

Data Dictionary on Career Tracking

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Executive summary

This data dictionary, prepared for the purpose of tracking career paths, was commissioned by the National Office of Vocational Education and Training and Adult Learning (NOVETAL) as part of the EQAVET project. Its purpose is to present the career tracking indicators developed in connection with the VET Career Tracking System (SZPR) in a uniform, easily understandable, and reproducible format, thereby supporting the consistent interpretation of results in policy-making, institutional management, and quality improvement processes.

The methodological document sets forth both the definitions of the indicators and their methodological rationale: it specifies what each indicator measures, which target group and time period they apply to, what data sources they are based on, and the guiding principles behind their development. The indicator system provides standard, comparable feedback on three key areas: (1) the transition from vocational training to the labour market, (2) the main dimensions of labour market integration (e.g. labour market status, work intensity, income characteristics, job search), and (3) the area of further education.

The indicators are derived from individual-level, anonymous data linkage that combines relevant records from multiple administrative data holders (National Office of Vocational Education and Training and Adult Learning; Education Office; National Health Insurance Fund of Hungary; National Tax and Customs Administration; Ministry of National Economy – National Employment Service; Diákhitel Központ Zrt.). The document places particular emphasis on how the characteristics of administrative data sources – such as coverage, update frequency, and conceptual equivalence – may influence the interpretation of indicators, and in which cases it is necessary to draw cautious, context-sensitive conclusions.

In this version, the follow-up covers the period from February 2021 to September 2023, i.e. 32 months; however, the system is expanded upwards every six months and will eventually cover a 9-year follow-up period. Where the temporal development of career paths is relevant, the data are interpreted in the form of monthly time-series indicators. For one-off events associated with a “first occurrence” (such as starting a job for the first time), the system uses event-based timing relative to the completion of studies. In addition, certain indicators apply to the entire observation period following the completion of studies and record whether the phenomenon in question occurred at any time after the completion of studies (for example, experiencing a registered job search episode).

To facilitate practical application, the methodological handbook also provides an overview of the main filtering and breakdown dimensions (institutional, educational, student, labour market, and further education) along which the indicators can be analysed in a targeted manner.

Overall, the document provides a common interpretive framework that simultaneously facilitates the transparent communication of indicators, comparability across institutions and regions, and the basis for development interventions aimed at tracking the labour market and educational pathways of young people leaving vocational training.



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Introduction

This document was commissioned by the National Office of Vocational Education and Training and Adult Learning (NOVETAL) as part of the EQAVET project. The purpose of this publication is to present the 11 career tracking indicators developed in connection with the VET Career Tracking System in a standardised format, in an easy-to-understand and professionally sound manner.

The document sets forth both the substantive interpretation and the methodological description of the indicators: it defines what each indicator measures exactly, which target groups and time periods they cover, what data sources and conceptual frameworks they are based on, and the calculation logic used to derive them. In this way, it promotes the consistent application of indicators, comparability, and the interpretation and use of results in policy, institutional management, and development decisions.

The indicator system focuses on three key areas of vocational education and training effectiveness and defines standard indicators based on these:

- the characteristics of the transition from vocational training to the labour market,
- the main dimensions of labour market integration,
- further education and the continuation of learning pathways.

Together, the eleven indicators presented in this document form a standardised, transparent, and reproducible system of indicators that is suitable for providing regular feedback on the career paths of young people leaving vocational training, and to provide a reliable basis for quality improvement efforts, institutional self-assessment, and planning and monitoring tasks concerning the vocational training system as a whole.



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Methodology

Before presenting the content and methodology of the indicators, it is essential to overview the origin and production process of the information used in their calculation. This methodological overview chapter sets out the data sources and the basic principles of the data production, data collection, and data linking methodologies applied.

In terms of the validity, reliability, and comparability of indicators, it is crucial not only to specify what we are measuring, but also from what sources and how we calculate the relevant indicators. The range, level of detail, frequency of updates, and quality of the data sources used fundamentally influence the phenomena that the results obtained are capable of capturing. Furthermore, it also identifies areas where a more cautious interpretation of the indicators is warranted.

Clarity of these contexts ensures that the subsequent presentation of the indicators is based on a consistent conceptual and methodological framework, guaranteeing a transparent and comprehensible interpretation of the results for all users.

Data sources and data collection methodology

The Data Integration Module of the VET Career Tracking System (SZPR), which is used to determine indicator values, is the result of data linking that connects the administrative data sources of government agencies at the individual level, but in an anonymous manner.

The linked administrative database was developed in accordance with the methodology and data content specified in Section 6/A(2) of Act LXXXIX of 2018 on the Education Register. Its legal basis was provided by *Act CI of 2007 on Ensuring Access to Data Necessary for Decision-Making*, which has since been repealed, and by *Government Decree 335/2007 (XII. 13.) on the implementation of Act CI of 2007 on Ensuring Access to Data Necessary for Decision-Making*. The first linking of the SZPR, launched in 2020, was initiated under the auspices of this regulation, but since the system became operational, the document governing the data integration process has been amended twice: first under *Act XCI of 2021 on National Data Assets*, and then under *Act CI of 2023 on the System for the Utilisation of National Data Assets and Certain Services*. In accordance with these laws, the process is initially coordinated and supervised by Nemzeti Infokommunikációs Szolgáltató Zrt., and subsequently, in an upward system, by the National Data Assets Agency; data is transferred through this organisation. In accordance with the relevant law(s), the data undergoes multiple rounds of anonymisation during the data linking process.

