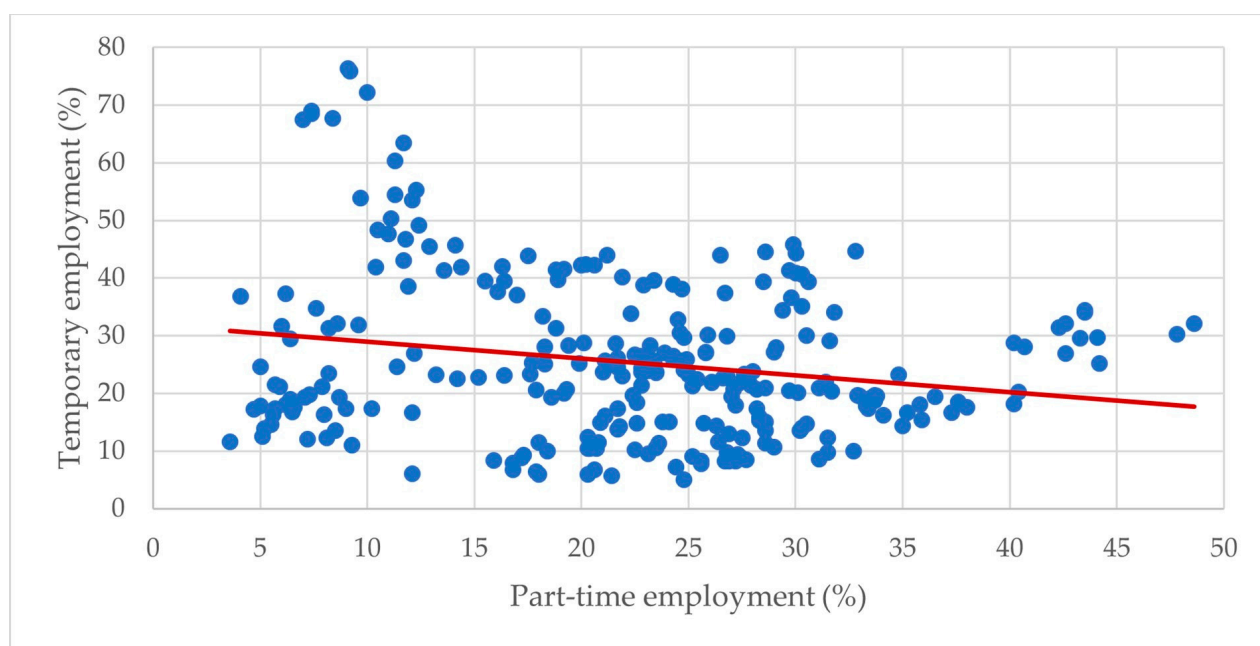


**Figure 7.** Share of part-time and temporary employment for TCNs aged 20–64. (Note: The data pertain to 18 countries for 2009–2023 and were procured from Eurostat. The red line is the trend line, blue points are country observations).

Globally, the number of people in vulnerable forms of employment (e.g., self-employed) is rising. However, in 2023, in the case of TCNs across the countries we examined, and with Slovenia as an outlier, we found that the rate of TCNs who were self-employed (without employees) in Portugal, Greece, Italy, and Spain was around 10%.

In examining European countries' very long-term unemployment rates over two years, (2009 and 2023), we found that Slovenia and Belgium had very high rates for both years, while Cyprus, Greece, Italy, and Norway had the highest rates in 2023 (Figure 8). Although the long-term unemployment rate has fallen sharply in many countries since 2009 (e.g., Germany, down 28.8 pp), it fluctuates above 30% in Belgium, Cyprus, Greece, Germany, Italy, Norway, Slovenia, and Sweden (Figure 8).

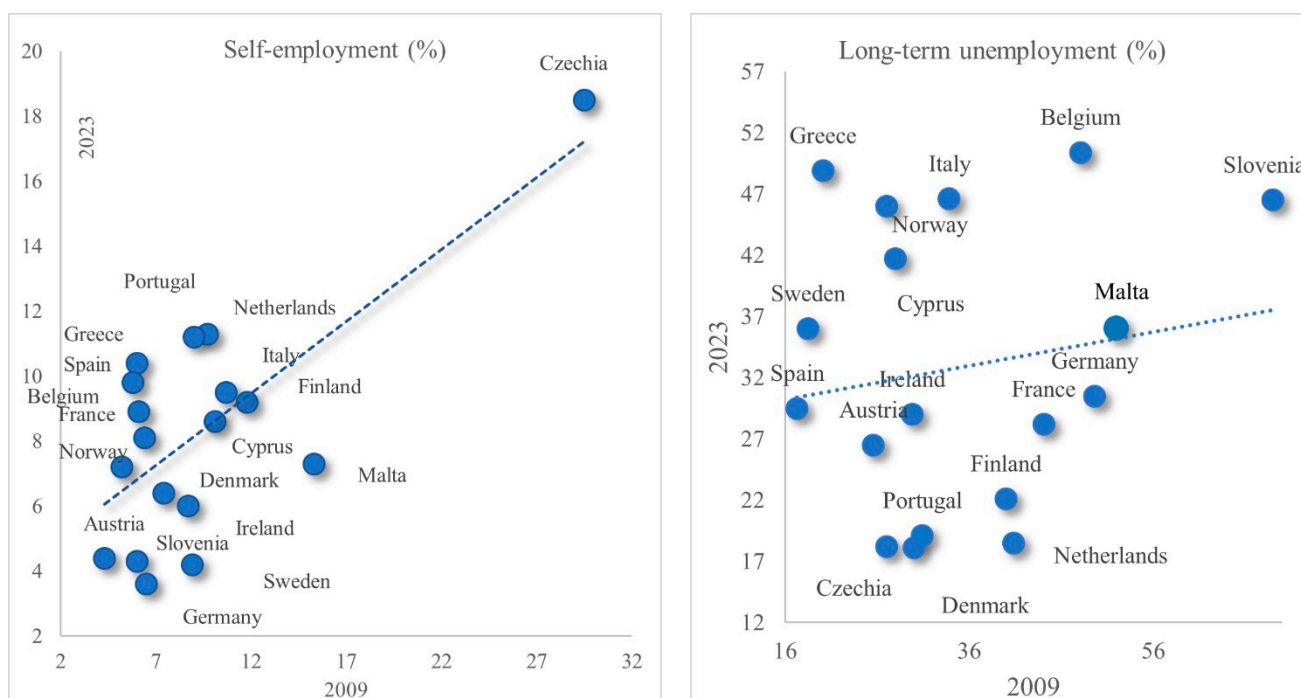


**Figure 8.** Share of self-employed TCNs without employees and long-term unemployment (%) among TCNs aged 20–64 in 2009 versus 2023. (Source: Authors' elaboration with data from Eurostat. The blue line is the trend line, blue points are country observations).

