

# Trade Union Density in Austria: New Evidence from Tax Records

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January 17, 2025

Research Note

## 1 Introduction

The primary source for trade union density data across countries and time for the past 20 years has been the OECD/AIAS Institutional Characteristics of Trade Unions, Wage Setting, State Intervention, and Social Pacts (ICTWSS) database (OECD and AIAS, 2021). A key advantage of the ICTWSS is its strength in enabling international comparability, as it offers standardized data on trade union characteristics across multiple countries. However, it is important to note that ICTWSS data for some countries, including Austria, relies partly on assumptions rather than direct empirical observation, which may affect its precision. This research note introduces findings derived from an alternative data source: Austrian tax records, which contain detailed information on union dues payments by individual workers. By capturing actual dues payments, these records provide a more direct and more accurate measure of union membership and density in Austria.

Given that the dataset encompasses virtually all workers in Austria, including a majority of union members, we can perform a fine-grained analysis across several dimensions including the economic (sub-)sector, job characteristics, and the wage distribution, as well as combinations thereof. This research note provides initial breakdowns for the broad dimensions covered in the ICTWSS: gender, public/private sector, part time/full time, and age.

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We thank Julia Hofmann and Sepp Zuckerstätter for valuable feedback. We thank Matthias Stehle for outstanding research assistance. We acknowledge funding from the OeNB Jubiläumsfonds for the project Labour Unions and Firm Productivity (grant number: 18834).

## 2 Data and method

### 2.1 Data

**Tax records and union dues** The primary data source for this analysis is administrative data from Austria’s payroll tax register *Lohnsteuerstatistik* (LST). For the majority of union members, dues are automatically deducted from their payroll and recorded on their pay slips, with the Ministry of Finance processing these deductions as part of payroll tax accounting. This system allows us to identify and observe all union members who have dues directly deducted from their wages—referred to here as *payroll members*. The employer-employee linked dataset spans the period from 2008 to 2020 and includes detailed information on demographic and job characteristics. We accessed the tax records through the Austrian Micro Data Centre (AMDC).

**Union membership registers** In addition to payroll tax data, we draw on union membership registers to account for members who pay their dues through alternative methods. These registers provide detailed information on dues payment channels, enabling us to identify union members who do not rely on payroll deduction but instead use other methods such as direct debit, standing orders, manual bank transfers, deposit slip, or cash payments. These additional data allows us to adjust for variation in payment practices across demographic and job categories, ensuring a comprehensive measure that captures total union membership among salaried workers.

To obtain the information, we proceeded as following: We reached out to all seven sectoral trade unions as well as their overarching umbrella organization, the trade union confederation (Österreichischer Gewerkschaftsbund (ÖGB)). Our request was aimed at gaining access to their records or, alternatively, having them provide us with aggregate numbers regarding the proportion of payroll members and retired workers within their membership.

### 2.2 Method

**Weighting** A key advantage of our dataset over previous measures is that we observe all salaried employees and the union membership status for payroll members at the individual level from the same data source. The tax records are recorded on an annual basis, and for each salaried employee, we observe the total number of days worked in the year, allowing us to determine the number of days as an active payroll union member.<sup>1</sup> To account for seasonal fluctuations in employment and union membership, we assign each individual a weight between 0 and 1 based on the proportion of days worked in the year, calculated as  $x/365$ , where  $x$  represents the number of days employed in a given year.<sup>23</sup>

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<sup>1</sup>We keep all salaried employees except retirees who receive a pension, regardless of whether they are still in salaried employment. This adjustment reduces the count by 235,000 salaried employees, including about 50,000 payroll members. Many of these retirees only work a small number of days a year, which leaves us with a substantially smaller number of excluded retirees after weighting for the number of days employed.

<sup>2</sup>For leap years, we calculate  $x/366$  days.