The integrated database managed by the National Office of Vocational Education and Training and Adult Learning (NOVETAL) was created by linking, on an individual record basis and in an anonymous manner, data from the NOVETAL, the Education Office (OH), the National Health Insurance Fund of Hungary (NEAK), the National Tax and Customs Administration (NAV), the Ministry of National Economy – National Employment Service (NFSZ), and Diákhitel Központ Zrt., in order to track the labour market and training pathways of graduates from vocational training and adult education programmes. The data provided by each agency covers the following areas:



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- National Office of Vocational Education and Training and Adult Learning (NOVETAL)
 - Vocational training information stored in the Vocational Training Information System (SZIR), which, in addition to details of individuals, also includes detailed information about the issuing institution and the training programme
 - Adult education information stored in the Adult Training Data Reporting System (FAR)
 - Data relating to vocational examinations
- Education Office (OH)
 - Information relating to higher education studies
- National Health Insurance Fund of Hungary (NEAK)
 - Information related to insurance coverage (e.g. change in work capacity, death, posting abroad, establishment, or insurance coverage)
- National Tax and Customs Administration (NAV)
 - Form '08: data at employee level, by legal status, and by benefit payments
 - Form '58: contribution data of sole traders
 - Data from fixed-rate tax of small taxpayer enterprises (KATA) returns
 - Form '29: data from corporate income tax (TAO) returns
- Ministry of National Economy – National Employment Service (NFSZ)
 - Data from the register of jobseekers (benefits, active measures, labour market training, etc.)
- Diákhitel Központ Zrt. (DH)
 - Information on the taking out and repayment of student loans

Study population and coverage¹

The first data linkage for the vocational training target group included all students who were listed in the Vocational Training Information System (SZIR) after 1 September 2020, regardless of which stage of their training they were in at the time of data reporting. The available data sets are expanded in an upward system every semester – over a total of 9 years – upon each data linkage, supplemented with up-to-date information on individual students and newly enrolled students.

As of the date of this document's completion, based on the data provided to the author up to that point, the vocational training students registered in SZIR between 1 and 30 September 2020 constitute the existing vocational training sample (N = ~520,000 individuals), for whom follow-up is currently ensured from February 2021 through September 2023.

¹ This chapter draws heavily on the relevant sections of the following study: Czirfusz, D., Nyüsti, Sz., Nagy, Z., & Lénárd, S. (2025). The role of administrative data in analysing the transition from vocational training to the labour market: Opportunities and challenges. In V. Bocsi & K. Kovács (Eds.), *Új kutatások a neveléstudományokban 2024: A nevelés és oktatás kihívásai a válságok korában* [New Research in the Educational Sciences 2024: Challenges in Education and Teaching in an Era of Crises] (pp. 95–107). Hungarian Academy of Sciences (MTA) Committee on Pedagogical Sciences; Faculty of Child Development and Special Education, University of Debrecen; Institute of Education and Cultural Studies, Faculty of Arts, University of Debrecen.



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One of the greatest advantages of administrative data over surveys is that they ensure, in principle, comprehensiveness with regard to the population. This makes it possible to conduct targeted studies of smaller but socially relevant groups or individuals with atypical life paths, as well as to evaluate specific educational institutions or even individual programmes. However, this comprehensiveness can only ever be understood from the perspective of the administrative act that gives rise to the data collection, which often does not coincide with the researcher's perspective. One example of this is working or continuing one's education abroad, which can be regarded as highly relevant events from the perspective of examining the transition from education to the labour market, yet they do not entail any administrative tasks for Hungarian administrative bodies, so no information is collected or stored on this subject. Linking domestic administrative databases in this way is therefore unable to provide information about the life paths of those studying or working abroad; at most, it can detect the mere fact that they are doing so – or, more accurately, the absence of domestic data on them. Similarly, administrative data do not provide information on individuals who work without being registered, seek employment without being registered, or are economically inactive for reasons other than having children / damage to health.

In addition, the coverage of the target group at a given administrative body may also be influenced by administrative decisions aimed at practical considerations, such as streamlining data collection or reducing the burden on respondents. In the field of education, one such decision was the 2020 measure that separated public education and vocational training into distinct information systems, which would have placed a significant reporting burden on multi-purpose institutions. To streamline and rationalise these burdens, each educational institution fulfils its data reporting obligations through a single information system. Consequently, neither data requests based solely on the Public Education Information System (KIR) nor those based exclusively on the Vocational Training Information System (SZIR) can ensure comprehensive coverage of the target group, and a joint analysis of the two is only possible to a limited extent due to differences in the content, structure, and collection practices of the data. According to KIR statistics from October 2024, the number is in the tens of thousands, representing about 4% of the total vocational training population, are students who, although they are part of the vocational training system, are overlooked in an analysis based on SZIR data.