Concerning the distribution of TCNs by sex in 2023, we see approximately the same proportion of men and women across the EU in 2023 (50.7% and 49.3% respectively). In that same year, the member states reporting the highest share of male TCNs were, in descending order, Slovenia (63.9%), Malta (62.3%), Finland (54.3%), and Greece (53%). In contrast, the highest share of female immigrants (TCNs) was reported in Cyprus (56.2%), followed by Norway (52.9%) and Denmark (52.8%) (Figure 9).

With respect to employment, the data paint a rather different picture. As seen in Figure 10, employment rates varied considerably by citizenship status, sex, and country. For example, in 2023, in a series of countries including those with a truncated welfare state (Greece, Italy, Portugal), but also Czechia, Ireland, Malta, and Slovenia, the employment rate for TCNs who identified as male (aged 20–64) exceeded that of country nationals. It is noteworthy that, while in countries like Slovenia, Portugal, and Greece, the employment rate for male TCNs was 13, 9, and 8 percentage points, respectively, which was higher than for nationals, in the Netherlands, Germany, Norway, and Austria, the employment rate of male TCNs was 15.7, 12.8, 12.0, and 10.5 percentage points lower than for nationals. These noteworthy differences may be explained by a variety of factors, the discussion of which goes beyond the scope of this article.

