

Relevance of Collective Agreements and Employee Rights in Relation to Digitisation and Automation

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Introduction

At the moment, the **4th industrial revolution** is **changing the labour market**. These changes will have an impact on every single employee. However, its intensity will differ depending on occupation, field, or the employer's investment activities, as well as on the employee's age and motivation to learn new things. **Collective bargaining** should **respond** to the rise of digital economy primarily in regard to the **protection of employee rights**. On the other hand, it is generally true that collective bargaining is meant to protect the rights of union members as a matter of preference. Nevertheless, it also significantly contributes to the protection of rights of all employees in the Czech Republic as **stipulations negotiated in collective agreements** tend to be later **enshrined in employment laws**.

Therefore, **the main goal** of this study is to describe **differences between the standing enjoyed by employees under the protection of a collective agreement**, and the position of employees who are **not covered** by the **benefits** achieved by means of collective bargaining. Furthermore, **measures** will be proposed to **strengthen the relevance of collective agreements** in highly digitised economies.

The structure of this study is as follows:

The first chapter provides details on data sources and methodology;

The second chapter focuses on current developments in the labour market from the perspective of employee structure and levels of remuneration as affected by the existence of a collective agreement. Attention is also paid to ICT and technical fields, specifically to graduates and professionals in these areas as they are frequently mentioned in relation to the 4th industrial revolution.

The third chapter looks into differences between the standing enjoyed by employees under the protection of a collective agreement, and the standing of employees who are not covered by the benefits achieved by means of collective bargaining. First, attention is paid to the structure of employees who are and are not covered by a collective agreement, emphasising different characteristics and differences in remuneration as affected by the existence of a collective agreement. Then, based on differences in the employee structure as per the existence of a collective agreement, different employee groups are identified and described with respect to protection granted by a collective agreement.

The fourth chapter concentrates on the possibilities of strengthening the relevance of collective agreements in highly digitised economies.

The **conclusion** summarises the study's chief findings.

1 Data sources and methodology

1.1 Employee and earnings structure

Data from the **Information System on Average Earnings (ISAE)** is used in order to analyse employee structure and levels of remuneration. The results of ISAE's surveys (**structural statistics**) are meant to provide the most detailed information on **pays received by individual employees** and the time worked, sorted by employees' personal characteristics (such as age, gender, educational attainment, or occupation as per the CZ-ISCO classification) and the characteristics of employers (e.g. a CZ-NACE section of economic activity, the size of economic entity, the entity's seat). In terms of income levels, the chief indicators being monitored are the gross monthly salary and hourly wage.

ISAE contains data from regular statistical surveys, i.e. the Quarterly Survey of Average Earnings which is incorporated into the programme of statistical surveys declared by the Czech Statistical Office, Collection of Laws for a given calendar year. Quarterly Survey of Average Earnings is **harmonised with the structural survey of the European Union**, i.e. *The Structure of Earnings Survey* (see the Commission Regulation (EC) No. 1916/2000 as amended).

ISAE results are differentiated by the sector to which they pertain. In ISAE, economic entities which **give pay** as per Section 109, Paragraph 2, Act No. 262/2006, Coll., Labour Code, as amended, are considered to be active in **the private sector**. Entities which **give pay** as per Section 109, Paragraph 2, Act No. 262/2006, Coll., Labour Code, as amended, are considered to be active in **the public sector**.

Detailed ISAE results and descriptions are published on www.ispv.cz.

1.2 Outcomes of collective bargaining

Information on collective bargaining in the CZ is based on the outcomes of the **Information on Working Conditions (IWC)** survey. Managed by the Ministry of Labour and Social Affairs (MoLSA), it has been regularly mapping and analysing collective bargaining in the Czech Republic since 1993 (formerly as the Information System of Working Conditions). The survey aims to provide the government and other institutions with an overview of trends in collective bargaining, and contractual partners with information which is appropriate for further negotiations on the business level or to negotiate a higher class collective agreement.

The survey focuses on provisions concluded by social partners in following areas:

- Employee remuneration;
- Cooperation between contractual parties;
- Working hours and extended vacation time;
- Changes in employment;
- Employment rate;
- Provision of benefits;
- Working conditions of employees;
- Obstacles to work;
- Professional development of employees;
- Equal treatment; and
- Occupational health and safety.

The survey **monitors collective agreements on the business level, as well as collective agreements of higher classes**. Results of surveys on collective business agreements are sorted primarily by whether or not an economic entity is active in the private, or public sector. Economic entities which give pay as per Section 109, Paragraph 2, Act No. 262/2006, Coll., Labour Code, as amended, are considered to be active in the private sector. Entities which give pay as per Section 109, Paragraph 2, Act No. 262/2006, Coll., Labour Code, as amended, are considered to be active in the public sector. Input data is sourced electronically by means of the EKS acquisition programme, or by a direct gathering of collective agreements.

Survey results are available on the MoLSA website (www.mpsv.cz) in the *Incomes and Standard of Living* section, or on www.kolektivnismilouvy.cz.

1.3 Graduates and professionals in ICT and technical fields

Graduates from information and communication technology fields (ICT) and technical fields are defined by ISCED-F 2013, an international classification of education fields which served as a basis for CZ-ISCED-F 2013¹, a national classification of education fields, in effect as of the 1st January, 2016.

Information and Communication Technologies (class 06 of the CZ-ISCED 2013 classification) includes the following fields:

- Computer use (0611);

¹ Learn more on <https://www.czso.cz/csu/czso/klasifikace-oboru-vzdelani-cz-isced-f-2013>

- Database and network design and administration (0612);
- Software and applications development and analysis (0613);
- Information and communication technologies (ICT) not elsewhere classified (0619);
- Interdisciplinary programmes and qualifications involving ICT (0688).

Technical fields (class 07 of the CZ-ISCED 2013 classification) include the following fields:

- Engineering and engineering trades (071);
- Manufacturing and processing (072);
- Architecture and construction (073);
- Interdisciplinary programmes and qualifications involving technology, production, and construction (078).

The ISCED-F 2013 classification used to be based on individual fields of education. However, a 2016 amendment to the Higher Education Act abolished the fields of education system and replaced it with a system of study programmes. Thus, all information on the number of graduates is currently presented only with respect to this system, and has been retroactively adjusted for previous years. Therefore, data may not be identical to the information published in the past.

Information on the number of graduates from ICT and technical fields, and on their other characteristics is based on the data sources of the Ministry of Education, Youth and Sports (MoEYS), specifically the SIMS Register of Students (SIMS). Graduate data always pertains to an entire academic year. For the purposes of this study, this applies to those who graduated from all types of study programmes (bachelor's, master's, and doctoral). The number of graduates is expressed in natural persons, i.e. each graduate is indicated only once, including those who graduated from multiple study programmes. Thus, the overall number of graduates may not correspond to the totals for individual types of study programmes.

Professionals from the ICT and technical fields are defined by the international ISCO-08 classification of occupations, or rather CZ-ISCO², its national version. For the purposes of this study, they include the following occupation classes:

- Science and engineering professionals (21);
- ICT professionals (25);
- Science and engineering associate professionals (31);
- Information and communications technicians (35).

² Learn more on https://www.czso.cz/csu/czso/klasifikace_zamestnani_-cz_isco-

2 Czech labour market during the 4th industrial revolution

2.1 Employee structure development

This chapter focuses on **changes in employee structure over the past 10 years**. Employee structure with respect to age, educational attainment, field, and occupation (knowledge vs. manual workers) is the subject of observation.

Regarding the age structure of employees, as the Czech population ages, so does the employee pool. As shown by Figure 2.1, **the average age of employees** grew from just under 42 in 2009 to almost **43 years in 2019**. This is caused by an **increased percentage** of employees aged **60 and older**, from **5 % in 2009** to **8 % in 2019**. The percentage of employees aged **40–49** increased as well, from **25 % in 2009** to **31 % in 2019**.

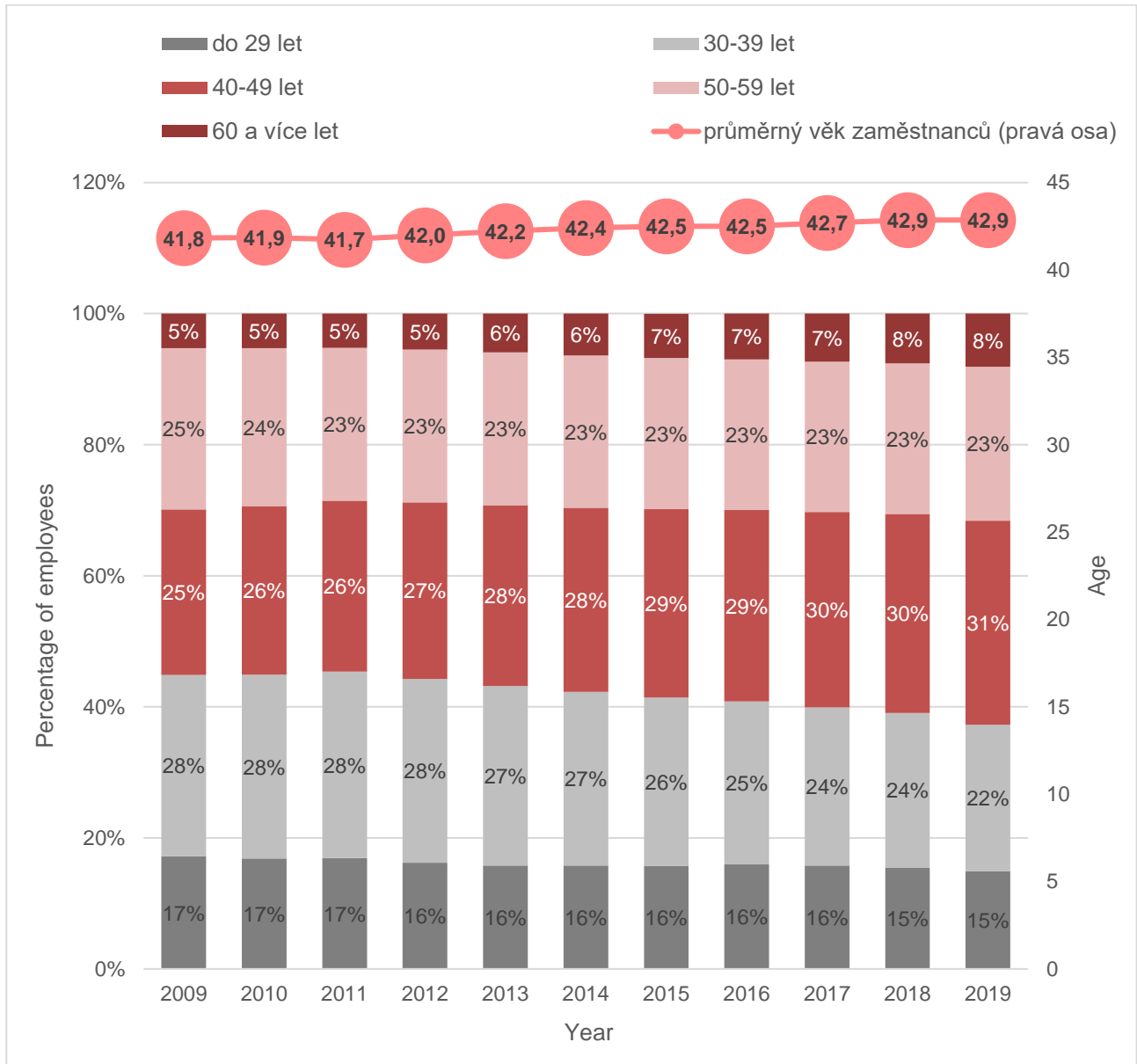
Conversely, the **percentage of employees aged 39 and younger decreased** from **45 % in 2009** to **37 % in 2019**. Employees aged 50–59 have long constituted roughly a quarter of the Czech labour market. This has not changed significantly over time; over the past 10 years, the number decreased only by 2 points—from 25 % in 2009 to 23 % in 2019.

Apart from an aging population and a constantly increasing retirement age, the employee age structure is affected by modern technologies which allow employees to work later in life.

Also related to the development of the age structure of employees is their education structure. Figure 2.2 shows that the **percentage of tertiary-educated employees** has grown over the past few years. Employees with a college education, as well as with a bachelor's degree and university education, constituted 18 % of employees in 2009 in the Czech Republic. In 2019, this percentage rose to 24 points. Conversely, the **percentage of secondary-educated employees without Matura dropped** in the reference period by 6 percentage points—from 38 % in 2009 to 32 % in 2019. The percentage of secondary-educated employees with Matura remained unchanged—35 % in 2009 and 2019.

As stated, development of employees' age structure is related to the development of their education structure. This connection is evident, among other things, in the decreasing percentage of employees aged 29 years and less. This confirms the trend of a growing percentage of secondary-educated employees, causing them to enter the labour market at a later time.

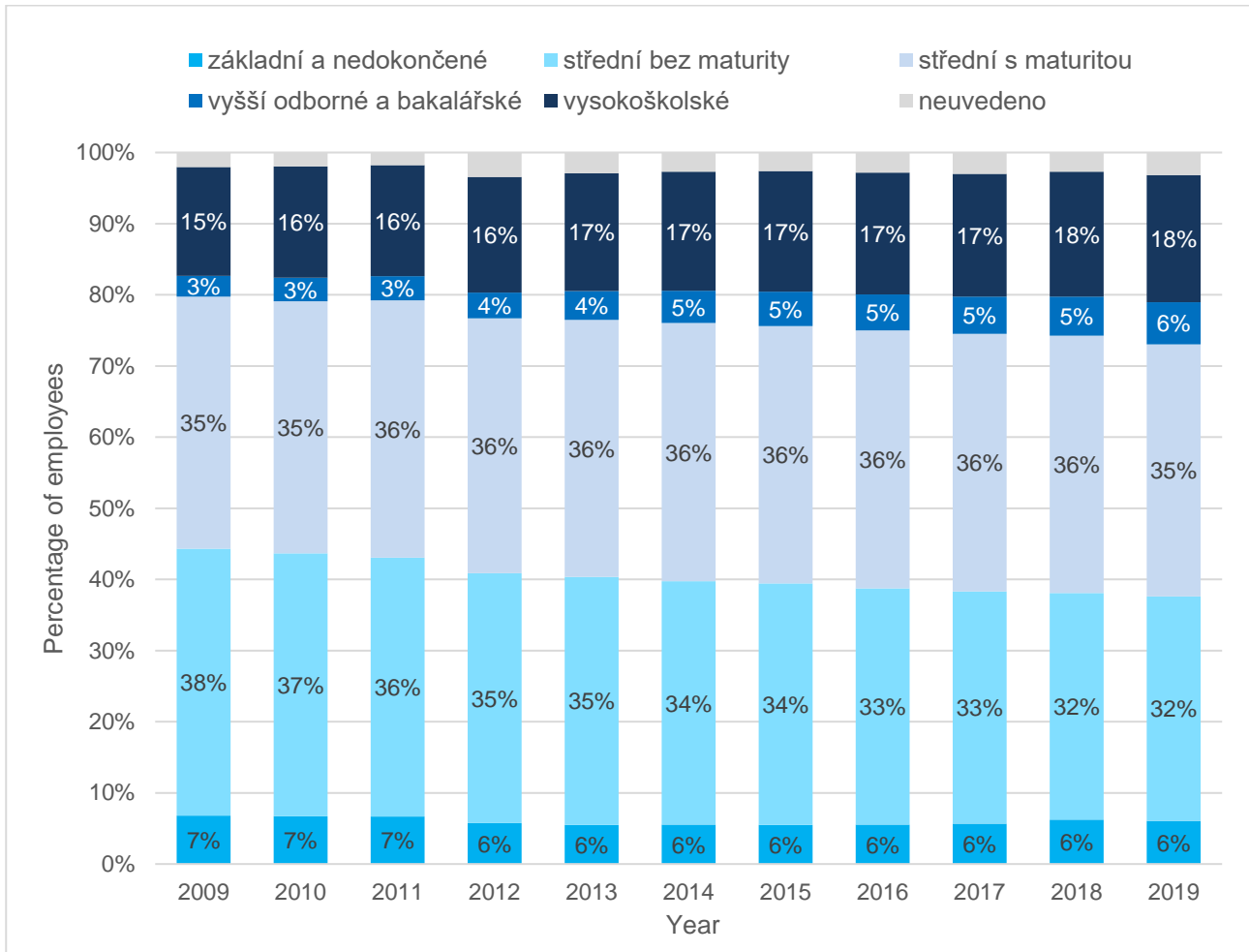
Figure 2.1: Development of the age structure of employees, 2009 to 2019 (CZ)



Source: CSO (Structure of earnings). Data as of the 25th of May, 2020.

*29 years and less, *30–39 years, *40–49 years, *50–59 years, *60 and older, * Average age of employees (right axis)

Figure 2.2: Employee structure development by education, 2009 to 2019 (CZ)



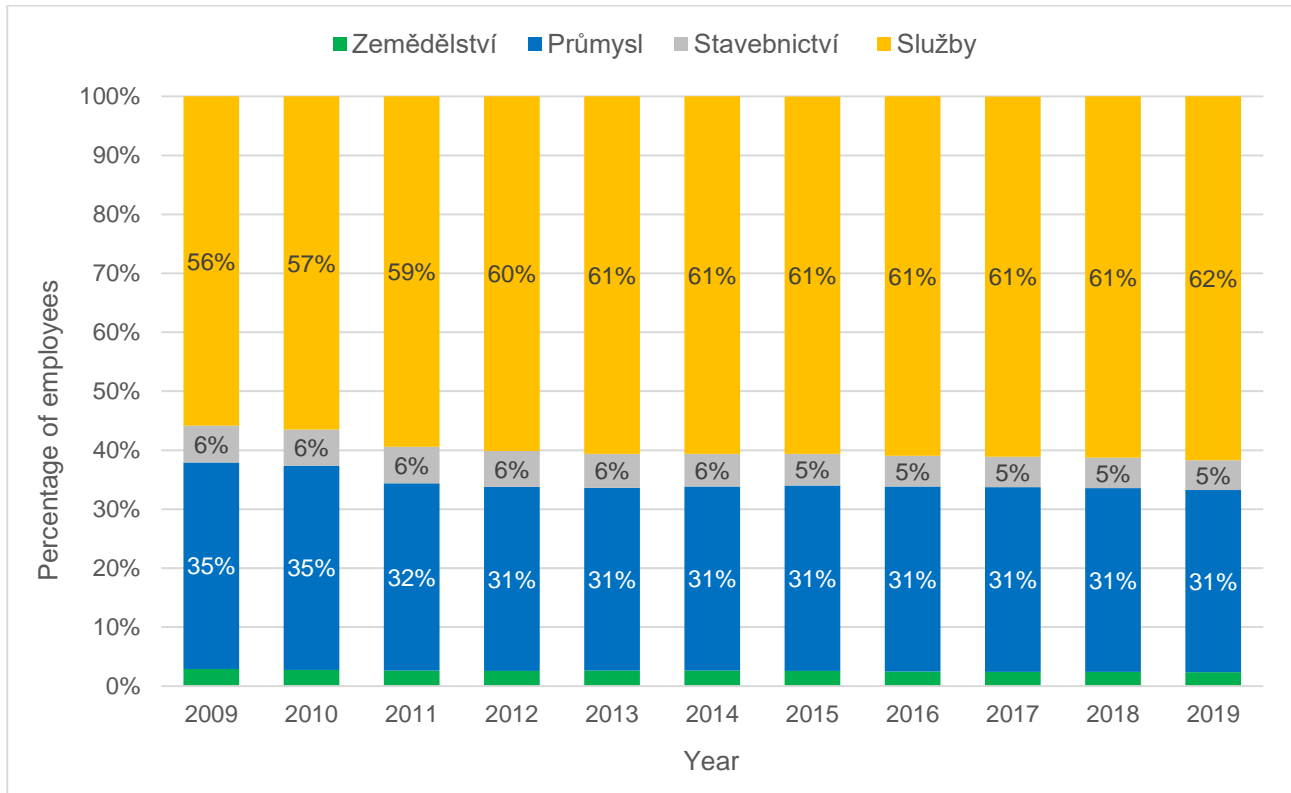
Source: CSO (Structure of earnings). Data as of the 25th of May, 2020.

- Primary and early school leavers * Secondary without Matura * Secondary with Matura * College and bachelor's * University * Not stated

Figure 2.3. shows employee structure development by field from 2009 to 2019. In the reference period, the **percentage of service workers** rose from 56 % in 2009 to 62 % in 2019. Conversely, the percentage of industry workers dropped by 4 points, from 35 % in 2009 to 31 % in 2019.

A **growing percentage of knowledge workers** and a decreasing share of manual workers is another labour market phenomenon in terms of employee structure during the 4th industrial revolution (see Figure 2.4). The percentage of knowledge workers rose from 59 % in 2009 to 63 % in 2019. Conversely, the **share of manual workers dropped** from 40 % in 2009 to 37 % in 2019.

Figure 2.3: Employee structure development by field, 2009 to 2019 (CZ)

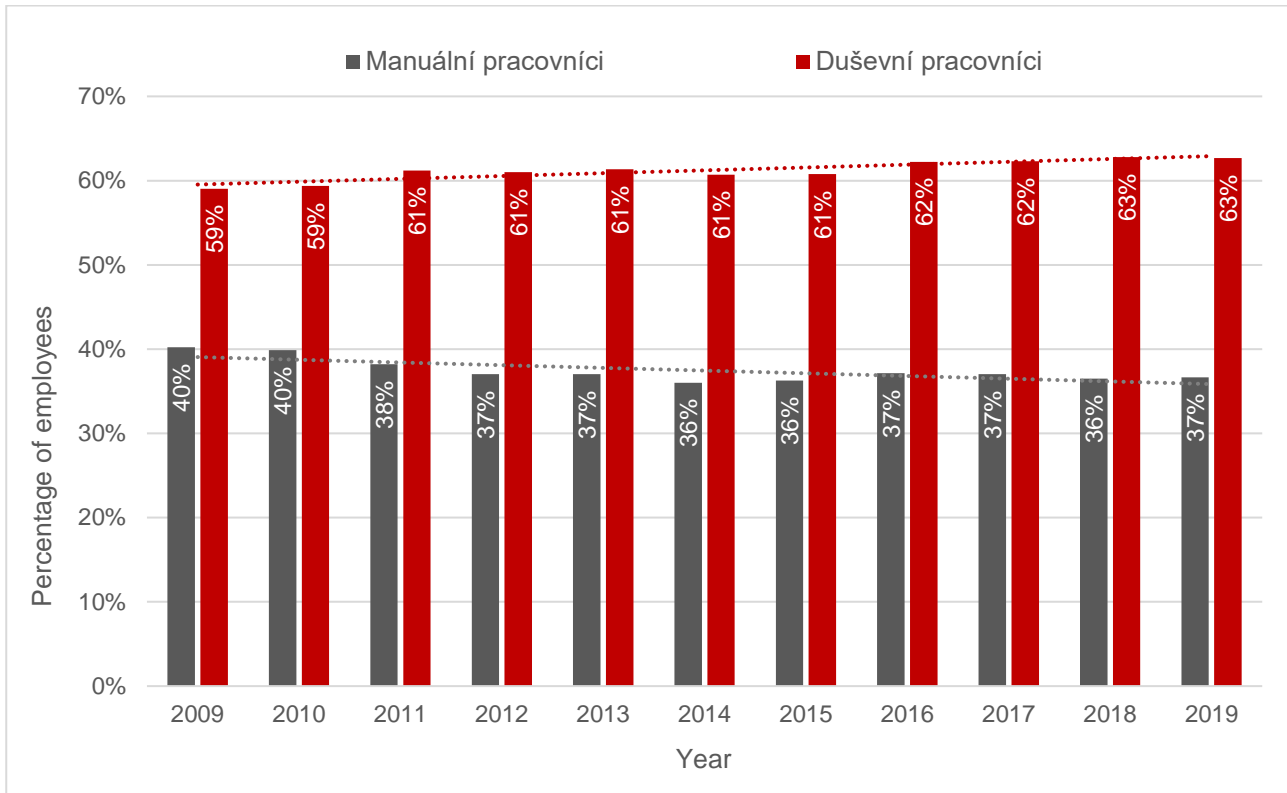


Note.: Agriculture falls under the A section of the CZ-NACE classification, industry under the B–E sections, construction under the F section, services under the G–S sections.

Source: CSO (Structure of earnings). Data as of the 25th of May, 2020.

*Agriculture * Industry * Construction * Services

Figure 2.4: Development of the manual to knowledge worker ratio, 2009 to 2019 (CZ)



Note: Knowledge workers fall under main groupings 1–5 of the CZ-ISCO classification of occupations, manual workers under main groupings 6–9.

Source: CSO (Structure of earnings). Data as of the 25th of May, 2020.