It is also important to note that defining the population is justified from both the student's and the training provider's perspectives, since the same individual may be involved in multiple educational programmes over the course of their life – whether concurrently or sequentially, with a time lag between them. Indicators describing the transition to the labour market and early career paths are particularly sensitive to the amount of time that has elapsed since the completion of training; so in addition to tracking individuals' career paths, it is important to distinguish which specific training programme we are using as a reference point when examining the subsequent development of their career.

Time horizon of the available information

Follow-up begins before the training programme ends and – based on the data currently available – may continue for up to 2.5–3 years afterward. Upon completion of the project, for the earliest school



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leaving class involved, the study will also allow for longer-term tracking of labour market trajectories: beginning with the final semester of the programme and continuing for approximately nine years. For classes that leave school at a later stage, the duration of the labour market follow-up will be shorter; however, in their case, it will be possible to examine the entire period of training, including the entirety of their employment concurrently with their studies.

For the period between February 2021 and September 2023, where the temporal evolution of the trajectories (longitudinal approach) is relevant for interpreting and calculating the indicators, the available administrative data are processed in such a way as to produce monthly, mutually comparable indicators. This means that observations regarding individuals' labour market and educational status are interpreted on a month-to-month basis, and the indicators accordingly describe monthly statuses or monthly performance metrics. The calculation logic behind the monthly breakdown makes it possible not only to provide a snapshot at a given moment but also to track, over a longer time series, how the careers of those involved develop in the period following the completion of studies. An additional advantage of the monthly approach is that it organises the differences arising from varying training dates into a unified framework: individuals' career paths can be examined not in terms of calendar time, but on a common timeline relative to their training (for example, months 1–36 following the completion of their studies). This makes it easier to compare results across training programmes, institutions, or classes, and also allows for the identification of typical career patterns.

In contrast, there are phenomena that, by their very nature, are tied to a single event or point in time (such as starting one's first job). With these indicators, we do not measure a monthly "status," but rather the occurrence of an event and its timing. The system interprets indicators based on such one-off events flexibly, always in relation to the completion of the given training programme: in other words, it does not tie the comparison to a fixed point in time, but rather examines when the event occurred after the programme was completed.

During career tracking, there are also outcomes to be examined that are not linked to a single point in time (such as "first" events) or to monthly statuses, but rather can be described in terms of the entire observation period following the completion of studies. These indicators record whether the phenomenon in question occurred at any time during the career tracking time-window and, if necessary, the intensity of its occurrence (for example, how many times it occurred, how many days / months it affected in total, the number of episodes or their total duration, etc.). A typical example of this is when we examine whether the individual in question experienced a registered job search episode at any time following the completion of studies, regardless of exactly when that occurred. Such time-window-based indicators complement monthly time-series indicators and one-time, timing-based indicators well: they simultaneously provide a comprehensive picture of the occurrence of events characteristic of the entire trajectory and allow for comparisons between groups even when the timing of events varies widely.

In summary, the methodology employs three complementary time-management approaches:



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- A monthly time-series (longitudinal) approach where trends, stability, and dynamics of the trajectories are of key importance (state-based or activity-based indicators).
- An event-based approach, with timing relative to the completion of studies, where the aim is to capture a one-off transition, a “first occurrence” or an entry point (time-bound indicators).
- A time-window-based approach (covering the entire follow-up period), in which we examine whether a phenomenon occurred at any time during the observation period following the completion of studies, and – where relevant – how frequently or for how long it occurred in total after the completion of studies.

This approach ensures that the indicators describe the trajectories following the completion of studies from three complementary perspectives. On the one hand, they provide a dynamic, time-series view of how these trajectories evolve (for example, the month-to-month patterns of work, study, inactivity, or job search), and on the other hand, they also accurately capture the critical entry events that are key elements in assessing the transition from education to the labour market (such as the timing of starting the first job and the onset of a stable employment phase). In addition, the time-window-based approach also allows us to interpret, over the entire observation period, those phenomena that are not tied to a single point in time: for example, we can record whether the individual experienced any registered job-search episodes at any time following the completion of their studies, and – where relevant – how frequently or for how long the event under examination occurred. By combining these three time-management logics, the trajectories may be interpreted not merely as “snapshots,” but the speed, sequence, and duration of transitions also become apparent, whilst we gain a comprehensive picture of the cumulative risks and experiences that occur during the career tracking period.

Possible filtering criteria

This chapter presents the filtering criteria that can be taken into account when reporting and calculating indicators, organised by topic. The criteria listed are not relevant for every indicator; those listed here describe all possible breakdown factors. The purpose of the filtering criteria is to ensure that the indicators do not merely present a single “average” picture of the population, but rather enable the interpretation of the results along institutional, educational, student, labour market, and further education dimensions. This facilitates comparison, the identification of targeted development interventions, and a nuanced assessment of the outcomes for different groups.