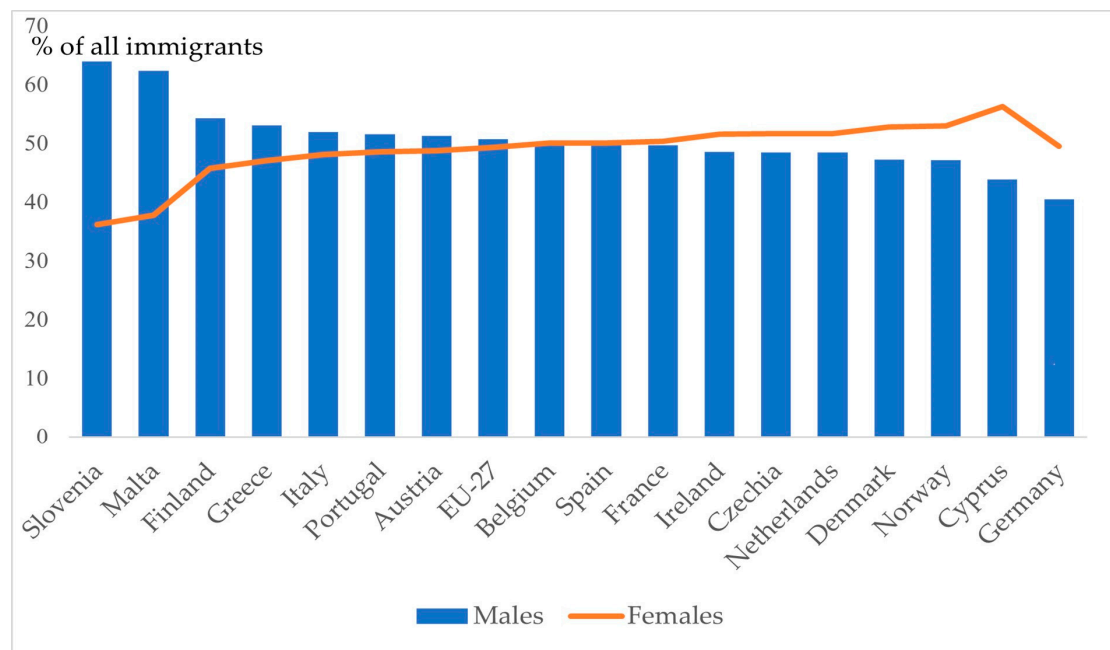


**Figure 9.** TCNs by sex, 2023. (Source: Authors' elaboration with data from Eurostat).

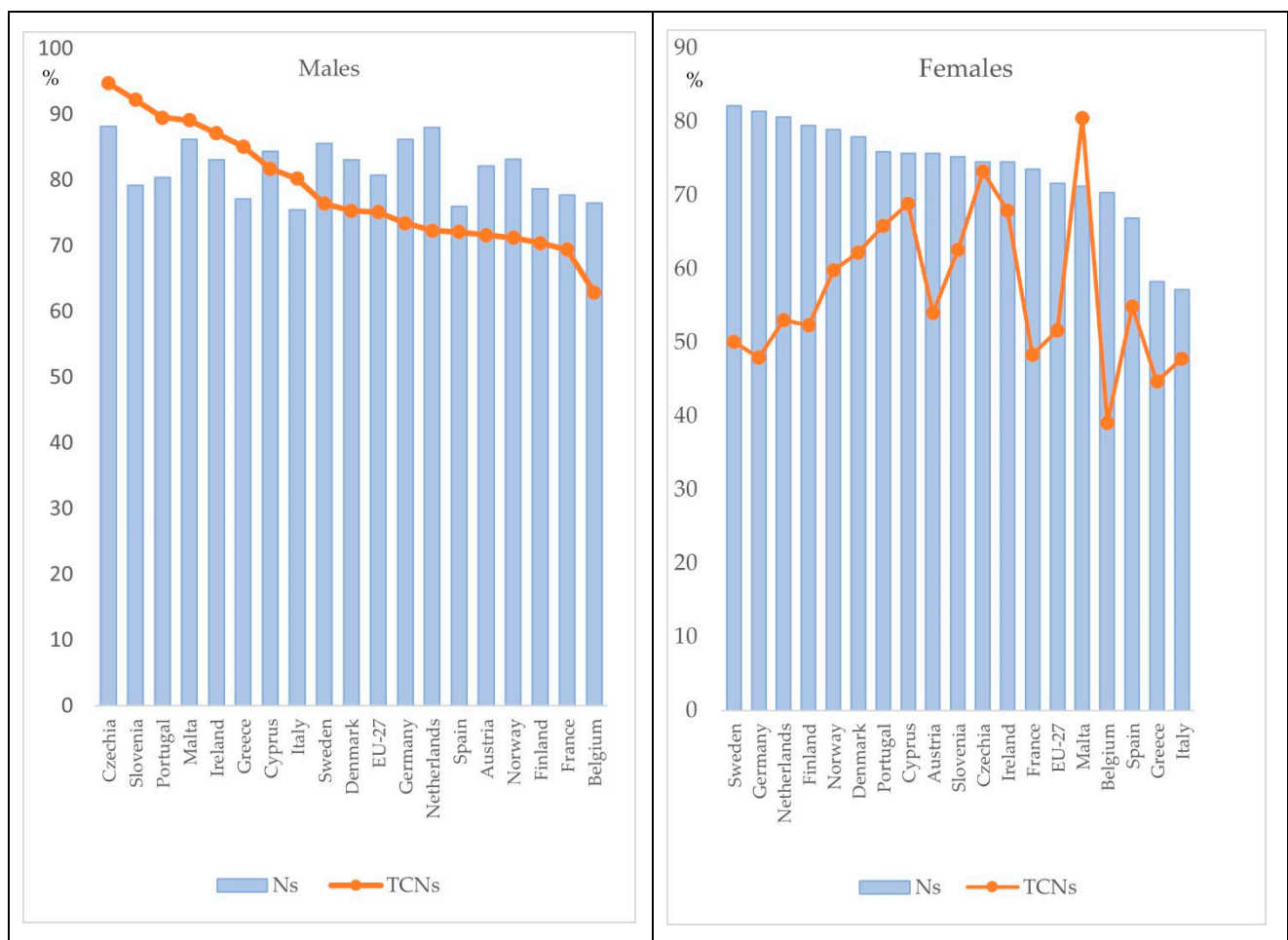


**Figure 10.** Employment rate for country nationals (Ns) and third-country nationals (TCNs) by sex 2023. (Source: Authors' elaboration with data from Eurostat.).

The situation is rather different when examining the employment rate among females. In all countries, with the exception for Malta, females who are also country nationals have higher employment rates than females who are TCNs. The differences between the two groups (Ns-TCNs) of females (aged 20–64) are impressive. The largest gaps were recorded in Sweden (32.1 percentage points [pp]), Germany (33.2 pp), Belgium (31.3 pp), the Netherlands (27.6 pp), Finland (27.2 pp), France (25.2 pp), and Austria (21.7). Across the EU-27, the difference was 20 percentage points. Moreover, the employment rate differences between male and female TCNs were also remarkable and in favor of males. The gap was narrower in Malta (only 8.6 pp higher for males), but it was over 25 pp in Germany, 25.5 pp in Sweden, 29.6 pp in Slovenia, 32.4 pp in Italy, and 40.0 pp in Greece (Figure 10).

A variety of factors contribute to these patterns. They could be explained partially by gender inequalities evident in job markets across Europe more broadly speaking (EIGE 2022). In light of the “double disadvantage” that women who are immigrants are likely to face, the need for a gender-focused approach to social integration policies has become increasingly recognized at the EU level. Although women’s employment rate in the EU is higher today than ever before, many women still experience barriers to joining and remaining in the labor market. Some women are underrepresented in the labor market. This is frequently the result of the intersection of gender with additional conditions of vulnerability or marginalization such as belonging to an ethnic or religious minority or having a migrant background (European Commission 2020).

### 3.2. Regression Analysis

Panel data regression analysis is a well-regarded and commonly employed data analysis method that facilitates examining data from numerous entities, countries, in our case, over time. With observations that span both time and entities, in a cross-section, more information is available, allowing for more efficient estimates. We expected that the results from the panel data regression analysis would show, for example, that higher values of temporary and part-time employment among TCNs are associated with higher values of bad or very bad self-perceived health. The results of these analyses are presented in Table 2, and the coefficient values provide insight into the role of each independent variable in TCNs’ self-perceived health status.

The regression model examined was as follows:

$$\text{SPHBVBit} = \beta_0 + b_1\text{Temporary}_{it} + b_2\text{Partime}_{it} + b_3\text{Selfemployed}_{it} + b_4\text{Longtermunemployed}_{it} + u_{it} \quad (1)$$

In Equation (1) above, the subscript  $i$  shows the entities (countries) and  $t$  corresponds to time (years). Temporary, part-time, self-employed, and long-unemployed represent the independent variables (temporary and part-time employment, self-employed without employees, and long-term unemployment), while SPHBVB represents the dependent variable. The constant term is denoted by  $\beta_0$ , and  $b_1$ ,  $b_2$ ,  $b_3$ , and  $b_4$  are the coefficients of the independent variables, while  $u_{it}$  is the error term.

Different models for panel data regression analysis were estimated initially:<sup>50</sup> common-effects, fixed-effects,<sup>51</sup> and random-effects models. Although the fixed-effects model is the most frequently used model in panel data analysis, we determined that employing a random-effects model in this case was most appropriate. For the purposes of our analysis, first, we estimated the correlations among all variables. The strongest correlations were those between TCNs’ self-perceived bad or very bad health (SPHBVB) and (a) self-employment without employees ( $r = -0.4442$ ) and (b) part-time employment ( $r = 0.3902$ ). These two independent variables were also moderately correlated with each other ( $r = -0.3547$ ).