*Manual workers *Knowledge workers

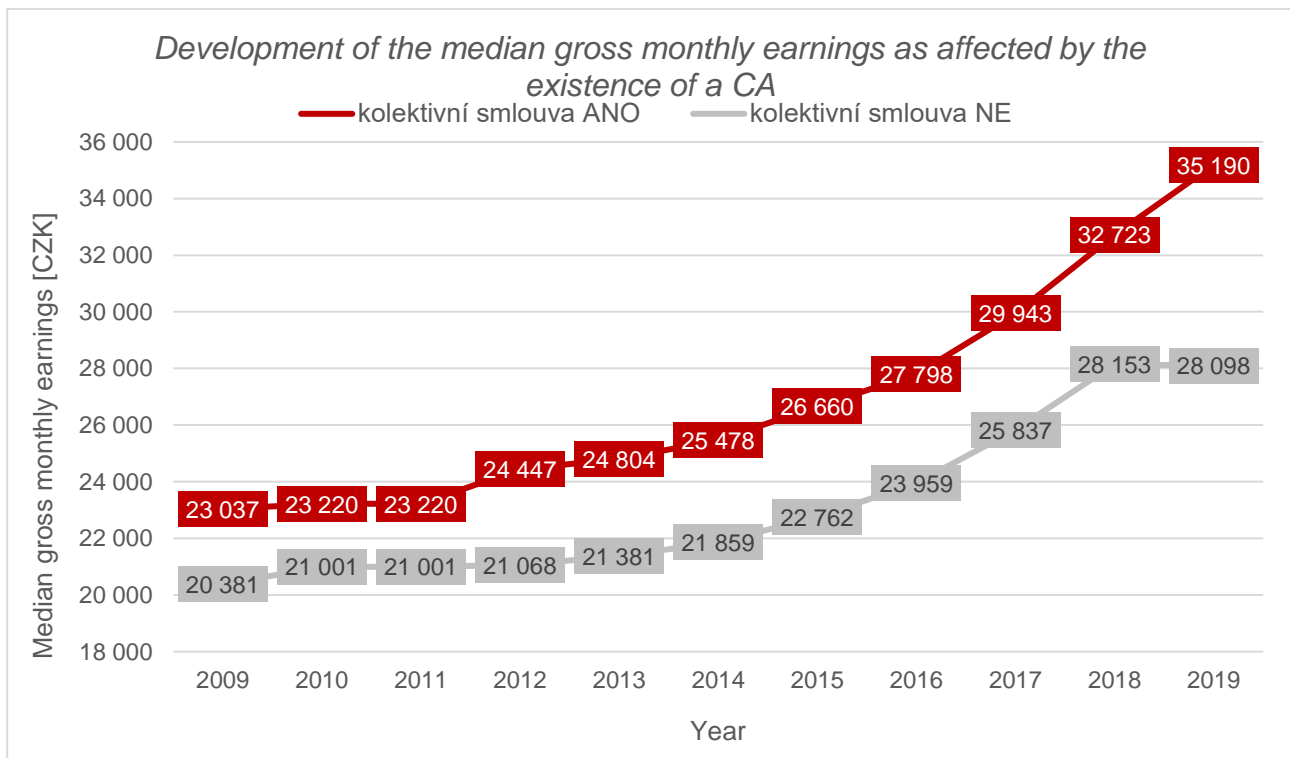
2.2 Pay development by collective agreement

Generally speaking, it can be argued that from the perspective of remuneration as affected by the existence of a collective agreement, **employees covered by a collective agreement receive a higher pay in the long term** when compared to those workers who are not under the protection of a collective agreement (see Figure 2.5).

In the Czech Republic, the **median gross monthly earnings of employees covered by a collective agreement** amounted to ca **23 thous. CZK** in 2009. By way of contrast, the median gross monthly earnings of employees who were not under the protection of a collective agreement were over 20 thous. CZK, i.e. almost **3000 CZK less than the employees covered by a collective agreement**. This difference has been growing over time, in favour of employees under the protection of a collective agreement. In 2019, the **median gross monthly earnings of employees** covered by a collective agreement were

ca **35 thous. CZK**, i.e. approximately **7000 CZK more than those who were not under the protection of a collective agreement.**

Figure 2.5: Development of the median gross monthly earnings as affected by the existence of a collective agreement, 2009 to 2019



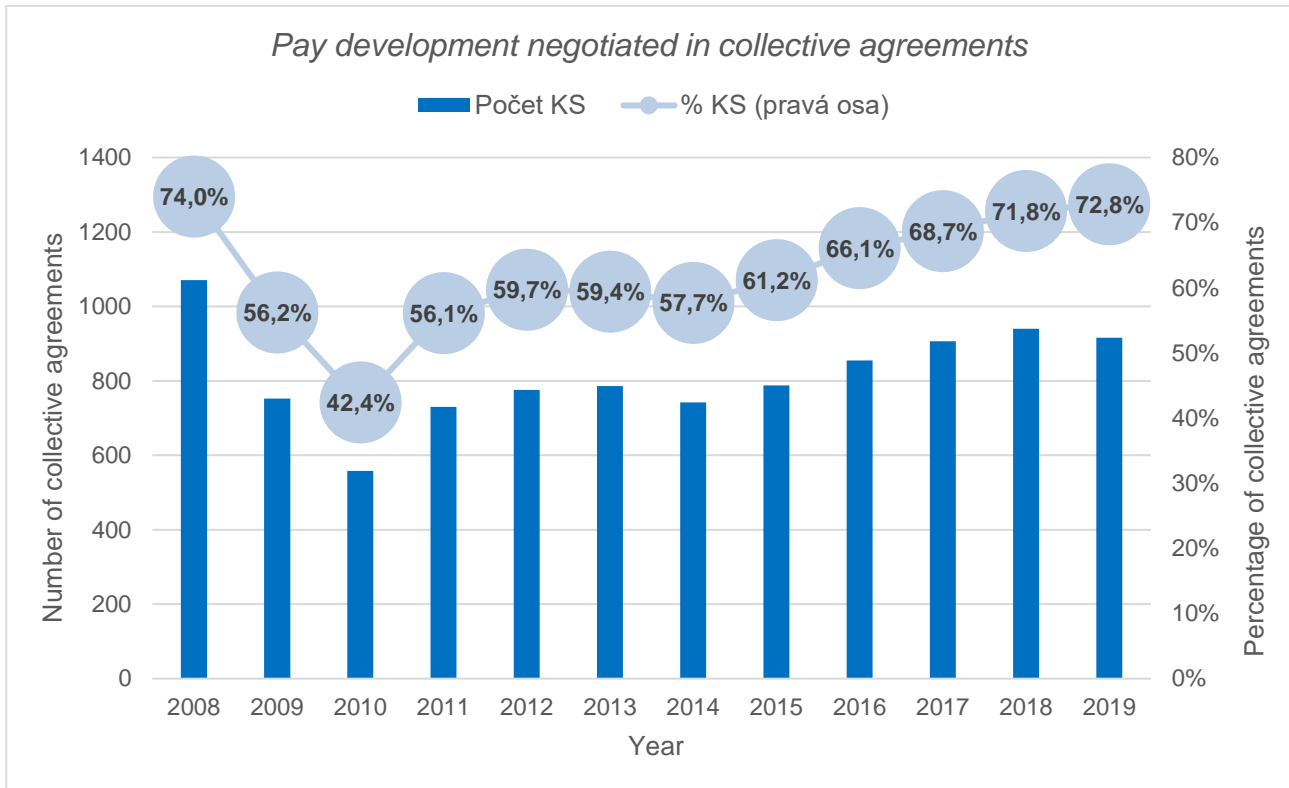
Source: ISAE (MoLSA).

*collective agreement * no collective agreement

With respect to collective agreements and pay development in the private sector, attention has long been paid to the **number of collective business agreements with stipulations on pay development**. This number is used to calculate the ratio of collective agreements where a relevant value is negotiated, to the total amount of agreements in the set.

Until 2008, a pay development was negotiated in ca three quarters of collective business agreements. Then, the financial crisis hit and the number of collective agreements stipulating a pay development dropped significantly. As shown by Figure 2.6, the biggest drop occurred in **2010** when a pay development was stipulated only in **42 %** of collective business agreements. In 2011, the situation changed due to economic growth and this trend held until **2019** when a **pay development was a part of almost 73 % of collective business agreements**.

Figure 2.6: Development of the number and percentage of collective agreements stipulating a pay development, 2009 to 2019 (private sector, CZ)



Source: IWC (MoLSA), prepared by TREXIMA.

*Number of CA *CA % (right axis)

2.3 Graduates and professionals in ICT and technical fields

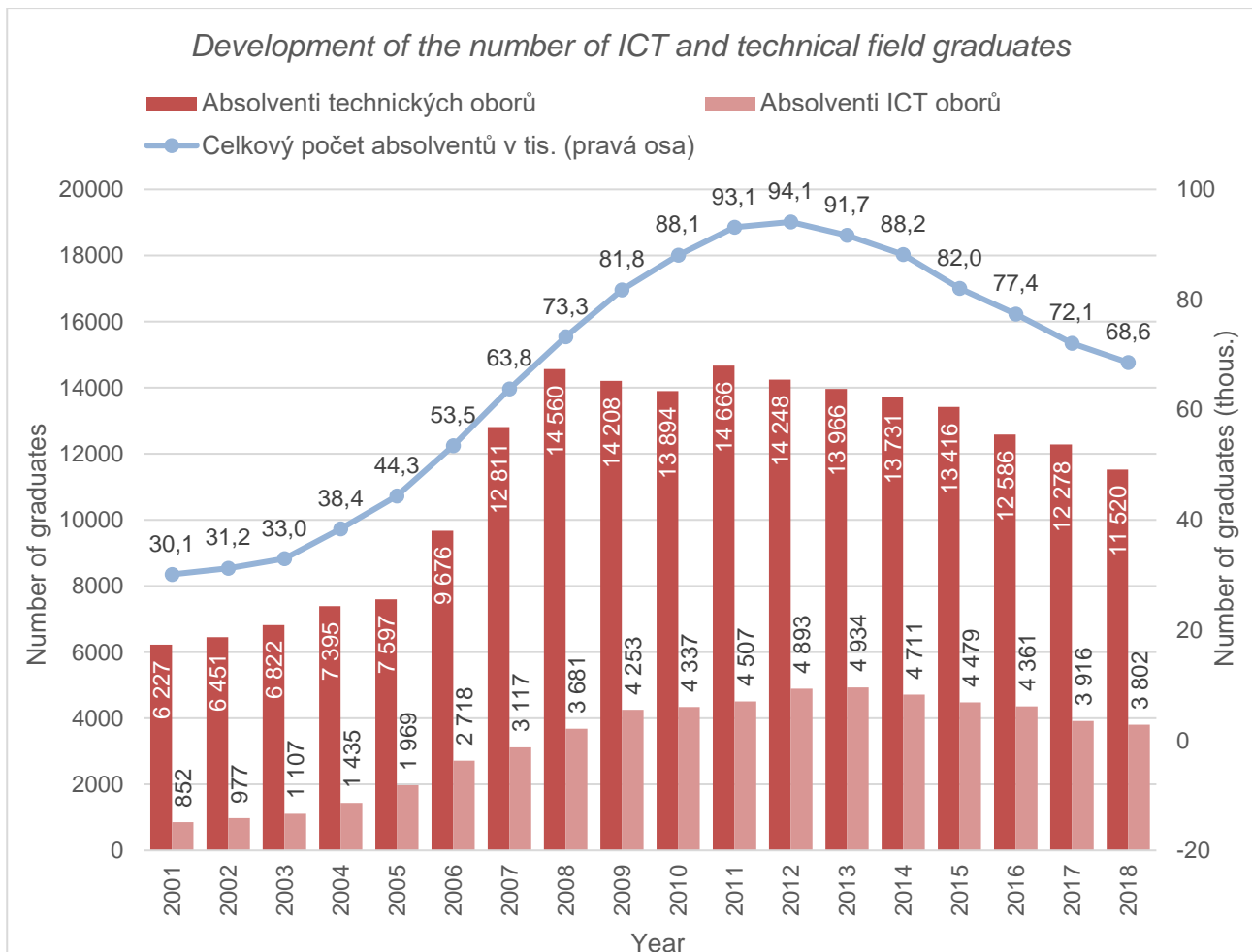
In the era of digitisation and automation, situation on the labour market is characterised by an increased **demand for employees with a degree in information and communication technologies (ICT) and technical fields**, i.e. for graduates from these fields or for ICT professionals and technicians. During the 4th industrial revolution, however, it is not enough to simply have a degree in the respective field. It is also crucial to keep educating oneself over the course of one's life and constantly improve one's qualifications, have interdisciplinary knowledge as well as the ability to think creatively and critically.

This part of the study first deals with the development of the number of graduates with degrees from the above-mentioned fields, and the share of said graduates in the total number of college graduates in the Czech Republic. A closer look at the issue is provided by an analysis of the standing enjoyed by ICT professionals and technicians in the labour market (their number and remuneration).

Figure 2.7 shows the development of the number of graduates with ICT and technical degrees, and for the purposes of contextualisation also the development of the total number of college graduates in the Czech Republic from 2001 to 2018. Figure 2.8 captures the development of the share of these graduates in the total number of college graduates in the Czech Republic for the same reference period.

Figure 2.7 makes it evident that the **development of the number of ICT graduates** approximately **copies the development of the total number of graduates**. The development of the number of **graduates with a degree from a technical field** roughly corresponded to the development of the total number of graduates until 2008; from 2009 to **2012**, the number **did not grow as much as the total number of graduates**. This was also made evident by a decreasing share of graduates with a technical degree in the total number of graduates—from 20 % in 2008 to 15 % in 2012. Currently, the percentage is around 17 (see Figure 2.8). Since 2001, the **share of ICT graduates** in the total number of college graduates in the CZ roughly **doubled**. In 2018, it was **6 %**.

Figure 2.7: Development of the number of ICT and technical field graduates and of the total number of college graduates in CZ, 2001 to 2018

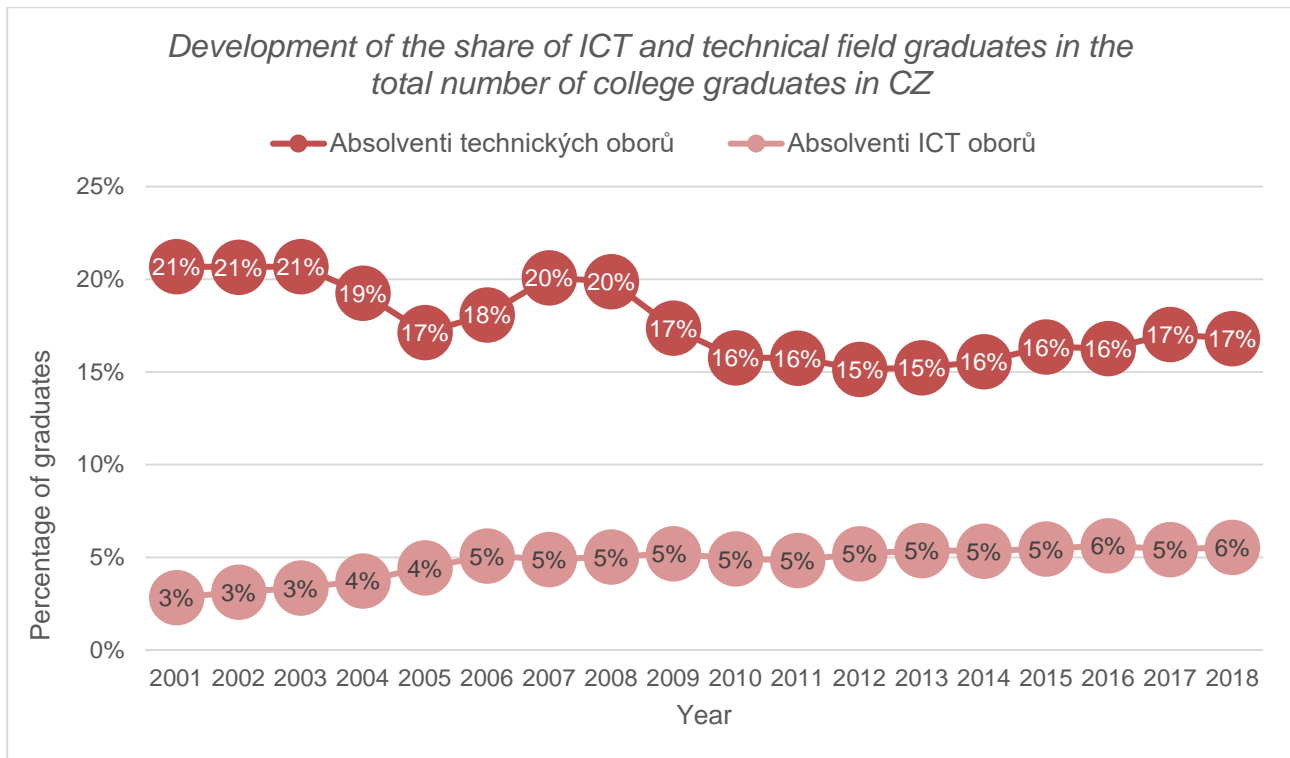


Note: The number of graduates from technical and ICT fields by individual fields of education is listed in the Annexe (see figures I and II).

Source: CSO, data from MoEYS (the SIMS database).

*Technical field graduates, *ICT graduates, *Total number of graduates in thous. (right axis)

Figure 2.8: Development of the share of ICT and technical field graduates in the total number of college graduates in CZ, 2001 to 2018



Note: The percentage of graduates from technical and ICT fields by individual fields of education is listed in the Annexe (see figures III and IV).

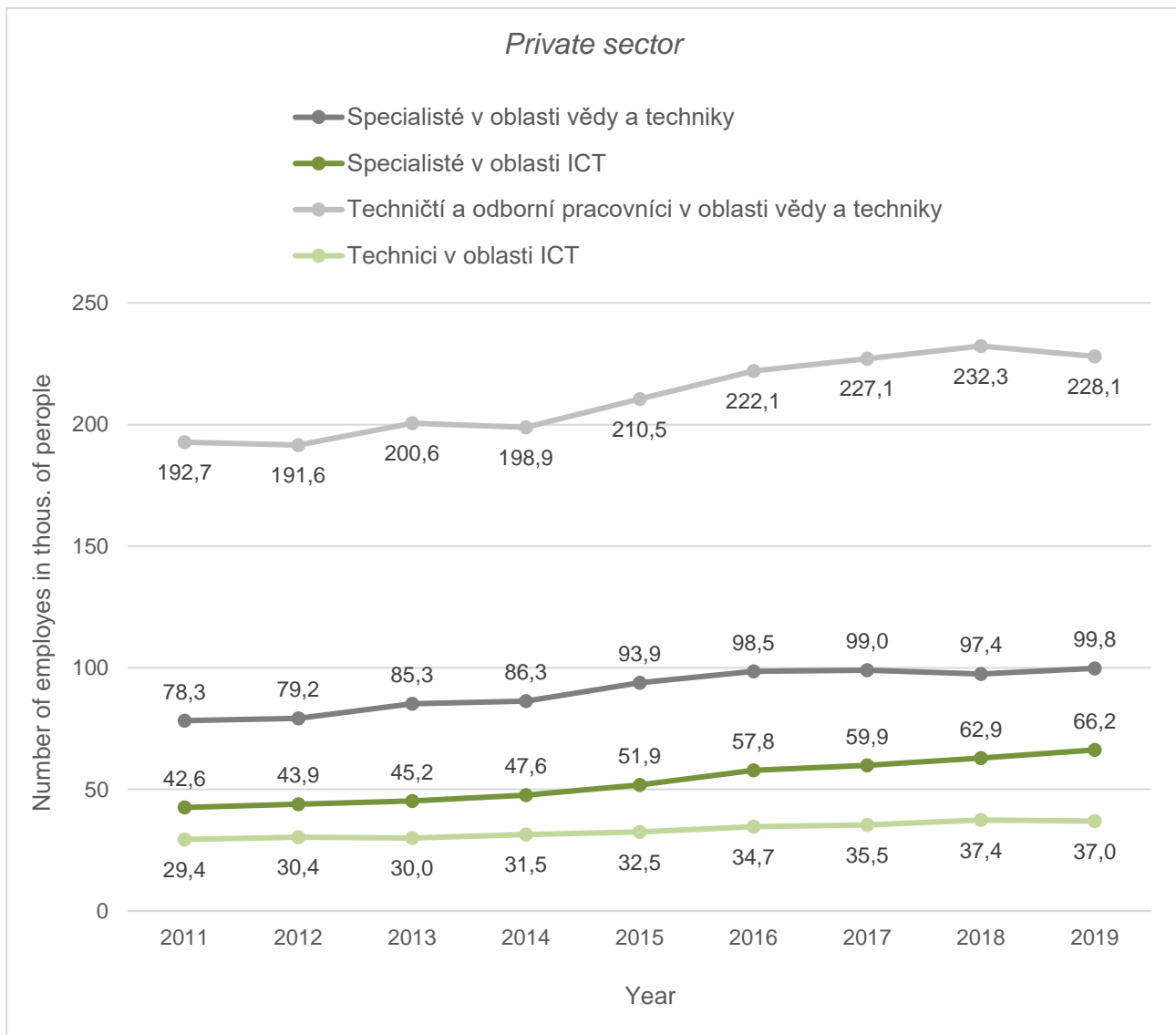
Source: CSO, data from MoEYS (the SIMS database).

*Technical field graduates, *ICT graduates

A growing percentage of graduates with a degree in **ICT or a technical field** reflect a growing demand for such professionals in the labour market. Thus, it is necessary to pay attention to the position of these workers in the **Czech labour market**. Figures 2.9 and 2.10 show the development of the number of technicians and ICT professionals from 2011 to 2019, especially in the private and public sector. Naturally, the number of these experts is higher in the private sector than in the public sector, on account of their different size. To give a better idea of the issue, figures 2.11 and 2.12 show the share of ICT professionals and technicians, employed in respective fields, in the total number of employees from 2011 to 2019. Finally, figures 2.13 and 2.14 show the development of remuneration of ICT professionals and technicians from 2011 to 2019. For the purposes of comparison, the figures also contain information about total remuneration in the private and public sector.

Figure 2.9 confirms that the **number of professionals as well as technicians and associate professionals who are active in the private ICT and technical sector grew since 2011**. In the public sector, the number of ICT professionals and technicians was stable in the past few years. On the other hand, the number of science and technology professionals decreased slightly since 2011 (see Figure 2.10).

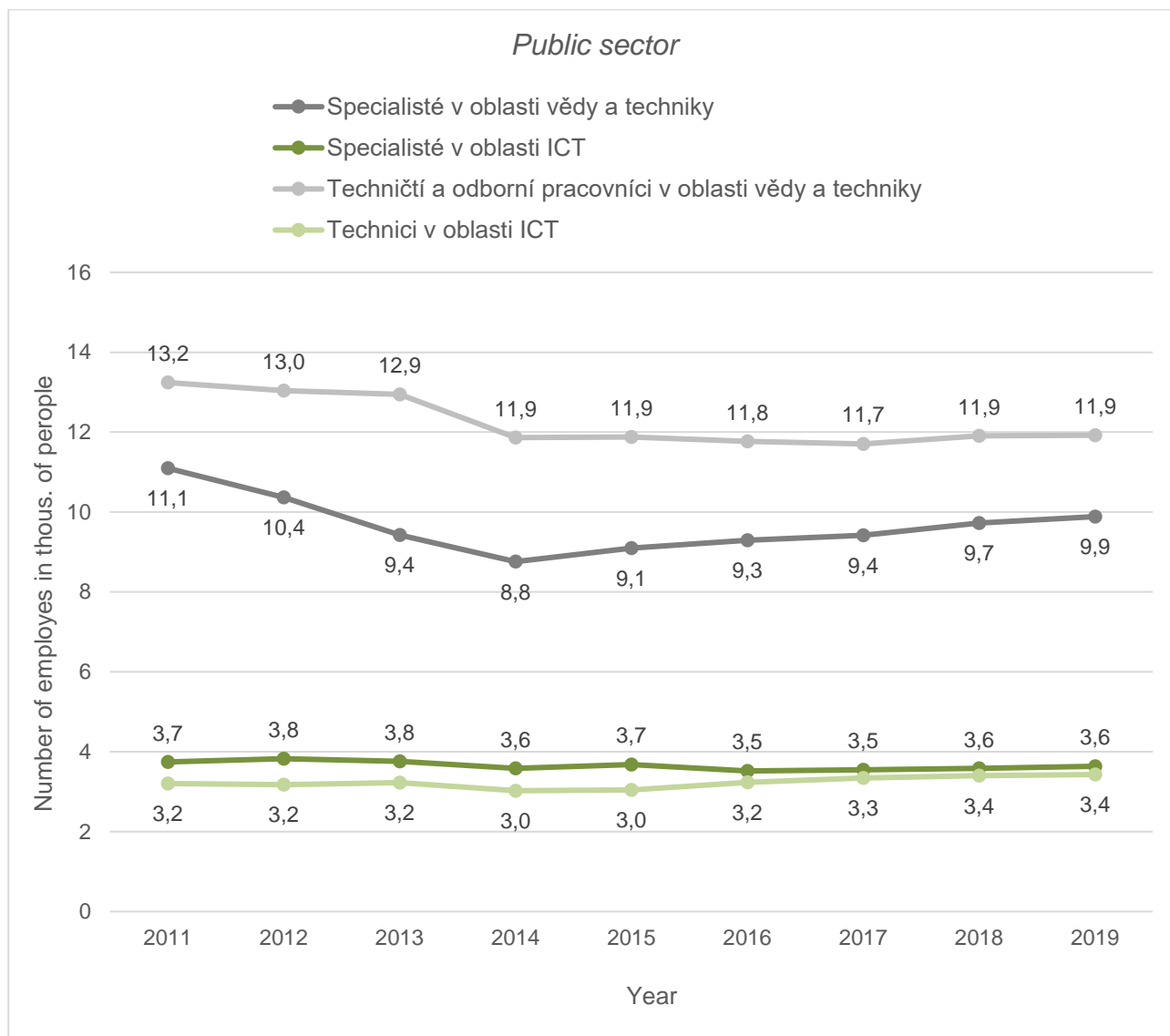
Figure 2.9: Development of the number of technicians and ICT professionals, 2011 to 2019 (private sector, CZ)



Source: ISAE (MoLSA).