During the analyses, the following potential filtering criteria are identified:

1) Institutional considerations

- a) Maintainer
- b) Type of maintainer
- c) Organisation
- d) Vocational Training Centre or not
- e) Institution
- f) Place of operation / school site
 - i) Place of operation / school site by settlement



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- ii) Place of operation / school site by district
- iii) Place of operation / school site by county
- iv) Place of operation / school site by region

2) Training considerations

- a) Type of training
- b) Duties performed
- c) Flexible training or not
- d) Sector
- e) Profession
- f) National Qualifications Register (OKJ) / Register of Professions (SZJ)
- g) Type of legal relationship
- h) Individual study programme
- i) Grade
- j) Dual learning
- k) Status of legal relationship

3) Student details

- a) Gender
- b) Age
- c) Place of residence
 - i) Place of residence by district
 - ii) Place of residence by county
 - iii) Place of residence by region
 - iv) Place of residence-based district development pursuant to Government Decree No. 290/2014 (XI. 26) on the classification of eligible districts
- d) Citizenship
- e) Disadvantaged status (HH)
- f) Multiply disadvantaged status (HHH)
- g) Special educational needs (SNI)
- h) Integration, learning and behavioural difficulties (BTMN)
- i) Dorm resident

4) Labour market considerations

- a) Nature of employment relationship
- b) Type of business (GFO)
- c) Type of employment
- d) Level 1 of scope of activities (for enterprises)
- e) Employer's scope of activity (Level 1)
- f) Type of employer ownership



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- g) Employer company size category
- h) Employer's turnover category
- i) Employer's profit category

5) Further study considerations in view of progression to higher education

- a) Field of training / Programme trade group / Programme's discipline of science
- b) Level of training
- c) Institution
- d) Work schedule
- e) Form of funding

The application of the above filtering criteria must always be carried out while weighing the relevance of the intended use and ensuring full compliance with data protection requirements. Accordingly, breakdowns and filters may only be provided in as much detail as is necessary to ensure that the publication of the results does not pose a risk of identifying (revealing the identity of) individuals. Where the number of available data points is low, or where combined filters result in groups being too narrow, detailed breakdowns cannot be made available; where necessary, the use of more aggregated categories, combined groups or non-disclosure rules is justified.



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Textual explanation of indicators

Indicators relating to labour market transitions

Number of students who found employment (at their first job) after completion of their studies (persons)

The indicator for the number of students who found employment (at their first job) after completing their studies measures how many of the surveyed school leavers took their first job after completing their education, that is, how many young people began their first verifiable employment after completing their studies.

We include here those students (individuals) for whom, based on the available administrative data, an employment relationship can be identified, and of whom the first employment did not begin prior to completion of their studies but rather after the successful completion of their programme (if the date of successful completion is unknown, then after the final month of the programme).

We categorise students' entry into employment into three easily understandable situations:

1. Concurrent work: employment begins before the training programme is completed (the student is already working while studying)
2. First job after completion of studies: employment begins after completion of the programme, and this is the individual's first recorded start of employment in the dataset
3. Not the first job after the completion of studies: although the employment began after the completion of studies, the data indicate that the individual had previously been in employment (meaning this is not their first entry into the labour market)

The value of the indicator is the number of students within the target group under study who, according to the classification above, fall into the "first job after completion of studies" category.

An important note regarding interpretation is that the indicator measures the start dates of employment that can be identified based on available domestic administrative records, and even among those, it only considers data starting from February 2021, when data linkage began. The term "starting a job" is therefore limited here to registered employment relationships in Hungary commencing after February 2021.

Percentage of students who found employment (at their first job) after completion of their studies, relative to the base group (%)

This indicator shows the proportion of students within the surveyed group of school leaving students who entered the labour market for the first time after completing their education, that is, those for whom the first employment identifiable in administrative data began after the completion of their studies.



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The value of the indicator is the ratio of the number of “those who found employment for the first time after the completion of studies” to the total size of the target group under study, expressed as a percentage.

This indicator reflects registered employment start dates in Hungary, as identified on the basis of available administrative data; it does not include unreported employment, employment abroad, or any work performed prior to February 2021.

Gross wages for work performed at the first job following completion of training (HUF)

This indicator measures income levels achieved in one's first job. This indicator shows the total gross wage-type income earned by an individual during the first month of employment at the first job identified after completing their studies.

This indicator applies exclusively to the employment relationship associated with an employee's first job and consists of the sum of two components:

- the adjusted (standardised) monthly value of regular cash benefits, which is scaled to provide a comparable wage value projected to a full month and a 40-hour workweek; and
- the gross value of non-regular cash benefits for a given month, which includes non-regular income subject to social security contributions and the contribution base for service charges.

The indicator thus reflects the amount of gross income earned during the first month of employment at the first job.

Time (calendar days) between completion of studies and first job

The "Time (calendar days) between completion of studies and first job" indicator measures the average number of calendar days that elapse between the successful completion of a programme and the student's start date at their first job.

This indicator is calculated exclusively for individuals whose first job begins after the completion of their studies – that is, those who enter the labour market for the first time after completing their education. The calculation is based on the number of calendar days between the date the programme was completed (or, if that date is not available, the last month of the programme) and the start date of the first job. The indicator value is the average of these differences within the target group. The result thus describes the speed of the transition: the lower the value, the shorter the time between completion of studies and starting the first job.