**Table 2.** Random-effects regression with TCNs' self-perceived health (bad or very bad) as the dependent variable.

| Independent Variables                                 | Dependent Variable:<br>Bad or Very Bad Self-Perceived Health (TCNs) |                         |                         |                         |
|-------------------------------------------------------|---------------------------------------------------------------------|-------------------------|-------------------------|-------------------------|
|                                                       | Model 1                                                             | Model 2                 | Model 3                 | Model 4                 |
| Constant                                              | 7.0443<br>(1.7008) ***                                              | 5.471<br>(1.6800) ***   | 7.1576<br>(1.7409) ***  | 5.9133<br>(1.6725) ***  |
| Temporary employment                                  | −0.02636<br>(0.0401)                                                | −0.0295<br>(0.0407)     | −0.0268<br>(0.0409)     | −0.0322<br>(0.0425)     |
| Part-time employment                                  | 0.0694<br>(0.0238) ***                                              | 0.0630<br>(0.0275) **   | 0.0838<br>(0.0277) ***  | 0.0668<br>(0.0290) **   |
| Self-employed TCNs (without also<br>having employees) | −0.2514<br>(0.0519) ***                                             | −0.2573<br>(0.0838) *** | −0.2352<br>(0.0552) *** | −0.3023<br>(0.0780) *** |
| Long-term unemployment                                |                                                                     |                         | −0.0142<br>(0.0180)     |                         |
| Welfare state (truncated: omitted category)           |                                                                     |                         |                         |                         |
| Large balanced welfare state                          |                                                                     | 2.5620<br>(1.0678) **   |                         | 2.4121<br>(1.0648) **   |
| Limited balanced welfare state                        |                                                                     | 3.9990<br>(1.7434) **   |                         | 4.7572<br>(1.6630) ***  |
| Small balanced welfare state                          |                                                                     | −1.5134<br>(1.0258)     |                         |                         |
| Wald chi-squared test                                 | 42.98<br>(0.000)                                                    | -                       | 43.26<br>(0.000)        | 60.19<br>(0.000)        |
| R-squared                                             | 0.2852                                                              | 0.4141                  | 0.2895                  | 0.3789                  |
| Observations                                          | 270                                                                 | 270                     | 270                     | 255 (without Malta)     |

Note: Robust standard errors in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ .

Subsequently, we conducted several tests and carried out a variety of regression models. The results from the Breusch–Pagan test showed that the random-effects model was preferable compared to an OLS approach. After testing for autocorrelation and heteroscedasticity,<sup>52</sup> robust estimations and a random-effect model were selected as the most appropriate.<sup>53</sup>

We analyzed the data by employing four models with different sets of independent variables (Table 2). Columns under Models 1, 2, and 3 correspond to analyses that account for different sets of variables that we theorize impact SPHBVB among TCNs across 18 countries and between 2009 and 2023 (i.e., 270 cases). Model 1 includes only temporary employment, part-time employment, and being self-employed without employees. Model 2 adds two categories of the 'welfare state type' qualitative variable: 'truncated welfare state' and 'limited welfare state'. In Model 3, we included the variable 'long-term unemployment'.<sup>54</sup> Finally, we tested Model 4 to verify the results of Model 3, but using fewer cases. Specifically, in Model 4, we excluded Malta, due largely to data limitations.<sup>55</sup>

The regression analysis showed that the effect and significance of explanatory variables on TCNs' health is not the same for all models (1 through 4). Namely, the results from all specified models suggest that temporary employment is not a significant predictor of bad or very bad health among TCNs. Arguably, temporary workers have lower expectations for job security and, therefore, their employment conditions do not significantly affect their health. This result is in line with the findings of other studies. [Waenerlund et al. \(2011\)](#), for instance, found that, in Sweden, temporary employment may have negative effects on

self-reported health status, even after adjusting for previous health status and sociodemographic variables. However, job insecurity and low cash margin may partially mediate the relationship between temporary employment and self-rated health status. Similarly, [Dawson et al. \(2017\)](#) found that, in Britain, individuals on temporary employment contracts, especially casuals, reported lower well-being than their counterparts in permanent employment. Dawson et al.'s multivariate analysis showed that this relationship was clearer in the case of well-being measures capturing psychological well-being (psychological distress and life dissatisfaction) and less so for those measures more closely related to subjective health status (anxiety/depression and poor general health).

Contrary to temporary employment, higher part-term employment significantly predicted an increase in TCNs' self-perceived bad or very bad health, but the effect is marginal, as indicated by the low value of the regression coefficient (ranging from 0.063 to 0.084 across all models). Generally, part-time employment is a common work arrangement in many European countries. It can be precarious, insecure, and may not provide individuals with opportunities for advancement. This reality could explain why part-time employment, especially when it is involuntary, tends to be associated with worse health outcomes. [Donnelly and Schoenbachler's \(2021\)](#) findings from a study in the U.S., discussed earlier, show that rates of fair/poor health are greatest among part-time workers, and that there is variation across U.S. states.<sup>56</sup> Other studies focused on Europe have also associated part-time employment with lower levels of job satisfaction, mental well-being, self-perceived health, and physical health, as well as increased work stress ([Merino-Llorente and Sommariba-Arechavala 2020](#)).<sup>57</sup>

Interestingly, the effects of self-employment were negative and highly significant. The variety of reasons why immigrants may turn to self-employment complicate explaining this relationship. Immigrants may turn to self-employment as an escape from unfavorable working conditions, long-term unemployment, in-work poverty, discrimination, and other labor market restrictions, especially those typically found in truncated welfare states ([Balourdos 2016](#); [Balourdos and Petraki 2019, 2021](#)). Moreover, the disadvantage or blockage hypothesis suggests that immigrants enter self-employment out of necessity because they have low skills, lack of education, language difficulties, and because they may experience discrimination ([OECD 2010](#), p. 16).

Considering the combined effects of the explanatory variables, the results of the regression model analysis showed that the three independent variables pertaining to employment explained 28.52% of the variance in SPHBVB (Column/Model 1). This figure increased to 41.41% when we also accounted for differences across types of welfare states (Column/Model 2).<sup>58</sup> According to this model, immigrants employed in a country with a large and balanced welfare system are much more likely to have higher levels of SPHBVB than those employed and living in a country with characteristics of a truncated welfare state. Moreover, TCNs working in a limited welfare state context (as is the case of Czechia) are also more likely to report being in bad or very bad health. Finally, the effect of living in a small balanced welfare state (such as Malta) is negative<sup>59</sup> but not statistically significant. The results from testing Model 4—the model excluding Malta—confirmed that, beyond the labor-market-related variables, the type of welfare state TCNs have settled in matters too when it comes to their self-perceived health status.

This finding is significant and consistent with the results of other empirical research, although the research did not focus on TCNs. For example, research has revealed large differences across European countries with respect to welfare dependency. [Brücker et al. \(2002\)](#) identified two groups of countries: (a) Germany, Greece, Portugal, Spain, and the UK, where differences in welfare dependency rates between immigrants and the native-born population are not significant, and (b) Austria, Belgium, France, the Netherlands, and

Nordic countries, where social benefits are higher for immigrants than for natives (see also: [Kunißen 2021](#); [Bertin et al. 2021](#)). Thus, the differences across types of welfare state that emerged in our analyses may well be attributed to countries' institutional setting and the constellation of policies that shape the local labor market. In a similar manner, [Sainsbury's \(2012\)](#) empirical findings using data from the Luxembourg Income Study confirm the existence of substantial cross-national variations in immigrants' social rights, suggesting that the type of welfare regime matters. Immigrants, according to [Sainsbury \(2012\)](#), fare best in social–democratic welfare regimes, as opposed to conservative corporatist and liberal regimes.

