

Analysis of Data on Unemployment Among Graduates of Slovenian Higher Education Institutions (2021)

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Abstract

This paper presents a data-driven analysis of unemployment among graduates of Slovenian higher education institutions, based on administrative data for the year 2021. The study focuses on graduates who registered as unemployed one year after completing their studies and examines unemployment rates by region, type of study, study field, and individual programmes. The findings reveal notable differences in graduate employability outcomes—both between and within institutions—highlighting structural and systemic challenges in aligning education with labour market needs. While university-level graduates generally show lower unemployment, certain professionally oriented programmes face higher rates. The study provides a foundation for further research and underlines the importance of using such data in quality assurance processes and policy development.

Keywords: graduate unemployment, higher education institutions, labor market integration, skills mismatches, Slovenia

INTRODUCTION

The primary aim of this study is to analyse unemployment rates among graduates of Slovenian higher education institutions, focusing on national, regional, and institutional comparisons. Special attention is paid to identifying programme- and field-specific differences and systemic trends. The analysis is based on data for the year 2021, collected by the Ministry of Higher Education, Science and Innovation.

The study responds to recommendations from experts, students, and employers, as well as good practices from abroad, all underlining the importance of aligning higher education with labour market needs. As noted by Lesjak and Škrbinjek (2017), tertiary education institutions should adapt study programmes and enrolment policies to societal and economic demands. However, policy misalignment often leads to mismatches in the labour market. Graduates in social sciences, business, and law account for a disproportionately high share of unemployment, pointing to structural issues within both education and employment systems.

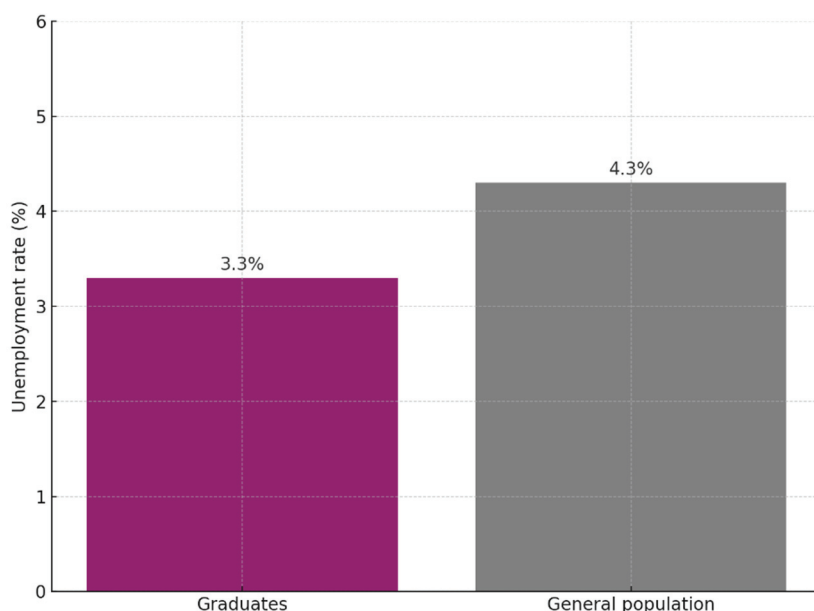
Albert et al. (2023) highlight educational mismatch as a persistent problem, affecting graduates long after completion. In Slovenia, these mismatches reveal a need for improved alignment of education with the labour market and better job mobility mechanisms.

The data include all graduates tracked using the national identifier (EMŠO), with unemployment status recorded 6, 9, 12, and 24 months post-graduation. The analysis focuses on the 12-month mark and uses the KLASIUS-P-16 classification of study fields. All data is anonymised. The methodology combines descriptive statistics and institutional comparisons to evaluate the effectiveness of graduate labour market integration.

FINDINGS BY LEVEL OF ANALYSIS

National level

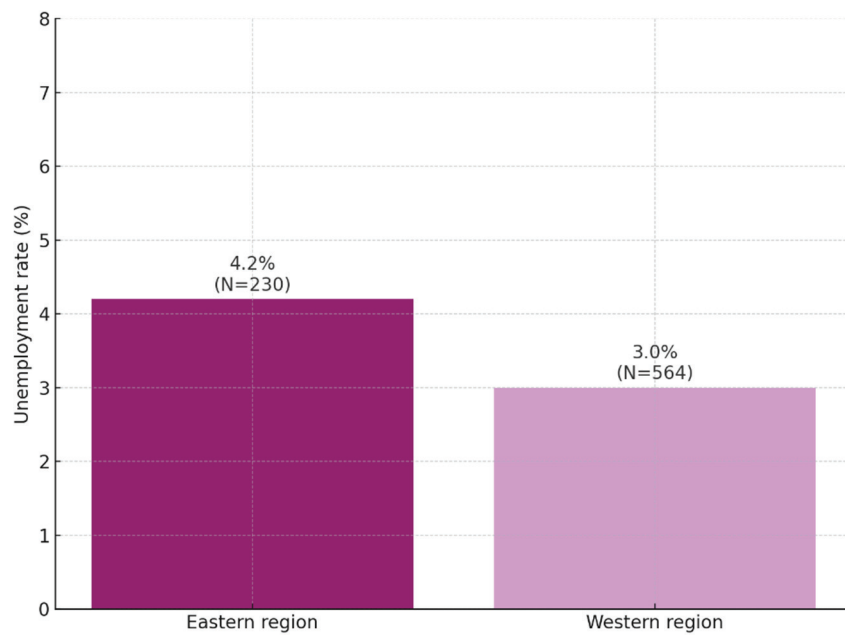
Picture 1: National level - Unemployment comparison (2021)