Labour market indicators

Labour market sub-status categories

Determining labour market status requires defining the various sub-statuses and then cross-referencing them with respect to the period under study. Sub-statuses that can be determined on the basis of the available information, and their content, are as follows:



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- **Enrolled:** A person is considered to be of “student sub-status” if, during the month under study, they had an active (non-suspended) enrolment status in vocational training, adult education, or higher education for at least one day. Here is a more detailed breakdown:
 - **Enrolled in vocational training:** A person is considered a student in vocational training if he or she had an active enrolment status in vocational training for at least one day during the month under study.
 - **Enrolled in adult education:** A person is considered a student in adult education if he or she had an active enrolment status in adult education for at least one day during the month under study.
 - **Enrolled in higher education:** A person is considered a student in higher education if he or she had an active enrolment status in higher education for at least one day during the month under study.
- **Employed:** A person is considered to be of “employed sub-status” if, during the month under study, they performed a registered income-generating activity on at least one day, regardless of the form of that activity: employee, simplified contribution to public revenues (EKHO), simplified employment (EFO), primary producer, sole trader (EV), or small taxpayer (KATA). If someone has been absent from work / suspended for the entire month, they will not be classified as employed. A more detailed breakdown of the sub-status is also available as follows:
 - Works as an employee
 - Works under the simplified contribution to public revenues (EKHO) scheme
 - Works under the simplified employment scheme (EFO)
 - Works as a primary producer
 - Works as a sole trader (EV)
 - Works as a small taxpayer (KATA)
- **Registered job search:** A person is considered to be of “registered job seeker sub-status” if they registered as a job seeker on at least one day during the month under study.
- **Other statuses**
 - **Childcare, adoption, or home care:** The “having children, adoption, and home care sub-status” applies exclusively to cases where the insured status is suspended (shown as a period of absence from employment) for one of the following reasons: infant care benefit; child care benefit; child care allowance; child care support allowance; child-raising allowance; nursing allowance; child home care allowance; adoption allowance. If, in addition to these, the person is in employment, or if they are claiming these benefits without having previously had insured status arising from an employment relationship (e.g. if they entered this status as a student or self-employed individual), then they will not appear under this sub-status. The purpose of the sub-status, therefore, is not to identify the entire group of persons involved in having children, adoption, or providing home care, but rather to indicate that there has been a gap in



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the person's labour market participation, and the likely reason for this is that they are receiving one of the benefits listed above.

- **Death:** The “death sub-status” indicates that, according to information available from NEAK, the person died during or before the given month.
- **Pension benefits:** The information available through data linking is not sufficient to fully identify every person receiving a pension; however, in the case of NAV data – due to its relevance to taxation – it is possible to identify those individuals who are in employment while receiving pension benefits. In their case, it is possible to specify the date from which they have definitely been receiving pension benefits. Based on this logic, we classify an individual as having pensioner status if, according to the tax return data from the National Tax and Customs Administration (NAV), a code indicating pensioner status appears for the month under study or any preceding month.
- **Relocation abroad / living abroad / insurance cover abroad:** We include an individual in this category if, according to NEAK records, they reported a stay abroad or foreign insurance coverage, and the validity of such report or coverage extended for at least one day during the month under study.
- **Other, inactive:** The individual cannot be classified under any of the sub-statuses defined above for the month under study, and there is no administrative record associated with the individual in any of the analysed registers for any calendar day.

Primary labour market status

Primary labour market status can be determined based on a monthly comparison of the sub-statuses detailed above and the number of days spent in each. When identifying the primary status, it is recommended not only to consider dominance in terms of the number of days, but also to take into account legal / theoretical considerations (e.g. the fact that CSED (infant care benefit) and job-seeker status preclude employment). In cases of overlapping statuses, the final categories of primary labour market status should be defined based on actual frequencies and patterns, specifying, where appropriate, both a more detailed and an aggregated version thereof. The categories used are as follows:

- **Enrolled:** if, during the month under study, the individual is registered in the Higher Education Information System of the Education Office to begin a higher education programme; or appears in the Adult Education Data Reporting System as enrolled in a programme; or is enrolled in a programme in the Vocational Training Information System that is different from their first qualification, and this status is not suspended/active and is considered to be the dominant status for the days of that month
- **Employed:** if, during the month under study, there is an entry in the NAV's specialised system indicating employment as an employee; a primary producer or sole trader (KATA or flat-rate taxpayer); and the reported gainful activity is the dominant status for the days of that month
- **Enrolled and employed:** if neither of the two statuses listed above is predominant during the month under study, both apply simultaneously



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- **Registered job seeker:** if the individual is listed in the register of job seekers of the National Employment Service of the Ministry of Economic Development during the month under study, and this is the individual's primary status for that month based on the number of days spent on the register
- **Other, inactive:** if the person cannot be classified into any of the above status categories during the month under study (for example, they are receiving family support benefits, have moved abroad, have died, do not appear in any administrative registry, etc.)