[Hooijer and Picot \(2015\)](#) suggest that immigrants' well-being in advanced welfare states cannot be explained by welfare generosity alone because several institutional mechanisms determine the extent to which immigrants benefit from that generosity. Their empirical findings show that “unwanted immigrants”<sup>60</sup> lack access to the labor market and to welfare state resources at the same level as the native-born population. Referring to employment opportunities, Hooijer's and Picot's findings and interpretation support the hypothesis that strong employment protections for workers in full-time permanent jobs have negative consequences for immigrants. The latter may find it more difficult to find stable jobs in a highly regulated labor market. On the flipside, a less regulated labor market may be more accessible to immigrants, but it may offer mostly low-paying jobs ([Hooijer and Picot 2015](#); [Kogan 2006](#)).

#### 4. Discussion

After years of limited change, the beginning of 2023 saw the share of third-country nationals (TCNs) residing regularly in the EU and Norway increase in both relative and absolute terms, growing from 5.3% (or approximately 24 million) to 6.1% of the total population of the EU and Norway (i.e., approximately 27.4 million) ([EMN and Eurostat 2024](#)). While the vast majority of migrants arrive in Europe and work legally, there was an increase in irregular migration in 2023. Authorities reported approximately 380,000 illegal border crossings of the EU's external border, an increase of 17% compared to 2022. In fact, 2023 was the third consecutive year during which there was a significant rise in the number of irregular entries. That was also the highest annual figure since the 2015–2016 migration crisis ([EMN and Eurostat 2024](#); [FRONTEX 2023](#)).

In several European countries, TCNs, if not all immigrants, are more likely to experience poorer health and, in certain cases, face medical needs that go unmet. Many factors contribute to this, including low-quality employment, limited financial resources, discrimination, not knowing how to access services, unemployment, and limited health insurance. This is particularly true in countries with a truncated welfare state (for example, see [Fouskas' \(2018, 2023\)](#) for excellent studies focused on Greece).

Our findings suggest that factors related to poor employment play a significant role in third-country nationals' (TCNs') perceptions of being in bad or very bad health in 18 European countries. Random-effects regression analyses using data from two major European surveys for the period 2009–2023 (i.e., EU-SILC and EU-LFS) showed that working under two different types of non-standard contracts—namely, part-time and being self-employed (without simultaneously having employees)—predicted higher and lower levels of bad or very bad self-perceived health, respectively. The latter results suggest psychological aspects, including perceived insecurity and a sense of a lack of choice within a given labor market, may be important dimensions of poor employment conditions that contribute significantly to bad or very bad self-perceived health among immigrants.

Self-employment (without also having employees) seems to be the strongest predictor. Extant research shows clearly that discrimination can manifest either as blocking

immigrants' access to the labor market in general, or by restricting their opportunities to low-paying jobs. In such a context, immigrants may choose self-employment as an escape strategy, although, in practice, doing so may offer most immigrant entrepreneurs nothing more than long hours of work at subsistence pay. New research that will investigate this finding in more depth through quantitative, qualitative, and mixed-methods research designs is necessary, as the phenomenon is more widely researched in certain European countries than others. For example, research in the context of Southern European countries that represent the truncated welfare state type is scarce.

Specific populations are more likely to be disproportionately affected by labor-market-related and health inequities. Female TCNs are one of the most vulnerable such population groups in EU countries. Women's immigration status (i.e., whether they are documented or undocumented) is likely to shape their immigration and labor market experience. Frequently, they find themselves employed in their country of settlement in low-paid unregulated sectors of the economy for which they are likely to be overqualified. Employment and legal status are closely linked, and both affect immigrant women's access to public services. What is more, many immigrant women, especially those with young children, face more barriers to accessing the labor market. The European Institute for Gender Equality (EIGE) shows that immigrant women are more likely to be unemployed or economically inactive than any other group in the EU labor market (Orav 2023).

Social integration and labor market participation can be a complicated process for female immigrants. The (mis)alignment between the social and cultural norms of their country and community of origin with those of the country and community of settlement can be critical. Women from some immigrant communities, such as women from devout Muslim communities, for example, can face marginalization and social exclusion. They may be discouraged from participating in training, unable to attend co-educational employment programs, or be unable to be employed altogether. In some cases, women who are immigrants or refugees are trapped in a frame of invisibility, precarious living, and exploitative working conditions and discrimination (Fouskas 2023; Orav 2023).

A web of regulations and policies, as well as how bureaucratic systems function in countries of settlement, may exacerbate immigrant women's exclusion by creating barriers to employment opportunities and public and health services, and by limiting their economic independence. Simultaneously, a constellation of policies also shapes TCNs' access to healthcare services in their country of settlement. The fact that countries (e.g., Greece versus Sweden) differ with respect to the type of welfare state they espouse helps explain significant disparities in healthcare service access across their entire populations. The impact of such disparities is even more pronounced in the case of immigrant women (Fouskas 2018; Lindsjö et al. 2021).

Although the examination of the effects of poor employment conditions on TCNs who are women was out of the scope for this study, future research emphasizing the role of gender in the relationship between employment conditions and health among immigrants in Europe (and arguably beyond) is highly needed. This is especially true given the potential of related policy interventions to improve the quality of employment, health, and living conditions of vulnerable populations, but also the well-being of the broader societies in which immigrants choose to settle (EIGE 2020).

The results of our analyses also suggest that immigrants' context of reception matters significantly. Countries' social and labor policy frameworks are consequential for TCNs' health. Specifically, we argued—similarly to others before us—that there is no single European welfare state. To be able to compare EU member states, we introduced dummy variables in regression models to account for four different types of welfare state regime in Europe. Our findings show that it matters, for instance, whether immigrants settle in a

country representing a large balanced versus a truncated welfare state. In the case of the former, TCNs are more likely to report being in bad or very bad health.