<sup>3</sup>Note that weighting by the number of days employed leads to a discrepancy with the number of salaried employees reported in the national accounts system and labor force survey. However, we consider this weighting approach to be a more accurate measure than using a reference date or an arbitrary cutoff based on a minimum

This approach represents an improvement over previous approaches of calculating union density, as it aligns the numerator (union members among employees) with the denominator (employees) more accurately. Previously, union membership was self-reported by unions on a specific date, typically December 31 for Austria, while the labor force denominator was collected from the system of national accounts and from labor force surveys collected at different points throughout the year. This discrepancy between reference dates could introduce bias, which our approach addresses by synchronizing the measurement period for both union membership and employment status.

**Adjustment for non-payroll members among salaried workers** To address the limitation of not directly observing non-payroll union members, we adjust our figures based on the observed proportion of non-payroll members among salaried workers from union membership registers. This adjustment is crucial, as the share of payroll members varies significantly across industries and firms. For example, a substantially higher proportion of union members in the public sector pay their dues through payroll deductions compared to those in the private sector. Due to confidentiality reasons, we cannot publish the calculated shares of non-payroll members.

**Adjustment for non-salaried members** While some membership registers allow for calculating the proportion of retired union members, their sectoral coverage remains limited. Therefore, we currently continue to rely on the ÖGB's annually published official figure for total union membership. The number of non-salaried union members is derived by subtracting our calculated figure for salaried union members from the ÖGB's total membership figure.

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number of days employed per year.

### 3 Findings

Our findings reveal three notable differences in the trade union density (TUD) figures for Austria compared to the current ICTWSS data. First, overall TUD appears to be somewhat overestimated. Second, the share of retired union members seems to be underestimated. Third, union density within the public sector also appears to be underestimated. Furthermore, our analysis provides new figures on union membership by hours worked and age.

Below are the key revisions compared to the ICTWSS data:

1. **Total Union Members (TUM):** The proportion of non-salaried employees among union members was underestimated. Furthermore, the proportion of non-salaried employees has not remained constant but has increased consistently over the period observed in our data (2008-2020).
2. **Salaried Union Members (NUM):** As a consequence, salaried union members were overestimated. We observed significantly lower numbers for union members ranging from -9% to -15% over the observed period, compared to the ICTWSS estimates.
3. **Union Density (UD)** Irrespective of the revisions above, union density was previously systematically underestimated. This is likely due to different sources and reference periods for TUM/NUM and the number of salaried employees.
  - The ÖGB reports TUM as of December 31st, the annual reference date. This date was used to derive the number of active union members (NUM).
  - The figures of salaried employees was derived from the System of National Accounts (for total salaried employees) and the Labor Force Survey (for the breakdowns by gender and sector).
    - The System of National Accounts reports total salaried employees for the entire year.
    - The Labor Force Survey refers to employment status in the reference week of data collection.
  - Using NUM and the number of salaried employees from the same data source, the payroll register, and time period leaves us with significantly smaller changes to union density (UD) compared to the changes in the number of salaried union members (NUM).
4. **Breakdown Revisions:**
  - **Gender:** Our figures result in higher union density for women and lower union density for men than previously estimated in the ICTWSS. However, NUM is lower for both (slightly lower for women and substantially lower for men).
  - **Sector:** We also observe substantially higher union density in the public sector and lower union density in the private sector than previously estimated in the ICTWSS. Previously, NUM was not available for the sector split.