The information above is also presented on a monthly basis, showing **the number of people in each labour market (sub-)status** and their **proportion (%)** of the population under study.

Indicators related to job search

Number of persons classified as job seekers (persons)

The number of persons who were listed in the register of job seekers as registered job seekers at least once during the study period (currently February 2021–September 2023). The number of job seekers thus indicates how many individuals, over the entire career-tracking period under study, were listed at least once in the register of job seekers of the National Employment Service of the Ministry of Economic Development, regardless of how long their registration lasted, how many times it occurred, or on what date(s) it took place.

Percentage of individuals with job seeker status (%)

The proportion of job seekers reflects the share of the (sub-)population under study that, during the study period (currently February 2021–September 2023), at least once registered as a job seeker in the register of job seekers of the National Employment Service of the Ministry of Economic Development, regardless of the duration, number, or timing of the registrations.

In other words, the indicator represents the proportion of individuals within the target group under study who were registered as job seekers at least once during the specified period, relative to the total size of the (sub-)population under study.

Number of job seekers (persons) for the entire study period

The number of job seekers for the entire study period represents the number of individuals who, throughout the entire period under study (currently February 2021–September 2023), were listed as registered job seekers in the register of job seekers of the National Employment Service of the Ministry of Economic Development.

Percentage of job seekers for the entire study period (%)

The proportion of job seekers for the entire study period indicates what percentage of the total (sub-)population under study consisted of jobseekers who were registered throughout the entire study period (currently February 2021 – September 2023), according to the register of job seekers of the National Employment Service of the Ministry of Economic Development.



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Time spent in search for a job (calendar days)

The time spent in search for work indicates the total number of calendar days the person spent as a registered job seeker during the study period (currently February 2021 – September 2023) as a registered job seeker, according to the register of job seekers of the National Employment Service of the Ministry of Economic Development. The indicator is derived from the sum of values calculated on a monthly basis; as such, it can be calculated for any time frame.

Indicators related to income status

The monthly gross wage indicator for work performed is calculated only for employees in an employment relationship.² During the calculation, regular cash benefits, the amounts of non-regular cash benefits for the given month, and the total of these amounts are calculated separately.

Regular monthly cash benefits arising from employment as an employee (gross, HUF)

The basis for calculating the indicator for regular monthly cash benefits arising from employment as an employee is the income reported in tax returns that forms the basis for social security contributions. However, the income figures are used in an adjusted (standardised) form: the declared amounts are scaled so that they correspond to a gross wage for a full month's employment of 40 hours per week – that is, "full-time, full-month" employment. This adjustment makes it possible to produce comparable wage indicators even in the case of part-time work or employees joining or leaving employment mid-month. It is important to note, however, that while this approach may be appropriate from the perspective of specific occupations, it is not suitable for assessing the wage levels achieved by individuals, and it also leads to distorted results when aggregating income from various employment relationships at the individual level.

Value of non-regular cash benefits arising from employment as an employee for the month under study (gross, HUF)

The monthly value of non-regular cash benefits is determined based on non-regular income related to employment as an employee that is subject to social security contributions. The calculation takes two tax return items into account: first, the amount of non-regular income that forms the basis for social security contributions; and second, the amount of the base for social security contributions paid on service charges. Accordingly, the indicator shows the gross value in HUF of non-regular cash benefits arising from employment as an employee for the given month.

Total monthly cash benefits arising from employment as an employee (gross, HUF)

The purpose of this indicator is to show the total amount of reported income related to employment relationships within a given month. Total monthly benefits arising from employment as an employee

² To gain a more complex and comprehensive understanding of school leavers' income situation, it is recommended that additional indicators beyond wages be introduced in the future; these could include the following: Monthly income earned under the simplified contribution to public revenues scheme; Monthly income earned from simplified employment; Average monthly income earned as a primary producer; Average monthly income earned as a sole trader; Average monthly income earned as a small taxpayer; Total monthly income.



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are determined based on the tax return data, without any adjustments, on a gross basis. The indicator is calculated by simply summing the income items that form the base for social security contributions reported in the given month: by adding together regular wage-type income, non-regular cash benefits, and the contribution base for service charges. If a person has more than one employment relationship within a single month (e.g., due to concurrent employment or a change in employment during the month), the indicator includes the combined values of these relationships.

Indicators relating to work intensity

Number of full-time employees (persons)

The number of full-time employees represents the number of employed persons who, during the month under study, were employed for at least 40 hours per week in at least one employment relationship for at least one calendar day.

Percentage of full-time employees (%)

The percentage of full-time employees indicates what percentage of employees in the month under study belong to the group of those employed for 40 hours or more per week.

The numerator includes the number of employees who, during the month under study, were employed for at least 40 hours per week in at least one employment relationship for at least one calendar day. The denominator is the total number of persons employed during the month under study; the indicator therefore shows the proportion of full-time workers exclusively among those working (also) as employees.

Number of part-time employees (persons)

The number of part-time employees represents the number of employees who were employed for less than 40 hours per week during the month under study.

Percentage of part-time employees (%)

The percentage of part-time employees indicates what percentage of employees in the month under study belong to the group of those employed for less than 40 hours per week.