*Science and engineering professionals, *ICT professionals, * Science and engineering associate professionals, * Information and communications technicians

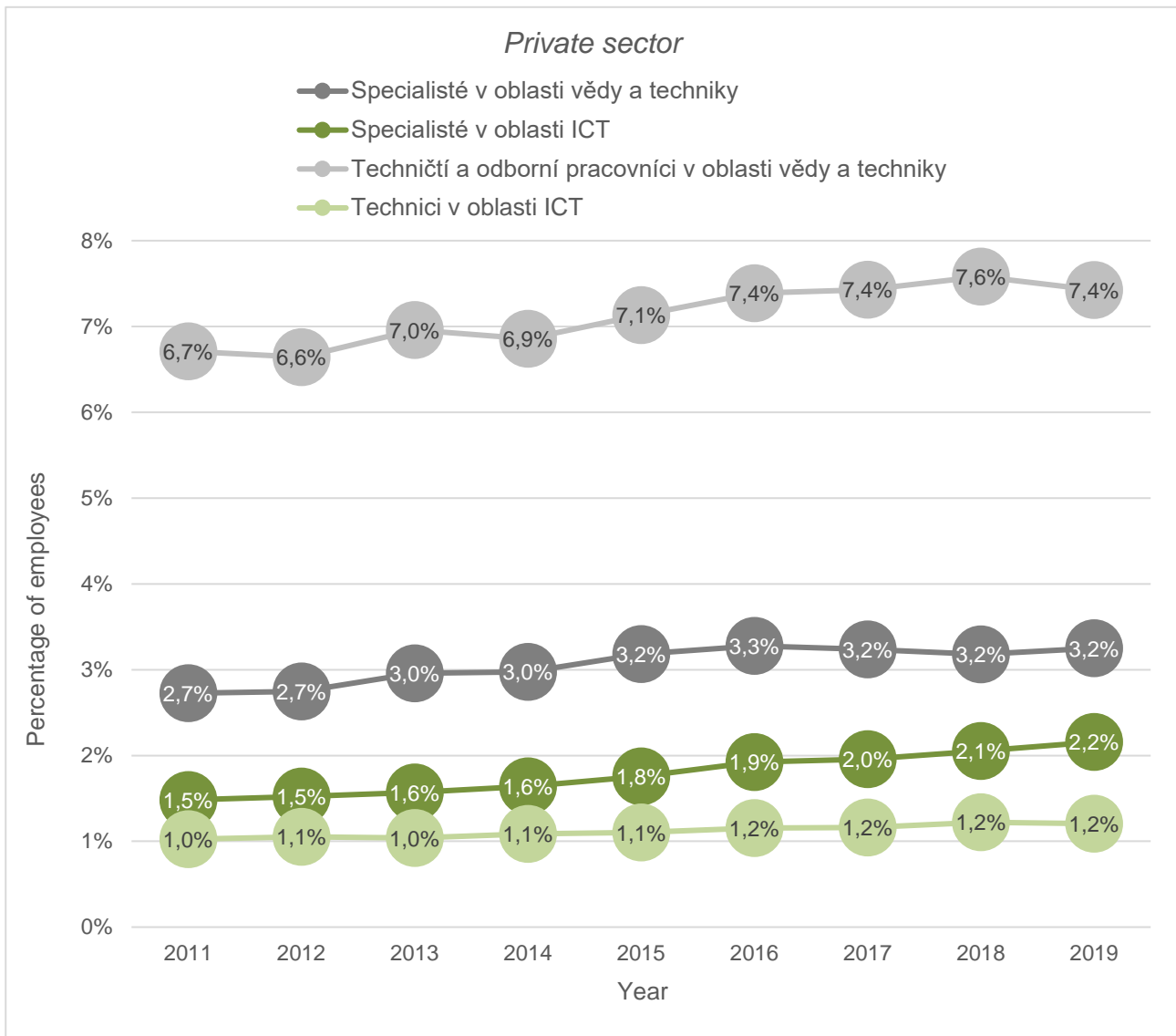
Figure 2.10: Development of the number of technicians and ICT professionals, 2011 to 2019 (public sector, CZ)



Source: ISAE (MoLSA).

*Science and engineering professionals, *ICT professionals, *Science and engineering associate professionals, * Information and communications technicians

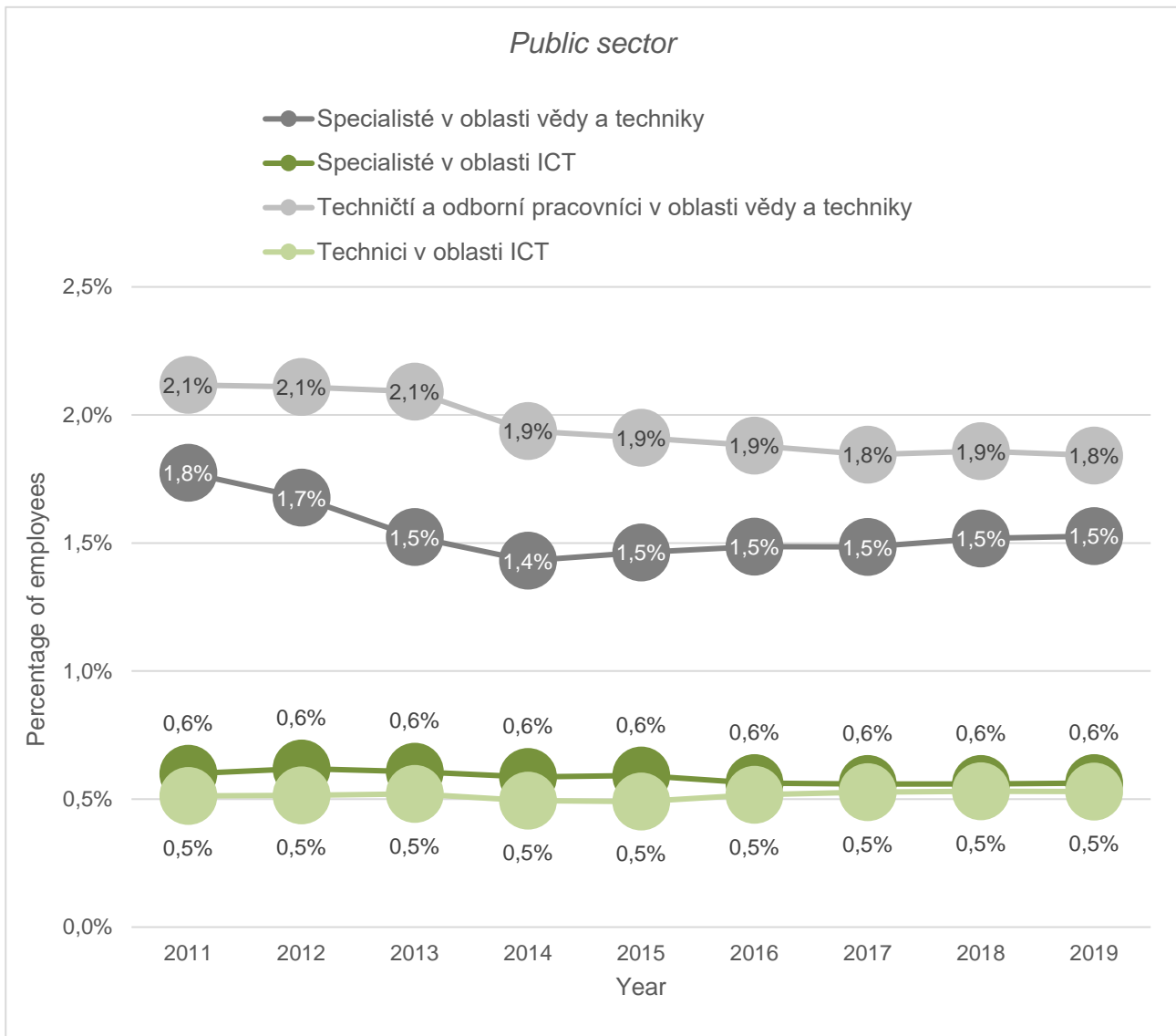
Figure 2.11: Development of the share of technicians and ICT professionals in the total number of employees, earnings in the private sector, CZ, 2011 to 2019



Source: ISAE (MoLSA).

*Science and engineering professionals, *ICT professionals, *Science and engineering associate professionals, * Information and communications technicians

Figure 2.12: Development of the share of technicians and ICT professionals in the total number of employees, public sector, CZ, 2011 to 2019



Source: ISAE (MoLSA).

*Science and engineering professionals, *ICT professionals, *Science and engineering associate professionals, * Information and communications technicians

With respect to the **remuneration of ICT professionals and technicians in the Czech private sector**, Figure 2.13 shows they receive an **above-average pay**. In the public sector where remuneration is not as variable as in the private sector, ICT professionals or science and engineering professionals receive approximately the median gross monthly income. This also applies to ICT, science, and engineering professionals (see Figure 2.14).

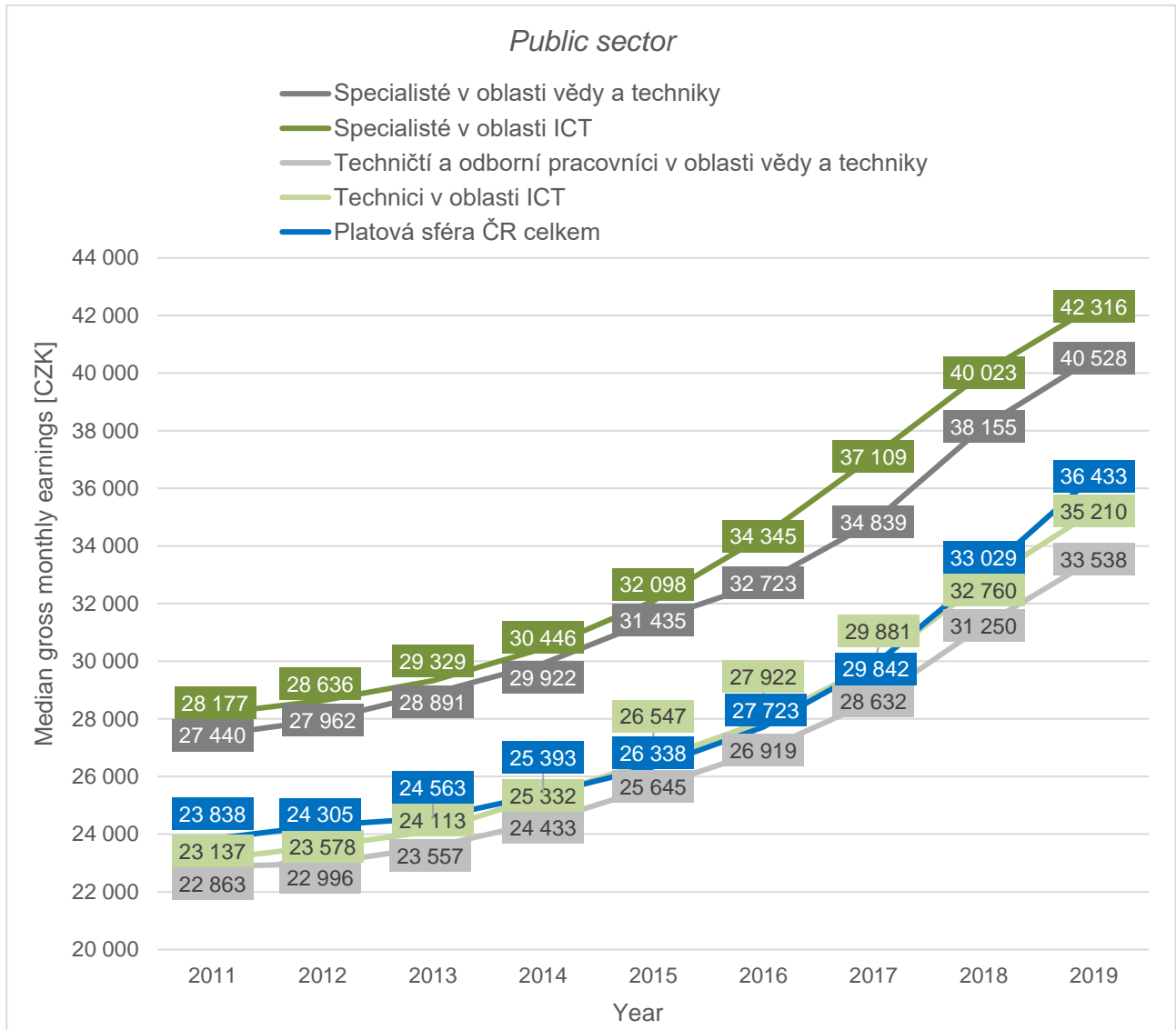
Figure 2.13: Development of the gross median monthly earnings of technicians and ICT professionals in the private sector, 2011 to 2019 (CZ)



Source: ISAE (MoLSA).

*Science and engineering professionals, * ICT professionals, * Science and engineering associate professionals, *Information and communications technicians, *Private sector in total (CZ)

Figure 2.14: Development of the gross median monthly earnings of technicians and ICT professionals in the public sector, 2011 to 2019 (CZ)



Source: ISAE (MoLSA).

*Science and engineering professionals, *ICT professionals, *Science and engineering associate professionals, *Information and communications technicians, *Public sector in total (CZ)

3 Differences in employee status on account of a collective agreement

The aim of this chapter is to describe differences in the standing of employees under the protection of a collective agreement as opposed to those who are not covered by the benefits achieved by means of collective bargaining. Attention is paid to the **structure of employees who are/are not under the protection of a collective agreement**, taking into account various factors, and also to **differences in remuneration as affected by the existence of a collective agreement**. Using these differences in employee structure, **groups of employees are subsequently identified**, taking collective agreement coverage into consideration (e.g. groups of employees with a low collective agreement coverage).

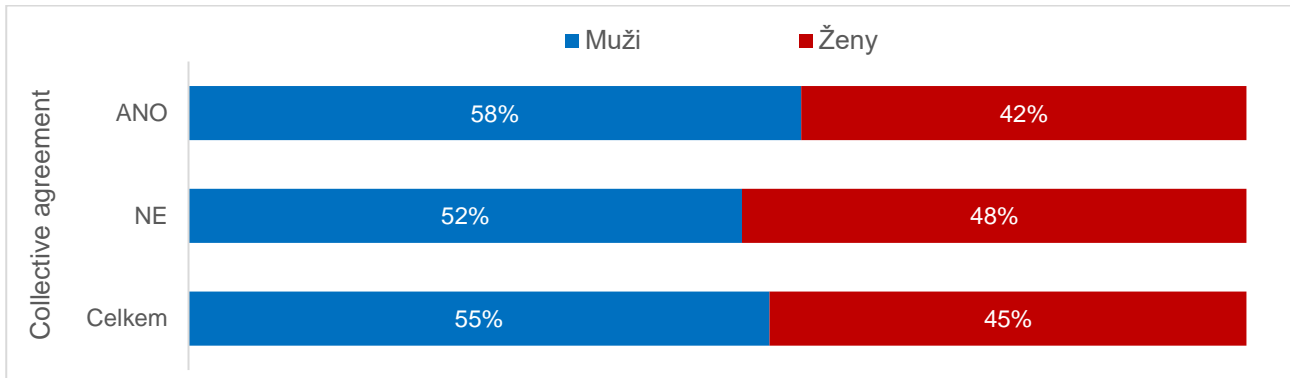
3.1 Employee structure

Collective agreements strongly affect the standing of employees to whom negotiated provisions apply. However, these agreements can also impact specific groups of employees who typically avail themselves of related benefits and enjoy a better standing on the labour market. When identifying groups of employees under the protection of a collective agreement, and those who do not enjoy the protection provided by a collective agreement, it is vital to monitor primarily their structure by gender, age, educational attainment, occupation, field, nationality, the size and ownership of the relevant economic entity, and the entity's affiliation with the private, or public sector.

3.1.1 Gender

In terms of employee structure by gender and collective agreement, **men are more represented among employees who are covered by a collective agreement** than among those who are not (see Figure 3.1). In **2019, men accounted for 58 % of employees under the protection of a collective agreement**, whereas in the group of employees who were not covered by a collective agreement, the percentage was only 52.

Figure 3.1: Employee structure by gender and collective agreement (CZ, 2019)



Source: ISAE (MoLSA).

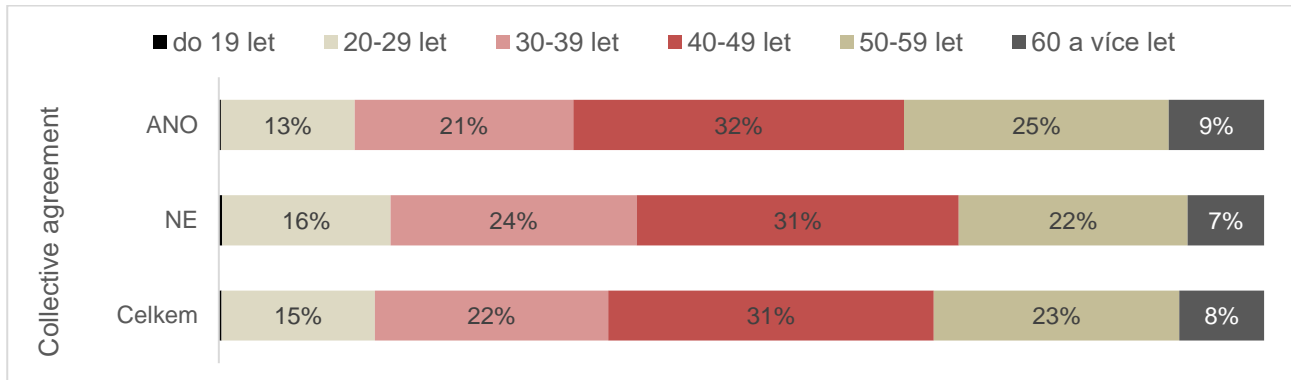
*Men, *Women, YES, NO, In total

3.1.2 Age

There are no significant differences in the age structure of employees as affected by the existence of a collective agreement. Figure 3.2 shows only a slight deviation, **where among employees under the protection of a collective agreement there is a slightly higher percentage of employees aged 50 and older and a lower percentage of employees under 40.**

In 2019, employees aged 50 and older amounted to 34 % of employees covered by a collective agreement. Comparatively, they constituted 29 % of employees not under the protection of a collective agreement. In a group of employees under the protection of a collective agreement, those under 40 amounted to 34 %; compare to the group not covered by a collective agreement where the figure was 40 %. In 2019, employees aged 40–49 comprised roughly a third of both groups in terms of collective agreement coverage (32 % and 31 %, respectively).

Figure 3.2: Age structure of employees by collective agreement (CZ, 2019)



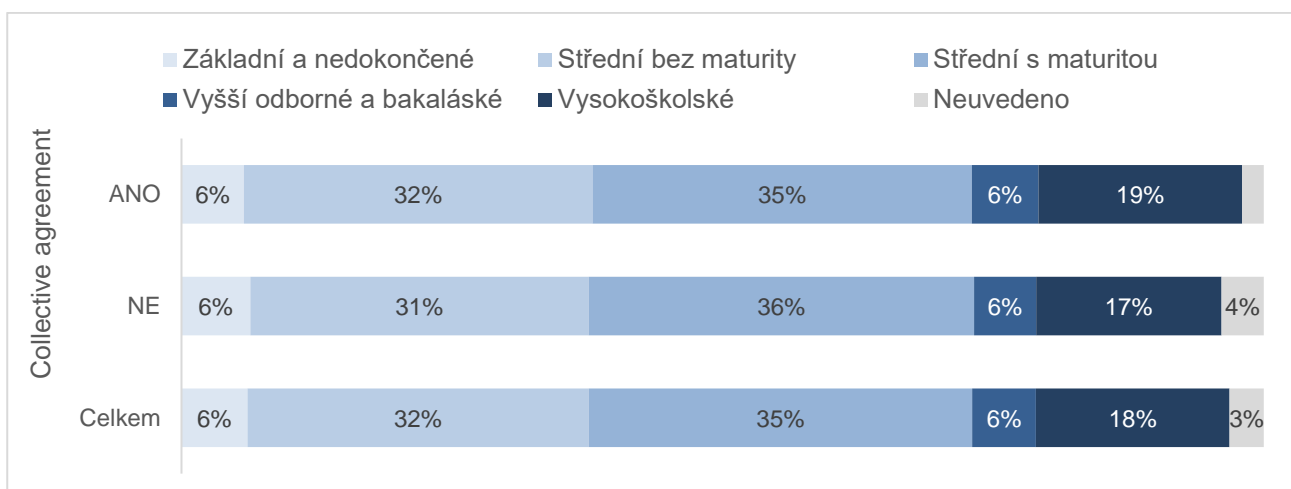
Source: ISAE (MoLSA).

*19 years and younger, *20–29 years, *30–39 years, *40–49 years, *50–59 years, * 60 years and older

3.1.3 Educational attainment

As shown by Figure 3.3, there are **essentially no differences** in the **education structure of employees covered/not covered by a collective agreement**. With all levels of educational attainment, there is a roughly identical degree of collective agreement coverage. In terms of educational attainment, no group of employees is disadvantaged with respect to protection granted by a collective agreement.

Figure 3.3: Employee structure by education and collective agreement (CZ, 2019)



Source: ISAE (MoLSA).

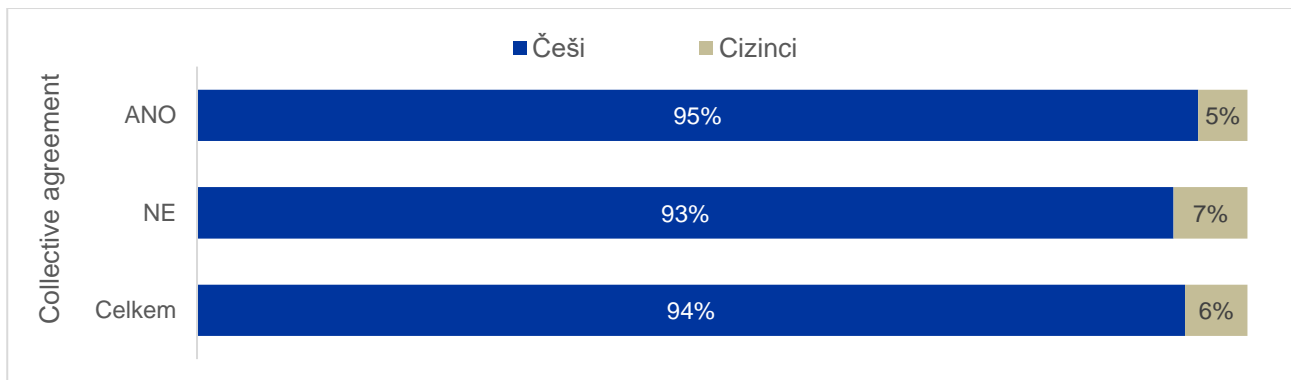
*Primary and early school leavers, *Secondary without Matura, *Secondary with Matura, *College and bachelor's, *University, *Not stated, YES, NO, In total

3.1.4 Nationality

In 2019, **Czechs accounted for 94 % of employees in the CZ**; the remaining **6 %** was comprised of **foreigners**, mostly Slovaks, Ukrainians, Poles, Bulgarians, and Romanians. In terms of employee structure by nationality and collective agreement, **foreigners constituted 5 % of employees under the protection of a collective agreement in 2019, and 7 % of those not covered by a collective agreement** (see Figure 3.4). Thus, Figure 3.4 indicates a lower collective agreement coverage of foreigners when compared to employees of Czech nationality. However, it provides no information on the coverage of foreigners by individual nationalities.

Therefore, Figure 3.5 contains information on collective agreement coverage by nationalities which were most common in the CZ in 2019. Among **foreigners** who were active in the Czech labour market, **Poles (45 %) enjoyed the highest collective agreement coverage**; their rate of coverage was lower than that of Czech employees by a single percentage point. Comparatively, **Bulgarians experienced the lowest collective agreement coverage** out of the reference nationalities where only a third was under the protection of a collective agreement. Figure 3.5 also shows that Romanian workers comprise the highest percentage of employees where no information on collective agreements is given.

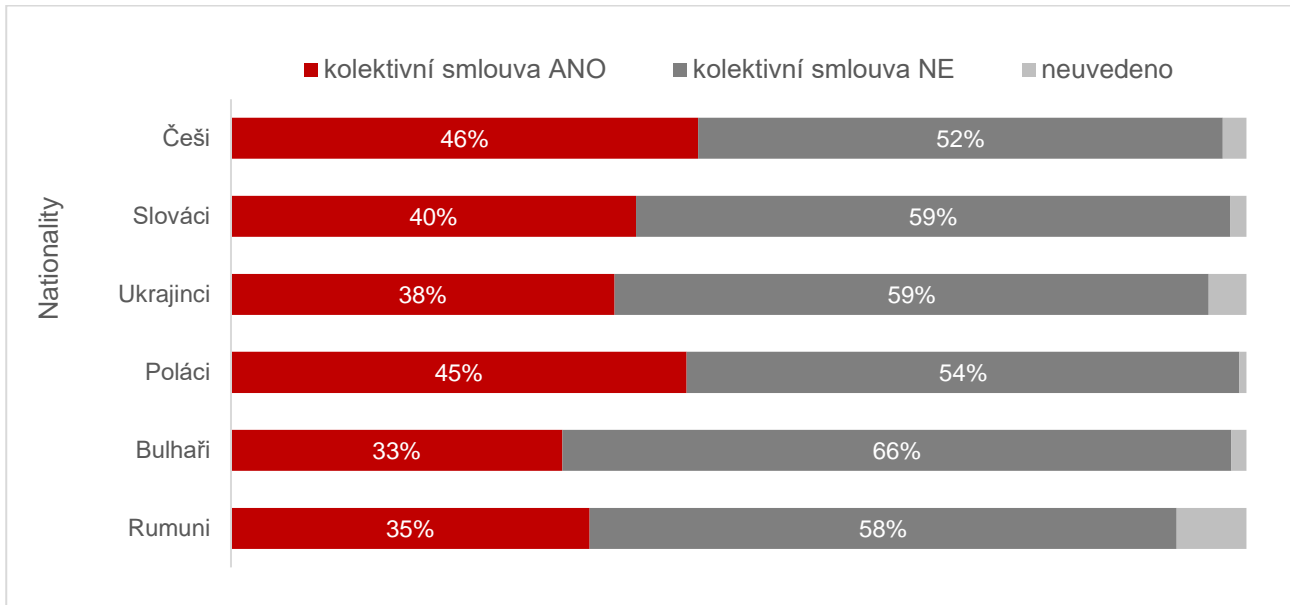
Figure 3.4: Employee structure by nationality and collective agreement (CZ, 2019)



Source: ISAE (MoLSA).