Figure 1: Total union members in Austria, 2008-2020

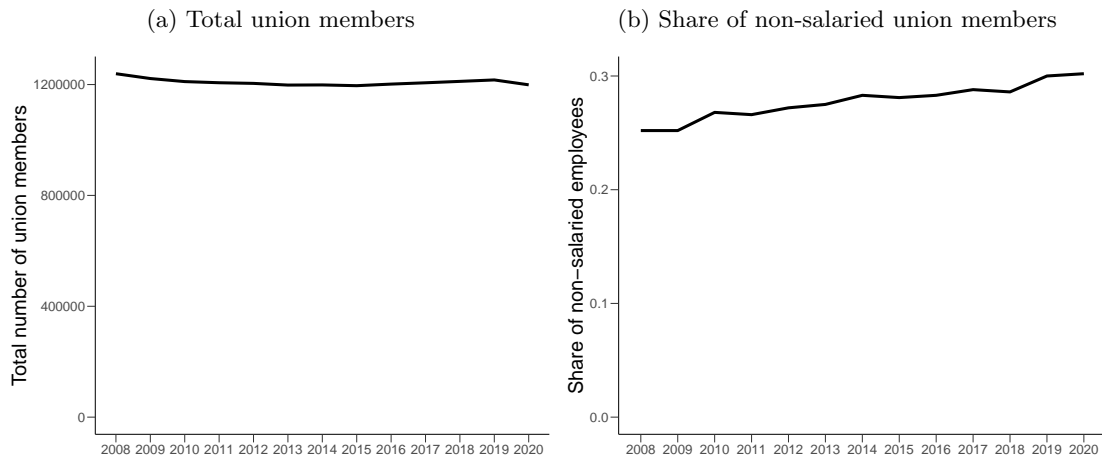


Figure 2: Union membership in Austria among salaried employees, 2008-2020

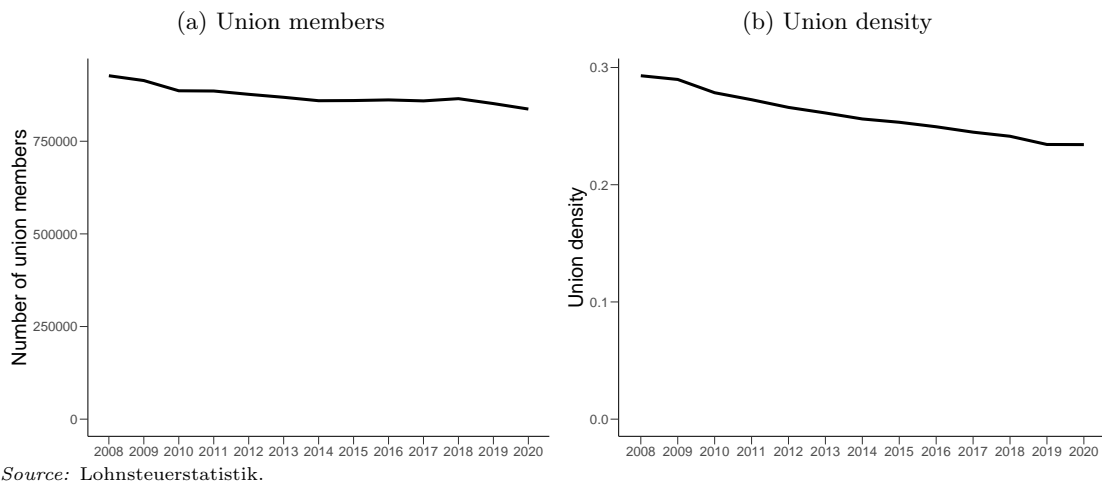


Figure 3: Unionization by sector

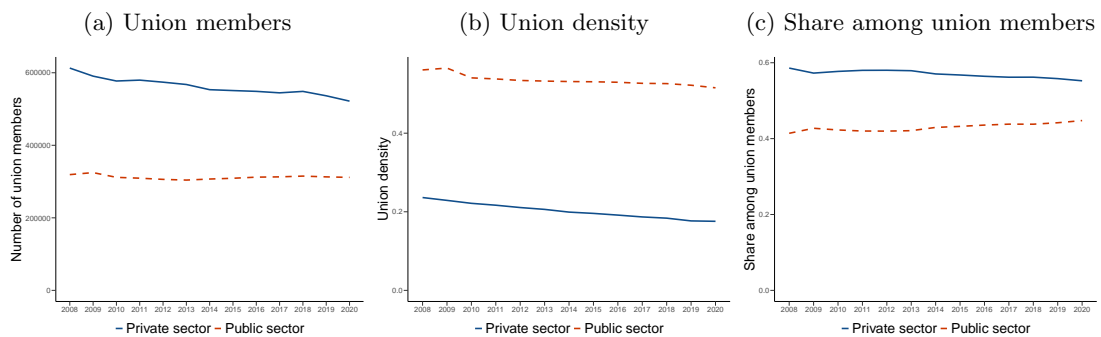
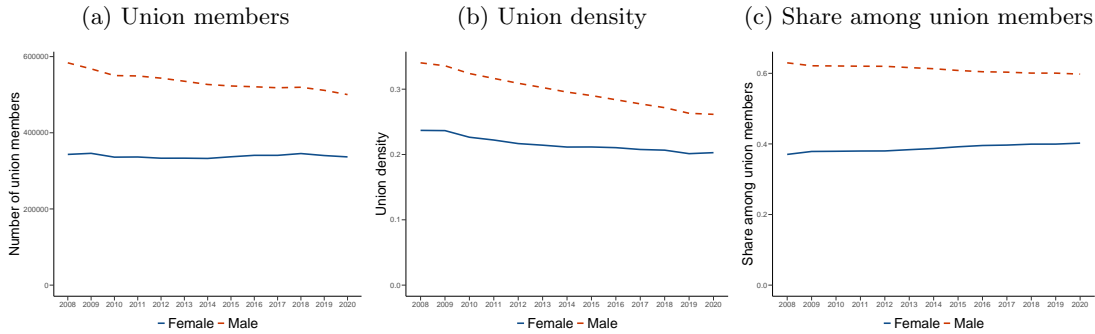
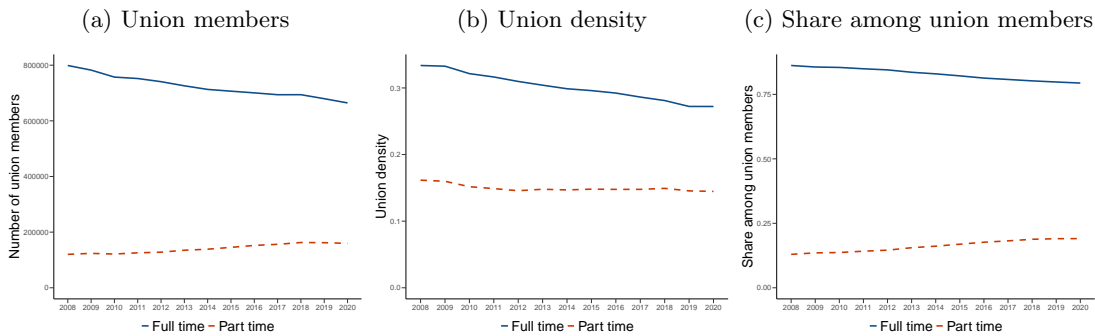


Figure 4: Unionization by gender



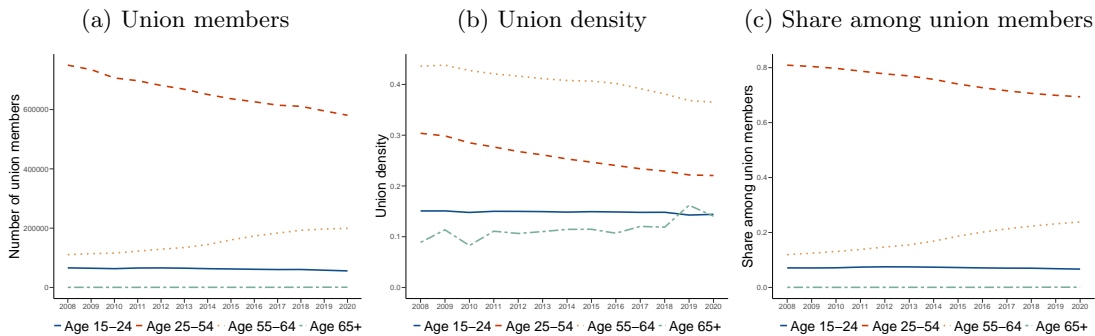
Note: Union members include salaried employees only.  
Source: Lohnsteuerstatistik.

Figure 5: Unionization by hours worked



Note: Union members include salaried employees only.  
Source: Lohnsteuerstatistik.

Figure 6: Unionization by age



Note: Union members include salaried employees only. In the current version, the age group 65+ includes only salaried employees who do not receive a pension in the respective year.  
Source: Lohnsteuerstatistik.

## References

OECD and AIAS (2021). Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts (ICTWSS database). OECD Publishing, Paris.