Cross-national studies demonstrate that TCNs in the EU generally experience poorer labor market outcomes when they move to countries in Western Europe. Studies examining whether the country of origin plays a role in how immigrants fare in the labor market of the country where they settle show that individuals from non-European countries of origin that are wealthier and more stable fare better (Seiger et al. 2024). Such findings are in line with evidence showing that immigrants from backgrounds that are more different economically, culturally, and phenotypically from mainstream European populations face the highest levels of prejudice and discrimination. Muslim immigrants, for instance, tend to be perceived as the most culturally distant immigrant group by native European populations (Lancee 2019). The abovementioned evidence in combination with data that reveal significant differences between TCNs and the rest of the population in national job markets across Europe suggest that certain TCNs face extra challenges in securing and/or maintaining jobs, and this highlights the need for active integration and focused employment policies.

It has been argued that immigrant employment may depend less on labor market tightness than on available alternatives. The “welfare magnet” hypothesis suggests that generous welfare states may attract immigrants who are less motivated to find work or who prefer to not work and take advantage of a lower level of benefits, as opposed to seeking employment. While there is some evidence to support the welfare magnet argument, related findings may be misleading, as higher welfare spending overall does not necessarily mean that immigrants can access more generous welfare benefits (Platt et al. 2021). Indeed, our findings show that the percentage of employed TCNs in truncated welfare states (Greece, Italy, Portugal, and Spain) who reported being in very bad or bad health was very low. Although this is a key finding of this study, additional research must probe deeper. We need to better understand whether, for example, this finding is associated with needs for medical visits or treatment that go unmet, whether it can be attributed to such services being too expensive or requiring extensive travel, whether it is due to very long waitlists for health services,<sup>61</sup> or whether it is due to other healthcare system particularities (e.g., high required out-of-pocket expenses).

Finally, looking further to the future, a systematic examination of how countries meaningfully cluster in terms of the constellation of policies that comprise their welfare framework and the impact of those policy choices on immigrants’ health could meaningfully inform policymaking at both the national and the EU level. Likewise, country-specific research producing fine-grained, quantitative, and qualitative data could inform policy interventions at national and local levels, hopefully to promote immigrants’ social integration and the elimination of health and other social inequities. Such country-specific projects designed through the cross-state collaboration of researchers, leveraging existing networks built through EU-funded initiatives, would also facilitate comparative analysis across national borders and the exchange of best practices.

More specifically, this study’s findings highlight the need to invest in new cross-country research that will shed additional light on how different labor policies and variations in actual employment conditions interact with applicable health-related and immigration policies to determine TCNs’ social integration, more broadly, and their health and well-being, more specifically. The effectiveness of health policies that support TCNs’ access to healthcare in a country, for example, should be examined in conjunction with the effects of policies in place that fail to address or help combat discrimination against immigrants, including discrimination in the labor market. In another example, from a different perspective, given evidence that language proficiency can be a barrier to TCNs’ integration into the

workforce, policies that increase accessibility to language training can facilitate immigrants' labor market integration, and, by extension, contribute to improved health.

## 5. Limitations

In this study, we employed macro population-level data. All variables used in the analysis were derived from Eurostat data pertaining to TCNs aged 20–64. Future studies may benefit from the use of individual-level data to elucidate more specific determinants of TCNs' self-perceived health.

One important limitation of this study is the lack of variables that capture, for example, involuntary part-time employment among immigrants and Eurostat's definition of precarious employment (i.e., short work contracts with a duration that does not exceed three months). More complete and reliable data from as many EU member states (and EU-associated states) as possible would eliminate additional constraints.

TCNs' median age is another important factor that should be included in similar research as a control variable. However, such age data are only available for more recent years. Further considering the role of age is necessary, as immigrants are generally younger workers who move hoping to find better living conditions. Moreover, in Europe, young immigrants are more likely to accept lower-quality jobs.

Last, but not least, our study focused on self-perceived health as the key dependent variable. Despite the advantages of this indicator, it would be informative to consider the relationships between employment variables included in this analysis and objective indicators of well-being (physical and psychological). Moreover, an examination of the role of national healthcare policies in immigrants' health would shed additional light on how policy interventions can address health disparities and inequities.

## 6. Conclusions

Social exclusion manifests in multiple ways and contexts, including the labor market, and can have dramatic consequences on vulnerable populations' well-being, as in the case of immigrants. This study adds to the relatively limited literature on how poor employment conditions impact the health of immigrants, particularly in Europe. The findings underscore expected ways, based on the literature, in which employment arrangements shape health, but they also elucidate the influence (unexpected in some instances) of understudied factors, including self-employment and the country's welfare policy regime. Further research to examine the role of these factors in health inequities that disproportionately affect immigrant workers in Europe (and elsewhere) would benefit not only TCNs, but also the broader societies in which they have settled.