*Czechs, *Foreigners, YES, NO, In total

Figure 3.5: Collective agreement coverage of employees by nationality (CZ, 2019)



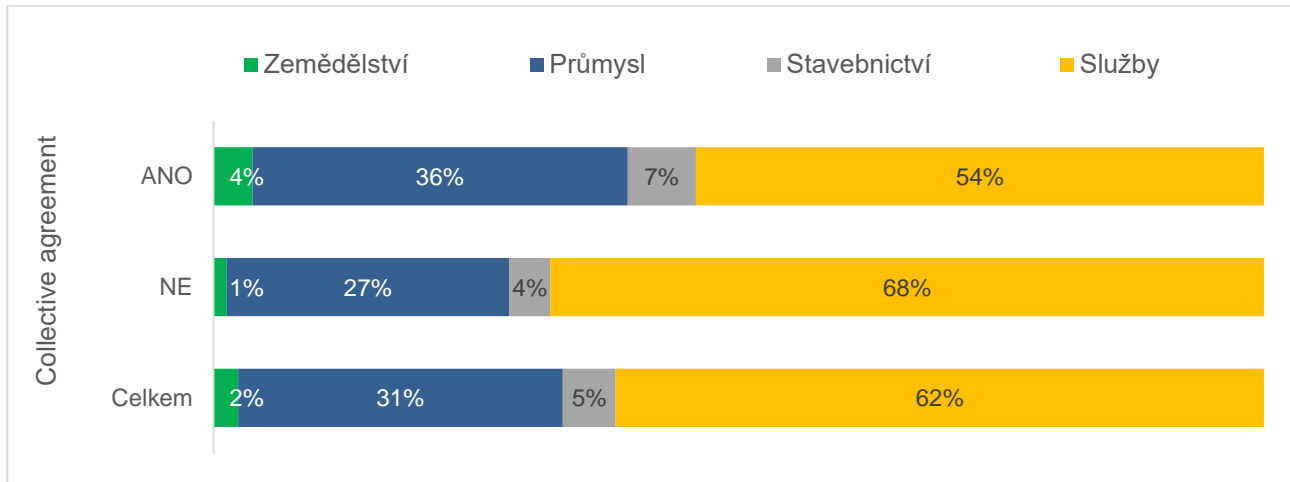
Source: ISAE (MoLSA).

*collective agreement, *no collective agreement, * not stated, Czechs, Slovaks, Ukrainians, Poles, Bulgarians, Romanians

3.1.5 Field

In terms of employee structure by field and collective agreement, the **percentage of agricultural, industry, and construction workers who are covered by a collective agreement** (see Figure 3.6) **is higher** than the percentage of those who are not. **Comparatively**, service sector employees are prevalently represented in the group of employees who are not under the protection of a collective agreement (68 %).

Figure 3.6: Employee structure by field and collective agreement (CZ, 2019)



Note: Agriculture falls under the A section of the CZ-NACE classification, industry under the B–E sections, construction under the F section, services under the G–S sections. Find more detailed structure as per individual section in the Annexe (see Figure V).

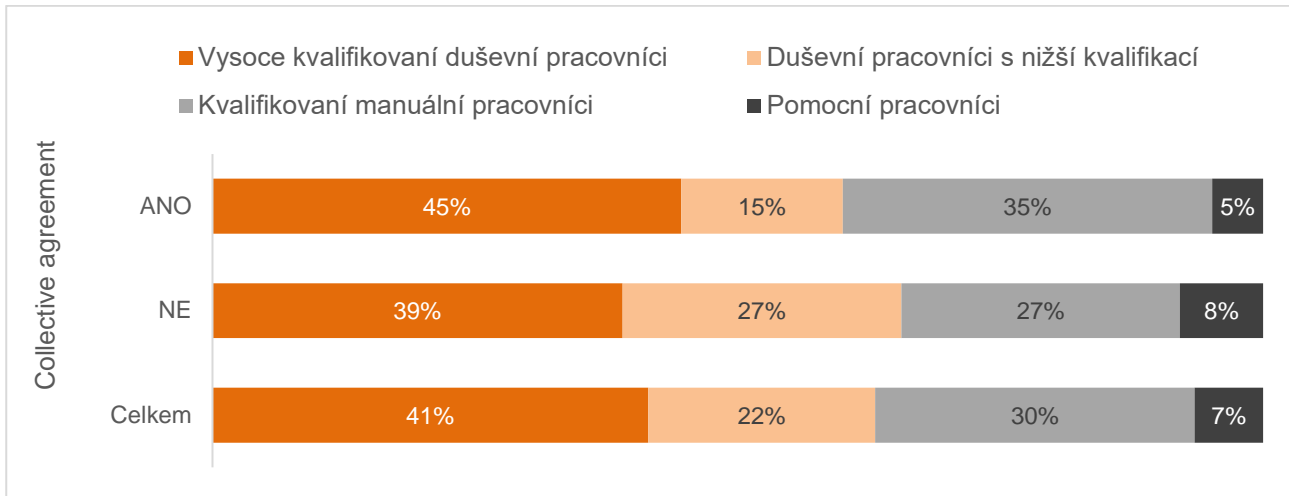
Source: ISAE (MoLSA).

*Agriculture, *Industry, *Construction, *Services, YES, NO, In total

3.1.6 Occupation

Figure 3.7 shows employee structure by occupation and collective agreement. It is evident that in terms of collective agreement coverage, there are differences as per the nature of occupation. In **2019, highly qualified knowledge workers (45 %)** and **skilled manual workers (35 %)** were strongly represented among employees **covered by a collective agreement**; compare to their 39 % and 27 % counterparts among those not under the protection of a collective agreement. On the other hand, **less-skilled knowledge workers (27 %)** and **ancillary workers (8 %)** were almost **twice as likely** to be represented in the group of employees with **no collective agreement coverage** than be covered by a collective agreement (15 % and 5 %, respectively).

Figure 3.7: Employee structure by occupation and collective agreement (CZ, 2019)



Note: Highly-qualified workers fall under main groupings 1–3 of the CZ-ISCO classification of occupations, less-skilled knowledge workers under main groupings 4–5, skilled manual workers under main groupings 6–8, and ancillary workers under main groupings 9. Find a more detailed structure as per individual main groupings of the CZ-ISCO classification of occupations in the Annexe (see Figure VI).

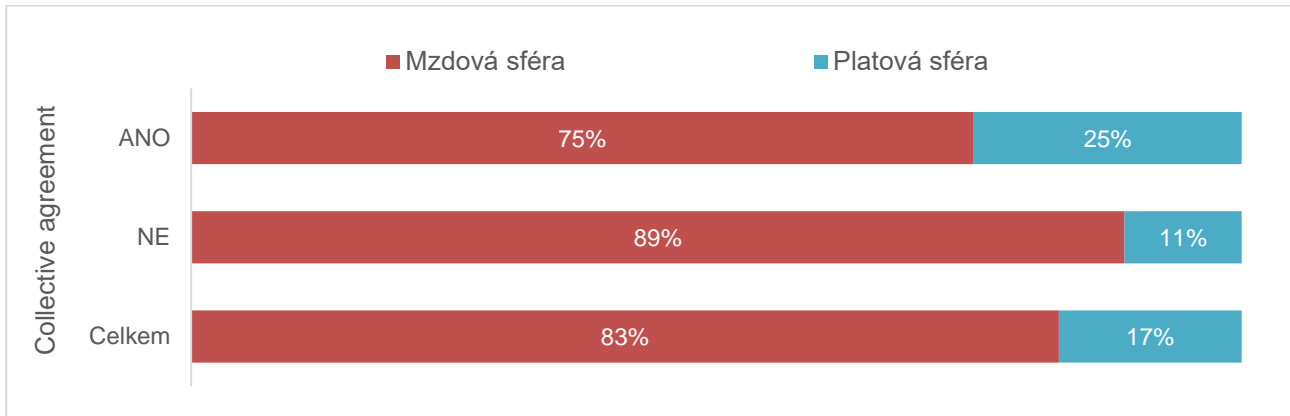
Source: ISAE (MoLSA).

*Highly qualified knowledge workers, *Less-skilled knowledge workers, *Skilled manual workers, *Ancillary workers, YES, NO, In total

3.1.7 Sector

As shown by Figure 3.8, the structure of employees who are/are not covered by a collective agreement is **influenced by the affiliation of the employee's economic entity with either the public, or the private sector**. The public sector is much smaller than the private sector; in 2019, roughly a fifth of employees in the Czech Republic worked in the public sector (17 %). The remaining 83 % of workers was employed in the private sector. Nevertheless, the **public sector** is characterised by a **higher** rate of **collective agreement coverage**. In 2019, **those working in the public sector** comprised a **quarter** (25 %) of employees **under the protection of a collective agreement**. Meanwhile, they accounted only for the **tenth** (11 %) of those who enjoyed **no collective agreement coverage**.

Figure 3.8: Employee structure by sector and collective agreement (CZ, 2019)



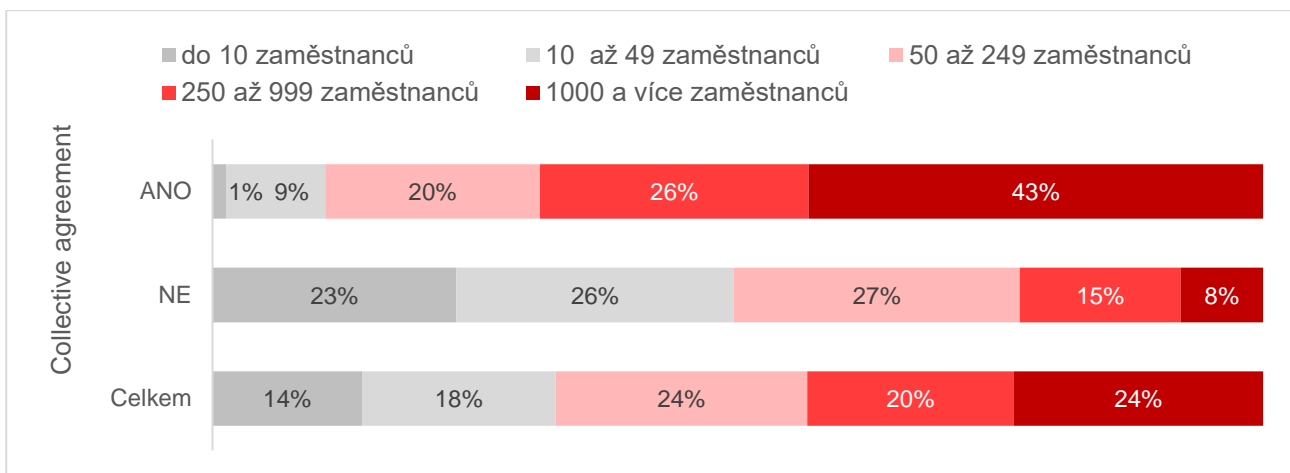
Source: ISAE (MoLSA).

*Private sector, *Public Sector, YES, NO, In total

3.1.8 Size and ownership of economic entities

Employee structure, as affected by the existence of a collective agreement, is also influenced by the size and ownership of economic entities. Figure 3.9 shows that the **employee structure of those who are/are not under the protection of a collective agreement differs** significantly depending on the **size of the economic entity**—collective agreement coverage is higher in large economic entities. In 2019, almost 70 % of employees under the protection of a collective agreement worked in entities of 250 workers and more.

Figure 3.9: Employee structure by collective agreement and the size of economic entity (CZ, 2019)



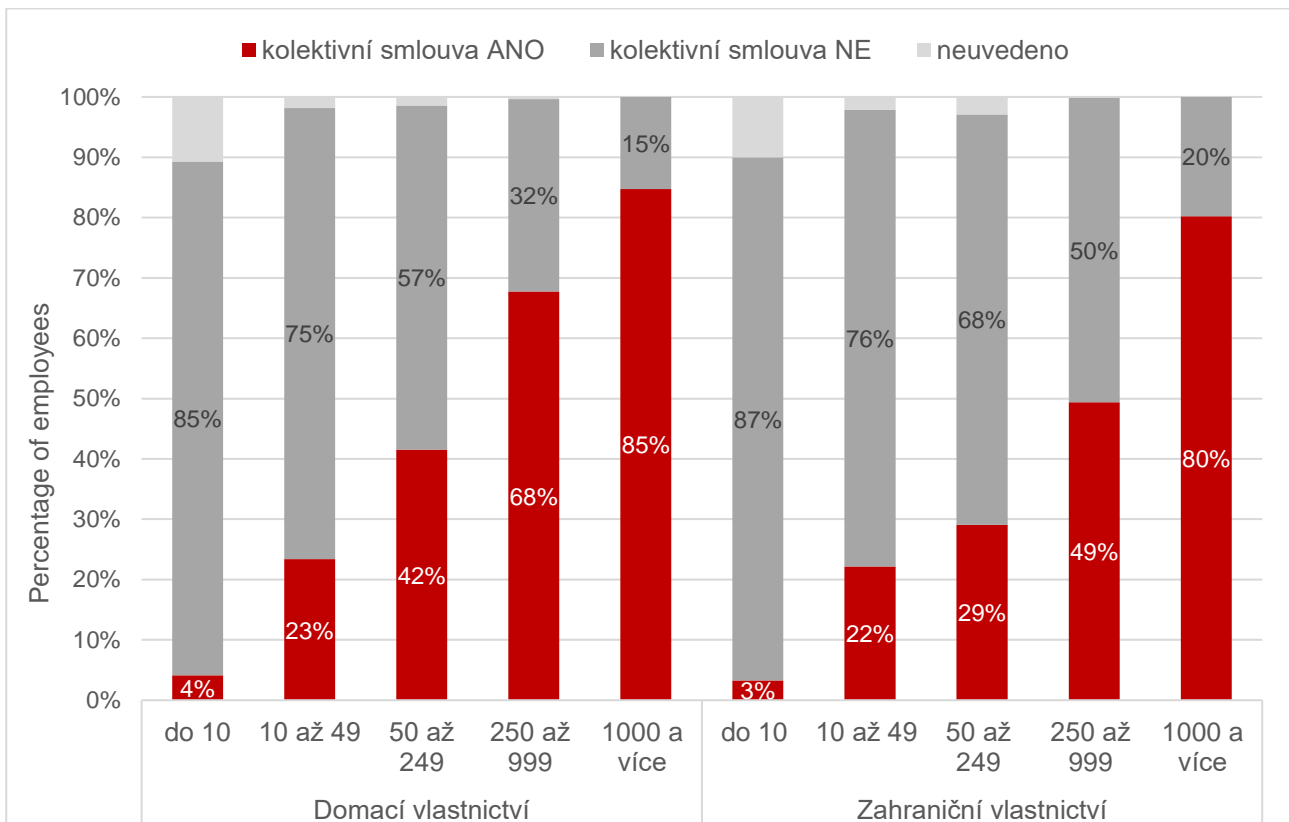
Source: ISAE (MoLSA).

*10 employees and fewer, *10–49 employees, *50–249 employees, *250–999 employees, *1000 employees and more

Figure 3.10 shows collective agreement coverage of employees by the size and ownership of economic entities. It is clear that **collective agreement coverage grows along with the size of entities** and is **more frequent** in the group of workers employed by **domestically owned** entities, across categories of size. In terms of domestic vs. foreign ownership, **differences** are more **noticeable** in case of **large economic entities of 50 employees and more**. In case of economic entities of up to 50 employees, such differences are minor.

Small **economic entities of up to 10 employees** comprise a specific category as a **negligible number of their workers is covered by a collective agreement**. Simultaneously, this group is characterised by a large percentage of those who give no information about the presence of a collective agreement or lack thereof. Conversely, economic entities of **1000 employees and more cover most of their workers** with a collective agreement (85 % for domestically owned entities, 80 % for foreign-owned entities).

Figure 3.10: Collective agreement coverage of employees by the size and ownership of economic entities (CZ, 2019)



Source: ISAE (MoLSA).

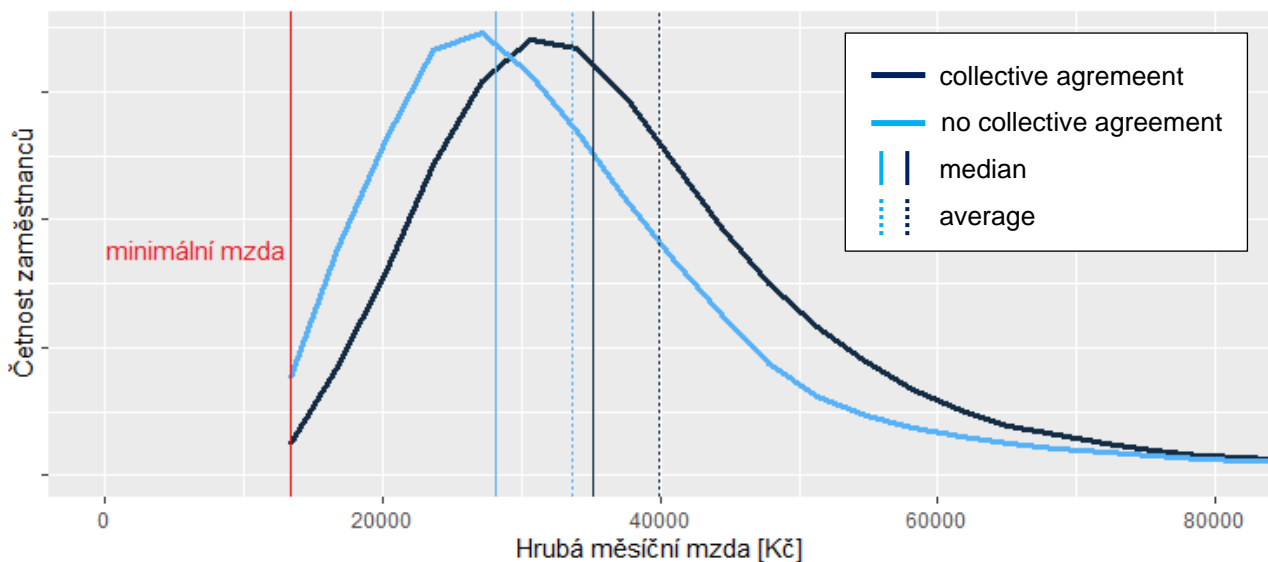
*collective agreement, *no collective agreement, *not stated, up to 10, 10–49, 50–249, 250–999, 1000 and more, up to 10, 10–49, 50–249, 250–999, 1000 and more, Domestic ownership, Foreign ownership

3.2 Remuneration

This subchapter deals with **differences in remuneration**, as affected by the existence of a collective agreement. Figure 3.11 illustrates pay distribution in 2019 by collective agreement. It is clear that among **employees who are under the protection of a collective agreement**, there is a fewer of those working for a minimum wage. Also, the **income** received by members of this group is **higher** when compared to the group of employees who are not protected by a collective agreement.

In the previous year, the **median gross monthly income of workers covered by a collective agreement** was **35 190 CZK**. Compared to employees who were not covered by a collective agreement and whose median gross monthly income was 28 098 CZK, the **difference was 7 092 CZK in favour of employees covered by a collective agreement**.

Figure 3.11: Pay distribution by collective agreement (CZ, 2019)



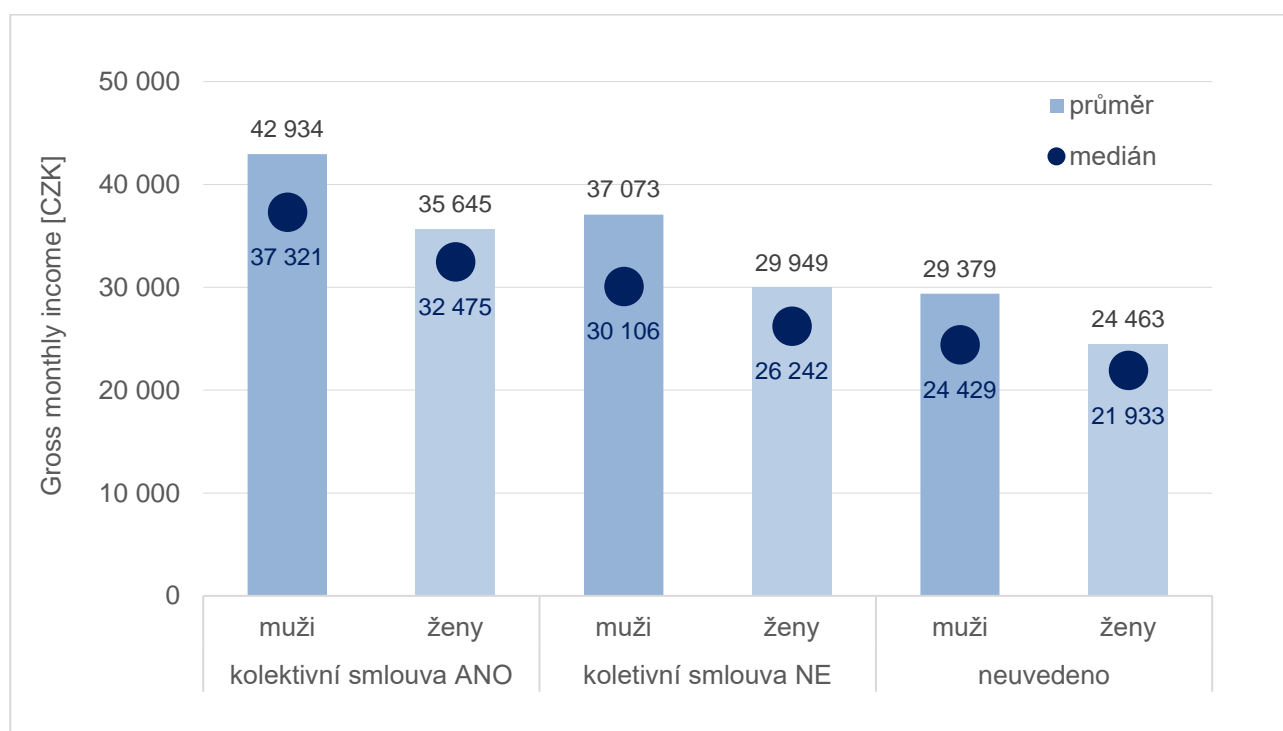
Source: ISAE (MoLSA).

Number of employees, minimum wage, Gross monthly income [CZK]

3.2.1 Gender

Differences in remuneration between employees who are/are not covered by a collective agreement are also affected by **gender** (see Figure 3.12). In 2019, the **median gross monthly income of men in businesses with collective agreements was 37 321 CZK**; that is **7 215 CZK more than** in businesses with **no collective agreements**. In 2019, the **median gross monthly income of women in businesses with collective agreements was 32 475 CZK**; **6 233 CZK more than** in businesses with **no collective agreements**.

Figure 3.12: Remuneration by gender and collective agreement (CZ, 2019)



Source: ISAE (MoLSA).

*average, *median, men, women, collective agreement, men, women, no collective agreement, men, women, not stated

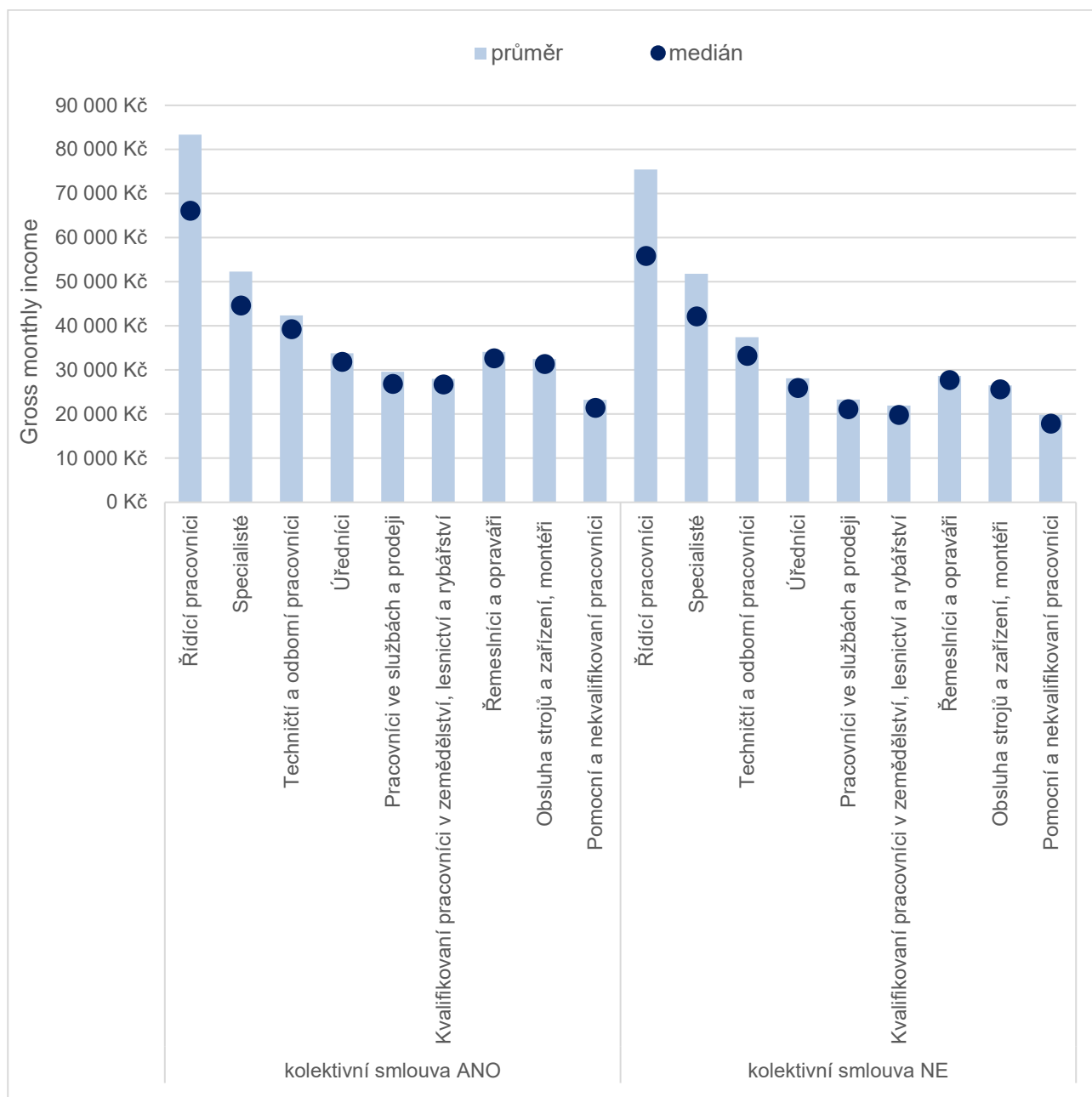
3.2.2 Occupation

The situation with occupation is similar to the one with gender. Figure 3.13 shows the average and median gross monthly income by collective agreement and main groupings of the CZ-ISCO classification of occupations. In 2019, **employees covered** by a collective

agreement received a **higher remuneration** across **all classes of occupation** than those who were not under the protection of a collective agreement.