The numerator includes the number of employees who, during the month under study, were employed for less than 40 hours per week in at least one employment relationship for at least one calendar day. The denominator is the total number of persons employed during the month under study; the indicator therefore shows the proportion of part-time workers exclusively among those working as employees.

Number of days spent at work (calendar days)

The number of days spent at work indicates the total number of days during the month under study on which the individual had insurance coverage linked to employment as an employee.

When calculating the indicator, we take into account all relevant periods of employment as an employee occurring within the month, and then aggregate them without counting overlaps: if a person has multiple overlapping employment relationships at the same time, or if the periods of the employment relationships partially overlap, we count the overlapping days only once. Accordingly, the



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result is the unique (duplicate-free) number of days worked during the month under study, which can range from 0 to the number of calendar days in the month.

Indicators relating to the continuation of further studies

General indicators of further education

Number of students continuing their studies (persons)

This indicator shows how many of the students who successfully complete a given programme go on to pursue further education in higher education, adult education, or vocational training after completing their studies.

This category includes individuals for whom, based on administrative data, participation in higher education, adult education, or vocational training can be identified after leaving the programme under study. For the purposes of this indicator, it is sufficient for the student to appear at least once within the time window under study in any training register with an active/non-suspended status, regardless of whether the student successfully completed the training programme they had started. The value of the indicator therefore represents the number of individuals in the target group of school leavers who continue their education.

It is important to note that the linked data used to calculate this indicator does not include data from the Public Education Information System (KIR); therefore, any pathways to further education that may exist within the public education system are not reflected in this indicator. Furthermore, based on the available data sources, there is no information on studies pursued abroad, so these are also excluded from the calculation. As a result, the indicator is expected to underestimate the actual rate of further education.

Percentage of students continuing their studies (%)

This indicator shows the percentage of students who successfully complete a given programme and go on to pursue further education in higher education, adult education, or vocational training after completing their studies.

The numerator includes those individuals for whom, based on administrative data, there is evidence of enrollment in higher education, adult education, or vocational training after leaving the programme under study. For the purposes of this indicator, it is sufficient for the student to appear at least once within the time window under study in any training register with an active/non-suspended status, regardless of whether the student later successfully completed the training programme they had started. The denominator is the total number of school leavers in the target group under study; the indicator therefore shows the proportion of students continuing their education relative to the entire target group.

It is important to note that the linked data used to calculate this indicator does not include data from the Public Education Information System (KIR); therefore, any pathways to further education that may exist within the public education system are not reflected in this indicator. Furthermore, based on the available data sources, there is no information on studies pursued abroad, so these are also excluded



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from the calculation. As a result, the indicator is expected to underestimate the actual rate of students continuing their education.

Indicators of further education in higher education

The number of students who, after completing their training, continue their studies in higher education during the study period (number of students)

This indicator shows how many of the students who successfully complete a given programme go on to pursue higher education after completing their studies.

This category includes individuals who, according to administrative records, have a verifiable status as domestic students after leaving the programme under study. For the purposes of this indicator, it is sufficient for the student to be listed at least once in the Higher Education Information System as having active enrolment in higher education within the time window under study, regardless of whether the student later successfully completed the higher education programme they had started. The value of this indicator therefore represents the number of individuals in the target group of school leavers under study who continue their education in higher education.

This indicator measures only higher education enrolment data appearing in available domestic administrative records; it does not account for studies pursued in higher education institutions abroad, so these are not included in the calculation.

Percentage of students who, after completing their training, continue their studies in higher education during the study period (%)

This indicator shows the percentage of students who successfully complete a given programme and go on to pursue higher education after completing their studies.

The numerator includes those individuals who, according to administrative records, have a verifiable status as domestic students after leaving the programme under study. For the purposes of this indicator, it is sufficient for the student to be listed at least once in the Higher Education Information System as having active enrolment in higher education within the time window under study, regardless of whether the student later successfully completed the higher education programme they had started. The denominator is the total number of school leavers in the target group under study; the indicator therefore shows the proportion of students continuing their studies in higher education relative to the entire target group.

This indicator measures only higher education enrolment data appearing in available domestic administrative records; it does not account for studies pursued in higher education institutions abroad, so these are not included in the calculation.



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Indicators of further education in adult learning

The number of students who, after completing their training, continue their studies in adult education during the study period (number of students)

This indicator shows how many of the students who successfully complete a given programme go on to enroll in adult education after completing their studies.

This category includes individuals who, according to administrative records, have a verifiable status as domestic students enrolled in adult education after leaving the programme under study. For the purposes of this indicator, it is sufficient for the student to be registered at least once in the Adult Education Data Reporting System as enrolled in adult education within the time window under study, regardless of whether the student later successfully completed the adult education programme they had started. The value of the indicator therefore represents the number of individuals in the target group of school leavers under study who are enrolled in adult education.

This indicator measures only adult education enrolment recorded in available domestic administrative records; it does not account for education pursued abroad or through non-formal channels, so these are not included in the calculation.