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## Notes

- <sup>1</sup> The European Migration Network defines an immigrant as a “person who establishes their usual residence in the territory of an EU member state for a period that is, or is expected to be, of at least 12 months, having previously been usually resident in another EU member state or a third country” (see: [https://home-affairs.ec.europa.eu/networks/european-migration-network-emn/emn-asylum-and-migration-glossary/glossary/immigrant\\_en](https://home-affairs.ec.europa.eu/networks/european-migration-network-emn/emn-asylum-and-migration-glossary/glossary/immigrant_en), accessed on 12 November 2024).
- <sup>2</sup> A third-country national is a person who does not have the nationality of one of the member states of the European Union nor the nationality of one of the countries associated with the European Union, including Switzerland, Norway, Iceland, and Liechtenstein. See: [https://home-affairs.ec.europa.eu/networks/european-migration-network-emn/emn-asylum-and-migration-glossary/glossary/third-country-national\\_en](https://home-affairs.ec.europa.eu/networks/european-migration-network-emn/emn-asylum-and-migration-glossary/glossary/third-country-national_en) (accessed 10 November 2024).
- <sup>3</sup> Other indicators referenced by Broughton et al. (2016, p. 10) are social security, labor rights, stress and health, career development and training, and low levels of collective rights.
- <sup>4</sup> Although its multidimensionality is recognized and the term precarious employment is increasingly used at the European and international level, there is no single accepted definition for the term. Attempts to define or describe it reflect rather different understandings that vary by country, region, and the economic and social structure of political systems and labor markets. In one influential definition (see Vosko 2006, 2010), precarious employment is characterized by uncertainty, discontinuity, and having to hold multiple jobs. Those who are self-employed (and do not employ others) frequently also find themselves to be in precarious employment conditions. Moreover, precarious employment is characterized by having little control over one’s work conditions, wages, and intensity. Such precarity also comes with limited formal protections, lack of union membership and collective bargaining coverage, inadequate income and benefits, and high risk of ill health.
- <sup>5</sup> In the EU, precarious employment is defined as a combination of a low level of security in continuing employment, poor personal control over the work (especially over working hours), a low level of protection (from unemployment or discrimination), and few opportunities for training and career progression. This has also been referred to as “low quality” employment.
- <sup>6</sup> Quality of employment is an important element of well-being and affects the lives of individual workers and members of their households. Quality of employment frameworks cover a broad range of dimensions and indicators related to employment, including the working environment, income, work–life balance, social security, work motivation, and development opportunities (UNECE 2015).
- <sup>7</sup> In this regard, TCNs’ right of free movement that is the cornerstone of a worker’s mobility inside the EU is curtailed.
- <sup>8</sup> Eurostat is the statistics authority of the European Union, responsible for publishing high-quality Europe-wide statistics, indicators, and reports that enable comparisons across countries and regions. Eurostat produces statistics on a range of issues related to international migration flows, non-national population stocks, and the acquisition of citizenship. Data are collected on an annual basis and are supplied to Eurostat by the national statistical authorities of the EU member states and EFTA countries (Eurostat 2024a).
- <sup>9</sup> Including Eurostat (2018), which measures precarious employment as the percentage of workers whose contract has a maximum duration of three months.
- <sup>10</sup> Not discussed or further examined in this paper.
- <sup>11</sup> We elected to use this clustering as the literature review suggested that categorizing countries strictly based on their welfare regime type may not be appropriate for examining the relationship between health and employment conditions. Barbra et al.’s (2014) empirical analysis does not support the hypothesis that there are very meaningful differences with respect to the association between employment conditions and health by welfare state regime. Moreover, the association was weaker in the Anglo-Saxon than in the Scandinavian countries. In another approach, Jokela (2019) defined different regimes on the basis of institutional settings and policies regarding paid domestic work: The Continental European regime, the Southern European (Mediterranean) regime, the Liberal regime, and the Nordic welfare regime. Employing this classification, Jokela finds, for example, that, similarly to Germany, labor markets in Italy and Spain are characterized by entrenched ‘insider–outsider’ divides and also by high levels of temporary work (especially Spain). In both countries, the informal economy is large and consists particularly of industries with a high share of (undocumented) immigrant workers (e.g., paid domestic laborers).
- <sup>12</sup> As a share of GDP.

Which is a proxy for the effectiveness of allocated resources or the types of instruments that can be potentially leveraged to tackle chronic poverty and protect the poor in a crisis.

The Southern European countries Greece, Italy, Portugal, and Spain fall in this category.

The social protection spending in this category is higher, characterized by a relatively more balanced breakdown between social assistance and social insurance spending, providing safety nets for the poor and vulnerable through their social assistance programs. The social protection system includes a more balanced mix of programs with basic elements that buffer against different risks (e.g., risk of unemployment, of disability, of poverty). Denmark, Sweden, Finland, Austria, Belgium, France, Netherlands, Ireland, Slovenia, Cyprus, and Germany (added by the authors).

Most countries included in this category (Latvia, Lithuania, Malta, Romania, and Slovakia) have reformed (and continue to reform) their social protection systems and have steered them to a relatively more balanced approach which offers a mix of programs that cover various risks and covers a large share of the poorest population, mostly through categorical/universal programs but still at relatively low costs. No country from this category is included in the empirical part of our paper, mainly due to data restrictions and deficiencies.

Bulgaria, Croatia, Czechia, Poland, and Estonia fall in this group. However, in our empirical analysis, only Czechia represented this group. Data restrictions and deficiencies were the main reasons of exclusion for the other countries in this group.

A major benefit of having a large sample size is that it enables the study of labor market characteristics across different segments of countries' populations, including immigrants and, by extension, TCNs.

Data from both surveys employed in this study are available via Eurostat's online database. See: <https://ec.europa.eu/eurostat/web/migration-asylum/migrant-integration/database> and <https://ec.europa.eu/eurostat/web/microdata/european-union-statistics-on-income-and-living-conditions> (accessed on 1 September 2024).

Before 2009, no data are available on a regular basis for several countries.

The rest of the EU countries (and associated countries) are not included in the analysis, mainly due to a lack of data. Interpolation and extrapolation techniques were used to manage missing values related to the explanatory variables.

The obvious benefit of panel data is in terms of obtaining a large sample, giving more degrees of freedom, more variability, more information, and less multicollinearity among the variables. Our panel has the advantage of having N cross-section (countries) and T time series observations, thus contributing a total of  $NT = 270$  observations.

According to Eurostat, focusing on this age group at least partially eliminates the likely influence of younger persons who are most likely to still be completing their studies and not be active in the labor market. More importantly, however, the 20–64 age group is of particular interest as it is at the center of employment analyses in the EU's Action Plan on Integration and Inclusion 2021–2027 (Eurostat 2023c).

Every person aged 16 years and over in a household responds to questions about their health, education, work, etc. We focused on participants who were TCNs and in the 20–64 age bracket.

UNECE (2015). Handbook for Measuring Quality of Employment, A Statistical Framework. Prepared by the Expert Group on Measuring Quality of Employment, established by the Bureau of the Conference of European Statisticians (CES) with the main aim to provide a clear and coherent structure for measuring quality of employment.

The safety and ethics of employment; the income and benefits from employment; working time and work–life balance; security of employment and social protection; social dialogue; skill development and training; and employment-related relationships and work motivation.

Previous European studies also included similar indicators (e.g., Muñoz de Bustillo et al. 2009; European Commission 2015).

Other empirical efforts use a similar methodology but result in one composite indicator. For example, Julià et al. (2017) specify seven broad dimensions of employment quality including (1) employment (in)stability (i.e., nature of employment contract and threats to the continuation of employment); (2) lower/higher material rewards for an acceptable standard of living; (3) status of workers' rights and social protections; (4) (de-)standardized working time arrangements (e.g., reflected in the length and intensity of working hours, part-time and involuntary part-time employment [underemployment], unsocial working times, flexible working times, and low schedule predictability); (5) availability of training opportunities; (6) employee (dis)empowerment (e.g., reflected in the possibilities for employee representation); and (7) (im)balanced interpersonal power relationships between employees and employers.