In case of **professionals** (2nd main grouping of the CZ-ISCO classification), however, **collective agreements or lack thereof were not as crucial** as in the other main groupings as the average income received by professionals covered by a collective agreement in 2019 was only 500 CZK more than that enjoyed by their colleagues who were not under the protection of a collective agreement; differences in median incomes were slightly more substantial (ca 2500 CZK). On the other hand, a significant difference in remuneration levels, as affected by the existence of a collective agreement, can be observed with **managers** (1st main grouping of the CZ-ISCO classification) where the difference between the average income received by employees who are/are not covered by a collective agreement in 2019 was almost 8000 CZK; moreover, the difference between median incomes was more than 10 000 CZK (see Figure 3.14).

Figure 3.13: Median/average gross monthly earnings by collective agreement and main occupation classes, CZ-ISCO (CZ, 2019)

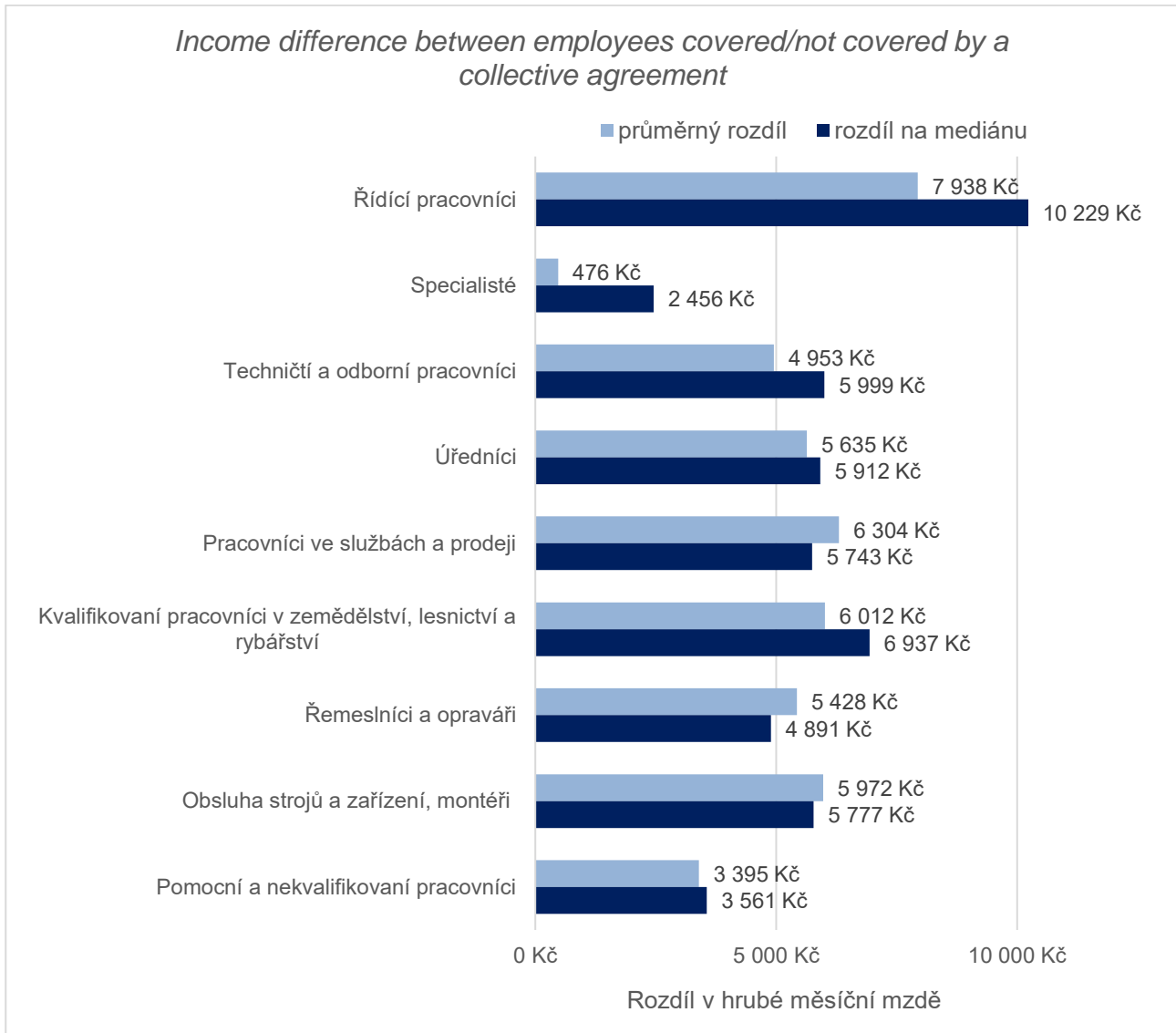


Note: Specific values of the average and median gross monthly income, including the number of employees, are listed in the Annexe (see Table III).

Source: ISAE (MoLSA).

*average, *median, Managers, Professionals, Technicians and associate professionals, Clerks, Service workers and shop and market sales workers, Skilled agricultural, forestry, and fishing workers, Craft and related trades workers, Plant and machine operators and assemblers, Elementary occupations, collective agreement, Managers, Professionals, Technicians and associate professionals, Clerks, Service workers and shop and market sales workers, Skilled agricultural, forestry, and fishing workers, Craft and related trades workers, Plant and machine operators and assemblers, Elementary occupations, no collective agreement

Figure 3.14: Difference in the gross monthly income of employees covered/not covered by a collective agreement by main occupation classes, CZ-ISCO (CZ, 2019)



Source: ISAE (MoLSA).

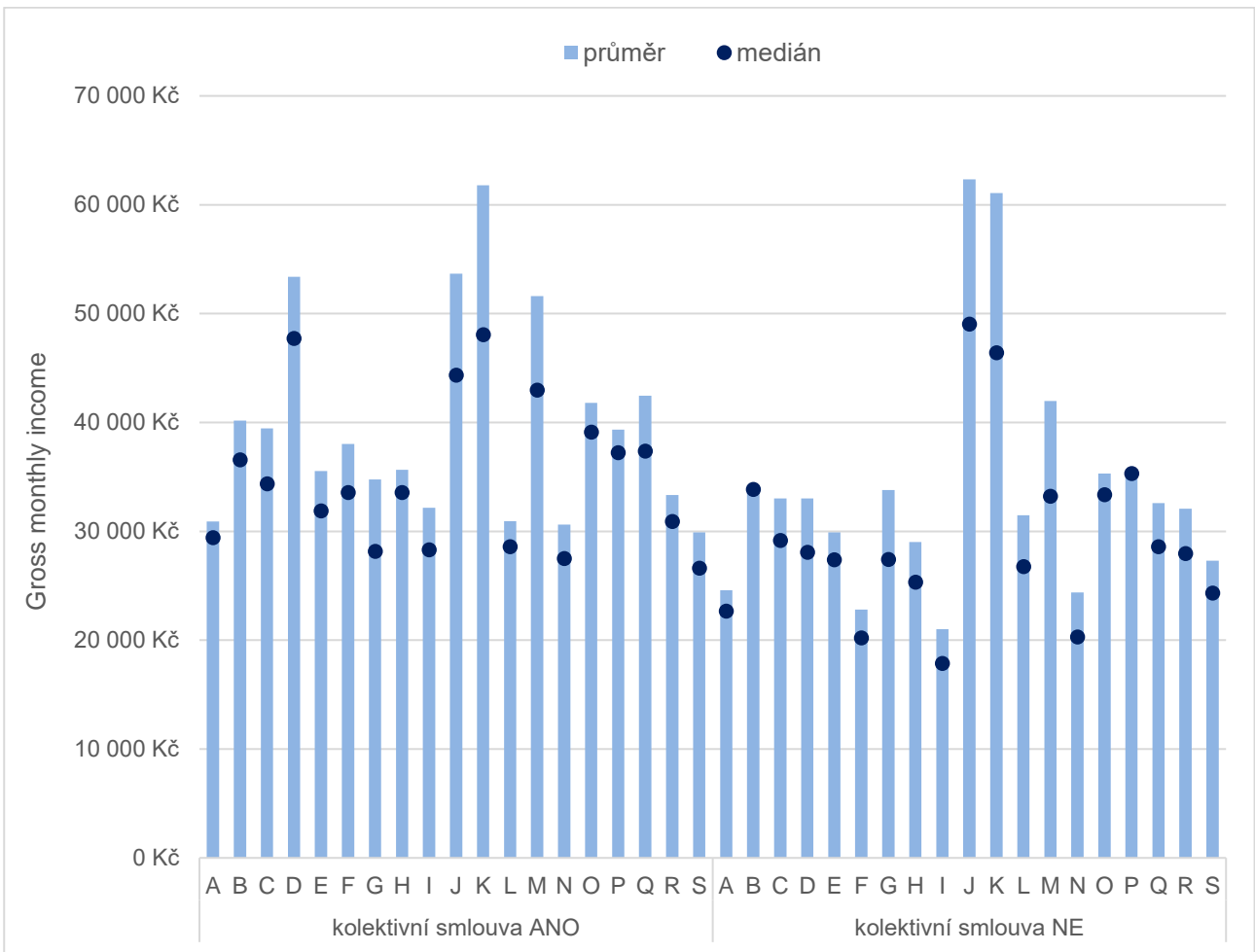
*average difference, *difference in the median, Managers, Professionals, Technicians and associate professionals, Clerks, Service workers and shop and market sales workers, Skilled agricultural, forestry, and fishing workers, Craft and related trades workers, Plant and machine operators and assemblers, Elementary occupations, Gross monthly income difference

3.2.3 Field

Differences in employee remuneration, as affected by the existence of a collective agreement, are also evident in individual fields. Figures 3.15 and 3.16 show that **in most**

fields, employees under the protection of a collective agreement have a higher income than those who are not covered by a collective agreement. The impact of collective agreements with respect to remuneration is the most noticeable in electricity, gas, steam and air conditioning supply (section D of the CZ-NACE classification) and in construction (section F of the CZ-NACE classification). Information and communication (section J of the CZ-NACE classification) is the one exception to this as the field has been very progressive during the 4th industrial revolution and the presence of a collective agreement or lack thereof has had no strong effect there. In 2019, the average income of information and communication workers covered by a collective agreement was over 8500 CZK less than the income received by workers who were not under the protection of a collective agreement. Collective agreements also have no strong impact on real estate activities (section L of the CZ-NACE classification) where the average income of employees who were covered by a collective agreement in 2019 was over 500 CZK less than the one received by their colleagues who were not under the protection of a collective agreement; in terms of the median income, the difference was almost 2000 CZK, this time in favour of employees under the protection of a collective agreement.

Figure 3.15: Median/average gross monthly income by collective agreement and CZ-NACE sections (CZ, 2019)

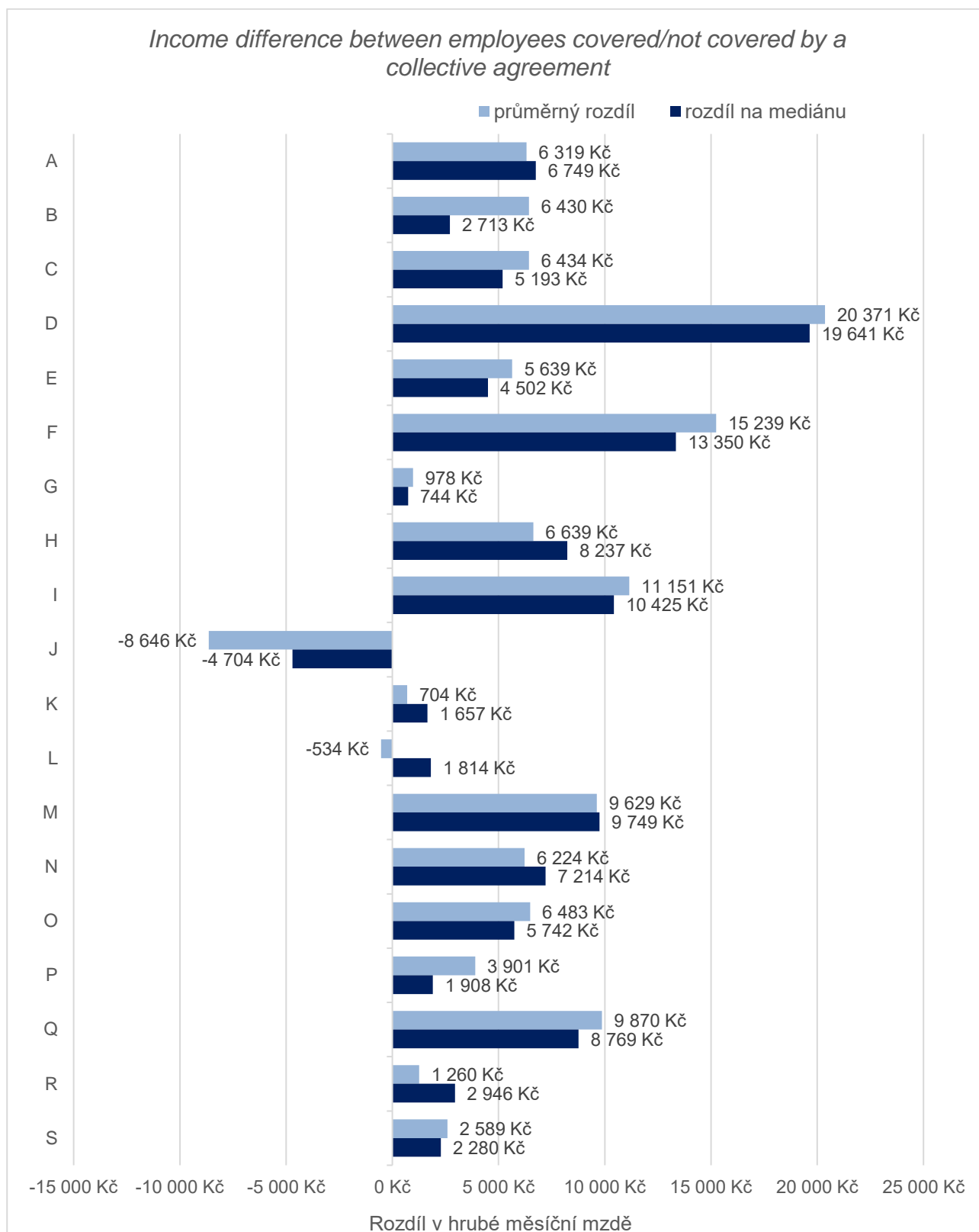


Note: Full titles of individual CZ-NACE sections are listed in the Annexe in Table I. Specific values of the average and median gross monthly income, including the number of employees, are listed in the Annexe (see Table IV).

Source: ISAE (MoLSA).

*average, *median, collective agreement, no collective agreement

Figure 3.16: Difference in the gross monthly income of employees covered/not covered by a collective agreement by CZ-NACE sections (CZ, 2019)



Note: Full titles of individual CZ-NACE sections are listed in the Annexe in Table I.

Source: ISAE (MoLSA).

*average difference, *difference in the median, Gross monthly income difference

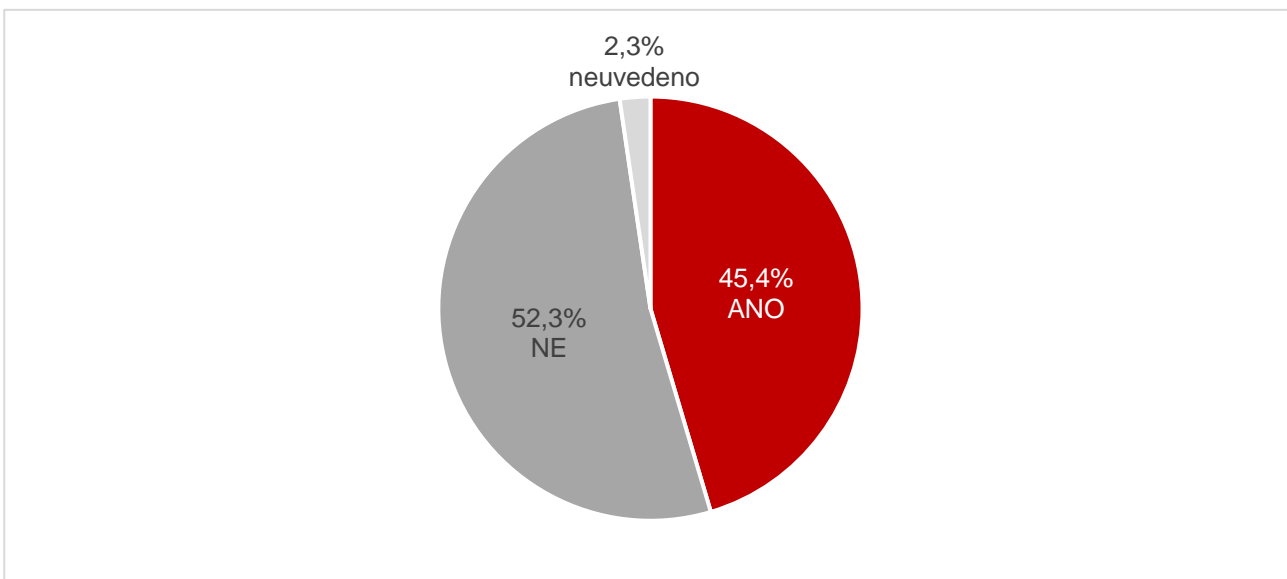
3.3 Employee groups by collective agreement coverage

In 2019, 45% of employees in the CZ were covered by a collective agreement (see Figure 3.17). It must be pointed out, however, that this indicator characterises the entire population of employees in the CZ; with respect to **individual groups**, there are **differences** in collective agreement coverage. Based on the employee structure as affected by a collective agreement (see chapter 3.1), it is evident that the largest differences lie in the affiliation of economic entities with either the private, or the public sector and in their size. Nevertheless, the field and nature of the occupation in question also plays a part.

Therefore, this chapter contains examples of employee groups which are characterised by a low, or high collective agreement coverage. For the purposes of this study, **collective agreement coverage** is expressed in percentages as a **share of employees who are covered by a collective agreement in the total number of employees in a given group**, where only those employee groups who had at least 1000 employees in 2019 are included.

The issue will be analysed primarily in regard to the private and public sector as each sector is specific, both in terms of size and of collective agreement coverage. In 2019, over 3 million workers were employed in the **private sector**; **41 % of them were covered by a collective agreement**. Comparatively, in the **public sector** which is much smaller in terms of the number of employees (ca 650 000), **two thirds of employees were under the protection of a collective agreement** (see Figure 3.18.)

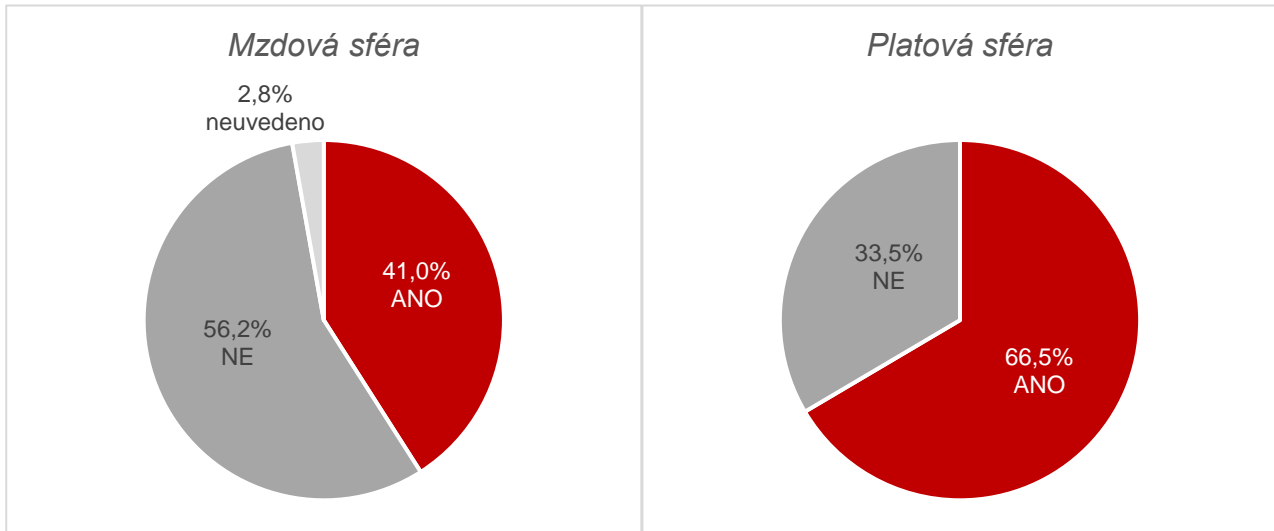
Figure 3.17: Collective agreement coverage of employees (CZ, 2019)



Source: CSO (Structure of earnings). Data as of the 25th of May, 2020.

*not stated, *NO, *YES

Figure 3.18: Collective agreement coverage of employees in the private and public sector, CZ (2019)



Source: ISAE (MoLSA).

Private sector, *not stated, * NO, *YES, Public sector, *NO, *YES

3.3.1 Private sector

As stated above, **41 %** of workers in the **private sector** were **covered** by a collective agreement in **2019**. Nevertheless, there are differences between individual employee groups in terms of collective agreement coverage. Therefore, this part of the study will deal with the coverage of different employee groups, first with respect to a given **field and the size of economic entities**, and then to **gender** and **occupation**.

Table 3.1 shows the coverage of selected employee groups by field and the size of economic entities, as well as the total number of employees in a given group. The data is listed in ascending order by collective agreement coverage. It is evident that **small service and industry businesses of 49 employees and fewer have a very low coverage** (6 and 11 %, respectively). In medium-sized businesses of **50–249 employees**, collective agreement coverage is slightly higher—23 % for services and 33 % for industry in 2019. Compared to **agriculture** and **construction**, however, it is still very low as these fields have a **100 % collective agreement coverage** in businesses of **50 employees and more**. Nevertheless, it must be remarked that the data provided by this analysis concerns only workers who are formally employed, not those who engage in the so-called false self-employment and work for their employer under a works contract. This is especially relevant in construction, for example.

Table 3.1: Collective agreement coverage of employees by field and the size of economic entity (private sector, CZ, 2019)

Size of economic entity	Field	Number of employees in thous.	Collective agreement coverage
49 employees and fewer	Services	668.8	6%
49 employees and fewer	Industry	226.8	11%
50–249 employees	Services	328.2	23%
50–249 employees	Industry	309.3	33%
49 employees and fewer	Construction	115.0	33%
250–999 employees	Services	277.8	42%
49 employees and fewer	Agriculture	50.3	51%
250–999 employees	Industry	339.9	65%
1000 employees and more	Services	376.9	68%
1000 employees and more	Industry	269.9	94%
50 employees and more	Construction	72.0	100%
50 employees and more	Agriculture	36.3	100%

Note: Agriculture falls under the A section of the CZ-NACE classification, industry under the B–E sections, construction under the F section, services under the G–S sections. Only those employee groups which had at least 1000 employees in 2019 are listed.

Source: ISAE (MoLSA).

Figures 3.19 and 3.20 present collective agreement coverage of employees, analysed by field and the size of economic entities, from another perspective, structuring **coverage** in more detail, by **individual sections** of the CZ-NACE classification where Figure 3.19 shows data for businesses of **249 employees and fewer** while Figure 3.20 focuses on large businesses of **250 employees and more**. As was already stated several times, the collective agreement coverage of employees is higher in large businesses, as confirmed by Figures 3.19 and 3.20.

In businesses of **249 employees and fewer**, those employed in **electricity, gas, steam and air conditioning supply** (section D of the CZ-NACE classification) were the **most protected by collective agreements**; in 2019, almost three quarters of the employees (73 %) were covered. In **agriculture, forestry, and fishing**, over two thirds of employees were covered (68 %). Figure 3.19 also shows that in 2019, only five sections covered more than a half of their employees with a collective agreement. The remaining fields covered less than a quarter of their workers.

Entities of **250 employees and more** are characterised by a higher collective agreement coverage when compared to smaller businesses. In this group of businesses, **more than**

half of those employed in 12 sections was covered by a collective agreement in 2019; only five fields covered less than a third of their employees.

Figure 3.19: Collective agreement coverage of employees in economic entities of 249 employees and fewer, by CZ-NACE sections (private sector, CZ, 2019)



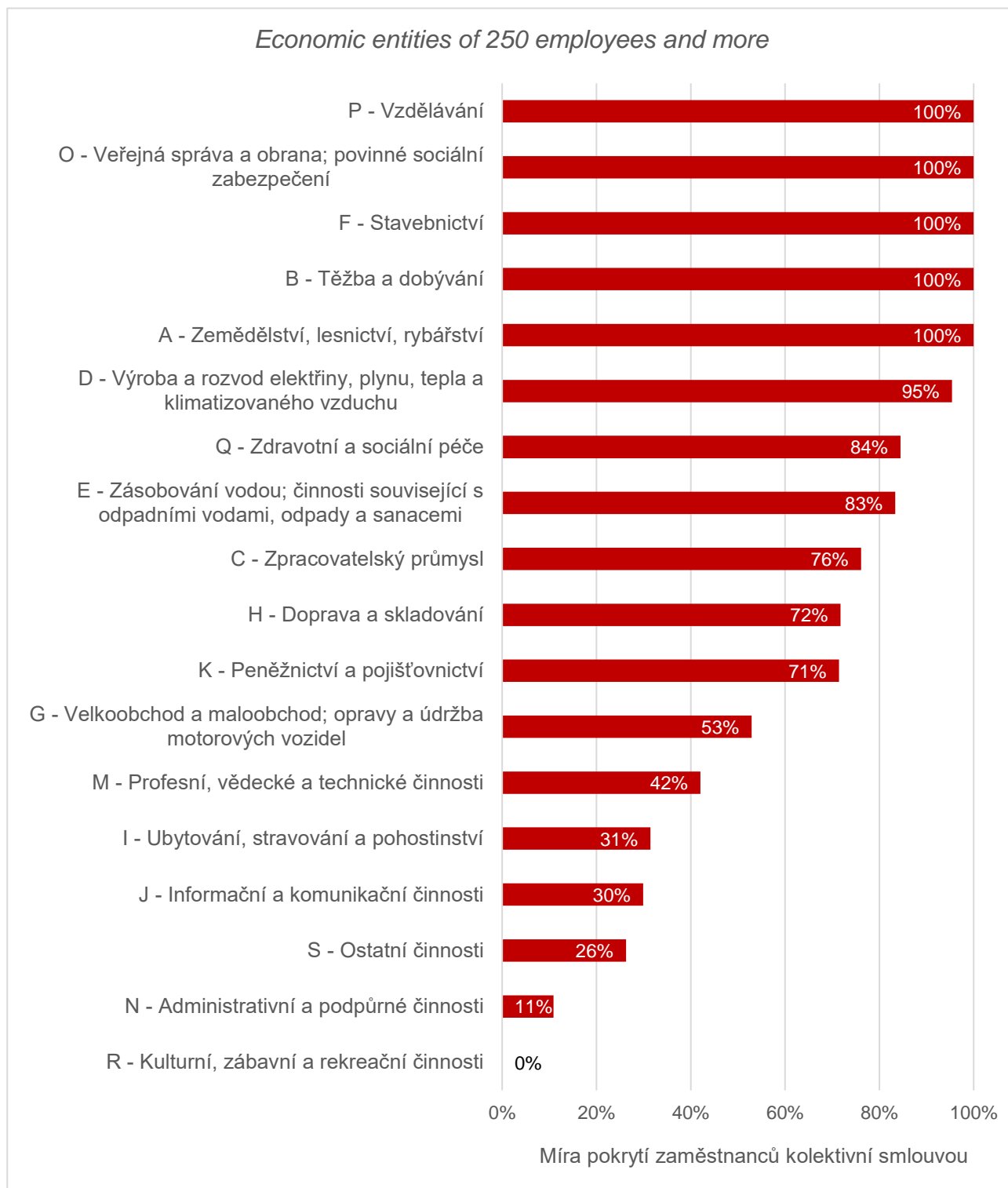
Note: Only those sections which had at least 1000 employees in 2019 are listed.