Source: SURS, eVŠ

In 2021, the unemployment rate among graduates 12 months after graduation stood at 3.3%, compared to 4.3% in the general population. This pattern is consistent with long-term trends observed between 2012 and 2019, where individuals with higher education continuously experienced lower unemployment rates than the broader population. Even during periods of economic downturn, graduates were less affected by labour market fluctuations. The data suggest that higher education provides a level of resilience against unemployment, offering graduates a comparative advantage in both stable and uncertain economic conditions.

Picture 2: Unemployment comparison between Western and Eastern region(2021)



Source: eVŠ

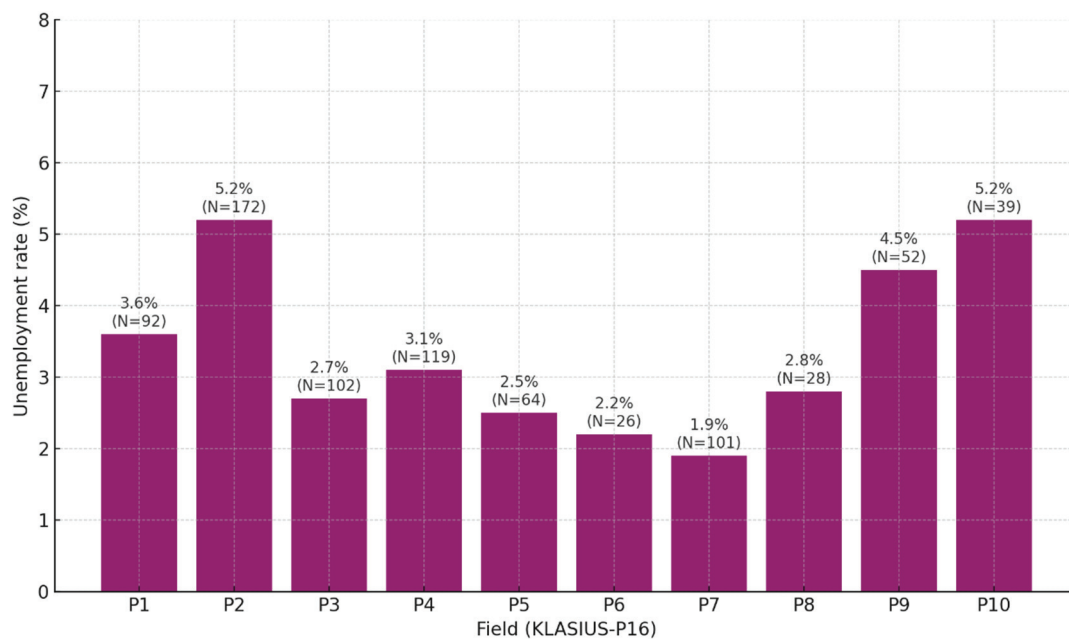
The chart shows the unemployment rates of graduates in Slovenia's two cohesion regions in 2021. Graduates from the Eastern region faced a higher unemployment rate of 4.2%, compared to 3.0% in the Western region. This regional disparity may reflect broader economic differences, with the Western region generally offering more diverse employment opportunities and a stronger labour market.

Study field level

Table 1: Klasisus P-16 descriptons

Code	Field of Study (KLASIUS-P-16)
P1	Education
P2	Arts and Humanities
P3	Social Sciences, Journalism and Information
P4	Business, Administration and Law
P5	Natural Sciences, Mathematics and Statistics
P6	Information and Communication Technologies (ICT)
P7	Engineering, Manufacturing and Construction
P8	Agriculture, Forestry, Fisheries and Veterinary
P9	Health and Welfare
P10	Services