According to Eurostat, employed people can be either employees, self-employed, or contributing family workers. In the EU, the vast majority of employed people work as employees and employees can work under permanent or temporary contracts. Temporary employment refers to people working under a fixed-term contract, while people working under a 'permanent' contract have no end date in their contract (Eurostat 2023c).

Data on part-time employment are only collected about a person's main job. This job can be on a full-time or a part-time basis. The distinction is based on the respondent's own perception of the hours they usually work. A person in a part-time job is assumed to work less than a full-time worker with a job in the same occupation and in the same organization. For people who

cannot compare working hours because, for example, they are working alone, the benchmark is the group of people who work in the same occupation and the same branch of industry in the same country (Eurostat 2023a).

A person is self-employed if they are the sole or joint owner of the unincorporated enterprise (one that has not been incorporated, i.e., formed into a legal corporation) in which they work (unless they are also in paid employment and that is their main activity) (Eurostat 2023b).

Defined as the number of TCNs who have been unemployed long-term (i.e., unemployed for at least a year) as a percentage of all unemployed TCNs.

Picchio and Ubaldi (2022), in a meta-analysis, found that it is the occurrence of unemployment that matters rather than its duration. However, we think that TCNs' long-term unemployment should be a matter of concern.

Other explanatory variables that were not included in the final analysis, either because of no data availability or low reliability of the data available, were unemployment or underemployment rates, in-work poverty, low work intensity, precarious and involuntary part-time employment (as defined by Eurostat), percentage of those who are overqualified for the job they currently occupy, risk of poverty rate, and median income, as well as labor market slack.

Using data from the EU-LFS.

Just above 40% for Portugal.

See also: <https://ec.europa.eu/eurostat/web/migration-asylum/migrant-integration> (accessed 10 November 2024).

Specific country reports concerning illegal employment of TCNs for 2017–2022 are produced and provided by Eurostat and the European Migration Network (EMN) (see, e.g., EMN and Eurostat 2024).

We also created separate dummy variables for each category. However, the results were similar.

In the case of Latvia, the proportion of citizens from non-member countries is particularly large due to the high number of recognized non-citizens (mainly former Soviet Union citizens who permanently reside in Latvia without acquiring any other citizenship).

However, this result is very different for the population 16 years old or older (8.9% for nationals against 7.9% for TCNs). This result, to a large extent, reflects the different age structure between the two groups. Based on Eurostat data, on average, TCNs living the EU are younger than nationals, whereas the highest share of people in a bad or very bad state of self-perceived health is among individuals 65 years old or older. This means that, by restricting our analysis to the population aged 20–64, to a great degree, we have controlled for an age effect.

The ratio for nationals is, by definition, equal to 1. A ratio higher than 1 indicates worse self-perceived health of TCNs than for nationals. On the scatter plots, the dark black lines indicate the ratio of EU averages for 2015 and 2023, which is slightly higher than 1 for both years. The intersection of these lines separates the graph into four quadrants.

Median age is the age at which exactly half of the immigrants or nationals are older and half are younger.

See: <https://ec.europa.eu/eurostat/web/main/data/database> (accessed 10 November 2024).

Increases in median age reflect the rising proportions of immigrants 65 and older in the populations of all countries examined.

The population of older people is defined here as those aged 65 years or more.

Population ageing is a global phenomenon that refers to a shift in the distribution of a country's population towards older ages. This is usually reflected in an increase in the population's median ages, a decline in the proportion of the population composed of children, and a rise in the proportion of the population composed of the elderly.

It refers to the ratio between the elderly (65 years old and over) and youth/children population (less than 20 years). It is used to compare the scale of two populations (TCNs vs. Ns).

This is explained by the differences in the very low against the high mean values of immigrants who declared very bad or bad self-perceived health.

Results are not presented in this version of the paper.

The country fixed-effects model accounts for unobserved heterogeneity across countries that is constant over time.

It turned out that the data have both. The Wooldridge test showed  $F(1, 17) = 19.469$  and  $\text{Prob} > F = 0.000$ . The respective Breusch–Pagan LM test of independence showed  $\chi^2(153) = 237.638$ ,  $p = 0.000$ . No multicollinearity was detected.

Using the software package STATA to test model specification (fixed- or random-effects), the command 'xtoverid' was used. That returned the following: test of overidentifying restrictions: fixed vs random effects; cross-section time-series model: xtreg re robust cluster (country); Sargan–Hansen statistic 0.764,  $\chi^2(4)$ ,  $p = 0.943$ . This results of 'xtoverid' suggest that the random-effects specification is appropriate (given the  $\chi^2$  test's  $p$ -value).

Note that the variable 'welfare state' is to be regarded as a discrete categorical variable and that each category (except one reference category omitted from the regression equation) is represented in the model. Here, the 'truncated welfare state' type was used as a reference category and omitted to avoid the so-called *dummy trap*.

Due to STATA software restrictions, for Model 3, it was not possible to obtain the values of Wald chi-squared test and  $\text{prob} > \chi^2(2)$  using the robust command. One suggested option was to test a subset of the data, but not all. Initially, we considered omitting Malta, mainly because the welfare models represented by the countries left in the analysis would be restricted to three

(‘large balanced’ and ‘limited balanced’, with ‘truncated’ as the reference category). Additionally, in Malta’s case, data capturing SPHBVB (the dependent variable) had low variability. Moreover, for certain years, the percentage of TCNs in Malta with very bad or bad self-perceived health was close to ‘0’, leading to a mean value across all years of 1.2 (the immediately larger mean score was that for Czechia: 2.7).

Part-time work and self-rated health are moderated by state-level social policies and contexts.

This work did not focus on TCNs, however. See Merino-Llorente and Sommariba-Arechavala (2020) for a more detailed description.

The omitted category is the one used as a reference.

This can be interpreted relative to TCNs working in one country operating with a truncated welfare state model.

These could include family members of immigrants and refugees who found themselves in EU countries thanks to past policies (e.g., guest worker programs) that originally did not encourage movement of entire families, legal constraints (e.g., seeking asylum as a human right), and the international environment (e.g., humanitarian crises).

According to Eurostat data, in 2023, 12.3% of TCNs in Finland and 6.7% of TCNs declared that it was too expensive or too far to travel to be on a waiting list, while it was lower in Spain (1.3%), Italy (2.3%), and Greece and Portugal (above 4%).

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