Source: ISAE (MoLSA).

D – Power, heat and air-conditioning production and distribution, A – Agriculture, forestry, and fishing B – Mining and quarrying, H – Transportation and storage, F – Construction, E – Water supply; sewerage, waste management and remediation activities, C – Manufacturing, M – Professional, scientific, and technical activities, K – Financial and insurance activities, R – Arts, entertainment and recreation, P – Education, N – Administrative and support service activities, G – Wholesale and retail trade; repair of

motor vehicles and motorcycles, J – Information and communication, L – Real estate activities, Q – Human health and social work activities, I – Accommodation and food service activities, S – Other service activities, Collective agreement coverage

Figure 3.20: Collective agreement coverage of employees in economic entities of 250 employees and more, by CZ-NACE sections (private sector, CZ, 2019)



Note: Only those sections which had at least 1000 employees in 2019 are listed.

Source: ISAE (MoLSA).

P – Education, O – Public administration and defence; compulsory social security, F – Construction, B – Mining and quarrying, A – Agriculture, forestry, and fishing, D – Power, heat and air-conditioning production and distribution, Q – Human health and social work activities, E – Water supply; sewerage, waste management and remediation activities, C – Manufacturing, H – Transportation and storage, K – Financial and insurance activities, G – Wholesale and retail trade; repair of motor vehicles and motorcycles, M – Professional, scientific, and technical activities, I – Accommodation, boarding, and catering, J – Information and communication, S – Other service activities, N – Administration and ancillary activities, P – Arts, entertainment and recreation, Collective agreement coverage

Table 3.2, as well as Figures 3.21 and 3.22, offer a similar view of the issue of collective agreement coverage of different employee groups, but this time in terms of **gender** and **occupation**.

Table 3.2 shows the collective agreement coverage of individual employee groups in 2019 by gender and occupation, as well as the total number of employees in a given group. Once again, the data is listed in ascending order, by coverage. It is clear that **less-skilled knowledge workers** are **covered the least**, regardless of gender; only a quarter of this employee group is under the protection of a collective agreement. In terms of gender, however, the number of women who qualify as less-skilled knowledge workers (ca 443 000) is roughly double the number of men (ca 211 000). In 2019, most men working in the private sector in 2019 were employed as skilled manual workers; over a half of them (53 %) was under the protection of a collective agreement.

Table 3.2: Collective agreement coverage of employees by gender and occupation (private sector, CZ, 2019)

Gender	Type of occupation	Number of employees in thous.	Collective agreement coverage
Men	Less-skilled knowledge workers	211.2	25%
Women	Less-skilled knowledge workers	442.7	27%
Women	Ancillary workers	104.0	28%
Men	Ancillary workers	97.2	35%
Women	Highly qualified knowledge workers	455.5	41%
Men	Highly qualified knowledge workers	657.8	41%
Women	Skilled manual workers	246.2	48%
Men	Skilled manual workers	856.5	53%

Note: Highly-qualified workers fall under main groupings 1–3 of the CZ-ISCO classification of occupations, Less-skilled knowledge workers under main groupings 4–5, skilled manual workers under main groupings 6–8, and ancillary workers under main groupings 9.

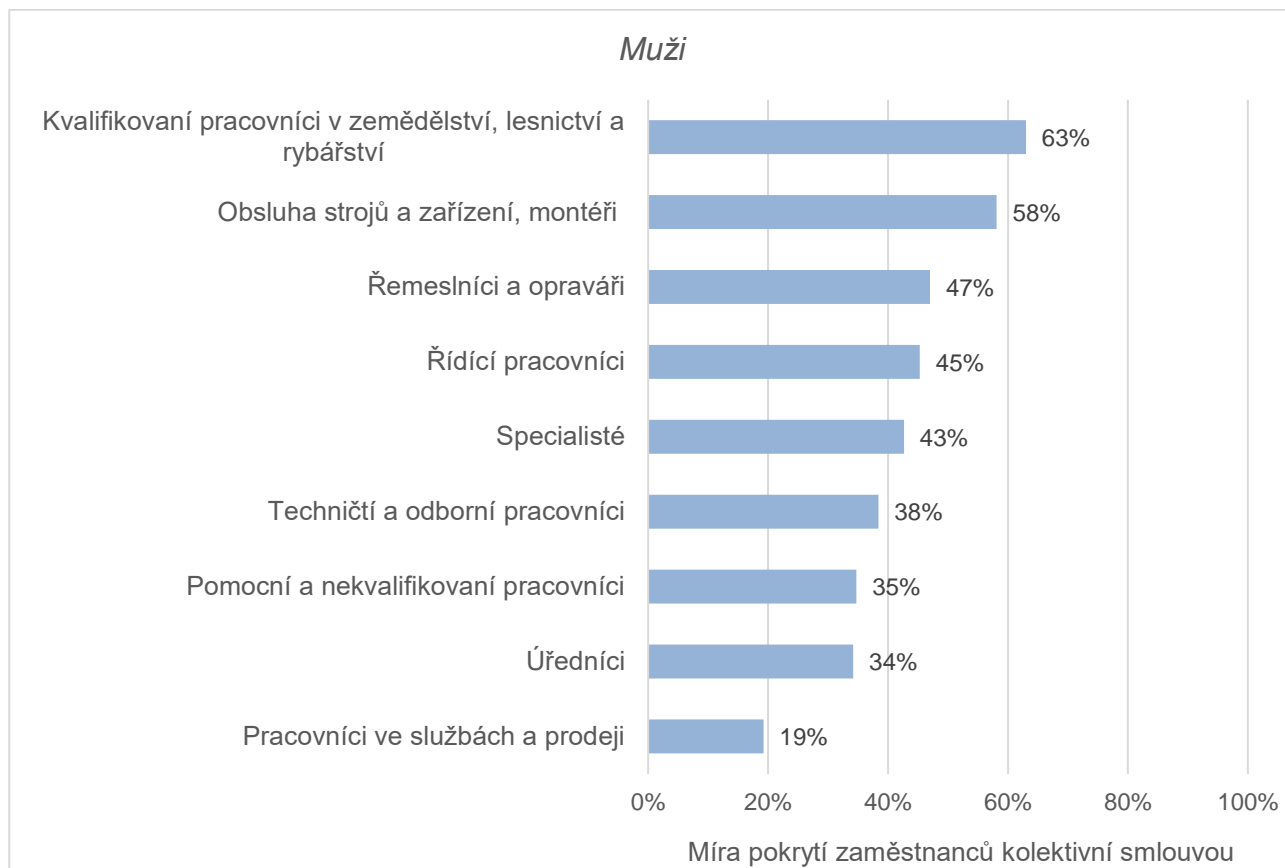
Source: ISAE (MoLSA).

Table 3.2 shows that with respect to collective agreement coverage, gender is not as important as occupation. Therefore, this part of the study provides a detailed classification in terms of the **main groupings** of the CZ-ISCO classification of occupation. Figure 3.21 contains information on the coverage of men by individual occupation classes; Figure 3.22 does the same for women.

For both genders, skilled workers in agriculture, forestry, and fishing (main grouping 6) are **the most protected by** a collective agreement, along with machinery and facility operators and fitters (main grouping 8) where, however, the collective agreement coverage of men was 9 percentage points higher than that of women. Other main CZ-ISCO classes of occupation, as represented in the list of collective agreement coverage, do differ by gender. As seen in Figure 3.21, **service workers and shop and market sales workers** (main grouping 5) were **the least protected employee group** among men; in 2019, roughly a fifth was covered by a collective agreement (19 %). **In regard to women, clerks** were the least protected; only a quarter was covered by a collective agreement in 2019 (see Figure 3.22).

For the sake of completeness, the Annexe (see Table V) contains information on the collective agreement coverage of individual employee groups by all reference characteristics, i.e. gender, business size, field, and nature of occupation. The annexed Table V makes it clear that women who are employed in businesses of 249 employees and fewer as less-skilled knowledge workers are the least protected employee group in the private sector; in 2019, the collective agreement coverage of this employee group was 5 %.

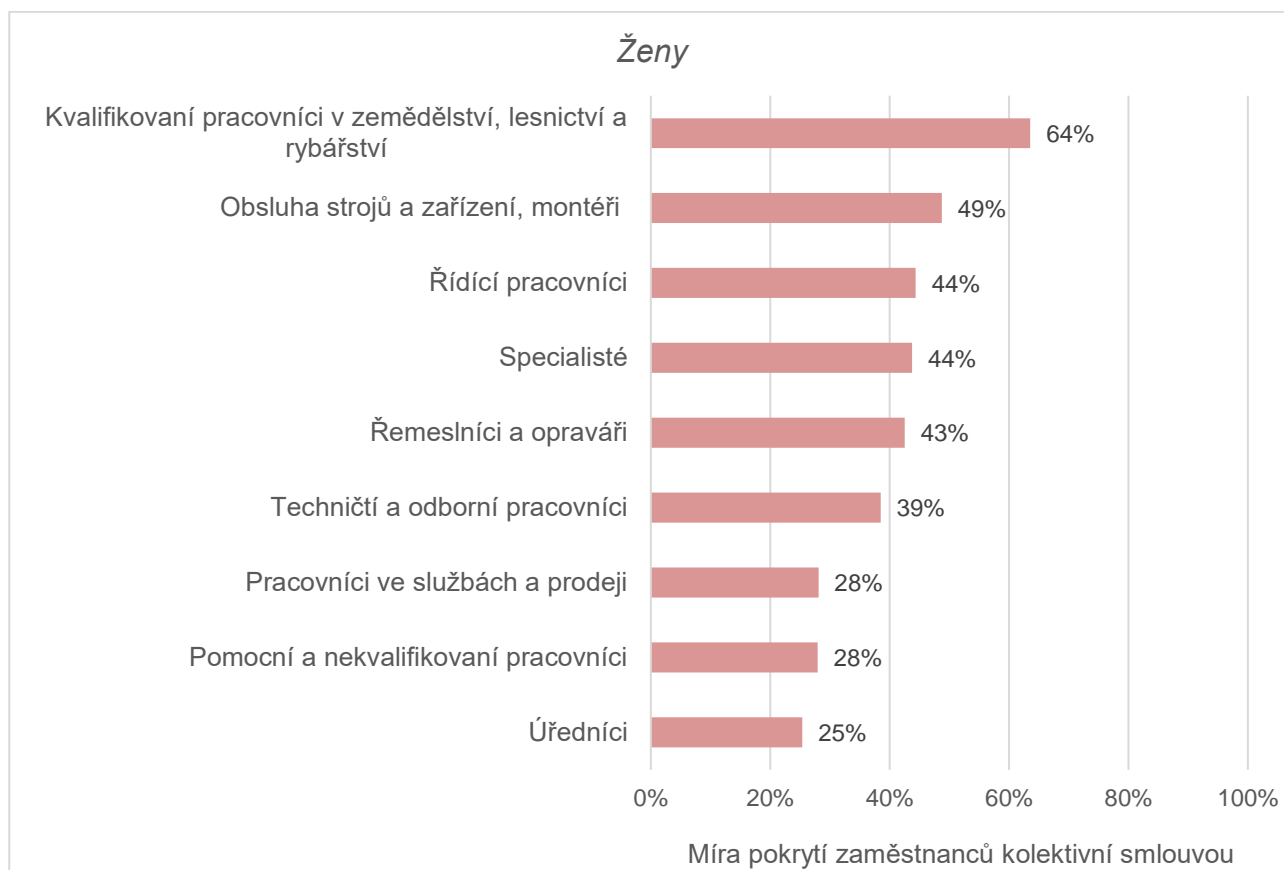
Figure 3.21: Collective agreement coverage of men, by main CZ-ISCO groupings (private sector, CZ, 2019)



Source: ISAE (MoLSA).

Men: Skilled agricultural, forestry, and fishing workers, Plant and machine operators and assemblers, Craft and related trades workers, Managers, Professionals, Technicians and associate professionals, Elementary occupations, Clerks, Service workers and shop and market sales workers, Collective agreement coverage

Figure 3.22: Collective agreement coverage of women, by main CZ-ISCO groupings (private sector, CZ, 2019)



Source: ISAE (MoLSA).

Women: Skilled agricultural, forestry, and fishing workers, Plant and machine operators and assemblers, Craft and related trades workers, Managers, Professionals, Technicians and associate professionals, Elementary occupations, Clerks, Service workers and shop and market sales workers, Collective agreement coverage

3.3.2 Public sector

In 2019, almost 67 % of those employed in the public sector were covered by a collective agreement. **Differences** in this sector in terms of **field** and the **size of economic entities** are shown in Table 3.3 which contains only those combinations which are sufficiently represented in the public sector (for example, information on agriculture and construction is not provided).

Table 3.3 makes it clear that the **bigger an economic entity**, the **higher collective agreement coverage**, with **collective agreement coverage in industry somewhat exceeding that in services**. It must be noted, though, that most public-sector workers were employed in services in 2019.

Table 3.3: Collective agreement coverage of employees by field and the size of economic entity (public sector, CZ, 2019)

Size of economic entity	Field	Number of employees in thous.	Collective agreement coverage
49 employees and fewer	Services	151.7	35%
49 employees and fewer	Industry	1.6	38%
50–249 employees	Services	181.7	53%
50–249 employees	Industry	1.7	72%
250–999 employees	Services	93.5	82%
1000 employees and more	Services	216.1	93%

Note: Industry falls under sections B–E as per the CZ-NACE classifications; in the public sector, this concerns mostly section E. Services fall under sections G–S. Only those employee groups which had at least 1000 employees in 2019 are listed.

Source: ISAE (MoLSA).

Figures 3.23 and 3.23 give a better idea of the collective agreement coverage of employees **in individual sections** of the CZ-NACE classification, especially in industry and **services** which are typical for the public sector. Figure 3.23 provides information on economic entities of 249 employees and fewer; Figure 3.24 focuses on the collective agreement coverage in economic entities of 250 employees and more. Once more, figures confirm a higher rate of coverage in large economic entities.

In economic entities of **249 employees and fewer**, those employed in **water supply, sewerage, waste management and remediation activities** (section E of the CZ-NACE classification) were covered by collective agreements the most; in 2019, more than half of them was protected. In **arts, entertainment, and recreation**, as well as in **education**, roughly a half of the employees had coverage (51 and 49 %, respectively).

In economic entities of **250 employees and more**, more than three quarters of employees had collective agreement coverage in 2019 in all reference sections, i.e. those sections which had at least 1000 employees in the public sector in 2019 (see Figure 3.24).

Figure 3.23: Collective agreement coverage of employees in economic entities of 249 employees and fewer, by CZ-NACE sections (public sector, CZ, 2019)

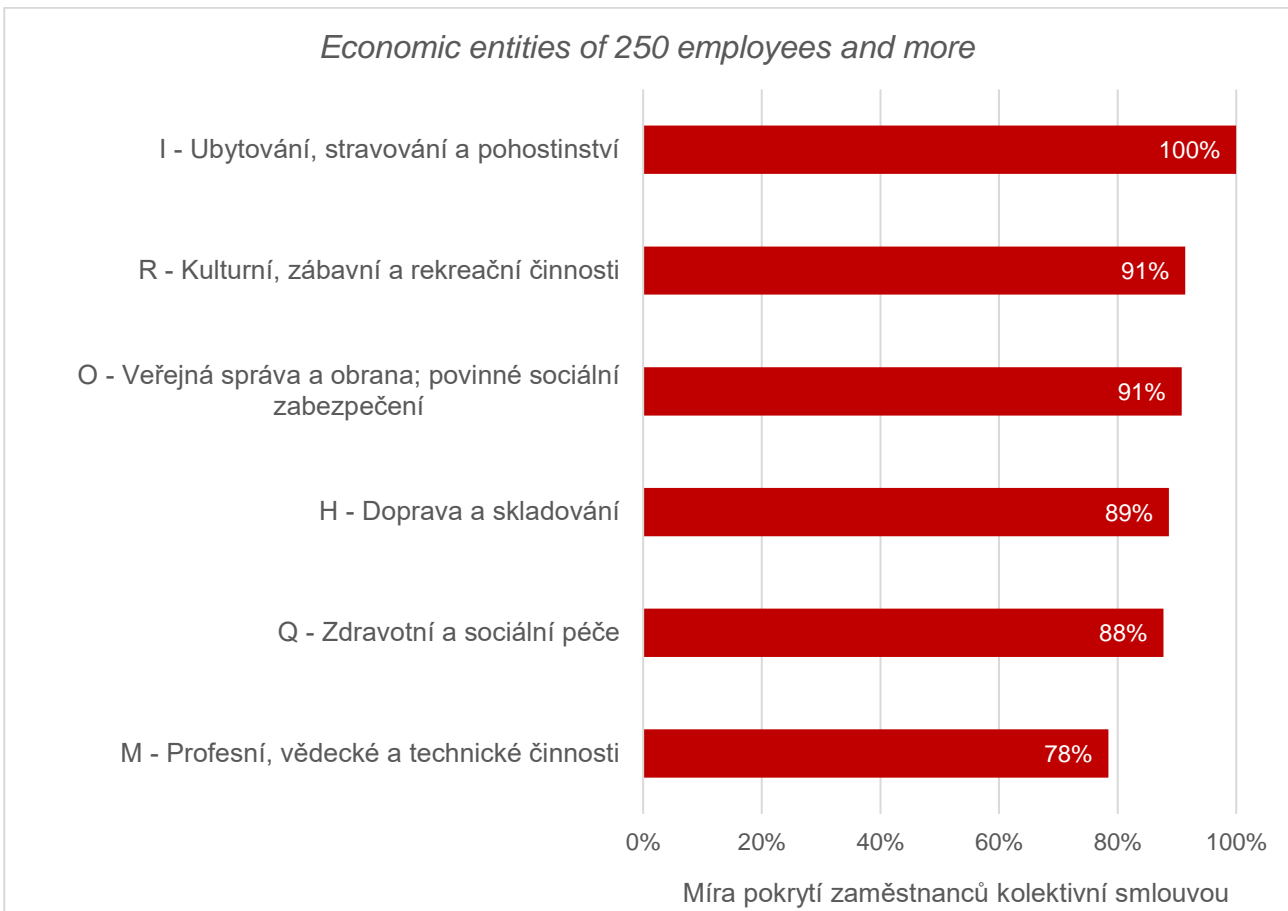


Note: Only those employee groups which had at least 1000 employees in 2019 are listed.

Source: ISAE (MoLSA).

E – Water supply; sewerage, waste management and remediation activities, R – Arts, entertainment and recreation, P – Education, Q – Human health and social work activities, I – Accommodation and food service activities, O – Public administration and defence; compulsory social security, M – Professional, scientific, and technical activities, Collective agreement coverage

Figure 3.24: Collective agreement coverage of employees in economic entities of 250 employees and more, by CZ-NACE sections (public sector, CZ, 2019)



Note: Only those employee groups which had at least 1000 employees in 2019 are listed.

Source: ISAE (MoLSA).

I – Accommodation and food service activities, R – Arts, entertainment and recreation, O – Public administration and defence; compulsory social security, H – Transportation and storage, Q – Human health and social work activities, M – Professional, scientific, and technical activities, Collective agreement coverage

Attention is also paid to collective agreement coverage in the public sector in 2019, by **gender** and **main CZ-ISCO groupings**. It is shown in Table 3.4 which also contains the number of the employees concerned. Figures 3.25 and 3.26 provide data on men and women, respectively.

In the public sector in 2019, a **full coverage** regardless of gender was enjoyed by those **employed in the armed forces** (main grouping 0) due to their concentration in a single economic entity (i.e. Ministry of Defence of the Czech Republic).

Conversely, **elementary occupations** (main grouping 9) have the **least coverage** in the public sector; in 2019, a **third** of the **men** was covered by a collective agreement (33 %) and roughly a **half** of the **women** (49 %). Furthermore, Table 3.4 shows that in the rest of the main occupation groupings (main groupings 1–8), men are covered by collective agreements more than women.

For the sake of completeness, the Annexe contains information on the collective agreement coverage of individual employee groups by all reference characteristics, i.e. gender, size of economic entities, field, and occupation (see Table VI). The annexed Table VI shows that male ancillary service workers employed in economic entities of 249 employees and fewer are the least protected employee group in the public sector; in 2019, their collective agreement coverage was 18 %.

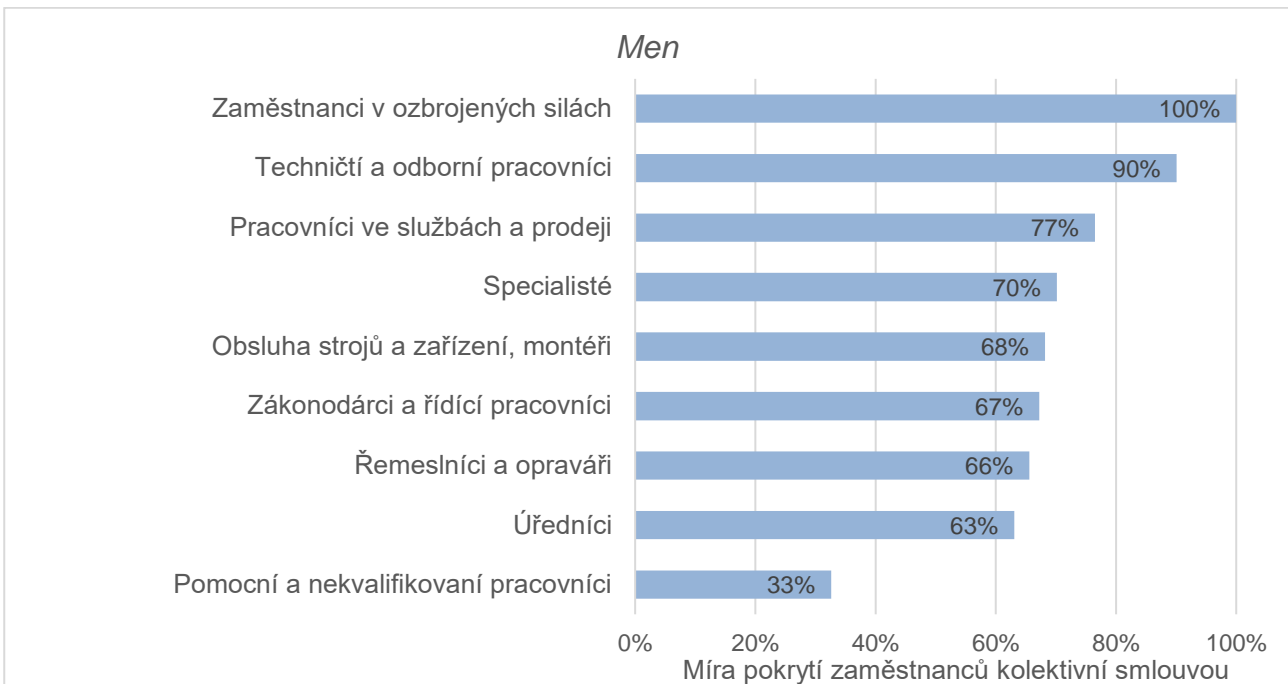
Table 3.4: Collective agreement coverage of employees by gender and main occupation classes, CZ-ISCO (public sector, CZ, 2019)

Gender	Main CZ-ISCO grouping	Number of employees in thous.	Collective agreement coverage
Men	9 – Elementary occupations	10.3	33%
Women	9 – Elementary occupations	28.7	49%
Women	5 – Service workers and shop and market sales workers	68.3	51%
Women	4 – Clerks	32.3	54%
Women	1 – Legislators and Managers	17.3	55%
Women	2 – Professionals	157.0	57%
Women	8 – Plant and machine operators and assemblers	1.5	61%
Men	4 – Clerks	6.2	63%
Men	7 – Craft and related trades workers	6.8	66%
Men	1 – Legislators and Managers	12.3	67%
Men	8 – Plant and machine operators and assemblers	9.6	68%
Men	2 – Professionals	50.4	70%
Women	3 – Technicians and associate professionals	118.2	76%
Men	5 – Service workers and shop and market sales workers	37.9	77%
Men	3 – Technicians and associate professionals	63.7	90%
Women	0 – Armed forces	2.7	100%
Men	0 – Armed forces	21.7	100%

Note: Only those employee groups which had at least 1000 employees in 2019 are listed.

Source: ISAE (MoLSA).