Percentage of students who, after completing their training, continue their studies in adult education during the study period (%)

This indicator shows the percentage of students who successfully complete a given programme and go on to pursue adult education after completing their studies.

The numerator includes those individuals for whom, based on administrative data, a domestic adult education enrolment status is identified after leaving the programme under study. For the purposes of this indicator, it is sufficient for the student to be registered at least once in the Adult Education Data Reporting System as enrolled in adult education within the time window under study, regardless of whether the student later successfully completed the adult education programme they had started. The denominator is the total number of school leavers in the target group under study; the indicator therefore shows the proportion of students entering adult education relative to the entire target group.

This indicator measures only adult education enrolment recorded in available domestic administrative records; it does not account for education pursued abroad or through non-formal channels, so these are not included in the calculation.

Indicators of further education in vocational training

The number of students who, after completing their training, continue their studies in vocational education during the study period (number of students)

This indicator shows how many of the students who successfully complete a given programme go on to participate in further vocational training after completing their studies.



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This category includes individuals who, according to administrative records, have a verifiable status as domestic students enrolled in vocational training after leaving the programme under study. For the purposes of this indicator, it is sufficient if, within the time window under study, the student is listed at least once in the Vocational Training Information System as having a non-suspended vocational training status – regardless of whether the student later successfully completed the vocational training programme they had started. The value of this indicator therefore represents the number of individuals in the target group of school leavers under study who continue their education in vocational training.

This indicator measures only vocational training relationships recorded in available domestic administrative records, specifically those appearing in the SZIR; it does not have access to data on vocational training pursued abroad or studies recorded in the KIR, so these are not included in the calculation.

Percentage of students who, after completing their training, continue their studies in vocational education during the study period (%)

This indicator shows the percentage of students who successfully complete a given programme and go on to participate in further vocational training after completing their studies.

The numerator includes those individuals who, according to administrative records, have a verifiable status as domestic students enrolled in vocational training after leaving the programme under study. For the purposes of this indicator, it is sufficient if, within the time window under study, the student is listed at least once in the Vocational Training Information System as having a non-suspended vocational training status – regardless of whether the student later successfully completed the vocational training programme they had started. The denominator is the total number of school leavers in the target group under study; the indicator therefore shows the proportion of students continuing their education in vocational training relative to the entire target group.

This indicator measures only vocational training relationships recorded in available domestic administrative records, specifically those appearing in the SZIR; it does not have access to data on vocational training pursued abroad or studies recorded in the KIR, so these are not included in the calculation.



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Summary

The data dictionary for career tracking, with its conceptual and methodological descriptions of the eleven indicators related to the VET Career Tracking System (SZPR), provides a unified basis for the systematic tracking of the career paths of vocational education and training graduates. Together, these indicators form a standard framework suitable for the presentation of the transition from education to the labour market, labour market integration (statuses, job search, work intensity, income characteristics), and pathways to further education in a comparable manner, broken down by institution, programme, student, and region.

The document also sets out the key framework for interpreting the indicators. The results are based on administrative records; therefore, they are primarily able to capture phenomena that appear in a reported or registered form in the linked systems (for example, reported employment in Hungary, registered job searches, and enrollment in Hungarian higher education, adult education, or vocational training programmes). Consequently, certain life situations relevant from a policy or analytical perspective (such as working or pursuing further education abroad, participating in non-formal training, working without being officially registered, etc.) are reflected in the data only to a limited extent, if at all. This may lead to an underestimation of certain indicators. When interpreting the indicators of further education, it is particularly important to note that this linked data does not include data from the Public Education Information System (KIR); therefore, any potential pathways for continuing education within the public education system are not reflected here.

The filtering criteria described in the data dictionary may serve as a guide for analysis: users may use them to interpret the indicators in light of their own questions (for example, comparisons between maintainers and institutions, sectoral differences, examination of flexible forms of education, varying outcomes among equal opportunities groups, analyses by employer characteristics, or detailed patterns of progression to higher education). The consistent use of filters helps ensure that the indicators do not merely present aggregated “averages,” but rather reveal meaningful patterns that are also useful from a development perspective.

The definitions and calculation rules specified in the data dictionary also play a key role in ensuring that the indicators can be interpreted by a wide range of users (vocational training institutions and their maintainers, sectoral management and policy makers, regional stakeholders, analysts and researchers, or even those about to pursue further education and their families) with the same content and according to the same logic. Regular, standardised, and predictable production and dissemination ensure that the indicators function not as one-off analytical results, but as monitoring tools, making them suitable for tracking trends, monitoring the impact of interventions, and providing stakeholders with feedback on their own performance and areas for improvement based on differences among institutions, educational programmes, students, and regions. A prerequisite for this is a transparent methodology and consistency in reporting practices, which simultaneously enhance the comparability, interpretability, and professional credibility of the indicators, while also supporting evidence-based planning and professional dialogue on the effectiveness of vocational education and training.



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Annexes

Annex 1 to the Data Linkage Agreement: description of the data owners and data fields involved in the linkage

Document on the Documentation of Data Fields Included in Career Tracking, and the Development and Operationalisation of Indicators (Version: 1 August 2025)