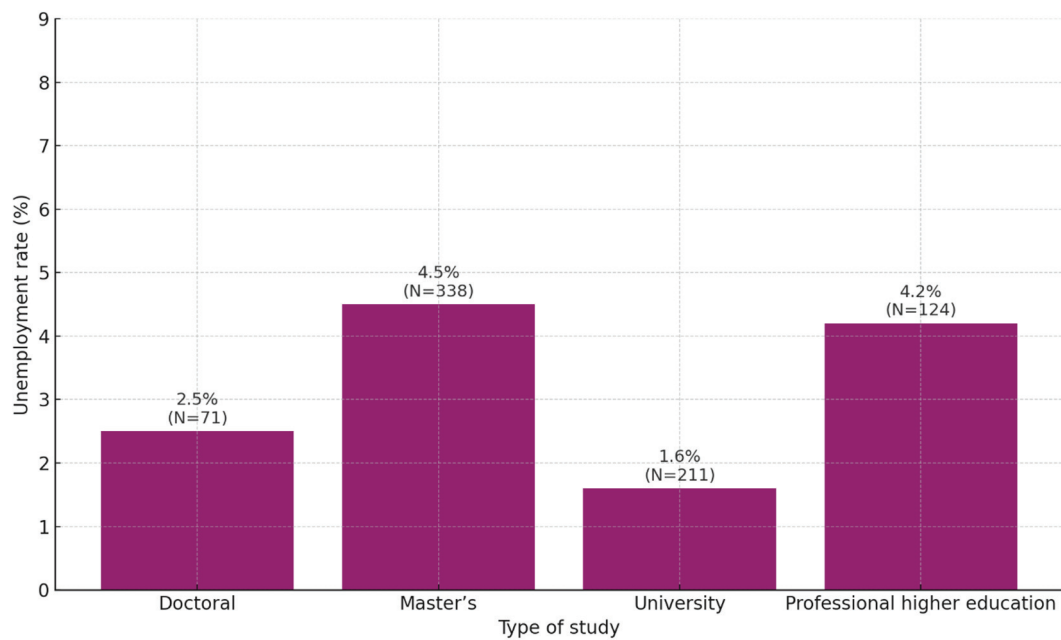
Picture 3: Study field level by Klasius P-16 - Unemployment comparison (2021)



Source: eVŠ

Graduates from fields such as services (P10), arts and humanities (P2), and health and welfare (P9) faced higher unemployment rates compared to those in technical and ICT fields. The sample size for each field is indicated with (N). This distribution highlights the persistent differences in labour market outcomes across educational domains.

Picture 5: Unemployment of graduates by type of study (2021)

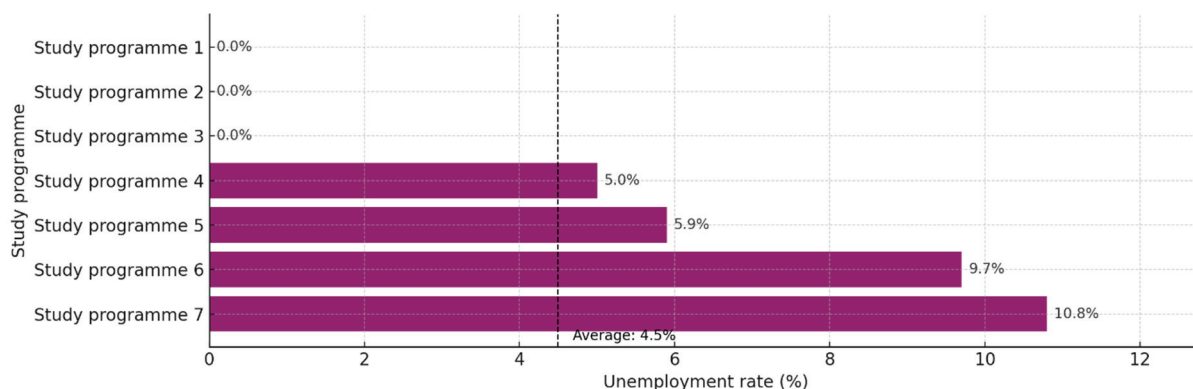


Source: eVŠ

The differences in unemployment rates across study types reflect expected outcomes based on typical graduate trajectories. University study graduates show the lowest unemployment rate (1.6%), which is unsurprising given that this type of programme most often serves as preparation for further studies at the master's level, rather than immediate labour market entry. In contrast, professional higher education (4.2%) and master's degree graduates (4.5%) typically enter the labour market upon graduation, which explains their relatively higher unemployment rates. These results highlight the structural distinctions between academic progression routes and professionally oriented study paths.

STUDY PROGRAM LEVEL

Picture 6: Unemployment among graduates of first-cycle study programmes in the Eastern region, P10 field (2021)



Source: eVŠ

The graph reveals significant variation in unemployment rates among individual study programmes, despite all being in the same region, at the same educational level, and within the same study field (Services – P10). These disparities suggest that institutional differences, programme content, and local labour market connections may play an important role in shaping graduate employability outcomes, even within a narrowly defined context.

CONCLUSION

This study provides a first step toward understanding graduate unemployment in Slovenia. The findings highlight clear differences in employability across regions, institutions, fields of study, and individual programmes. Graduates consistently show lower unemployment than the general population, but significant disparities remain—especially within the same region and study field.

The results point to the importance of using administrative data more systematically to support quality assurance and evidence-based policymaking. Continued efforts are needed to refine the analysis and better address observed mismatches, enabling more effective and targeted improvements in higher education and labour market alignment.

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