Figure 3.25: Collective agreement coverage of men, by main CZ-ISCO groupings (public sector, CZ, 2019)

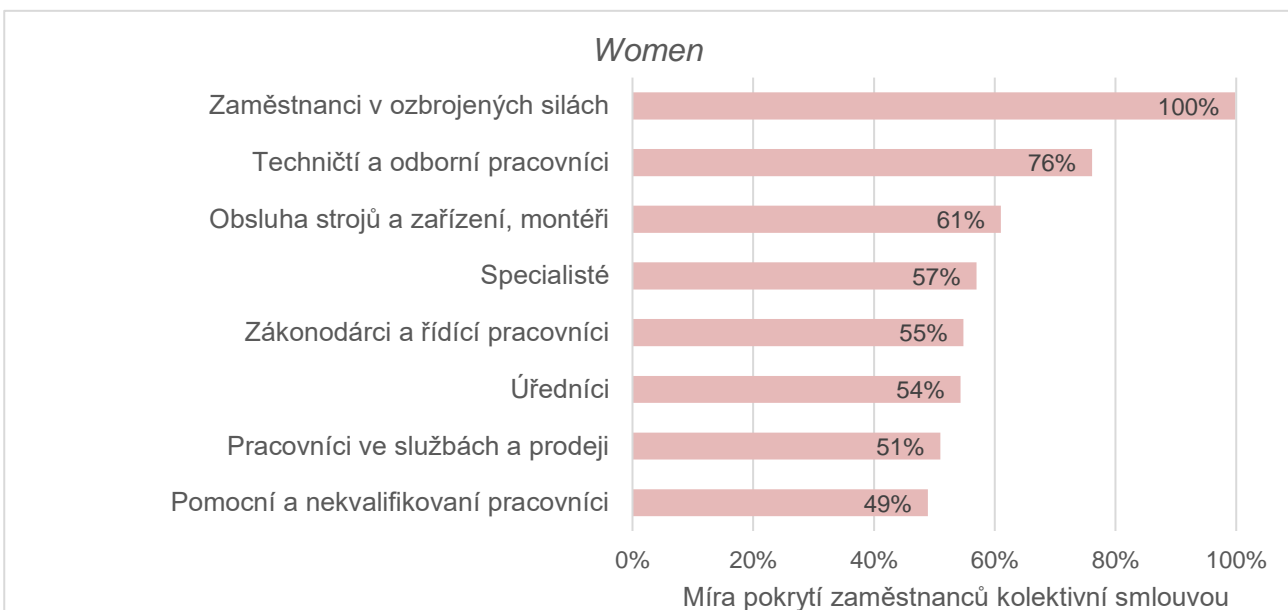


Note: Only those employee groups which had at least 1000 employees in 2019 are listed.

Source: ISAE (MoLSA).

Armed forces, Technicians and associate professionals, Service workers and shop and market sales workers, Professionals, Machinery and facility operators; fitters, Legislators and Managers, Craft and related trades workers, Clerks, Elementary occupations, Collective agreement coverage

Figure 3.26: Collective agreement coverage of women, by main CZ-ISCO groupings (public sector, CZ, 2019)



Note: Only those employee groups which had at least 1000 employees in 2019 are listed.

Source: ISAE (MoLSA).

Armed forces, Technicians and associate professionals, Service workers and shop and market sales workers, Professionals, Machinery and facility operators; fitters, Legislators and Managers, Craft and related trades workers, Clerks, Elementary occupations, Collective agreement coverage

4 Strengthening the relevance of collective agreements in highly digitised economies

The outcome of collective bargaining primarily helps improve the situation of employees under the protection of a collective agreement. Nevertheless, one of the factors which strengthen the relevance of collective agreements is, for example, the **adoption of their stipulations by employment laws**. This has the effect where collective bargaining helps **improve the rights of all employees**.

4.1 Actively using the outcomes of collective bargaining

With respect to the significance of collective agreements, it is positive and important that the **outcomes of collective bargaining** as per the Information on Working Conditions (IWC) are used as **arguments** when discussing **contemporary issues**. As a specific example from 2019, let us mention the **suggestion to grant 25 vacation days to all employees in the private sector**. In the public sector, employees have a basic rate of 25 vacation days, whereas teachers and academics enjoy 40 days of vacation; all other employees, i.e. those employed in the private sector, have 20 days. In case of the public sector and teachers/academics, vacations cannot be extended. Conversely, employers in the private sector can extend vacations by means of a collective agreement or internal rules. This was the point of the past-year's draft amendment to the Labour Code which proposed a basic vacation rate of 25 days in the private sector in order to eliminate the difference between the private and public sector, without changing the scope of vacation afforded to teachers and academics (40 days). In the end, the draft was not adopted but the outcomes of collective bargaining show that extra vacation time was negotiated in 88 % collective business agreements in 2019, suggesting that some **private employers already grant their workers 25 vacation days**. To strengthen the argument, however, the information provided by the outcomes of collective bargaining should be supplemented with data from other sources. For example, the results of the BENOFITY 2019³ survey which are representative

³ The survey was performed in 2019 by ASO as a part of the "Social dialogue as a precaution against societal polarisation and a means for working with the human capital in the era of digitisation and automation" project.

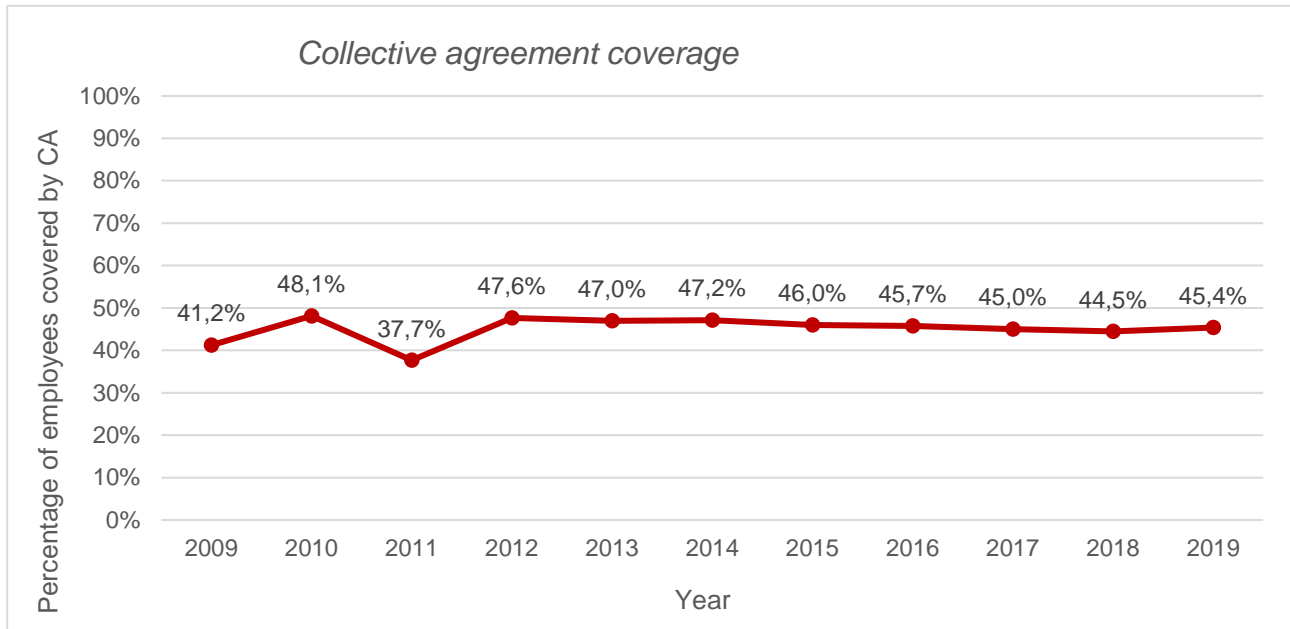
of all private economic entities in the Czech Republic with 10 employees and more (not only economic entities with a collective agreement coverage), show that only a third of economic entities without a collective agreement provided extra vacation. The BENOFITY 2019 survey also suggests that while businesses often do provide benefits of some sorts, they are not stipulated in a collective agreement. Therefore, the goal of a social dialogue should be to create favourable conditions for the inclusion of these benefit in collective agreements so that the outcomes of collective bargaining have the highest information value possible.

Shortening the statutory workweek from 40 hours to **37.5 hours** is another topic of discussion in the private sector. Currently, the statutory workweek can be shortened only by a collective agreement or internal rule. An IWC analysis shows that 2019, a 37.5 workweek was negotiated in ca 77 % collective business agreements which prescribe a total number of working hours for the entire organisation in question. A 40-hour workweek was negotiated only in 22 % of collective business agreements. With respect to a shorter statutory workweek, however, it is necessary to also consider productivity or a successful adaptation of businesses during the 4th industrial revolution.

4.2 Efforts to increase the collective agreement coverage of employees

In the past few years, the percentage of employees covered by a collective agreement in the CZ decreased slightly, from roughly 48 % in 2012 to approximately 45 % in 2019 (see Figure 4.1).

Figure 4.1: Development of the collective agreement coverage of Czech employees, from 2009 to 2019



Note: The 2011 fluctuation may be caused by a large percentage of missing data on the presence of collective agreements (ca 30 %).

Source: CSO (Structure of earnings).

Another way to strengthen the significance of collective agreements is to **focus on those employee groups** which are characterised by a **low collective agreement coverage**, and attempt to increase the percentage of those under the protection of a collective agreement in these groups. Chapter 3.3 identified employee groups by collective agreement coverage, showing that **private sector service workers employed in businesses of 249 employees and fewer were the least protected group**; their coverage ranged from 5 to 5 % for all groups by gender and occupation, except for men working as skilled manual workers whose coverage was 31 % in 2019 (see the annexed Table V). This, too, is below the total collective agreement coverage of employees in the Czech Republic.

4.3 Digitisation in collective bargaining

Currently, it is also important for collective bargaining to sufficiently stress aspects related to digitisation, such as **modern forms of work**, lifelong **education and development of employees**, safety measures against **occupational stress**, or special programmes for employing people over 50 years of age. The outcomes of collective bargaining in 2019 showed that:

- Only 1 % of collective agreements regulated conditions for specific forms of work and work regimes, where **1 %** negotiated a **home office**, 0.1 % job sharing, a 0.2 % a “hot desk”;
- **Flexible working hours** were negotiated in ca **28 %** of collective business agreements;
- **34 %** of collective business agreements negotiated conditions for a **vocational development** of employees. However, just **2 % of collective agreements** stipulated **specific programmes for the number of employees** concerned;
- Occupational health and safety measures are emphasised by most collective agreements (84 %). Nevertheless, only **0.3 % of collective agreements** specified the manner in which a framework agreement on **occupational stress** should be implemented;
- **Special conditions (programmes) for employing workers over 50 years of age** were negotiated only in **3 % of collective business agreements**.

Conclusion

The current era of digitisation and automation sees gradual changes to the labour market, affecting most employees. However, their impact on individual employee groups differs in intensity, for example with respect to field or occupation. This study confirms that the current labour market experiences changes in employee structure. In the past 10 years, the **average age of employees grew** from 42 in 2009 to almost 43 in 2019. The **percentage of college-educated employees also increased**, at the expense of employees with a secondary education without Matura. The **service sector has gained prominence** and the **percentage of knowledge workers** rose, compared to that of manual workers. Situation on the labour market in the era of digitisation and automation is frequently associated with a demand for educated employees and **ICT professionals or technicians**. This study showed that the **remuneration** of ICT professionals or technicians in the private sector in the Czech Republic **exceeds the norm**.

The aim of this study was to describe **differences in the standing of employees under the protection of a collective agreement** and those who **do not enjoy the benefits of collective bargaining**. With respect to remuneration in the private sector by collective agreement, it turns out that **in the long term, employees under the protection of a collective agreement** are characterised by a **higher remuneration** than employees who are not covered by a collective agreement. In 2019, the median gross monthly income of

employees under the protection of a collective agreement was ca 35 000 CZK—7000 CZK more than the income of employees with no collective agreement coverage.

Based on differences in employee structure by collective agreement, employee groups were identified with respect to collective agreement coverage. This was mostly because the **45 % coverage of employees in 2019** characterises the entire population of employees in the CZ, yet there are **differences between individual groups** in terms of collective agreement coverage. For one, the private and public sectors are markedly different in regard to their size and the collective agreement coverage of employees. Therefore, individual employee groups were identified for the private and public group, separately. In terms of the number of employees, the private sector is much larger and is characterised by a lower collective agreement coverage of employees. In 2019, the private sector employed more than 3 million employees, 41 % of whom were covered by a collective agreement.

Looking at employee groups by field and the size of economic entities, there is a very **low collective agreement coverage of private sector service and industry employees in small businesses of 49 employees and fewer** (6 and 11 %, respectively) which employed over 895 000 employees in 2019. In the same reference period, medium-sized businesses of 50–249 employees had a coverage of 23 % (services) and 33 % (industry).

With respect to **gender and occupation, service workers and shop and market sales workers** (main grouping 5 of CZ-ISCO) can be considered the **least protected group of men** in 2019 as roughly a fifth of them (19 %) was protected by a collective agreement. Among **women, clerks** (main grouping 4 of CZ-ISCO) are **the least protected**; in 2019, a quarter of them (25 %) was covered by a collective agreement.

With respect to identifying employee groups characterised by a low collective agreement coverage, measures can be proposed to **strengthen the relevance of collective agreements**. This can be achieved via efforts to **increase the total collective agreement coverage of employees**, by focusing on those employee groups which are characterised by a low coverage. The goal is to achieve the desired effect where collective bargaining helps improve the rights of all employees. **Actively using the outcomes of collective bargaining** in evidence-based policies is another important point in this regard. Another way to strengthen the relevance of collective agreements in highly digitised economies is to pay due attention to **digitisation in collective bargaining**, both in terms of the form of collective bargaining, and the content of the social dialogue.

Annexe—tables

Table I: CZ-NACE sections

Main grouping	CZ-NACE section
Agriculture	A Agriculture, forestry, and fishing
Industry and Construction	B Mining and quarrying
	C Manufacturing
	D Electricity, gas, steam and air conditioning supply
	E Water supply; sewerage, waste management and remediation activities
	F Construction
	Services
H Transportation and storage	
I Accommodation and food service activities	
J Information and communication	
K Financial and insurance activities	
L Real estate activities	
M Professional, scientific, and technical activities	
N Administrative and support service activities	
O Public administration and defence; compulsory social security	
P Education	
Q Human health and social work activities	
R Arts, entertainment and recreation	
S Other service activities	
T Activities of households as employers; undifferentiated goods- and services- producing activities of households for own use	
U Activities of extraterritorial organisations and bodies	

Table II: Main groupings of the CZ-ISCO classification of occupations

Main CZ-ISCO grouping	Name
0	Armed forces
1	Legislators and managers
2	Professionals
3	Technicians and associate professionals
4	Clerks
5	Service workers and shop and market sales workers
6	Skilled agricultural, forestry, and fishing workers
7	Craft and related trades workers
8	Plant and machine operators and assemblers
9	Elementary occupations

Table III: Number of employees and the median/average gross monthly income by collective agreement and main CZ-ISCO groupings (CZ, 2019)

Main CZ-ISCO grouping	Collective agreement	Number of employees in thous.	Average gross monthly income	Median gross monthly income
1 - Managers	YES	71.2	83 381 CZK	66 125 CZK
	NO	74.2	75 443 CZK	55 896 CZK
	not stated	2.8	53 113 CZK	37 055 CZK
2 - Professionals	YES	280.7	52 309 CZK	44 662 CZK
	NO	281.0	51 832 CZK	42 206 CZK
	not stated	7.6	36 540 CZK	28 966 CZK
3 - Technicians and associate professionals	YES	390.6	42 364 CZK	39 255 CZK
	NO	403.2	37 411 CZK	33 257 CZK
	not stated	20.8	31 471 CZK	28 077 CZK
4 - Clerks	YES	98.7	33 765 CZK	31 858 CZK
	NO	208.7	28 130 CZK	25 946 CZK
	not stated	9.5	24 785 CZK	22 946 CZK
5 - Service workers and shop and market sales workers	YES	157.2	29 569 CZK	26 868 CZK
	NO	307.2	23 265 CZK	21 126 CZK
	not stated	17.1	21 803 CZK	19 716 CZK
6 - Skilled agricultural, forestry, and fishing workers	YES	18.9	27 976 CZK	26 770 CZK
	NO	10.7	21 964 CZK	19 834 CZK
	not stated	*	*	*
7 - Craft and related trades workers	YES	221.0	34 118 CZK	32 655 CZK
	NO	238.9	28 690 CZK	27 764 CZK
	not stated	13.2	24 751 CZK	23 777 CZK
8 - Plant and machine operators and assemblers	YES	345.3	32 477 CZK	31 403 CZK
	NO	266.1	26 505 CZK	25 626 CZK
	not stated	8.8	24 754 CZK	22 826 CZK
9 - Elementary occupations	YES	80.2	23 208 CZK	21 435 CZK
	NO	153.4	19 813 CZK	17 874 CZK
	not stated	6.5	17 169 CZK	15 944 CZK

Note: Values marked as * cannot be listed as they do not meet the criteria for publication.

Source: ISAE (MoLSA).

Table IV: Number of employees and the median/average gross monthly income by field and collective agreement, CZ-NACE (CZ, 2019)

CZ-NACE section	Collective agreement	Number of employees in thous.	Average gross monthly income	Median gross monthly income
A	YES	62.6	30 913 CZK	29 413 CZK
	NO	24.4	24 594 CZK	22 664 CZK
	not stated	0.2	24 311 CZK	22 632 CZK
B	YES	19.9	40 169 CZK	36 563 CZK
	NO	1.2	33 739 CZK	33 850 CZK
	not stated	0.2	32 610 CZK	34 734 CZK
C	YES	528.9	39 458 CZK	34 366 CZK
	NO	494.5	33 025 CZK	29 172 CZK
	not stated	22.5	29 352 CZK	25 464 CZK
D	YES	29.3	53 392 CZK	47 728 CZK
	NO	3.7	33 021 CZK	28 086 CZK
	not stated	*	*	*
E	YES	24.8	35 529 CZK	31 884 CZK
	NO	23.8	29 890 CZK	27 382 CZK
	not stated	0.6	19 813 CZK	17 792 CZK
F	YES	110.0	38 038 CZK	33 573 CZK
	NO	75.7	22 799 CZK	20 223 CZK
	not stated	1.3	29 962 CZK	29 187 CZK
G	YES	101.6	34 758 CZK	28 163 CZK
	NO	346.3	33 780 CZK	27 419 CZK
	not stated	23.1	27 843 CZK	24 406 CZK
H	YES	165.5	35 664 CZK	33 558 CZK
	NO	77.2	29 025 CZK	25 322 CZK
	not stated	3.5	24 282 CZK	22 895 CZK
I	YES	8.2	32 174 CZK	28 296 CZK
	NO	92.4	21 022 CZK	17 871 CZK
	not stated	10.8	19 795 CZK	17 547 CZK
J	YES	19.7	53 677 CZK	44 332 CZK
	NO	94.1	62 323 CZK	49 036 CZK
	not stated	2.6	37 940 CZK	32 048 CZK
K	YES	38.4	61 783 CZK	48 061 CZK
	NO	30.1	61 079 CZK	46 404 CZK
	not stated	0.2	32 352 CZK	27 775 CZK
L	YES	1.9	30 933 CZK	28 582 CZK
	NO	34.5	31 467 CZK	26 768 CZK
	not stated	3.5	31 030 CZK	28 540 CZK

M	YES	32.6	51 606 CZK	42 979 CZK
	NO	125.6	41 977 CZK	33 230 CZK
	not stated	7.1	29 964 CZK	23 734 CZK
CZ-NACE section	Collective agreement	Number of employees in thous.	Average gross monthly income	Median gross monthly income
N	YES	14.0	30 619 CZK	27 503 CZK
	NO	152.7	24 395 CZK	20 290 CZK
	not stated	4.3	20 723 CZK	18 594 CZK
O	YES	219.0	41 803 CZK	39 105 CZK
	NO	61.5	35 319 CZK	33 364 CZK
	not stated	*	*	*
P	YES	139.7	39 345 CZK	37 224 CZK
	NO	117.7	35 444 CZK	35 316 CZK
	not stated	2.1	23 477 CZK	23 099 CZK
Q	YES	153.0	42 455 CZK	37 360 CZK
	NO	120.2	32 584 CZK	28 591 CZK
	not stated	2.4	30 134 CZK	25 955 CZK
R	YES	16.6	33 334 CZK	30 907 CZK
	NO	29.0	32 074 CZK	27 961 CZK
	not stated	0.7	26 389 CZK	20 200 CZK
S	YES	2.7	29 896 CZK	26 603 CZK
	NO	38.9	27 307 CZK	24 323 CZK
	not stated	1.2	21 624 CZK	18 845 CZK

Note: The full names of individual CZ-NACE sections are listed in Table I.
Values marked as * cannot be listed as they do not meet the criteria for publication.

Source: ISAE (MoLSA).

Table V: Collective agreement coverage by gender, business size, field, and occupation (private sector, CZ, 2019)

Gender	Business size	Field	Type of occupation	Number of employees in thous.	Collective agreement coverage
Women	249 employees and fewer	Services	Less-skilled knowledge workers	214.7	5%
Men	249 employees and fewer	Services	Less-skilled knowledge workers	115.6	6%
Women	249 employees and fewer	Services	Skilled manual workers	24.3	6%
Women	249 employees and fewer	Services	Ancillary workers	42.0	7%
Women	249 employees and fewer	Services	Highly qualified knowledge workers	188.4	8%
Men	249 employees and fewer	Services	Highly qualified knowledge workers	220.8	10%
Men	249 employees and fewer	Services	Ancillary workers	25.3	11%
Women	249 employees and fewer	Industry	Less-skilled knowledge workers	39.1	17%
Men	249 employees and fewer	Industry	Less-skilled knowledge workers	13.3	18%
Men	249 employees and fewer	Industry	Ancillary workers	22.5	19%
Men	249 employees and fewer	Industry	Highly qualified knowledge workers	103.8	23%
Women	249 employees and fewer	Industry	Ancillary workers	21.6	23%
Women	249 employees and fewer	Industry	Highly qualified knowledge workers	44.4	25%
Men	249 employees and fewer	Industry	Skilled manual workers	215.5	25%
Women	249 employees and fewer	Industry	Skilled manual workers	75.8	26%
Men	250 employees and more	Services	Ancillary workers	11.7	30%

Men	249 employees and fewer	Services	Skilled manual workers	165.9	31%
Men	249 employees and fewer	Construction	Less-skilled knowledge workers	3.3	38%
Women	249 employees and fewer	Construction	Less-skilled knowledge workers	11.1	38%
Gender	Business size	Field	Type of occupation	Number of employees in thous.	Collective agreement coverage
Women	250 employees and more	Services	Ancillary workers	20.8	41%
Women	249 employees and fewer	Construction	Ancillary workers	2.0	42%
Women	250 employees and more	Services	Skilled manual workers	22.9	42%
Men	249 employees and fewer	Construction	Ancillary workers	15.5	46%
Men	250 employees and more	Services	Less-skilled knowledge workers	65.8	48%
Men	249 employees and fewer	Construction	Skilled manual workers	77.5	51%
Women	250 employees and more	Services	Less-skilled knowledge workers	152.5	52%
Men	250 employees and more	Services	Highly qualified knowledge workers	143.3	53%
Men	249 employees and fewer	Construction	Highly qualified knowledge workers	37.0	55%
Women	249 employees and fewer	Agriculture	Less-skilled knowledge workers	4.8	55%
Men	249 employees and fewer	Agriculture	Less-skilled knowledge workers	1.5	56%
Women	249 employees and fewer	Agriculture	Ancillary workers	3.7	57%
Men	249 employees and fewer	Agriculture	Ancillary workers	4.1	59%
Women	249 employees and fewer	Construction	Highly qualified knowledge workers	10.1	61%
Women	250 employees and more	Industry	Less-skilled knowledge workers	19.0	66%
Men	250 employees and more	Services	Skilled manual workers	91.4	67%
Women	250 employees and more	Services	Highly qualified knowledge workers	146.3	68%

Men	249 employees and fewer	Agriculture	Highly qualified knowledge workers	10.4	68%
Men	249 employees and fewer	Agriculture	Skilled manual workers	37.5	70%
Women	250 employees and more	Industry	Ancillary workers	13.5	70%
Gender	Business size	Field	Type of occupation	Number of employees in thous.	Collective agreement coverage
Women	250 employees and more	Industry	Skilled manual workers	110.8	70%
Men	250 employees and more	Industry	Less-skilled knowledge workers	10.1	73%
Men	250 employees and more	Industry	Ancillary workers	16.0	73%
Women	249 employees and fewer	Agriculture	Skilled manual workers	10.9	74%
Women	250 employees and more	Industry	Highly qualified knowledge workers	56.8	78%
Women	249 employees and fewer	Agriculture	Highly qualified knowledge workers	5.3	78%
Men	250 employees and more	Industry	Skilled manual workers	254.8	81%
Men	250 employees and more	Industry	Highly qualified knowledge workers	128.8	81%
Men	250 employees and more	Construction	Skilled manual workers	11.8	100%
Men	250 employees and more	Construction	Ancillary workers	2.0	100%
Men	250 employees and more	Construction	Highly qualified knowledge workers	11.0	100%
Men	250 employees and more	Agriculture	Less-skilled knowledge workers	1.0	100%
Men	250 employees and more	Agriculture	Skilled manual workers	2.3	100%
Men	250 employees and more	Agriculture	Highly qualified knowledge workers	2.7	100%
Women	250 employees and more	Construction	Less-skilled knowledge workers	1.1	100%
Women	250 employees and more	Construction	Highly qualified knowledge workers	3.2	100%

Note: Only those employee groups which had at least 1000 employees in 2019 are listed. Agriculture falls under the A section of the CZ-NACE classification, industry under the B–E sections, construction under the F section, services under the G–S sections. Highly qualified workers fall under main groupings 1–

3 of the CZ-ISCO classification of occupations, less-skilled knowledge workers under groupings 4–5, skilled manual workers under groupings 6–8, and ancillary workers under main grouping 9.

Source: ISAE (MoLSA).

Table VI: Collective agreement coverage by gender, size of economic entity, field, and occupation (public sector, CZ, 2019)

Gender	Size of economic entity	Field	Type of occupation	Number of employees in thous.	Collective agreement coverage
Men	249 employees and fewer	Services	Ancillary workers	7.7	18%
Men	249 employees and fewer	Services	Skilled manual workers	6.2	36%
Women	249 employees and fewer	Services	Less-skilled knowledge workers	71.7	41%
Women	249 employees and fewer	Services	Ancillary workers	24.0	42%
Women	249 employees and fewer	Services	Skilled manual workers	1.5	44%
Women	249 employees and fewer	Services	Highly qualified knowledge workers	164.3	46%
Men	249 employees and fewer	Services	Less-skilled knowledge workers	15.0	48%
Men	249 employees and fewer	Services	Highly qualified knowledge workers	42.9	55%
Men	249 employees and fewer	Industry	Skilled manual workers	1.1	55%
Women	250 employees and more	Services	Less-skilled knowledge workers	28.6	81%
Women	250 employees and more	Services	Skilled manual workers	1.3	86%
Men	250 employees and more	Services	Ancillary workers	1.6	87%
Women	250 employees and more	Services	Ancillary workers	4.3	87%
Men	250 employees and more	Services	Skilled manual workers	9.7	87%
Men	250 employees and more	Services	Less-skilled knowledge workers	28.8	88%
Women	250 employees and more	Services	Highly qualified knowledge workers	127.9	89%
Men	250 employees and more	Services	Highly qualified knowledge workers	83.0	93%

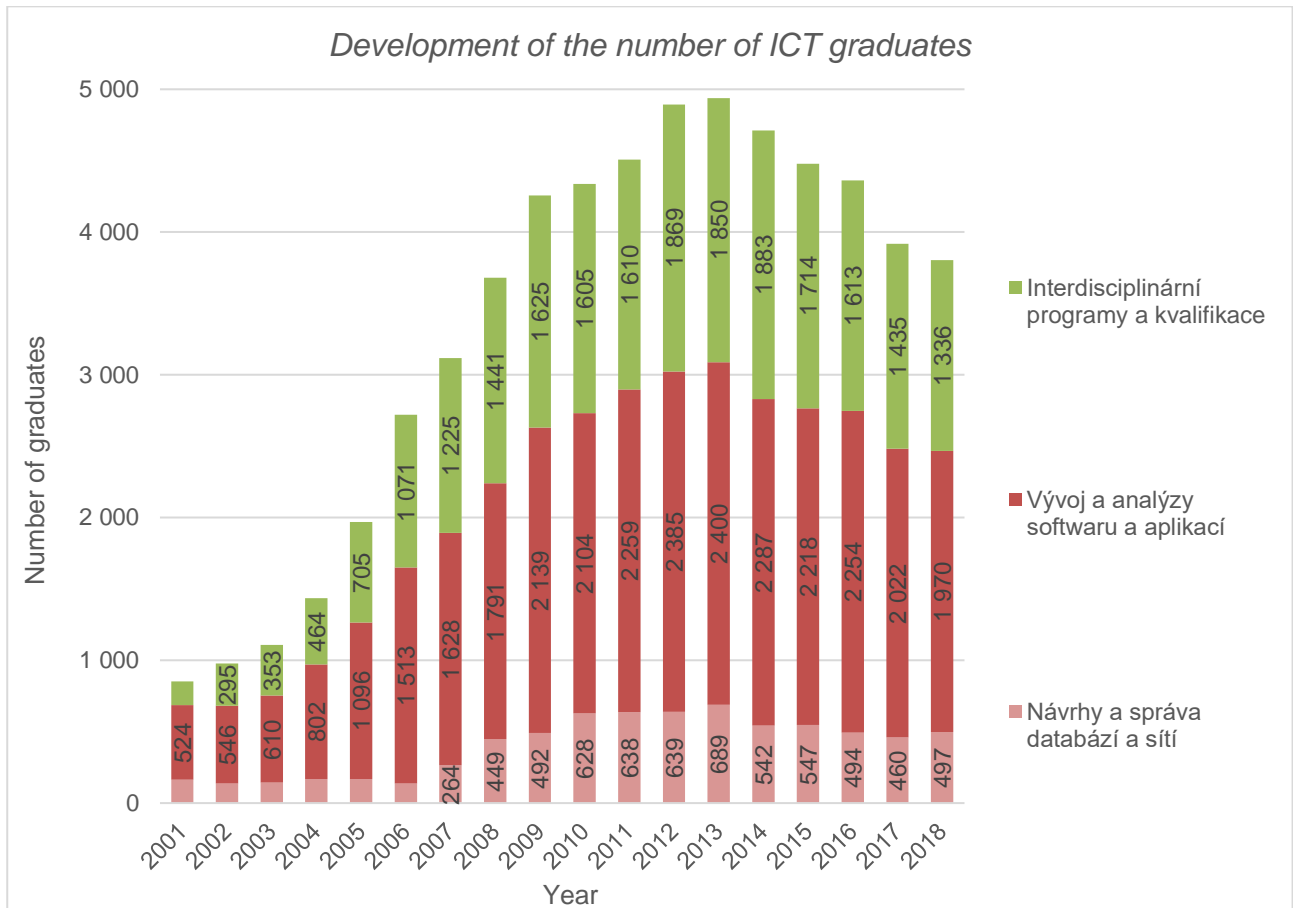
Note: Only those employee groups which had at least 1000 employees in 2019 are listed. Industry falls under sections B–E of the CZ-NACE classification (mostly section E in the public sector), services under sections G–S. Highly qualified workers fall under main groupings 1–3 of the CZ-ISCO classification of

occupations, less-skilled knowledge workers under groupings 4–5, skilled manual workers under groupings 6–8, and ancillary workers under main grouping 9. The table does not contain information on the armed forces (main grouping 0) as their collective agreement coverage is 100 %.

Source: ISAE (MoLSA).

Annexe—figures

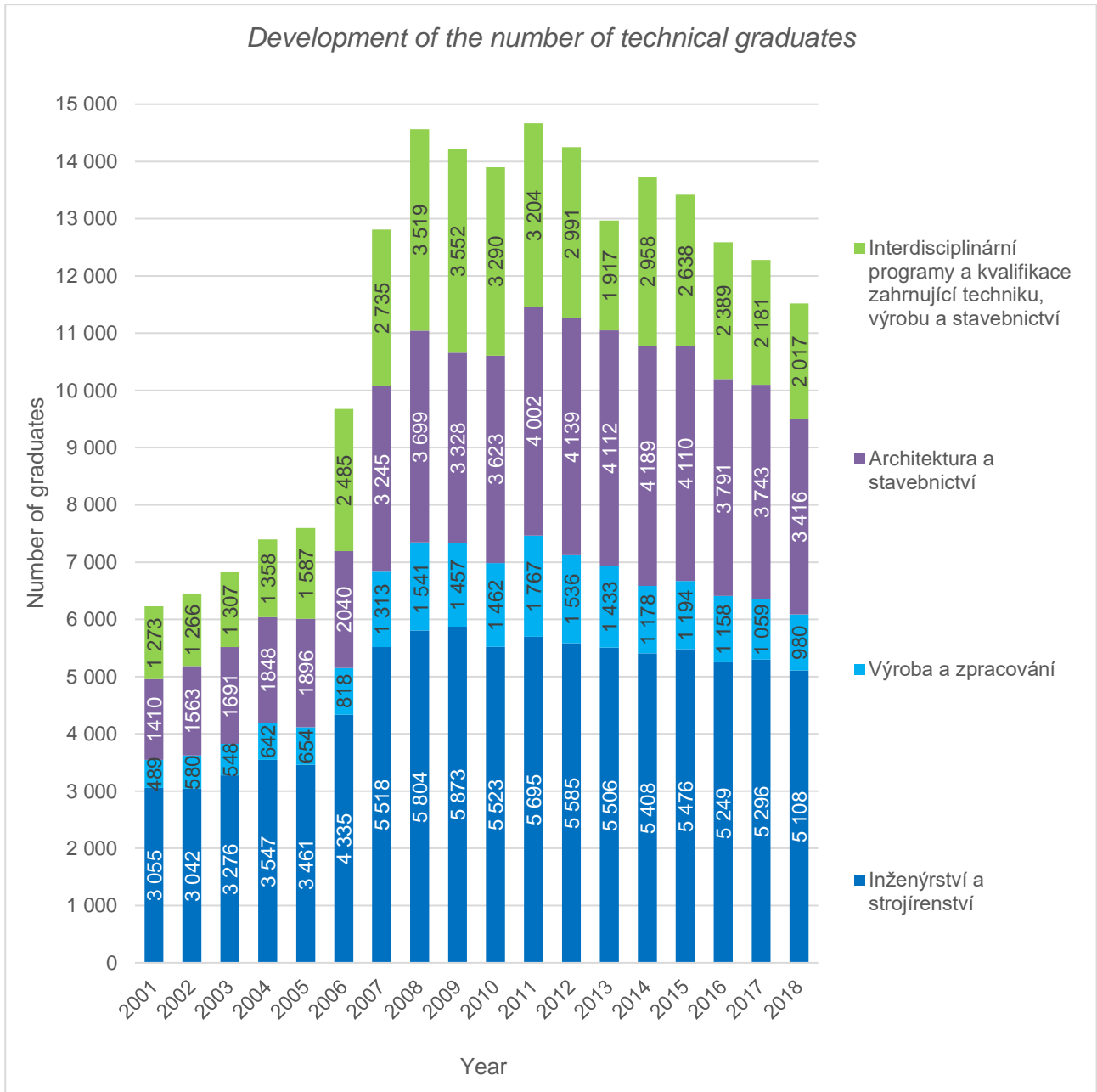
Figure I: Development of the number of ICT graduates by field of study, 2001 to 2018



Source: CSO, data from MoEYS (the SIMS database).

*Interdisciplinary programmes and qualifications, *Software and applications development and analysis,
*Database and network design and administration

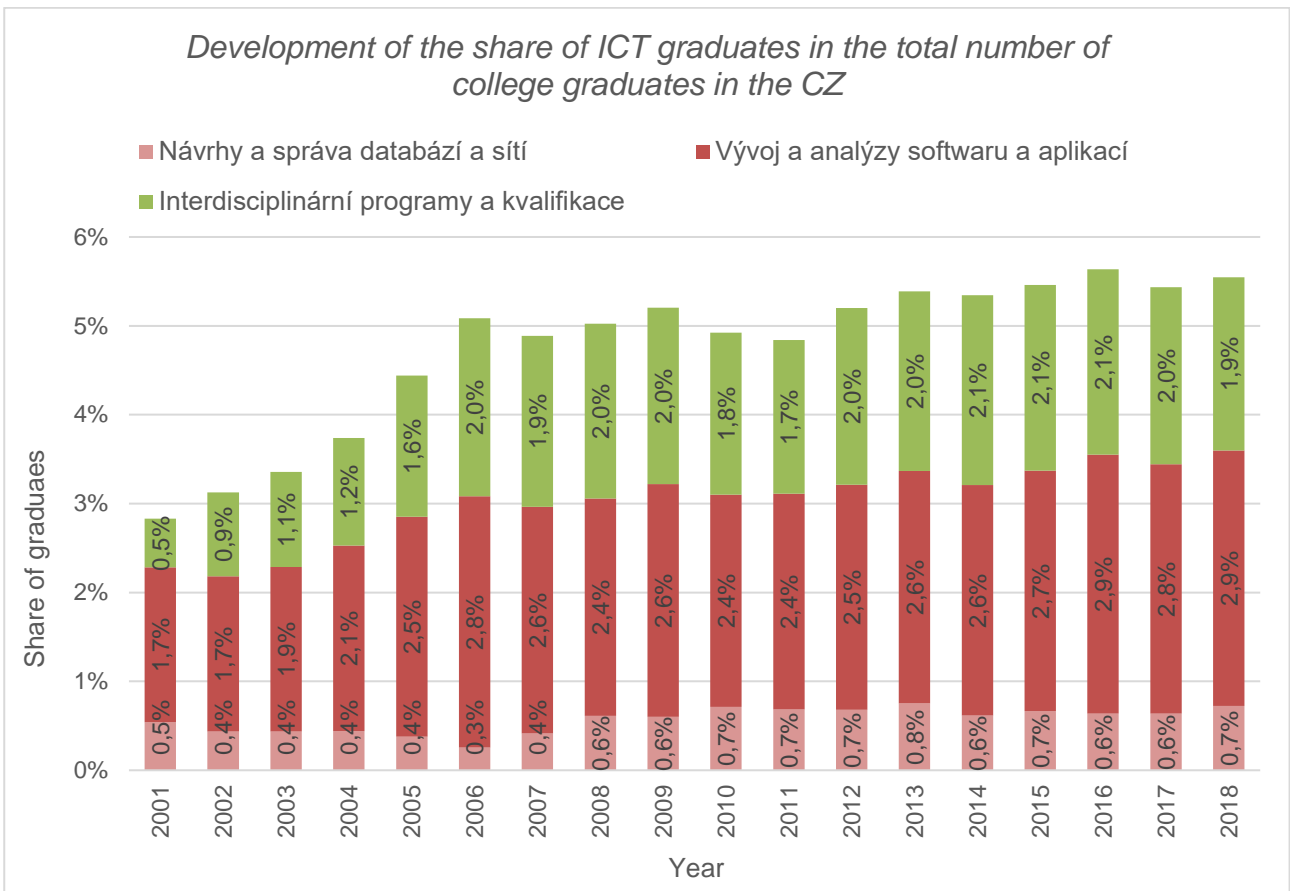
Figure II: Development of the number of technical graduates by field, 2001 to 2018



Source: CSO, data from MoEYS (the SIMS database)

*Interdisciplinary programmes and qualifications related to technology, manufacturing, and construction, *Architecture and construction, *Manufacturing and processing, * Engineering

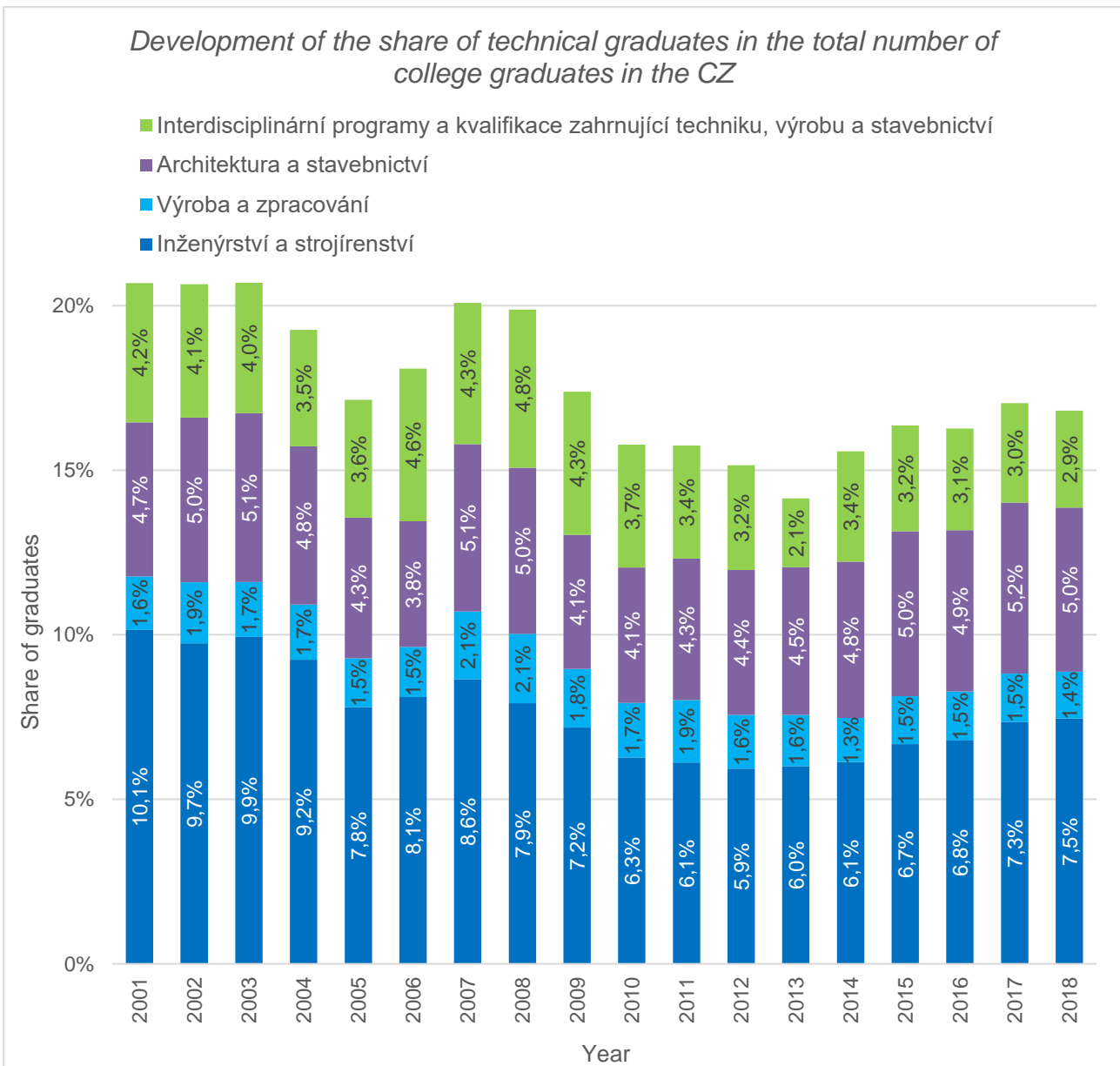
Figure III: Development of the share of ICT graduates in the total number of graduates in the Czech Republic by individual fields, from 2001 to 2018



Source: CSO, data from MoEYS (the SIMS database)

*Database and network design and administration, *Software and applications development and analysis,
*Interdisciplinary programmes and qualifications

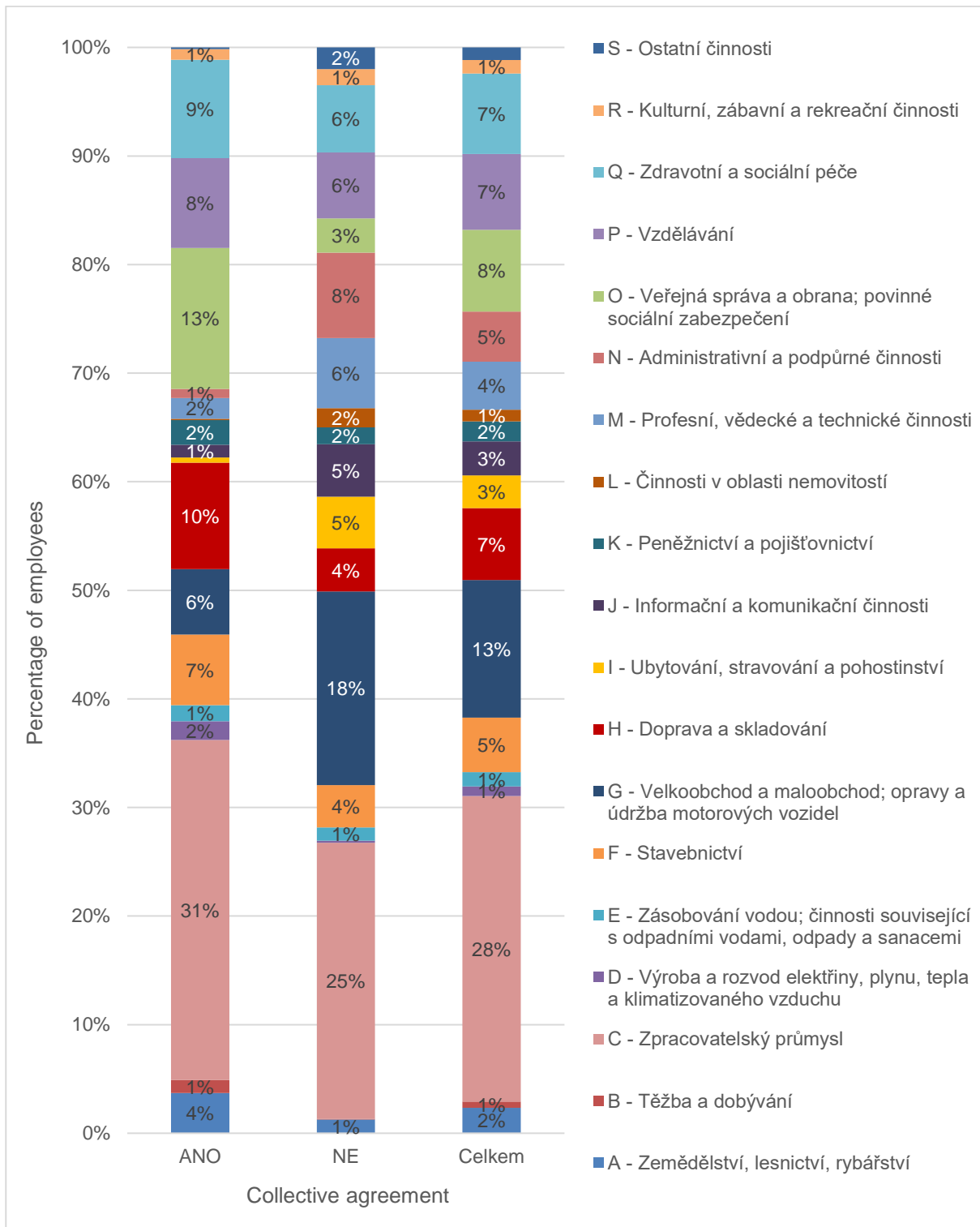
Figure IV: Development of the share of technical graduates in the total number of college graduates in the Czech Republic from 2001 to 2018



Source: CSO, data from MoEYS (the SIMS database)

*Interdisciplinary programmes and qualifications related to technology, manufacturing, and construction,
*Architecture and construction, *Manufacturing and processing, *Engineering

Figure V: Employee structure by collective agreement and CZ-NACE sections (CZ, 2019)

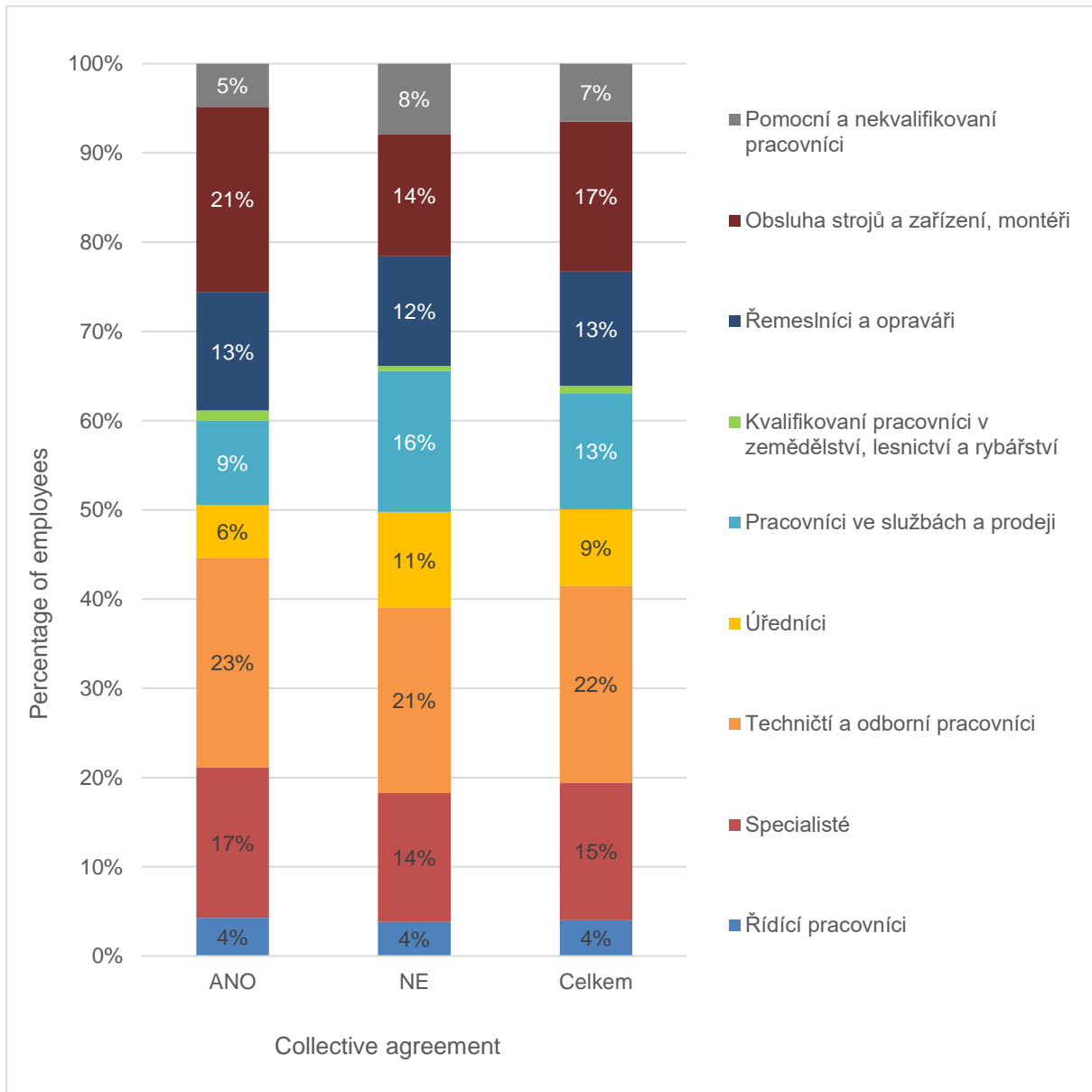


Source: ISAE (MoLSA).

S – Other service activities, R – Arts, entertainment and recreation, Q – Human health and social work activities, P – Education, O – Public administration and defence; compulsory social security, N – Administrative and support service activities, M – Professional, scientific, and technical activities, L – Real Estate activities, K – Financial and insurance activities, J – Information and communication, I – Accommodation and food service activities, H – Transportation and storage, G – Wholesale and retail trade; repair of motor vehicles and motorcycles, F – Construction, E – Water supply; sewerage, waste management and remediation activities, D

– Power, heat and air-conditioning production and distribution, C – Manufacturing, B – Mining and quarrying, A – Agriculture, forestry, and fishing, YES, NO, in total

Figure VI: Employee structure by collective agreement and main CZ-ISCO groupings (CZ, 2019)



Source: ISAE (MoLSA).

*Elementary occupations, *Plant and machine operators and assemblers, *Craft and related trades workers, *Skilled agricultural, forestry, and fishing workers, *Service workers and shop and market sales workers, *Clerks, *Technicians and associate professionals, *Professionals, *Managers



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